If you are not the intended recipient of this message, please delete and destroy all copies of this disclaimer and the attached Circular (as defined below) along with any e-mail to which either may be attached.

DISCLAIMER

Attached please find an electronic copy of the offering circular dated 30 May 2019 (the "**Circular**") relating to the offering (the "**Offering**") by Atlas Capital UK 2019 PLC (the "**Issuer**"), of certain notes. Capitalised terms used but not otherwise defined in this disclaimer will have the respective meanings set out in the Circular.

This Circular comprises the listing particulars for the purposes of listing the Notes on Euronext Dublin ("**Listing Particulars**"). Application has been made to the Irish Stock Exchange plc trading as Euronext Dublin ("**Euronext Dublin**") for the approval of this document as Listing Particulars. Application has been made to Euronext Dublin for the Notes to be admitted to the Official List and trading on the Global Exchange Market which is the exchange regulated market of Euronext Dublin. The Global Exchange Market is not a regulated market for the purposes of Directive 2014/65/EU.

The Circular shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the Notes in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration, qualification or exemption under the securities laws of any such jurisdiction. Neither the delivery of this Circular, nor any sale made hereunder, shall under any circumstance create any implication that the information contained herein is correct as of any date subsequent to the date hereof.

In order to be eligible to access the Circular or make an investment decision with respect to the Notes described therein, you must be a Qualified Investor under the Risk Transformation Regulations 2017. In addition, you must also be (i) a Qualified Institutional Buyer that, with respect to U.S. Persons, is also a Qualified Purchaser, (ii) a Qualified Eligible Person and (iii) a resident of, and purchasing in, and will hold the Notes in, a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction (and meet the other requirements set forth under "*Notice to Investors*" in the Circular).

Distribution of this electronic transmission of the Circular to any person other than (a) the person receiving this electronic transmission from the Initial Purchasers on behalf of the Issuer and (b) any person retained to advise the person receiving this electronic transmission with respect to the Offering contemplated by the Circular (each, an "**Authorised Recipient**") is unauthorised. Any photocopying, disclosure, or alteration of the contents of the Circular, and any forwarding of a copy of the Circular or any portion thereof by electronic mail or any other means to any person other than an Authorised Recipient, except as expressly authorised herein, is prohibited. By accepting delivery of the Circular, each recipient hereof agrees to the foregoing.

NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, EACH RECIPIENT (AND EACH EMPLOYEE, REPRESENTATIVE OR OTHER AGENT OF SUCH RECIPIENT) MAY DISCLOSE TO ANY AND ALL OTHER PERSONS, WITHOUT LIMITATION OF ANY KIND, THE TAX TREATMENT AND TAX STRUCTURE OF THE OFFERING AND ALL MATERIALS OF ANY KIND (INCLUDING OPINIONS OR OTHER TAX ANALYSES) THAT ARE PROVIDED TO THE RECIPIENT RELATING TO SUCH TAX TREATMENT AND TAX STRUCTURE. HOWEVER, ANY SUCH INFORMATION RELATING TO THE TAX TREATMENT OR TAX STRUCTURE IS REQUIRED TO BE KEPT CONFIDENTIAL TO THE EXTENT REASONABLY NECESSARY TO COMPLY WITH APPLICABLE SECURITIES LAWS. FOR PURPOSES OF THIS PARAGRAPH, THE TERMS "TAX TREATMENT" AND "TAX STRUCTURE" HAVE THE MEANING GIVEN TO SUCH TERMS UNDER U.S. TREASURY REGULATION SECTION 1.6011-4(c).

ATLAS CAPITAL UK 2019 PLC

(an insurance special purpose vehicle incorporated in England and Wales with company number 11931846 and LEI 549300TJTLMYVJ4MEN80)

USD 250,000,000 Series 2019-1 Principal At-Risk Variable Rate Notes due 7 June 2023

The USD 250,000,000 Series 2019-1 Principal At-Risk Variable Rate Notes due 7 June 2023 of Atlas Capital UK 2019 PLC (the "**Issuer**") are referred to hereafter as the "**Notes**". The Notes will be issued on 31 May 2019 (the "**Issuance Date**"). The Notes will be exposed to Named Storm Events, Earthquake Events and Europe Windstorm Events. If one or more Named Storm Events, Earthquake Events or Europe Windstorm Events on an annual aggregate basis during the Risk Period result in an Issuer Payment under the Risk Transfer Agreement, all or a portion of the Outstanding Principal Amount and interest accrued thereon payable to the holders of the Notes (each, a "**Noteholder**") may be reduced. The Issuer is licensed as a transformer vehicle under the laws of England and Wales.

This Circular comprises the listing particulars for the purposes of listing the Notes on Euronext Dublin ("**Listing Particulars**"). Application has been made to the Irish Stock Exchange plc trading as Euronext Dublin ("**Euronext Dublin**") for the approval of this document as Listing Particulars. Application has been made to Euronext Dublin for the Notes to be admitted to the Official List and trading on the Global Exchange Market which is the exchange regulated market of Euronext Dublin. The Global Exchange Market is not a regulated market for the purposes of Directive 2014/65/EU.

Investing in the Notes is speculative and involves a high degree of risk. See "Risk Factors" beginning on page 51 of this Circular for a discussion of certain factors to be considered in connection with an investment in the Notes.

The Notes are with limited recourse to certain assets of the Issuer and without recourse to the Risk Transferor and its affiliates.

The Notes are being offered only to qualified investors as defined in regulation 10 of the Risk Transformation Regulation 2017 ("Qualified Investors"). The Issuer must refuse to register a person who is not a Qualified Investor as a holder of securities issued by it.

The Notes have not been and will not be registered under the Securities Act of 1933, as amended (the "Securities Act"), or any U.S. State or foreign securities laws, and the Issuer is not and will not be registered under the Investment Company Act of 1940, as amended (the "Investment Company Act"). The Notes are being offered and sold in book-entry form only to investors who (i) are "qualified institutional buyers" as defined in rule 144A ("Rule 144A") under the Securities Act ("Qualified Institutional Buyers"), that, with respect to "U.S. Persons" as defined in rule 902(k) under the Securities Act ("U.S. Persons"), are also "qualified purchasers" as defined in section 2(a)(51) of the Investment Company Act ("Qualified Purchasers"); (ii) are "qualified eligible persons" as defined in U.S. Commodity Trading Futures Commission Rule 4.7 ("Qualified Eligible Persons"); and (iii) are residents of, and purchasing in, and will hold the Notes in, a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction. Prospective purchasers are hereby notified that the sellers of the Notes may be relying on the exemption from the provisions of Section 5 of the Securities Act provided by Rule 144A. The Notes are not transferable except in accordance with the restrictions described under "*Notice to Investors*" in this Circular. Each purchaser of the Notes in making its purchase will be deemed to have made certain acknowledgments, representations and agreements as set out under "*Notice to Investors—Representations of Purchaser*."

The Notes will be offered by GC Securities, a division of MMC Securities LLC, and Aon Securities LLC (the "**Initial Purchasers**"), as specified herein, subject to receipt and acceptance by the Initial Purchasers and subject to the Initial Purchasers' right to reject any order in whole or in part. The Initial Purchasers expect to deliver the Notes in book-entry form through the facilities of the Depository Trust Company (the "**DTC**") against payment therefor in immediately available funds on or about the Issuance Date.

Sole Structuring Agent

GC Securities

Joint Bookrunners

GC Securities **Aon Securities**

The date of this Circular is 30 May 2019

(*Cover page continued*)

On the Redemption Date, Noteholders will receive, to the extent of available funds therefor, 100% of the Outstanding Principal Amount of the Notes determined as of the Redemption Date (but not to exceed the liquidation proceeds of the Permitted Investments), plus the Early Redemption Payment or the Optional Redemption Payment if due and payable on the Notes.

On the Issuance Date, all of the proceeds paid to the Issuer from the sale of the Notes will be deposited into the Collateral Account and will be invested in Permitted Investments, as further described herein. Such proceeds will be available to collateralise and fund the obligations of the Issuer to the Risk Transferor under the Risk Transfer Agreement and, only after the fulfilment of such obligations and the termination of such Risk Transfer Agreement in accordance with its terms, to make payments under the Trust Deed in respect of the Outstanding Principal Amount of the Notes.

Notwithstanding anything in this Circular to the contrary, for each Accrual Period from and including the Issuance Date to, but excluding, the Redemption Date, interest on the Notes will be calculated by the Note Calculation Agent as the sum of:

(i) the Permitted Investment Yield relating to such Accrual Period; *plus*

(ii) the following amount (the sum of (a), (b), (c), (d) and (e)):

(a) for all calendar days during such Accrual Period that occur during the period from and including the Issuance Date to, but excluding the first day of the First Loss Period: interest accrued at the Non-Risk Period Interest Spread calculated on the Original Principal Amount;

(b) for all calendar days during such Accrual Period that occur during the period from and including the first day of the Risk Period to and including the last day of the First Loss Period: interest accrued at the Initial Interest Spread calculated on the Original Principal Amount; **provided, that** if the Outstanding Principal Amount is reduced to zero as a result of one or more Loss Payment Amounts on any of the Payment Dates prior to the end of the First Loss Period, the Residual Interest Amount will be paid on such Payment Date, in addition to the accrued interest for the prior Accrual Period, on such Payment Date and no further interest will be paid;

(c) for all calendar days during such Accrual Period that occur from and including the first day of the Second Loss Period to and including the last day of the Risk Period: the sum of interest accrued at the applicable Interest Spread calculated on the Outstanding Principal Amount as of the first day of the applicable Accrual Period;

(d) for all calendar days during such Accrual Period that occur from but excluding the last day of the Risk Period to but excluding such Early Redemption Date, the Optional Redemption Date or the Scheduled Redemption Date, as applicable, interest accrued at the Non-Risk Period Interest Spread calculated on the Outstanding Principal Amount as of the first day of the applicable Accrual Period; and

(e) for all calendar days during such Accrual Period that occur during the period from and including the Early Redemption Date, the Optional Redemption Date, or the Scheduled Redemption Date to but excluding the earlier of the last Extended Redemption Date and the Final Extended Redemption Date; interest accrued at the applicable Extension Spread calculated on the Outstanding Principal Amount,

in each case (a) to (e), calculated in accordance with the Interest Calculation Convention.

Interest on the Notes will be payable quarterly in arrears on the following dates (or if any such day is not a Business Day, the next succeeding Business Day) (i) each 1 March, 1 June, 1 September and 1 December, commencing on the First Payment Date and continuing to, but excluding, the earliest of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date, as applicable; (ii) the earliest of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date, as applicable; and (iii) if one or more Extension Events have occurred and are continuing under the Risk Transfer Agreement, each Extended Redemption Date (which will be the 7th day of each month),

provided that, in each case, if any of the forgoing days is not a Business Day, the relevant Payment Date will be next succeeding Business Day; and **provided further that** if an Early Redemption Event or an Optional Redemption Event occurs, the final Payment Date will be on the applicable Early Redemption Date or the Optional Redemption Date, as the case may be, unless the Risk Transferor elects an Extension with respect thereto. See "*Risk Factors—Limited Sources of Funds for Payment of Interest*."

The Issuer's sole source of funds for repayment of the Outstanding Principal Amount will be the liquidation proceeds of the Permitted Investments and any Negative Loss Payments, subject to the prior rights of the Risk Transferor therein. In addition, the Issuer's sole sources of funds for payments of interest on the Notes will be (i) the Periodic Payments received from the Risk Transferor under the Risk Transfer Agreement and (ii) the Permitted Investment Yield.

The Initial Purchasers expect to deliver the Notes offered by this Circular through the facilities of DTC against payment therefor in New York, New York on or about Issuance Date, which will be the fourth business day following the date of pricing of the Notes (such settlement schedule being herein referred to as "**T+4**"). Under Rule 15c6-1 under the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Because the Notes will not be delivered before the Issuance Date, purchasers trading the Notes before the closing will be required to specify a longer settlement cycle at the time of any such trade to prevent a failed settlement. Purchasers of Notes who wish to trade the Notes prior to the Issuance Date should consult their own advisor.

The language of this Circular is English. Certain legislative references and technical terms have been cited in their original language in order that the correct technical meaning may be ascribed to them under applicable law.

As at the date of this Circular, the Issuer has not conducted any business and its business in future will be limited to the entry into a risk transfer agreement (the "**Risk Transfer Agreement**") with the Risk Transferor in respect of risks identified in this Circular. The Issuer will fund its obligations under the Risk Transfer Agreement from the proceeds of the issuance of the Notes. Since the date of the incorporation of the Issuer, the Issuer has not commenced operations and as of the date of this Listing Particulars, no financial statements of the Issuer have been prepared. There are no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Issuer is aware) which may have, or have had since the date of its incorporation, a significant effect on the financial position or profitability of the Issuer. The issue of the Notes was authorised by resolutions of the Board of Directors of the Issuer passed at a meeting held on 24 May 2019.

Arthur Cox Listing Services Limited is acting solely in its capacity as listing agent for the Issuer in relation to the Notes and is not itself seeking admission of the Notes to the Official List of Euronext Dublin or to trading on the Global Exchange Market of Euronext Dublin.

CERTAIN PERSONS PARTICIPATING IN THE OFFERINGS MAY ENGAGE IN TRANSACTIONS THAT STABILISE, MAINTAIN OR OTHERWISE AFFECT THE PRICE OF THE NOTES, INCLUDING OVER-ALLOTMENT, STABILISING AND SHORT COVERING TRANSACTIONS IN THE NOTES, AND THE IMPOSITION OF A PENALTY BID, IN CONNECTION WITH THE OFFERING. FOR A DESCRIPTION OF THESE ACTIVITIES, SEE "*PLAN OF DISTRIBUTION*." ANY STABILISATION ACTION OR OVER-ALLOTMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL APPLICABLE LAWS AND RULES.

THERE IS NO MARKET FOR THE NOTES AND THERE IS NO ASSURANCE THAT A MARKET WILL DEVELOP. THE INITIAL PURCHASERS ARE NOT UNDER ANY OBLIGATION TO MAKE A MARKET IN THE NOTES AND, TO THE EXTENT THAT SUCH MARKET MAKING IS COMMENCED BY THE INITIAL PURCHASERS, IT MAY BE DISCONTINUED AT ANY TIME. GIVEN THE RISKS ASSOCIATED WITH AN INVESTMENT IN THE NOTES, THE HIGH MINIMUM DENOMINATIONS AND THE RESTRICTIONS ON TRANSFER, THERE IS NO ASSURANCE THAT A SECONDARY TRADING MARKET FOR THE NOTES WILL DEVELOP. INVESTORS MUST BE ABLE TO BEAR THE RISKS OF HOLDING THE NOTES UNTIL THEIR REDEMPTION DATE.

THE NOTES HAVE NOT BEEN RECOMMENDED BY ANY U.S. FEDERAL OR STATE SECURITIES COMMISSION OR ANY INSURANCE OR OTHER REGULATORY AUTHORITY. FURTHERMORE, THE FOREGOING AUTHORITIES HAVE NOT CONFIRMED THE ACCURACY OR DETERMINED THE ADEQUACY OF THIS CIRCULAR. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENCE.

THIS CIRCULAR (AS THE SAME MAY BE AMENDED OR SUPPLEMENTED, INCLUDING BY ANY CIRCULAR SUPPLEMENT) DOES NOT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY SECURITY OTHER THAN THE NOTES TO WHICH SUCH DOCUMENTS RELATE, NOR DOES IT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY OF THE NOTES, TO ANY PERSON IN ANY JURISDICTION WHERE SUCH OFFER OR SALE IS NOT PERMITTED OR WOULD REQUIRE REGISTRATION OR QUALIFICATION UNDER THE SECURITIES LAWS OF SUCH JURISDICTION IN WHICH IT IS UNLAWFUL TO MAKE SUCH AN OFFER OR SOLICITATION TO SUCH PERSON. NEITHER THE DELIVERY OF THIS CIRCULAR, NOR ANY SALE MADE HEREUNDER, SHALL UNDER ANY CIRCUMSTANCE CREATE ANY IMPLICATION THAT THE INFORMATION CONTAINED HEREIN IS CORRECT AS OF ANY DATE SUBSEQUENT TO THE DATE HEREOF.

THE NOTES OFFERED HEREBY MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED TO ANY PERSON (I) IN ANY STATE OR OTHER JURISDICTION IN THE UNITED STATES OTHER THAN THE PERMITTED U.S. JURISDICTIONS OR (II) IN ANY JURISDICTION OUTSIDE OF THE UNITED STATES OTHER THAN THE PERMITTED NON-U.S. JURISDICTIONS. FURTHERMORE, ANY NOTES OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED TO A PERSON IN A PERMITTED U.S. JURISDICTION OR PERMITTED NON-U.S. JURISDICTION MAY ONLY BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED TO INVESTORS THAT (I) ARE "QUALIFIED INSTITUTIONAL BUYERS" AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT THAT, WITH RESPECT TO U.S. PERSONS, ARE ALSO "QUALIFIED PURCHASERS" FOR PURPOSES OF SECTION 2(A)(51) OF THE INVESTMENT COMPANY ACT, (AND MEET THE OTHER REQUIREMENTS SET FORTH UNDER THE "*NOTICE TO INVESTORS*" HEREIN) (II) ARE "QUALIFIED ELIGIBLE PERSONS" AS DEFINED IN U.S. COMMODITY TRADING FUTURES COMMISSION RULE 4.7 ("QUALIFIED ELIGIBLE PERSONS") AND (III) IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE PERMITTED U.S. JURISDICTIONS AND ALL APPLICABLE SECURITIES LAWS OF THE PERMITTED NON-U.S. JURISDICTIONS.

IF ANY PERSON ACQUIRING A BENEFICIAL INTEREST IN THE NOTES IS NOT, AT THE TIME OF ACQUIRING SUCH INTEREST, (I) A QUALIFIED INVESTOR, (II) A QUALIFIED INSTITUTIONAL BUYER, (III) IN THE CASE OF A U.S. PERSON, ALSO A QUALIFIED PURCHASER AND (IV) A QUALIFIED ELIGIBLE PERSON, THE ISSUER MAY REGARD THE ACQUISITION BY SUCH PERSON AS NULL AND VOID AND OF NO EFFECT. ANY PERSON WHO HOLDS ANY BENEFICIAL INTEREST IN THE NOTES WHO DOES NOT RESIDE AND HOLD SUCH INTEREST IN A PERMITTED U.S. JURISDICTION OR A PERMITTED NON-U.S. JURISDICTION, OR WAS NOT, AT THE TIME OF ACQUIRING SUCH INTEREST IN THE NOTES, (I) A QUALIFIED INVESTOR, (II) A QUALIFIED INSTITUTIONAL BUYER, (III) IN THE CASE OF A U.S. PERSON, ALSO A QUALIFIED PURCHASER, AND A QUALIFIED ELIGIBLE PERSON, MAY BE FORCED TO TRANSFER SUCH INTEREST TO A PERSON WHO MEETS THE REQUIREMENTS SET FORTH IN "*NOTICE TO INVESTORS*" IN ACCORDANCE WITH THE PROCEDURES DESCRIBED UNDER "*DESCRIPTION OF THE NOTES—NON-PERMITTED NOTEHOLDER*." NONE OF THE ISSUER, THE RISK TRANSFEROR, THE INITIAL PURCHASERS OR ANY OF THEIR RESPECTIVE AFFILIATES MAKES ANY REPRESENTATION THAT THE OFFER, SALE, PLEDGE OR TRANSFER OF THE NOTES IS PERMITTED UNDER THE SECURITIES LAW OF ANY PERMITTED U.S. JURISDICTION OR ANY PERMITTED NON-U.S. JURISDICTION.

THE NOTES ARE NOT OBLIGATIONS OF, AND ARE NOT GUARANTEED BY, THE RISK TRANSFEROR OR ANY OF ITS AFFILIATES AND ARE WITHOUT RECOURSE TO THEM. FOR THE NOTES, THE OUTSTANDING PRINCIPAL AMOUNT AND INTEREST RELATING THERETO

(INCLUDING ANY EARLY REDEMPTION PAYMENT, OPTIONAL REDEMPTION PAYMENT AND RESIDUAL INTEREST AMOUNT, IF APPLICABLE) ARE PAYABLE SOLELY BY THE ISSUER. THE NOTES ARE WITH LIMITED RECOURSE TO CERTAIN ASSETS OF THE ISSUER.

NONE OF THE ISSUER, THE RISK TRANSFEROR, THE INITIAL PURCHASERS OR ANY OF THEIR RESPECTIVE AFFILIATES, NOR ANY OF THEIR RESPECTIVE REPRESENTATIVES OR AGENTS, MAKES ANY REPRESENTATION TO ANY INVESTOR IN THE NOTES REGARDING THE LEGALITY OF AN INVESTMENT UNDER APPROPRIATE LEGAL INVESTMENT OR SIMILAR LAWS. INVESTORS ARE NOT TO CONSTRUE THE CONTENTS OF THIS CIRCULAR AS INVESTMENT, TAX, ACCOUNTING OR LEGAL ADVICE. THIS CIRCULAR, AS WELL AS THE NATURE OF AN INVESTMENT IN THE NOTES, SHOULD BE REVIEWED BY EACH INVESTOR AND ITS INVESTMENT, TAX OR OTHER ADVISORS, AND ITS ACCOUNTANTS AND LEGAL COUNSEL. INVESTORS SHOULD SATISFY THEMSELVES THAT AN INVESTMENT IN THE NOTES IS NOT IN VIOLATION OF THE LAWS OF ANY JURISDICTION RELEVANT TO THEM, INCLUDING APPLICABLE INSURANCE LAWS.

NOTICE TO RESIDENTS OF AUSTRALIA

THIS CIRCULAR IS NOT A "PROSPECTUS", "PRODUCT DISCLOSURE STATEMENT" OR ANY OTHER FORM OF DISCLOSURE DOCUMENT FOR THE PURPOSES OF CHAPTERS 6D OR 7 OF THE AUSTRALIAN CORPORATIONS ACT 2001 (CTH) (THE "CORPORATIONS ACT") AND IS NOT REQUIRED TO BE LODGED WITH THE AUSTRALIAN SECURITIES AND INVESTMENTS COMMISSION UNDER THE CORPORATIONS ACT. THE OFFER FOR THE ISSUE, ANY INVITATION TO APPLY FOR THE ISSUE AND ANY OFFER FOR SALE OF, AND ANY INVITATION FOR OFFERS TO PURCHASE, THE NOTES TO A PERSON UNDER THIS CIRCULAR:

(I) WILL BE FOR A MINIMUM AMOUNT PAYABLE (AFTER DISREGARDING ANY AMOUNT LENT BY THE PERSON OFFERING THE NOTES (AS DETERMINED UNDER SECTION 700(3) OF THE CORPORATIONS ACT) OR ANY OF THEIR ASSOCIATES (AS DETERMINED UNDER SECTIONS 10 TO 17 OF THE CORPORATIONS ACT)) ON ACCEPTANCE OF THE OFFER OR APPLICATION (AS THE CASE MAY BE) WHICH IS AT LEAST A$500,000 (CALCULATED IN ACCORDANCE WITH BOTH SECTION 708(9) OF THE CORPORATIONS ACT AND REGULATION 7.1.18 OF THE AUSTRALIAN CORPORATIONS REGULATIONS 2001 (CTH)); OR

(II) DOES NOT OTHERWISE REQUIRE DISCLOSURE TO INVESTORS UNDER CHAPTERS 6D OR 7 OF THE CORPORATIONS ACT (AS THE CASE MAY BE) AND IS NOT MADE TO A PERSON WHO IS A RETAIL CLIENT (AS DEFINED IN SECTION 761G OF THE CORPORATIONS ACT).

A PERSON MAY NOT (DIRECTLY OR INDIRECTLY) OFFER FOR ISSUE OR SALE, OR MAKE ANY INVITATION TO APPLY FOR THE ISSUE OR TO PURCHASE, THE NOTES NOR DISTRIBUTE THIS CIRCULAR EXCEPT IF THE OFFER OR INVITATION:

(I) DOES NOT NEED DISCLOSURE TO INVESTORS UNDER CHAPTERS 6D OR 7 OF THE CORPORATIONS ACT (AS THE CASE MAY BE);

(II) IS NOT MADE TO A RETAIL CLIENT (AS DEFINED IN SECTION 761G OF THE CORPORATIONS ACT); AND

(III) COMPLIES WITH ANY OTHER APPLICABLE LAWS IN ALL JURISDICTIONS IN WHICH THE OFFER OR INVITATION IS MADE.

NEITHER MMC SECURITIES LLC NOR AON SECURITIES LLC HOLD AN AUSTRALIAN FINANCIAL SERVICES LICENSE ("AFSL") AND BOTH ARE EXEMPT FROM THE REQUIREMENT TO HOLD AN AFSL UNDER THE CORPORATIONS ACT IN RESPECT OF THE FINANCIAL SERVICES THEY PROVIDE IN THIS JURISDICTION. MMC SECURITIES LLC AND AON SECURITIES LLC ARE REGULATED BY THE UNITED STATES SECURITIES AND

EXCHANGE COMMISSION UNDER UNITED STATES FEDERAL SECURITIES LAWS, WHICH DIFFER FROM AUSTRALIAN LAWS.

NOTICE TO RESIDENTS OF AUSTRIA

THIS CIRCULAR DOES NOT CONSTITUTE AN OFFERING PROSPECTUS PURSUANT TO EITHER THE AUSTRIAN CAPITAL MARKET ACT (*KAPITALMARKTGESETZ*) OR THE AUSTRIAN STOCK EXCHANGE ACT (*BOERSENGESETZ*). FURTHERMORE, THIS CIRCULAR HAS NOT BEEN AUDITED BY A QUALIFIED BANK OR A CERTIFIED PUBLIC ACCOUNTANT. THE FORM AND CONTENT OF THIS CIRCULAR DO NOT COMPLY WITH THE AUSTRIAN LAW FOR PUBLIC OFFERING OF NOTES IN FOREIGN FUNDS. THUS, THIS CIRCULAR IS NEITHER INTENDED TO SERVE AS A MEANS OF OFFERING SECURITIES TO THE PUBLIC NOR DOES IT CONSTITUTE AN OFFER OF SUCH NOTES TO THE PUBLIC. THE NOTES ARE OFFERED OR SOLD ON A PRIVATE PLACEMENT BASIS. THIS CIRCULAR HAS BEEN PRODUCED FOR THE SOLE PURPOSE OF PROVIDING INFORMATION ABOUT CERTAIN SECURITIES TO A LIMITED NUMBER OF QUALIFIED INVESTORS IN AUSTRIA.

NOTICE TO RESIDENTS OF BARBADOS

THE NOTES SHALL NOT BE OFFERED OR SOLD INTO BARBADOS EXCEPT IN CIRCUMSTANCES THAT DO NOT CONSTITUTE AN OFFER TO THE PUBLIC. THIS CIRCULAR IS MADE AVAILABLE ON THE CONDITION THAT IT IS FOR THE USE ONLY BY THE RECIPIENT AND MAY NOT BE PASSED ONTO ANY OTHER PERSON OR BE REPRODUCED IN ANY PART. THE FINANCIAL SERVICES COMMISSION (OF BARBADOS) HAS NOT IN ANY WAY EVALUATED THE MERITS OF THE NOTES OFFERED HEREUNDER AND ANY REPRESENTATION TO THE CONTRARY IS AN OFFENCE.

THIS CIRCULAR IS ISSUED IN CONNECTION WITH THE DISTRIBUTION BY THE ISSUER OF THE NOTES (I) TO PERSONS IN BARBADOS WHO ARE EITHER EXEMPT FROM CURRENCY CONTROLS IN RESPECT OF THE PURCHASE, ACQUISITION AND OWNERSHIP OF THE NOTES, OR HAVE OBTAINED THE NECESSARY PERMISSION UNDER THE EXCHANGE CONTROL ACT OF BARBADOS, AND (II) TO FEWER THAN FIFTY (50) PERSONS IN THE AGGREGATE EACH OF WHOM IS A "SOPHISTICATED PURCHASER" WITHIN THE MEANING OF SECTION 61(1) OF THE BARBADOS SECURITIES ACT (BARBADOS EXEMPT PURCHASERS).

AS SUCH THE DISTRIBUTION OF THE NOTES IN BARBADOS IS EXEMPT FROM THE PROSPECTUS REQUIREMENTS OF THE BARBADOS SECURITIES ACT, BUT IS SUBJECT TO ANY CONDITIONS PRESCRIBED BY THE FINANCIAL SERVICES COMMISSION (OF BARBADOS). THE ISSUER IS REQUIRED TO GIVE WRITTEN NOTIFICATION OF THE DISTRIBUTION OF THE NOTES TO THE FINANCIAL SERVICES COMMISSION (OF BARBADOS) IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 69(2)(A) OF THE BARBADOS SECURITIES ACT. THE ISSUER MAY SEEK WRITTEN CONFIRMATION OF THE EXEMPTION FROM THE FINANCIAL SERVICES COMMISSION (OF BARBADOS).

BY PURCHASING THE NOTES IN BARBADOS, A PURCHASER WILL BE REPRESENTING TO THE ISSUER THAT:

(I) THE PURCHASER IS A SOPHISTICATED PURCHASER WITHIN THE MEANING OF SECTION 61(1) OF THE BARBADOS SECURITIES ACT;

(II) THE PURCHASER IS EXEMPT FROM CURRENCY CONTROLS IN RESPECT OF THE PURCHASE, ACQUISITION AND OWNERSHIP OF THE NOTES, OR HAS OBTAINED THE NECESSARY PERMISSION UNDER THE EXCHANGE CONTROL ACT OF BARBADOS, AND THAT EVIDENCE OF SUCH EXEMPTION SHALL BE FORWARDED TO THE ISSUER;

(III) THE PURCHASER IS ABLE TO EVALUATE THE NOTES AS AN INVESTMENT ON THE BASIS OF THE INFORMATION PROVIDED IN THIS CIRCULAR, BY VIRTUE OF HIS NET

WORTH AND ADVICE INDEPENDENTLY AVAILABLE TO HIM FROM AN INVESTMENT ADVISOR; AND

(IV) THE PURCHASER HAS REVIEWED THE FOREGOING PARAGRAPH.

THIS CIRCULAR IS NOT ISSUED IN CONNECTION WITH ANY INVITATION TO THE PUBLIC TO SUBSCRIBE FOR ANY DEBENTURES OR AS PART OF ANY DISTRIBUTION OF DEBENTURES TO THE PUBLIC OR OFFER OF DEBENTURES TO THE PUBLIC. AS A CONSEQUENCE, THE SALE AND DISTRIBUTION OF THE NOTES IS EXEMPTED FROM HAVING TO COMPLY WITH THE PROSPECTUS REQUIREMENTS OF THE BARBADOS COMPANIES ACT, AND THERE IS NO REQUIREMENT FOR THE REGISTRATION OF THE ISSUER OR THE NOTES IN ACCORDANCE WITH THE BARBADOS SECURITIES ACT.

NOTICE TO RESIDENTS OF BELGIUM

THE OFFERING OF THE NOTES HAS NOT BEEN AND WILL NOT BE NOTIFIED TO THE BELGIAN FINANCIAL SERVICES AND MARKETS AUTHORITY (*AUTORITEIT VOOR FINANCIELE DIENSTEN EN MARKTEN/AUTORITE DES SERVICES ET MARCHES FINANCIERS*) NOR HAS THIS CIRCULAR BEEN, NOR WILL IT BE, APPROVED BY THE BELGIAN FINANCIAL SERVICES AND MARKETS AUTHORITY. THE NOTES MAY NOT BE DISTRIBUTED IN BELGIUM BY WAY OF AN OFFER OF THE NOTES TO THE PUBLIC, AS DEFINED IN ARTICLE 3, §1 OF THE ACT OF 16 JUNE 2006 RELATING TO PUBLIC OFFERS OF INVESTMENT INSTRUMENTS, AS AMENDED OR REPLACED FROM TIME TO TIME, SAVE IN THOSE CIRCUMSTANCES (COMMONLY CALLED "PRIVATE PLACEMENT") SET OUT IN ARTICLE 3 §2 OF THE ACT OF 16 JUNE 2006 RELATING TO PUBLIC OFFERS OF INVESTMENT INSTRUMENTS, AS AMENDED OR REPLACED FROM TIME TO TIME. THIS CIRCULAR MAY BE DISTRIBUTED IN BELGIUM ONLY TO SUCH INVESTORS FOR THEIR PERSONAL USE AND EXCLUSIVELY FOR THE PURPOSES OF THIS OFFERING OF THE NOTES. ACCORDINGLY, THIS CIRCULAR MAY NOT BE USED FOR ANY OTHER PURPOSE NOR PASSED ON TO ANY OTHER INVESTOR IN BELGIUM. EACH INITIAL PURCHASER REPRESENTS AND AGREES THAT IT WILL NOT:

(I) OFFER FOR SALE OR MARKET THE NOTES IN BELGIUM OTHERWISE THAN IN CONFORMITY WITH THE ACT OF 16 JUNE 2006 RELATING TO PUBLIC OFFERS OF INVESTMENT INSTRUMENTS, AS AMENDED OR REPLACED FROM TIME TO TIME; OR

(II) OFFER FOR SALE, SELL OR MARKET THE NOTES TO ANY PERSON QUALIFYING AS A CONSUMER WITHIN THE MEANING OF THE CODE OF ECONOMIC LAW, AS MODIFIED, OTHERWISE THAN IN CONFORMITY WITH SUCH LAW AND ITS IMPLEMENTING REGULATIONS.

NOTICE TO RESIDENTS OF BERMUDA

TO THE EXTENT THAT ANY NOTES ARE OFFERED OR SOLD IN OR FROM BERMUDA, SUCH OFFER OR SALE MAY ONLY BE MADE IN ACCORDANCE WITH THE INVESTMENT BUSINESS ACT 2003 OF BERMUDA, WHICH REGULATES THE SALE OF SECURITIES IN BERMUDA. ADDITIONALLY, NON-BERMUDIAN PERSONS (INCLUDING COMPANIES) MAY NOT CARRY ON OR ENGAGE IN ANY TRADE OR BUSINESS IN BERMUDA UNLESS SUCH PERSONS ARE PERMITTED TO DO SO UNDER APPLICABLE BERMUDA LEGISLATION.

NOTICE TO RESIDENTS OF THE BRITISH VIRGIN ISLANDS

THE NOTES MAY NOT BE OFFERED IN THE BRITISH VIRGIN ISLANDS ("**BVI**") UNLESS THE ISSUER, THE INITIAL PURCHASERS OR ANY OTHER PERSON ACTING ON THEIR BEHALF IS LICENSED TO CARRY ON BUSINESS IN THE BVI. NONE OF THE ISSUER, THE INITIAL PURCHASERS OR ANY OTHER PERSON ACTING ON THEIR BEHALF IS CURRENTLY LICENSED TO CARRY ON BUSINESS IN THE BVI. THE NOTES MAY BE OFFERED TO BVI BUSINESS COMPANIES (FROM OUTSIDE THE BVI) WITHOUT RESTRICTIONS. A BVI

BUSINESS COMPANY IS A COMPANY FORMED UNDER OR OTHERWISE GOVERNED BY THE BVI BUSINESS COMPANIES ACT 2004 (AS AMENDED).

IT IS EXPECTED THAT PART II OF THE SECURITIES AND INVESTMENT BUSINESS ACT 2010 ("**SIBA**") WILL BE BROUGHT INTO FORCE AND BECOME LAW IN THE BVI IN THE NEAR FUTURE. UPON PART II OF SIBA COMING INTO FORCE, THE NOTES MAY NOT BE, AND WILL NOT BE, OFFERED TO THE PUBLIC OR TO ANY PERSON IN THE BVI FOR PURCHASE OF SUBSCRIPTION BY OR ON BEHALF OF THE ISSUER. THE NOTES MAY CONTINUE TO BE OFFERED TO BVI BUSINESS COMPANIES, BUT ONLY WHERE THE OFFER WILL BE MADE TO, AND RECEIVED BY, THE RELEVANT BVI COMPANY ENTIRELY OUTSIDE OF THE BVI. THE NOTES MAY ALSO BE OFFERED TO PERSONS LOCATED IN THE BVI WHO ARE "QUALIFIED INVESTORS" FOR THE PURPOSES OF SIBA.

THIS CIRCULAR HAS NOT BEEN REGISTERED WITH THE FINANCIAL SERVICES COMMISSION OF THE BVI AND WILL NOT BE SO REGISTERED UPON PART II OF SIBA COMING INTO FORCE. NO REGISTERED PROSPECTUS HAS BEEN OR WILL BE PREPARED IN RESPECT OF THE NOTES FOR THE PURPOSES OF SIBA.

NOTICE TO RESIDENTS OF CANADA

THE NOTES MAY BE SOLD ONLY BY PERSONS PERMITTED TO SELL SUCH NOTES AND ONLY TO PURCHASERS PURCHASING, OR DEEMED TO BE PURCHASING, AS PRINCIPAL THAT ARE ACCREDITED INVESTORS, AS DEFINED IN NATIONAL INSTRUMENT 45-106 PROSPECTUS EXEMPTIONS OR SUBSECTION 73.3(1) OF THE SECURITIES ACT (ONTARIO), AND ARE PERMITTED CLIENTS, AS DEFINED IN NATIONAL INSTRUMENT 31-103 REGISTRATION REQUIREMENTS, EXEMPTIONS AND ONGOING REGISTRANT OBLIGATIONS. ANY RESALE OF THE NOTES MUST BE MADE IN ACCORDANCE WITH AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE PROSPECTUS REQUIREMENTS OF APPLICABLE SECURITIES LAWS.

THIS CIRCULAR (INCLUDING ANY AMENDMENT THERETO) IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN ADVERTISEMENT OR A PUBLIC OFFERING OF THE NOTES DESCRIBED IN THIS CIRCULAR (INCLUDING ANY AMENDMENT THERETO) IN CANADA. NO SECURITIES COMMISSION OR SIMILAR AUTHORITY IN CANADA HAS REVIEWED OR IN ANY WAY PASSED UPON THIS DOCUMENT OR THE MERITS OF THE NOTES DESCRIBED IN THIS CIRCULAR (INCLUDING ANY AMENDMENT THERETO), AND ANY REPRESENTATION TO THE CONTRARY IS AN OFFENCE.

SECURITIES LEGISLATION IN CERTAIN PROVINCES OR TERRITORIES OF CANADA MAY PROVIDE A PURCHASER WITH REMEDIES FOR RESCISSION OR DAMAGES IF THIS CIRCULAR (INCLUDING ANY AMENDMENT THERETO) CONTAINS A MISREPRESENTATION, PROVIDED THAT THE REMEDIES FOR RESCISSION OR DAMAGES ARE EXERCISED BY THE PURCHASER WITHIN THE TIME LIMIT PRESCRIBED BY THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY. THE PURCHASER SHOULD REFER TO ANY APPLICABLE PROVISIONS OF THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY FOR PARTICULARS OF THESE RIGHTS OR CONSULT WITH A LEGAL ADVISOR.

PURSUANT TO SECTION 3A.3 (OR, IN THE CASE OF SECURITIES ISSUED OR GUARANTEED BY THE GOVERNMENT OF A NON-CANADIAN JURISDICTION, SECTION 3A.4) OF NATIONAL INSTRUMENT 33-105 UNDERWRITING CONFLICTS (NI 33-105), THE INITIAL PURCHASERS ARE NOT REQUIRED TO COMPLY WITH THE DISCLOSURE REQUIREMENTS OF NI 33-105 REGARDING UNDERWRITER CONFLICTS OF INTEREST IN CONNECTION WITH THIS OFFERING.

NOTICE TO RESIDENTS OF THE CAYMAN ISLANDS

UNLESS THE NOTES ARE LISTED ON THE CAYMAN ISLANDS STOCK EXCHANGE, NO INVITATION, WHETHER DIRECTLY OR INDIRECTLY, MAY BE MADE TO THE PUBLIC IN THE CAYMAN ISLANDS TO SUBSCRIBE FOR THE NOTES.

NOTICE TO INVESTORS IN DENMARK

THIS CIRCULAR AND THE NOTES OFFERED HEREIN HAVE NOT BEEN FILED WITH OR APPROVED BY THE DANISH FINANCIAL SUPERVISORY AUTHORITY OR ANY OTHER REGULATORY AUTHORITY IN THE KINGDOM OF DENMARK NOR DOES THIS DOCUMENT CONSTITUTE A PROSPECTUS OR OTHER PROMOTIONAL MATERIAL FOR THE PUBLIC OFFERING OF SECURITIES IN ACCORDANCE WITH DANISH LAW. ACCORDINGLY, THE NOTES OFFERED HEREIN MAY NOT BE OFFERED OR SOLD, DIRECTLY OR INDIRECTLY, IN DENMARK, NOR MAY THIS DOCUMENT BE MARKETED OR DISTRIBUTED IN DENMARK EXCEPT IF SUCH MARKETING OR DISTRIBUTION IS IN COMPLIANCE WITH THE DANISH CAPITAL MARKETS ACT (CONSOLIDATED ACT NO. 12 OF 8 JANUARY 2018, AS AMENDED FROM TIME TO TIME) AND ANY EXECUTIVE ORDERS ISSUED THEREUNDER, INCLUDING EXECUTIVE ORDER NO. 1176 OF 31 OCTOBER 2017 ON PROSPECTUSES, AS AMENDED OR REPLACED FROM TIME TO TIME.

NOTICE TO RESIDENTS OF EUROPEAN ECONOMIC AREA MEMBER STATES

PRIIPS REGULATION / PROSPECTUS DIRECTIVE / PROHIBITION OF SALES TO EEA RETAIL INVESTORS – THE NOTES ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED SOLD OR OTHERWISE MADE AVAILABLE TO ANY RETAIL INVESTOR IN THE EUROPEAN ECONOMIC AREA. FOR THESE PURPOSES, A RETAIL INVESTOR MEANS A PERSON WHO IS ONE (OR MORE) OF: (I) A RETAIL CLIENT AS DEFINED IN POINT (11) OF ARTICLE 4(1) OF DIRECTIVE 2014/65/EU (AS AMENDED, "**MIFID II**"); OR (II) A CUSTOMER WITHIN THE MEANING OF DIRECTIVE 2002/92/EC (AS AMENDED, THE "**INSURANCE MEDIATION DIRECTIVE**"), WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT AS DEFINED IN POINT (10) OF ARTICLE 4(1) OF MIFID II; OR (III) NOT A QUALIFIED INVESTOR AS DEFINED IN DIRECTIVE 2003/71/EC (AS AMENDED, THE "**PROSPECTUS DIRECTIVE**"). CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO. 1286/2014 (THE "**PRIIPS REGULATION**") FOR OFFERING OR SELLING THE NOTES OR OTHERWISE MAKING THEM AVAILABLE TO RETAIL INVESTORS IN THE EUROPEAN ECONOMIC AREA HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE NOTES OR OTHERWISE MAKING THEM AVAILABLE TO ANY RETAIL INVESTOR IN THE EUROPEAN ECONOMIC AREA MAY BE UNLAWFUL UNDER THE PRIIPS REGULATION.

ANY OFFER OF THE NOTES IN ANY MEMBER STATE OF THE EUROPEAN ECONOMIC AREA MAY ONLY BE MADE PURSUANT TO AN EXEMPTION UNDER THE PROSPECTUS DIRECTIVE FROM THE REQUIREMENT TO PUBLISH A PROSPECTUS FOR OFFERS OF THE NOTES. THIS CIRCULAR IS NOT A PROSPECTUS FOR THE PURPOSES OF THE PROSPECTUS DIRECTIVE.

THE EXPRESSION AN "OFFER OF THE NOTES" IN ANY RELEVANT MEMBER STATE OF THE EUROPEAN ECONOMIC AREA MEANS THE COMMUNICATION IN ANY FORM AND BY ANY MEANS OF SUFFICIENT INFORMATION ON THE TERMS OF THE OFFER AND THE NOTES TO BE OFFERED SO AS TO ENABLE AN INVESTOR TO DECIDE TO PURCHASE OR SUBSCRIBE FOR THE NOTES, AS THE EXPRESSION MAY BE VARIED IN THAT MEMBER STATE BY ANY AMENDMENTS TO THE PROSPECTUS DIRECTIVE.

NOTICE TO RESIDENTS OF FRANCE

THE NOTES DESCRIBED HEREIN WILL BE ISSUED OUTSIDE OF FRANCE AND MAY NOT BE, DIRECTLY OR INDIRECTLY, OFFERED OR SOLD TO THE PUBLIC IN FRANCE ("*OFFRE AU PUBLIC DE TITRES FINANCIERS*"). THE OFFER OF THE NOTES IS NOT SUBJECT TO THE

REQUIREMENT OF A PROSPECTUS TO BE SUBMITTED TO THE FRENCH AUTORITÉ DES MARCHÉS FINANCIERS FOR ITS APPROVAL (VISA). NONE OF THIS CIRCULAR NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE NOTES HAS BEEN OR WILL BE SUBMITTED FOR THE APPROVAL (VISA) OF THE FRENCH AUTORITÉ DES MARCHÉS FINANCIERS. THE NOTES WILL NOT BE OFFERED OR SOLD, DIRECTLY OR INDIRECTLY, IN FRANCE, AND THIS CIRCULAR AND ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE NOTES WILL NOT BE DISTRIBUTED IN FRANCE, EXCEPT TO QUALIFIED INVESTORS ("*INVESTISSEURS QUALIFIÉS*"), TO A LIMITED GROUP OF INVESTORS ("*CERCLE RESTREINT D'INVESTISSEURS*"), AND/OR TO PROVIDERS OF INVESTMENT SERVICES RELATING TO PORTFOLIO MANAGEMENT FOR THE ACCOUNT OF THIRD PARTIES ("*PERSONNES FOURNISSANT LE SERVICE D'INVESTISSEMENT DE GESTION DE PORTEFEUILLE POUR LE COMPTE DE TIERS*"), AS DEFINED IN, AND IN ACCORDANCE WITH, ARTICLES L.411-2, D.411-1 TO D.411-4, D.744-1, D.754-1 AND D.764-1 OF THE FRENCH CODE MONÉTAIRE ET FINANCIER. IN COMPLIANCE WITH ARTICLES L.411-2 AND D.411-1 TO D.411-4, D.744-1, D.754-1 AND D.764-1 OF THE FRENCH CODE MONÉTAIRE ET FINANCIER, ANY INVESTORS SUBSCRIBING FOR THE NOTES SHOULD BE ACTING FOR THEIR OWN ACCOUNT. IF ANY NOTES SUBSCRIBED FOR OR ACQUIRED BY SUCH INVESTORS ARE SUBSEQUENTLY OFFERED OR SOLD, DIRECTLY OR INDIRECTLY, TO THE PUBLIC IN FRANCE, ANY SUCH OFFER SHALL COMPLY WITH ARTICLES L. 411-1, L.411-2, L.412-1 AS WELL AS L.621-8 TO L.621-8-3 OF THE FRENCH CODE MONÉTAIRE ET FINANCIER.

NOTICE TO RESIDENTS OF GERMANY

THIS CIRCULAR IS ONLY DIRECTED AT PERSONS IN GERMANY WHO ARE "QUALIFIED INVESTORS" (*QUALIFIZIERTE ANLEGER*) WITHIN THE MEANING OF SECTION 2 SUBSECTION 6 OF THE GERMAN SECURITIES PROSPECTUS ACT (*WERTPAPIERPROSPEKTGESETZ*) OR ARE PERSONS TO WHOM AN OFFER OF SECURITIES MAY OTHERWISE BE MADE WITHOUT THE REQUIREMENT FOR AN APPROVED PROSPECTUS PURSUANT TO SECTION 3 SUBSECTION 2 OF THE GERMAN SECURITIES PROSPECTUS ACT (ALL SUCH PERSONS TOGETHER REFERRED TO AS "RELEVANT PERSONS"). THIS CIRCULAR HAS NOT BEEN AND WILL NOT BE SUBMITTED TO, NOR HAS IT BEEN APPROVED BY, THE GERMAN FINANCIAL SERVICES SUPERVISORY AUTHORITY (*BUNDESANSTALT FÜR FINANZDIENSTLEISTUNGSAUFSICHT, BAFIN*) OR ANY OTHER REGULATORY AUTHORITY IN GERMANY. THE NOTES HAVE NOT BEEN AND WILL NOT BE OFFERED TO THE PUBLIC IN GERMANY AND MUST NOT BE DISTRIBUTED WITHIN GERMANY BY WAY OF A PUBLIC OFFER, PUBLIC ADVERTISEMENT OR IN ANY SIMILAR MANNER ANY RESALE OF THE NOTES IN GERMANY MAY ONLY BE MADE IN ACCORDANCE WITH THE SECURITIES PROSPECTUS ACT AND OTHER APPLICABLE GERMAN LAWS. THIS CIRCULAR AND ANY OTHER DOCUMENT RELATING TO THE NOTES, AS WELL AS INFORMATION CONTAINED THEREIN, MAY NOT BE SUPPLIED TO THE PUBLIC IN GERMANY OR USED IN CONNECTION WITH ANY OFFER FOR SUBSCRIPTION OF THE NOTES TO THE PUBLIC IN GERMANY. THIS CIRCULAR MUST NOT BE RELIED ON OR ACTED UPON BY PERSONS WHO ARE NOT RELEVANT PERSONS. ANY INVESTMENT OR INVESTMENT ACTIVITY TO WHICH THIS COMMUNICATION RELATES IS AVAILABLE ONLY TO RELEVANT PERSONS AND WILL BE ENGAGED IN ONLY WITH RELEVANT PERSONS.

NOTICE TO RESIDENTS OF GUERNSEY

THIS CIRCULAR SHALL NOT BE CIRCULATED TO THE PUBLIC IN THE BAILIWICK OF GUERNSEY, CHANNEL ISLANDS.

THIS CIRCULAR IS ONLY BEING PROMOTED IN OR FROM WITHIN THE BAILIWICK OF GUERNSEY EITHER (I) BY PERSONS LICENSED TO DO SO UNDER THE PROTECTION OF INVESTORS (BAILIWICK OF GUERNSEY) LAW, 1987 (AS AMENDED) OR (II) TO PERSONS LICENSED UNDER THE PROTECTION OF INVESTORS (BAILIWICK OF GUERNSEY) LAW, 1987 (AS AMENDED), THE INSURANCE BUSINESS (BAILIWICK OF GUERNSEY) LAW, 2002 (AS AMENDED), THE BANKING SUPERVISION (BAILIWICK OF GUERNSEY) LAW, 1994 (AS AMENDED), THE REGULATION OF FIDUCIARIES, ADMINISTRATION BUSINESSES AND COMPANY DIRECTORS, ETC. (BAILIWICK OF GUERNSEY) LAW, 2000 (AS AMENDED) OR THE

INSURANCE MANAGERS AND INSURANCE INTERMEDIARIES (BAILIWICK OF GUERNSEY) LAW, 2002 (AS AMENDED).

THE NOTES REFERRED TO IN THIS CIRCULAR ARE NOT AVAILABLE IN OR FROM WITHIN THE BAILIWICK OF GUERNSEY OTHER THAN IN ACCORDANCE WITH THE ABOVE PARAGRAPHS (I) AND (II) AND MUST NOT BE RELIED UPON BY ANY PERSON UNLESS MADE OR RECEIVED IN ACCORDANCE WITH SUCH PARAGRAPHS. PROMOTION IS NOT BEING MADE IN ANY OTHER WAY.

NOTICE TO RESIDENTS OF HONG KONG

THE ISSUER AND EACH INITIAL PURCHASER HAS REPRESENTED, WARRANTED AND AGREED THAT, WITH EFFECT FROM AND INCLUDING THE DATE OF THIS CIRCULAR, IT HAS NOT ISSUED AND WILL NOT ISSUE, AND WILL NOT HAVE IN ITS POSSESSION FOR THE PURPOSES OF ISSUE, AN ADVERTISEMENT, INVITATION OR DOCUMENT WHICH IS OR CONTAINS AN INVITATION TO THE PUBLIC TO ENTER INTO OR OFFER TO ENTER INTO AN AGREEMENT TO ACQUIRE, DISPOSE OF, SUBSCRIBE FOR OR UNDERWRITE THE NOTES WHICH ARE THE SUBJECT OF THE OFFERING CONTEMPLATED BY THIS CIRCULAR IN THE HONG KONG SPECIAL ADMINISTRATIVE REGION OF THE PEOPLE'S REPUBLIC OF CHINA ("**HONG KONG**"), OTHER THAN THE ISSUE OF THIS CIRCULAR. THE ISSUER AND EACH INITIAL PURCHASER MAY ISSUE THIS CIRCULAR:

(I) TO ANY CORPORATION LICENSED TO DEAL IN OR ADVISE ON SECURITIES, OR TO ANY OTHER PERSON CARRYING ON THE BUSINESS OF INVESTMENT SERVICES AND REGULATED UNDER THE LAW OF ANY PLACE OUTSIDE HONG KONG ("**REGULATED**");

(II) TO ANY AUTHORISED INSTITUTION (BEING A BANK, A RESTRICTED LICENSE BANK OR DEPOSIT-TAKING COMPANY) AS DEFINED IN THE BANKING ORDINANCE (CHAPTER 155 OF THE LAWS OF HONG KONG), OR ANY BANK WHICH IS NOT AN AUTHORISED INSTITUTION BUT IS REGULATED;

(III) TO A WHOLLY OWNED SUBSIDIARY OR A HOLDING COMPANY HOLDING ALL THE ISSUED SHARE CAPITAL OF A PERSON DESCRIBED IN (I) OR (II) AND ANY OTHER WHOLLY OWNED SUBSIDIARY OF SUCH A HOLDING COMPANY;

(IV) TO ANY INSURER AUTHORISED UNDER THE INSURANCE COMPANIES ORDINANCE (CHAPTER 41 OF THE LAWS OF HONG KONG), OR ANY OTHER PERSON CARRYING ON INSURANCE BUSINESS AND REGULATED;

(V) TO ANY GOVERNMENT (OTHER THAN A MUNICIPAL GOVERNMENT AUTHORITY), CENTRAL BANK OR MULTILATERAL AGENCY;

(VI) TO A TRUST COMPANY REGISTERED UNDER PART VIII OF THE TRUSTEE ORDINANCE (CHAPTER 29 OF THE LAWS OF HONG KONG) OR ANY OTHER CORPORATION WHICH CARRIES ON A BUSINESS OF A SIMILAR NATURE TO THAT OF A REGISTERED TRUST COMPANY AND IS REGULATED AND WHICH ACTS AS TRUSTEE OF A TRUST OR TRUSTS WITH TOTAL ASSETS OF NOT LESS THAN HK$40 MILLION OR ITS EQUIVALENT IN ANY FOREIGN CURRENCY AS STATED OR ASCERTAINED IN PRESCRIBED AUDITED FINANCIAL STATEMENTS PREPARED WITHIN SIXTEEN (16) MONTHS OF THE RELEVANT DATE OR CUSTODIAN STATEMENTS ISSUED WITHIN TWELVE (12) MONTHS OF THE RELEVANT DATE;

(VII) TO ANY INDIVIDUAL, EITHER ALONE OR WITH ANY OF HIS ASSOCIATES ON A JOINT ACCOUNT, HAVING A PORTFOLIO OF NOT LESS THAN HK$8 MILLION OR ITS EQUIVALENT IN ANY FOREIGN CURRENCY AS STATED OR ASCERTAINED IN AN AUDITOR'S CERTIFICATE OR CUSTODIAN'S STATEMENT ISSUED WITHIN TWELVE (12) MONTHS OF THE RELEVANT DATE;

(VIII) TO ANY CORPORATION OR PARTNERSHIP HAVING A PORTFOLIO OF SECURITIES, CERTIFICATES OF DEPOSIT AND MONEY OF NOT LESS THAN HK$8 MILLION OR ITS EQUIVALENT IN ANY FOREIGN CURRENCY OR TOTAL ASSETS OF NOT LESS THAN HK$40 MILLION OR ITS EQUIVALENT IN ANY FOREIGN CURRENCY AS ASCERTAINED BY REFERENCE TO THE MOST RECENT AUDITED FINANCIAL STATEMENT PREPARED WITHIN SIXTEEN (16) MONTHS OF THE RELEVANT DATE OR CUSTODIAN STATEMENT ISSUED WITHIN TWELVE (12) MONTHS OF THE RELEVANT DATE;

(IX) TO ANY CORPORATION THE SOLE BUSINESS OF WHICH IS TO HOLD INVESTMENTS AND WHICH IS WHOLLY OWNED BY A TRUST COMPANY OR CORPORATION AS DESCRIBED IN (VI) OR BY AN INDIVIDUAL WHO, EITHER ALONE OR WITH ANY OF HIS/HER ASSOCIATES ON A JOINT ACCOUNT, IS DESCRIBED IN (VII) OR BY A CORPORATION OR PARTNERSHIP AS DESCRIBED IN (VIII);

(X) TO ANY PERSON OUTSIDE HONG KONG; OR

(XI) IN ANY OTHER CIRCUMSTANCES FALLING WITHIN SECTION 103(3) OF THE SECURITIES AND FUTURES ORDINANCE (CHAPTER 571 OF THE LAWS OF HONG KONG);

PROVIDED, THAT NO SUCH OFFERING OF THE NOTES CONTEMPLATED BY THIS CIRCULAR SHALL REQUIRE THE ISSUER OR THE INITIAL PURCHASERS TO REGISTER OR HAVE AUTHORISED THIS CIRCULAR UNDER THE LAWS OF HONG KONG.

THE CONTENTS OF THIS DOCUMENT HAVE NOT BEEN REVIEWED BY ANY REGULATORY AUTHORITY IN HONG KONG. YOU ARE ADVISED TO EXERCISE CAUTION IN RELATION TO THE OFFER. IF YOU ARE IN ANY DOUBT ABOUT ANY OF THE CONTENTS OF THIS DOCUMENT, YOU SHOULD OBTAIN PROFESSIONAL ADVICE.

NOTICE TO RESIDENTS OF IRELAND

EACH INITIAL PURCHASER HAS REPRESENTED AND AGREED THAT IT HAS NOT AND WILL NOT UNDERWRITE THE ISSUE OF OR PLACE THE NOTES IN IRELAND OR DO ANYTHING IN, FROM OR INVOLVING IRELAND WITH RESPECT TO THE NOTES:

(I) EXCEPT IN CIRCUMSTANCES WHICH DO NOT REQUIRE THE PUBLICATION OF A PROSPECTUS PURSUANT TO ARTICLE 3(2) OF DIRECTIVE 2003/71/EC;

(II) OTHERWISE THAN IN COMPLIANCE WITH THE PROVISIONS OF THE IRISH COMPANIES ACTS 1963-2013 (PRIOR TO 1 JUNE 2015), OR THE IRISH COMPANIES ACT 2014 (AS AMENDED) (FROM 1 JUNE 2015 ONWARDS);

(III) OTHERWISE THAN IN COMPLIANCE WITH THE PROVISIONS OF THE EUROPEAN COMMUNITIES (MARKETS IN FINANCIAL INSTRUMENTS) REGULATIONS 2007 (S.I. NO. 60 OF 2007) (AS AMENDED), AND THEY WILL CONDUCT THEMSELVES IN ACCORDANCE WITH ANY CODES OR RULES OF CONDUCT AND ANY CONDITIONS OR REQUIREMENTS, OR ANY OTHER ENACTMENT, IMPOSED OR APPROVED BY THE CENTRAL BANK OF IRELAND WITH RESPECT TO ANYTHING DONE BY THEM IN RELATION TO THE NOTES; AND

(IV) OTHERWISE THAN IN COMPLIANCE WITH THE PROVISIONS OF THE MARKET ABUSE REGULATION (REGULATION (EU) NO 596/2014 AS AMENDED) AND ANY RULES OR GUIDANCE ISSUED BY THE CENTRAL BANK OF IRELAND FROM TIME TO TIME UNDER SECTION 1370 OF THE IRISH COMPANIES ACT 2014 (AS AMENDED).

NOTICE TO RESIDENTS OF ISRAEL

THIS CIRCULAR HAS NOT BEEN APPROVED BY THE ISRAELI SECURITIES AUTHORITY AND WILL ONLY BE DISTRIBUTED TO ISRAELI RESIDENTS IN A MANNER THAT WILL NOT

CONSTITUTE "AN OFFER TO THE PUBLIC" UNDER SECTIONS 15 AND 15A OF THE ISRAEL SECURITIES LAW, 5728-1968 ("**THE SECURITIES LAW**"). THE NOTES ARE BEING OFFERED TO A LIMITED NUMBER OF INVESTORS (35 INVESTORS OR FEWER DURING ANY GIVEN 12 MONTH PERIOD) AND/OR THOSE CATEGORIES OF INVESTORS LISTED IN THE FIRST ADDENDUM ("**THE ADDENDUM**") TO THE SECURITIES LAW, ("**SOPHISTICATED INVESTORS**") NAMELY JOINT INVESTMENT FUNDS OR MUTUAL TRUST FUNDS, PROVIDENT FUNDS, INSURANCE COMPANIES, BANKING CORPORATIONS (PURCHASING THE NOTES FOR THEMSELVES OR FOR CLIENTS WHO ARE SOPHISTICATED INVESTORS), PORTFOLIO MANAGERS (PURCHASING THE NOTES FOR THEMSELVES OR FOR CLIENTS WHO ARE SOPHISTICATED INVESTORS), INVESTMENT ADVISORS OR INVESTMENT MARKETERS (PURCHASING THE NOTES FOR THEMSELVES), MEMBERS OF THE TEL-AVIV STOCK EXCHANGE (PURCHASING THE NOTES FOR THEMSELVES OR FOR CLIENTS WHO ARE SOPHISTICATED INVESTORS), UNDERWRITERS (PURCHASING THE NOTES FOR THEMSELVES), VENTURE CAPITAL FUNDS ENGAGING MAINLY IN THE CAPITAL MARKET, AN ENTITY WHICH IS WHOLLY-OWNED BY SOPHISTICATED INVESTORS, CORPORATIONS, OTHER THAN FORMED FOR THE SPECIFIC PURPOSE OF AN ACQUISITION PURSUANT TO AN OFFER, WITH A SHAREHOLDERS EQUITY IN EXCESS OF NIS 50 MILLION, AND INDIVIDUALS INVESTING FOR THEIR OWN ACCOUNT, IN RESPECT OF WHICH AT LEAST ONE OF THE FOLLOWING APPLIES: THE TOTAL VALUE OF THEIR CASH, DEPOSITS, FINANCIAL ASSETS (AS DEFINED IN THE INVESTMENT ADVICE LAW) AND SECURITIES TRADED ON A STOCK EXCHANGE LICENSED UNDER THE SECURITIES LAW (TOGETHER, "**LIQUID ASSETS**") EXCEEDS NIS 8 MILLION (APPROXIMATELY US$2.1 MILLION); THEIR LEVEL OF INCOME OVER EACH OF THE PRECEDING TWO YEARS EXCEEDS NIS 1.2 MILLION (APPROXIMATELY US$300,000), OR THE LEVEL OF INCOME OF THEIR "FAMILY UNIT" EXCEEDS NIS 1.8 MILLION (APPROXIMATELY US$470,000); OR THE AGGREGATE VALUE OF ALL THEIR LIQUID ASSETS EXCEEDS NIS 5 MILLION (APPROXIMATELY US$1.3 MILLION) AND THEIR LEVEL OF INCOME OVER EACH OF THE PRECEDING TWO YEARS EXCEEDS NIS 600,000 (APPROXIMATELY US$160,000), OR THE LEVEL OF INCOME OF THEIR "FAMILY UNIT" EXCEEDS NIS 900,000 (APPROXIMATELY US$240,000); EACH AS DEFINED IN THE SAID ADDENDUM, AS AMENDED FROM TIME TO TIME, AND WHO IN EACH CASE HAVE PROVIDED WRITTEN CONFIRMATION THAT THEY QUALIFY AS SOPHISTICATED INVESTORS, AND THAT THEY ARE AWARE OF THE CONSEQUENCES OF SUCH DESIGNATION AND AGREE THERETO; IN ALL CASES UNDER CIRCUMSTANCES THAT WILL FALL WITHIN THE PRIVATE PLACEMENT OR OTHER EXEMPTIONS OF THE SECURITIES LAW AND ANY APPLICABLE GUIDELINES, PRONOUNCEMENTS OR RULINGS ISSUED FROM TIME TO TIME BY THE ISRAELI SECURITIES AUTHORITY.

THIS CIRCULAR MAY NOT BE REPRODUCED OR USED FOR ANY OTHER PURPOSE, NOR BE FURNISHED TO ANY OTHER PERSON OTHER THAN THOSE TO WHOM COPIES HAVE BEEN SENT. ANY OFFEREE WHO PURCHASES THE NOTES IS PURCHASING SUCH NOTES FOR ITS OWN BENEFIT AND ACCOUNT AND NOT WITH THE AIM OR INTENTION OF DISTRIBUTING OR OFFERING SUCH NOTES TO OTHER PARTIES (OTHER THAN, IN THE CASE OF AN OFFEREE WHICH IS AN SOPHISTICATED INVESTOR BY VIRTUE OF IT BEING A BANKING CORPORATION, PORTFOLIO MANAGER OR MEMBER OF THE TEL-AVIV STOCK EXCHANGE, AS DEFINED IN THE ADDENDUM, WHERE SUCH OFFEREE IS PURCHASING THE NOTES FOR ANOTHER PARTY WHICH IS AN SOPHISTICATED INVESTOR). NOTHING IN THIS CIRCULAR SHOULD BE CONSIDERED INVESTMENT ADVICE OR INVESTMENT MARKETING DEFINED IN THE REGULATION OF INVESTMENT COUNSELLING, INVESTMENT MARKETING AND PORTFOLIO MANAGEMENT LAW, 5755-1995.

INVESTORS ARE ENCOURAGED TO SEEK COMPETENT INVESTMENT COUNSELLING FROM A LOCALLY LICENSED INVESTMENT COUNSEL PRIOR TO MAKING THE INVESTMENT. AS A PREREQUISITE TO THE RECEIPT OF A COPY OF THIS CIRCULAR, A RECIPIENT MAY BE REQUIRED BY THE ISSUER TO PROVIDE CONFIRMATION THAT IT IS AN SOPHISTICATED INVESTOR PURCHASING THE NOTES FOR ITS OWN ACCOUNT OR, WHERE APPLICABLE, FOR OTHER SOPHISTICATED INVESTORS.

NOTICE TO RESIDENTS OF ITALY

THE SALE OF THE NOTES HAS NOT BEEN CLEARED BY THE ITALIAN SECURITIES EXCHANGE COMMISSION ("**CONSOB**") PURSUANT TO ITALIAN SECURITIES LEGISLATION AND, ACCORDINGLY, NO SECURITIES MAY BE OFFERED, SOLD OR DELIVERED, NOR MAY COPIES OF THIS CIRCULAR OR OF ANY OTHER DOCUMENT RELATING TO THE NOTES BE DISTRIBUTED IN THE REPUBLIC OF ITALY, EXCEPT:

(A) TO QUALIFIED INVESTORS (*INVESTITORI QUALIFICATI*), REFERRED TO IN ARTICLE 100 OF LEGISLATIVE DECREE NO. 58 OF 24 FEBRUARY 1998, AS AMENDED ("DECREE NO. 58") AND ARTICLE 34-TER, PARAGRAPH 1(B) OF CONSOB REGULATION 11971 OF 14 MAY 1999, AS AMENDED ("**REGULATION NO. 11971**"); OR

(B) IN ANY OTHER CIRCUMSTANCES WHICH ARE EXEMPTED FROM THE RULES ON SOLICITATION OF INVESTMENTS PURSUANT TO ARTICLE 100 OF LEGISLATIVE DECREE NO. 58 OF 24 FEBRUARY 1998 ("**FINANCIAL SERVICES ACT**") AND ARTICLE 34-TER, OF CONSOB REGULATION NO. 11971.

ACCORDINGLY, ANY OFFER, SALE OR DELIVERY OF THE NOTES OR DISTRIBUTION OF COPIES OF THIS CIRCULAR OR ANY OTHER DOCUMENT RELATING TO THE NOTES IN THE REPUBLIC OF ITALY UNDER (A) OR (B) ABOVE MUST BE:

I. MADE BY AN INVESTMENT FIRM, BANK OR FINANCIAL INTERMEDIARY PERMITTED TO CONDUCT SUCH ACTIVITIES IN THE REPUBLIC OF ITALY IN ACCORDANCE WITH LEGISLATIVE DECREE NO. 385 OF 1 SEPTEMBER, 1993, AS AMENDED ("**CONSOLIDATED BANKING LAW**"), DECREE NO. 58 AND CONSOB REGULATION NO. 16190 OF 29 OCTOBER 2007, AS AMENDED AND ANY OTHER APPLICABLE LAWS AND REGULATIONS;

II. IN COMPLIANCE WITH ARTICLE 129 OF THE CONSOLIDATED BANKING LAW, OR ANY APPLICABLE IMPLEMENTING GUIDELINES OF THE BANK OF ITALY; AND

III. IN COMPLIANCE WITH ANY OTHER APPLICABLE NOTIFICATION REQUIREMENT OR LIMITATION WHICH MAY BE IMPOSED BY CONSOB OR THE BANK OF ITALY.

FOR THE PURPOSES OF THIS PROVISION, THE EXPRESSION "OFFER OF SECURITIES TO THE PUBLIC" IN ITALY MEANS THE COMMUNICATION IN ANY FORM AND BY ANY MEANS OF SUFFICIENT INFORMATION ON THE TERMS OF THE OFFER AND THE SECURITIES TO BE OFFERED SO AS TO ENABLE AN INVESTOR TO DECIDE TO PURCHASE OR SUBSCRIBE THE NOTES, INCLUDING THE PLACEMENT THROUGH AUTHORISED INTERMEDIARIES.

ANY INVESTOR PURCHASING THE NOTES IS SOLELY RESPONSIBLE FOR ENSURING THAT ANY OFFER OR RESALE OF THE NOTES BY SUCH INVESTOR OCCURS IN COMPLIANCE WITH APPLICABLE ITALIAN LAWS AND REGULATIONS. THE SECURITIES AND THE INFORMATION CONTAINED IN THIS CIRCULAR ARE INTENDED ONLY FOR THE USE OF ITS RECIPIENT. NO PERSON RESIDENT OR LOCATED IN ITALY OTHER THAN THE ORIGINAL RECIPIENTS OF THIS CIRCULAR MAY RELY ON IT OR ITS CONTENT.

NOTICE TO RESIDENTS OF JAPAN

NO REGISTRATION PURSUANT TO ARTICLE 4, PARAGRAPH 1 OF THE FINANCIAL INSTRUMENTS AND EXCHANGE LAW OF JAPAN (LAW NO. 25 OF 1948, AS AMENDED) (THE "**FIEL**") HAS BEEN MADE OR WILL BE MADE WITH RESPECT TO THE SOLICITATION OF THE ACQUISITION OF THE NOTES ON THE GROUND THAT ARTICLE 2, PARAGRAPH 3, ITEM 2-(I) OF THE FIEL IS APPLIED TO SUCH SOLICITATION. AS DESCRIBED IN THIS DOCUMENT, THE OFFERING OF THE NOTES IS LIMITED TO AND MADE ONLY TO THE QUALIFIED INSTITUTIONAL INVESTORS ("**QIIS**") AS DEFINED IN ARTICLE 2, PARAGRAPH 3, ITEM 1 OF THE FIEL AND ARTICLE 10 OF THE CABINET ORDER REGARDING THE DEFINITIONS UNDER ARTICLE 2 OF THE FIEL. NO TRANSFER OF THE NOTES MAY BE MADE TO PERSONS OTHER THAN QIIS, AS DESCRIBED IN THIS DOCUMENT.

THE ISSUER HAS NOT ISSUED (I) ANY OTHER DEBT SECURITIES LISTED AT A SECURITIES EXCHANGE IN JAPAN OR OTHERWISE SUBJECT TO THE CONTINUOUS DISCLOSURE OBLIGATIONS UNDER THE FIEL, WHICH HAVE THE SAME MATURITY, INTEREST RATE AND DENOMINATION CURRENCY AS THOSE OF THE NOTES, OR (II) ANY OTHER DEBT SECURITIES OFFERED OR SOLD UPON PRIVATE PLACEMENT EXEMPTION FOR SPECIFIED INVESTORS IN JAPAN UNDER THE FIEL, WHICH HAVE THE SAME MATURITY, INTEREST RATE AND DENOMINATION CURRENCY AS THOSE OF THE NOTES.

NOTICE TO RESIDENTS OF JERSEY

A PERSON MAY NOT (DIRECTLY OR INDIRECTLY) OFFER FOR ISSUE OR SALE, OR MAKE ANY INVITATION TO APPLY FOR THE ISSUE OR TO PURCHASE, THE NOTES NOR DISTRIBUTE THIS CIRCULAR EXCEPT WHERE ONE OF THE FOLLOWING APPLIES:

(I) THIS CIRCULAR RELATES TO A PRIVATE PLACEMENT AND DOES NOT CONSTITUTE AN OFFER TO THE PUBLIC IN JERSEY TO SUBSCRIBE FOR THE NOTES OFFERED HEREBY. NO REGULATORY APPROVAL HAS BEEN SOUGHT TO THE OFFER IN JERSEY AND IT MUST BE DISTINCTLY UNDERSTOOD THAT THE JERSEY FINANCIAL SERVICES COMMISSION DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE FINANCIAL SOUNDNESS OF OR ANY REPRESENTATIONS MADE IN CONNECTION WITH THE ISSUER. THE OFFER OF THE NOTES IS PERSONAL TO THE PERSON TO WHOM THIS CIRCULAR IS BEING DELIVERED BY OR ON BEHALF OF THE ISSUER, AND A SUBSCRIPTION FOR THE NOTES WILL ONLY BE ACCEPTED FROM SUCH PERSON. THIS CIRCULAR MAY NOT BE REPRODUCED OR USED FOR ANY OTHER PURPOSE; OR

(II) CONSENT UNDER THE CONTROL OF BORROWING (JERSEY) ORDER 1958 (THE "**COBO ORDER**") HAS NOT BEEN OBTAINED FOR THE CIRCULATION OF THIS CIRCULAR. ACCORDINGLY, THE OFFER THAT IS THE SUBJECT OF THIS CIRCULAR MAY ONLY BE MADE IN JERSEY WHERE THE OFFER IS VALID IN THE UNITED KINGDOM OR GUERNSEY AND IS CIRCULATED IN JERSEY ONLY TO PERSONS SIMILAR TO THOSE TO WHOM, AND IN A MANNER SIMILAR TO THAT IN WHICH, IT IS FOR THE TIME BEING CIRCULATED IN THE UNITED KINGDOM OR GUERNSEY AS THE CASE MAY BE. THE DIRECTORS MAY, BUT ARE NOT OBLIGED TO, APPLY FOR SUCH CONSENT IN THE FUTURE.

NOTICE TO RESIDENTS OF THE REPUBLIC OF KOREA

THIS CIRCULAR IS NOT, AND UNDER NO CIRCUMSTANCES IS, TO BE CONSTRUED AS, A PUBLIC OFFERING OF SECURITIES IN KOREA. NEITHER THE ISSUER NOR ANY OF ITS AGENTS MAKE ANY REPRESENTATION WITH RESPECT TO THE ELIGIBILITY OF ANY RECIPIENTS OF THIS DOCUMENT TO ACQUIRE THE NOTES UNDER THE LAWS OF KOREA, INCLUDING, BUT WITHOUT LIMITATION, THE FOREIGN EXCHANGE TRANSACTION LAW AND REGULATIONS THEREUNDER (THE "**FETL**"). THE NOTES HAVE NOT BEEN REGISTERED WITH THE FINANCIAL SERVICES COMMISSION OF KOREA FOR PUBLIC OFFERING IN KOREA, AND NONE OF THE NOTES MAY BE OFFERED, SOLD OR DELIVERED, DIRECTLY OR INDIRECTLY, OR OFFERED OR SOLD TO ANY PERSON FOR RE-OFFERING OR RESALE, DIRECTLY OR INDIRECTLY IN KOREA OR TO ANY RESIDENT OF KOREA EXCEPT PURSUANT TO THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT AND THE DECREES AND REGULATIONS THEREUNDER (THE "**FSCMA**"), THE FETL AND ANY OTHER APPLICABLE LAWS, REGULATIONS AND MINISTERIAL GUIDELINES IN KOREA. WITHOUT PREJUDICE TO THE FOREGOING, THE NUMBER OF NOTES OFFERED IN KOREA OR TO A RESIDENT OF KOREA SHALL BE LESS THAN FIFTY AND FOR A PERIOD OF ONE (1) YEAR FROM THE ISSUANCE DATE OF THE NOTES, NONE OF THE NOTES MAY BE DIVIDED RESULTING IN AN INCREASED NUMBER OF NOTES. FURTHERMORE, THE NOTES MAY NOT BE RESOLD TO KOREAN RESIDENTS UNLESS THE PURCHASER OF THE NOTES COMPLIES WITH ALL APPLICABLE REGULATORY REQUIREMENTS (INCLUDING, BUT NOT LIMITED TO, GOVERNMENT REPORTING APPROVAL REQUIREMENTS UNDER THE FETL AND ITS SUBORDINATE DECREES AND REGULATIONS) IN CONNECTION WITH THE PURCHASE OF

THE NOTES. BY THE PURCHASE OF THE NOTES, THE RELEVANT HOLDER THEREOF WILL BE DEEMED TO REPRESENT AND WARRANT THAT IF IT IS IN KOREA OR IS A RESIDENT OF KOREA, IT PURCHASED THE NOTES PURSUANT TO THE APPLICABLE LAWS AND REGULATIONS OF KOREA.

NOTICE TO RESIDENTS OF LUXEMBOURG

THE NOTES MAY NOT BE OFFERED OR SOLD IN THE GRAND DUCHY OF LUXEMBOURG, EXCEPT FOR THE NOTES WHICH ARE OFFERED IN CIRCUMSTANCES THAT DO NOT REQUIRE THE APPROVAL OF A PROSPECTUS BY THE LUXEMBOURG FINANCIAL REGULATORY AUTHORITY AND THE PUBLICATION OF SUCH PROSPECTUS IN ACCORDANCE WITH THE LAW OF JULY 10, 2005 ON PROSPECTUSES FOR SECURITIES, AS AMENDED. THE NOTES ARE OFFERED TO A LIMITED NUMBER OF INVESTORS OR TO QUALIFIED INVESTORS, IN ALL CASES UNDER CIRCUMSTANCES DESIGNED TO PRECLUDE A DISTRIBUTION THAT WOULD BE OTHER THAN A PRIVATE PLACEMENT. THIS CIRCULAR MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE, OR FURNISHED TO ANY PERSON OTHER THAN THOSE TO WHOM COPIES HAVE BEEN SENT.

NOTICE TO RESIDENTS OF MEXICO

NO ACTIONS, APPLICATIONS OR FILINGS HAVE BEEN UNDERTAKEN IN MEXICO, WHETHER BEFORE THE NATIONAL BANKING AND SECURITIES COMMISSION (*COMISIÓN NACIONAL BANCARIA Y DE VALORES* OR "**CNBV**") OR THE MEXICAN STOCK EXCHANGE (*BOLSA MEXICANA DE VALORES*, OR "**BMV**"), IN ORDER TO REGISTER OR MAKE A PUBLIC OFFERING IN MEXICO, WITH OR WITHOUT PRICE, THROUGH MASS MEDIA AND TO INDETERMINATE SUBJECTS TO SUBSCRIBE, ACQUIRE, SELL OR OTHERWISE ASSIGN THE NOTES, IN ANY FORM OR MANNER.

THIS DOCUMENT IS NOT INTENDED TO BE DISTRIBUTED THROUGH MASS MEDIA TO INDETERMINATE SUBJECTS, NOR TO SERVE AS AN APPLICATION FOR THE REGISTRATION OF THE NOTES BEFORE ANY SECURITIES REGISTRY OR EXCHANGE IN MEXICO, NOR AS A PROSPECTUS FOR THE NOTES' PUBLIC OFFERING IN MEXICO. NO FINANCIAL AUTHORITY OR SECURITIES EXCHANGE IN MEXICO HAS REVIEWED OR ASSESSED THE PARTICULARS OF THE NOTES OR THEIR OFFERING, AND IN NO CASE WILL THEY CERTIFY THE SUITABILITY OF THE NOTES, THE SOLVENCY OF THE ISSUER, OR THE EXACTITUDE OR VERACITY OF THE INFORMATION CONTAINED HEREIN, NOR WILL THEY VALIDATE ANY ACTION IN RELATION TO THE NOTES. HENCE, THE INFORMATION CONTAINED HEREIN IS THE EXCLUSIVE RESPONSIBILITY OF THE ISSUER AND HAS NOT BEEN REVIEWED BY THE CNBV.

YOU ARE SOLELY RESPONSIBLE FOR ANY DECISION YOU MAKE IN RELATION TO THE NOTES IF YOU HAVE PROCURED THIS DOCUMENT YOURSELF OR CAME BY IT THROUGH YOUR OWN MEANS OUT OF YOUR OWN ACCORD, REGARDLESS OF THE SOURCE. IF YOU HAVE RECEIVED THIS DOCUMENT FROM EITHER THE ISSUER OR ANY MANAGER OR ANY OF THEIR RESPECTIVE AFFILIATES, THE NOTES ARE BEING OFFERED TO YOU UNDER THE PRIVATE OFFERING EXCEPTIONS IN THE MEXICAN SECURITIES MARKET LAW (*LEY DEL MERCADO DE VALORES*, OR THE "**SML**", ITS ENGLISH LANGUAGE ACRONYM), FOR WHICH YOU MUST BE IN ONE OF THE FOLLOWING SITUATIONS:

(A) YOU ARE EITHER AN INSTITUTIONAL INVESTOR (*INVERSIONISTA INSTITUCIONAL*) WITHIN THE MEANING OF ARTICLE 2, ROMAN NUMERAL XVII, OF THE SML AND REGARDED AS SUCH PURSUANT TO THE LAWS OF MEXICO, OR A QUALIFIED INVESTOR (*INVERSIONISTA CALIFICADO*) PURSUANT TO THE DEFINITION OF ARTICLE 2, ROMAN NUMERAL XVI, OF THE SML AND YOU HAVE THE INCOME, ASSETS OR QUALITATIVE CHARACTERISTICS PROVIDED FOR UNDER ARTICLE 1, ROMAN NUMERAL XV OF THE GENERAL PROVISIONS APPLICABLE TO ISSUERS OF SECURITIES AND OTHER PARTICIPANTS IN THE SECURITIES MARKET, WHICH REQUIRE THAT YOU HAVE MAINTAINED, ON AVERAGE OVER THE PAST YEAR, INVESTMENTS IN SECURITIES (WITHIN THE MEANING OF THE SML) FOR AN

AMOUNT EQUAL TO OR GREATER THAN 1,500,000 INVESTMENT UNITS (*UNIDADES DE INVERSIÓN, UDIS*), OR IN EACH OF THE LAST TWO (2) YEARS HAD A GROSS ANNUAL INCOME EQUAL TO OR GREATER THAN 500,000 SUCH INVESTMENT UNITS; OR

(B) YOU ARE A MEMBER OF A GROUP OF LESS THAN 100 INDIVIDUALLY IDENTIFIED PEOPLE TO WHOM THE NOTES ARE BEING OFFERED DIRECTLY AND PERSONALLY.

YOU MAY BE REQUIRED TO EXPRESSLY CONFIRM THAT YOU FALL INTO EITHER OF THE FOREGOING EXCEPTIONS, THAT YOU FURTHER UNDERSTAND THAT THE PRIVATE OFFERING OF THE NOTES HAS LESS DOCUMENTARY AND INFORMATION REQUIREMENTS THAN PUBLIC OFFERINGS DO, AND THAT YOU WAIVE THE RIGHT TO CLAIM BASED ON THE LACK OF ANY DOCUMENT OR INFORMATION.

ANY INVESTOR ACQUIRING THE NOTES ACCEPTS RESPONSIBILITY FOR ITS DECISION TO ACQUIRE THE NOTES. ANY AND ALL ACQUISITIONS OF THE NOTES SHALL BE MADE THROUGH A U.S. FINANCIAL INTERMEDIARY PURSUANT TO APPLICABLE U.S. LAWS. NO MEXICAN FINANCIAL INTERMEDIARY MAY TRADE THESE NOTES.

NOTICE TO RESIDENTS OF THE NETHERLANDS

THIS CIRCULAR HAS NOT BEEN APPROVED BY OR FILED WITH THE DUTCH AUTHORITY FOR THE FINANCIAL MARKETS (*AUTHORITEIT FINANCIËLE MARKTEN*, THE "**AFM**"). THE NOTES ARE NOT, WILL NOT AND MAY NOT, DIRECTLY OR INDIRECTLY, BE OFFERED IN THE NETHERLANDS, UNLESS (I) THE OFFER IS MADE EXCLUSIVELY TO PERSONS OR ENTITIES WHICH ARE (A) QUALIFIED INVESTORS AS DEFINED IN THE PROSPECTUS DIRECTIVE OR (B) REPRESENTED BY ELIGIBLE DISCRETIONARY ASSET MANAGERS IN ACCORDANCE WITH ARTICLE 55 OF THE EXEMPTION REGULATION DFSA (VRIJSTELLINGSREGELING WFT), OR (II) ANOTHER EXCEPTION OR EXEMPTION TO THE REQUIREMENT TO PUBLISH AN APPROVED PROSPECTUS AS STATED IN THE DUTCH FINANCIAL SUPERVISION ACT (*WET OP HET FINANCIEEL TOEZICHT*, "**FSA**") APPLIES TO THE OFFER AND A STANDARD WARNING IS DISCLOSED AS REQUIRED BY ARTICLE 5:20(5) OR 5:5(2) FSA, IF APPLICABLE, PROVIDED, IN EACH CASE, THAT NO SUCH OFFER OF THE NOTES SHALL REQUIRE THE ISSUER OR THE INITIAL PURCHASERS TO PUBLISH A PROSPECTUS PURSUANT TO ARTICLE 3 OF THE PROSPECTUS DIRECTIVE OR SUPPLEMENT A PROSPECTUS PURSUANT TO ARTICLE 16 OF THE PROSPECTUS DIRECTIVE. FOR THE PURPOSE OF THIS AND THE ABOVE PARAGRAPH, THE EXPRESSION "PROSPECTUS DIRECTIVE" MEANS DIRECTIVE 2003/71/EC, AS AMENDED AND IMPLEMENTED IN NETHERLANDS LAW.

NOTICE TO RESIDENTS OF NEW ZEALAND

THE NOTES WILL NOT BE THE SUBJECT OF A REGULATED OFFER FOR THE PURPOSES OF THE FINANCIAL MARKETS CONDUCT ACT 2013 OF NEW ZEALAND ("**FMCA**") AND, ACCORDINGLY, NO PRODUCT DISCLOSURE STATEMENT HAS BEEN PREPARED OR WILL BE AVAILABLE IN RESPECT OF THE NOTES.

THE NOTES MAY NOT BE OFFERED, SOLD OR DELIVERED, NOR MAY THIS OFFERING CIRCULAR SUPPLEMENT, THE OFFERING CIRCULAR OR THE INFORMATION CONTAINED THEREIN IN RELATION TO THE NOTES BE DISTRIBUTED, IN NEW ZEALAND OTHER THAN TO A PERSON WHO IS A "WHOLESALE INVESTOR" AS THAT TERM IS DEFINED IN CLAUSES 3(2)(a), (c) AND (d) OF SCHEDULE 1 OF THE FMCA, BEING A PERSON WHO IS:

(A) AN "INVESTMENT BUSINESS";

(B) "LARGE"; OR

(C) A "GOVERNMENT AGENCY",

IN EACH CASE AS DEFINED IN SCHEDULE 1 OF THE FMCA.

NOTICE TO RESIDENTS OF NORWAY

THE OFFERING OF THE NOTES IS NOT SUBJECT TO THE PUBLIC OFFERING RULES OF THE SECURITIES TRADING ACT. NO ACTION HAS OR WILL BE TAKEN FOR THE OFFERING OF THE NOTES TO BE REGISTERED UNDER THE PUBLIC OFFERING RULES OF THE SECURITIES TRADING ACT CHAPTER 7 CF. THE SECURITIES TRADING REGUATIONS CHAPTER 7, AS THE NOTES WILL NOT BE LISTED ON A NORWEGIAN REGULATED MARKET AND THE MINIMUM SUBSCRIPTION PER INVESTOR OF THE NOTES OFFERED IS ABOVE THE EQUIVALENT OF EUR100,000. THE NOTES HAVE NOT BEEN NOR WILL BE REGISTERED OR APPROVED BY THE FINANCIAL SUPERVISORY AUTHORITY OF NORWAY (*FINANSTILSYNET*) AND, THUS, ARE NOT UNDER PUBLIC SUPERVISION IN NORWAY. THE ISSUER IS NOT UNDER PUBLIC SUPERVISION IN NORWAY. THIS CIRCULAR MUST NOT BE COPIED OR OTHERWISE DISTRIBUTED BY THE ADDRESSEE.

NOTICE TO RESIDENTS OF PORTUGAL

THE ISSUER HAS REPRESENTED AND AGREED THAT THE NOTES HAVE NOT AND WILL NOT BE OFFERED, SOLD OR DISTRIBUTED, DIRECTLY OR INDIRECTLY, TO THE PUBLIC IN PORTUGAL AND THAT IT HAS NOT DISTRIBUTED OR CAUSED TO BE DISTRIBUTED AND SHALL NOT DISTRIBUTE OR CAUSE TO BE DISTRIBUTED TO THE PUBLIC IN PORTUGAL OR IN CIRCUMSTANCES WHICH CONSTITUTE AN OFFER TO THE PUBLIC ACCORDING TO ARTICLE 109 OF THE PORTUGUESE SECURITIES CODE, THIS CIRCULAR OR ANY OTHER OFFERING MATERIAL RELATING TO THE NOTES, AND THAT SUCH OFFERS, SALES AND DISTRIBUTIONS HAVE BEEN AND SHALL ONLY BE MADE IN PORTUGAL, IN A PRIVATE PLACEMENT, TO QUALIFIED INVESTORS, ALL AS DEFINED IN THE PORTUGUESE SECURITIES CODE.

THIS CIRCULAR IS PERSONAL TO EACH PROSPECTIVE INVESTOR AND DOES NOT CONSTITUTE AN OFFER TO ANY OTHER PERSON. IT MAY ONLY BE USED BY THOSE PERSONS TO WHOM IT HAS BEEN HANDED OUT IN CONNECTION WITH THE ISSUE OF THE NOTES DESCRIBED HEREIN AND MAY NEITHER DIRECTLY NOR INDIRECTLY BE DISTRIBUTED OR MADE AVAILABLE TO OTHER PERSONS WITHOUT THE EXPRESS CONSENT OF THE ISSUER.

NOTICE TO RESIDENTS OF SINGAPORE

THIS CIRCULAR HAS NOT BEEN REGISTERED AS A PROSPECTUS WITH THE MONETARY AUTHORITY OF SINGAPORE. ACCORDINGLY, THIS CIRCULAR AND ANY OTHER DOCUMENT OR MATERIAL IN CONNECTION WITH THE OFFER OR SALE, OR INVITATION FOR SUBSCRIPTION OR PURCHASE, OF THE NOTES MAY NOT BE CIRCULATED OR DISTRIBUTED, NOR MAY THE NOTES BE OFFERED OR SOLD, OR BE MADE THE SUBJECT OF AN INVITATION FOR SUBSCRIPTION OR PURCHASE, WHETHER DIRECTLY OR INDIRECTLY, TO PERSONS IN SINGAPORE OTHER THAN (I) TO AN INSTITUTIONAL INVESTOR UNDER SECTION 274 OF THE SECURITIES AND FUTURES ACT, CHAPTER 289 OF SINGAPORE (THE "**SFA**"), (II) TO A RELEVANT PERSON PURSUANT TO SECTION 275(1), OR ANY PERSON PURSUANT TO SECTION 275(1A), AND IN ACCORDANCE WITH THE CONDITIONS SPECIFIED IN SECTION 275, OF THE SFA, OR (III) OTHERWISE PURSUANT TO, AND IN ACCORDANCE WITH THE CONDITIONS OF, ANY OTHER APPLICABLE PROVISION OF THE SFA.

WHERE THE NOTES ARE SUBSCRIBED OR PURCHASED UNDER SECTION 275 BY A RELEVANT PERSON WHICH IS:

(I) A CORPORATION (WHICH IS NOT AN ACCREDITED INVESTOR (AS DEFINED IN SECTION 4A OF THE SFA)) THE SOLE BUSINESS OF WHICH IS TO HOLD

INVESTMENTS AND THE ENTIRE SHARE CAPITAL OF WHICH IS OWNED BY ONE OR MORE INDIVIDUALS, EACH OF WHOM IS AN ACCREDITED INVESTOR; OR

(II) A TRUST (WHERE THE TRUSTEE IS NOT AN ACCREDITED INVESTOR) WHOSE SOLE PURPOSE IS TO HOLD INVESTMENTS AND EACH BENEFICIARY OF THE TRUST IS AN INDIVIDUAL WHO IS AN ACCREDITED INVESTOR,

SECURITIES (AS DEFINED IN SECTION 239(1) OF THE SFA) OF THAT CORPORATION OR THE BENEFICIARIES' RIGHTS AND INTEREST (HOWSOEVER DESCRIBED) IN THAT TRUST SHALL NOT BE TRANSFERRED WITHIN SIX (6) MONTHS AFTER THAT CORPORATION OR THAT TRUST HAS ACQUIRED THE NOTES PURSUANT TO AN OFFER MADE UNDER SECTION 275 EXCEPT:

(I) TO AN INSTITUTIONAL INVESTOR OR TO A RELEVANT PERSON DEFINED IN SECTION 275(2) OF THE SFA, OR TO ANY PERSON WHERE THE TRANSFER ARISES FROM AN OFFER REFERRED TO IN SECTION 275(1A) OR SECTION 276(4)(I)(B) OF THE SFA;

(II) WHERE NO CONSIDERATION IS OR WILL BE GIVEN FOR THE TRANSFER;

(III) WHERE THE TRANSFER IS BY OPERATION OF LAW;

(IV) AS SPECIFIED IN SECTION 276(7) OF THE SFA; OR

(V) AS SPECIFIED IN REGULATION 32 OF THE SECURITIES AND FUTURES (OFFERS OF INVESTMENTS) (SHARES AND DEBENTURES) REGULATIONS 2005 OF SINGAPORE.

NOTICE TO RESIDENTS OF SPAIN

THE SALE OF THE NOTES TO WHICH THIS CIRCULAR REFERS HAS NOT BEEN REGISTERED WITH THE SPANISH NATIONAL SECURITIES MARKET COMMISSION ("*COMISIÓN NACIONAL DEL MERCADO DE VALORES*") PURSUANT TO SPANISH LAWS AND REGULATIONS AND DOES NOT FORM PART OF ANY PUBLIC OFFER OF SUCH SECURITIES IN SPAIN. ACCORDINGLY, THE NOTES MAY NOT BE, AND/OR ARE NOT INTENDED TO BE PUBLICLY OFFERED, MARKETED OR PROMOTED, NOR ANY PUBLIC OFFER IN RESPECT THEREOF MADE, IN SPAIN, NOR MAY THIS CIRCULAR OR ANY OTHER OFFERING MATERIALS RELATING TO THE OFFER OF THE NOTES BE DISTRIBUTED, IN THE KINGDOM OF SPAIN, BY THE ISSUER, THE INITIAL PURCHASERS OR ANY OTHER PERSON ON THEIR BEHALF, EXCEPT IN CIRCUMSTANCES WHICH DO NOT CONSTITUTE A PUBLIC OFFERING AND MARKETING IN SPAIN WITHIN THE MEANING OF ARTICLE 35 OF THE SPANISH SECURITIES MARKET LAW OF 28 JULY 1988 (*LEY 24/1988, DE 28 DE JULIO, DEL MERCADO DE VALORES*), AS AMENDED AND RESTATED, AND SUPPLEMENTAL RULES ENACTED THEREUNDER.

NOTICE TO RESIDENTS OF SWEDEN

THIS DOCUMENT HAS NOT BEEN NOR WILL IT BE REGISTERED WITH OR APPROVED BY FINANSINSPEKTIONEN (THE SWEDISH FINANCIAL SUPERVISORY AUTHORITY) UNDER THE SWEDISH FINANCIAL INSTRUMENTS TRADING ACT (1991:980). FURTHER, THE OFFER IS ONLY DIRECTED TO QUALIFIED INVESTORS AS DEFINED BY THE SWEDISH FINANCIAL INSTRUMENTS TRADING ACT. ACCORDINGLY, THIS DOCUMENT MAY NOT BE MADE AVAILABLE, NOR MAY THE NOTES OFFERED HEREUNDER BE MARKETED AND OFFERED FOR SALE IN SWEDEN, OTHER THAN UNDER CIRCUMSTANCES WHICH ARE DEEMED NOT TO REQUIRE A PROSPECTUS UNDER THE SWEDISH FINANCIAL INSTRUMENTS TRADING ACT.

PROSPECTIVE INVESTORS SHOULD NOT CONSTRUE THE CONTENTS OF THIS DOCUMENT AS LEGAL OR TAX ADVICE. THIS DOCUMENT HAS BEEN PREPARED FOR MARKETING PURPOSES ONLY AND DOES NOT CONSTITUTE INVESTMENT ADVICE.

NOTICE TO RESIDENTS OF SWITZERLAND

THIS CIRCULAR AND ANY OTHER MATERIAL RELATING TO THE NOTES WHICH ARE THE SUBJECT OF THE OFFERING CONTEMPLATED BY THIS CIRCULAR ARE NOT INTENDED TO CONSTITUTE AN OFFER OR SOLICITATION TO PURCHASE OR INVEST IN THE NOTES DESCRIBED HEREIN. THE NOTES MAY NOT BE PUBLICLY OFFERED, SOLD OR ADVERTISED, DIRECTLY OR INDIRECTLY, IN, INTO OR FROM SWITZERLAND AND WILL NOT BE LISTED ON THE SIX SWISS EXCHANGE OR ON ANY OTHER EXCHANGE OR REGULATED TRADING FACILITY IN SWITZERLAND. NEITHER THIS CIRCULAR NOR ANY OTHER MATERIAL RELATING TO THE NOTES CONSTITUTES A PROSPECTUS WITHIN THE MEANING OF ARTICLES 652A AND 1156 OF THE SWISS CODE OF OBLIGATIONS OR A LISTING PROSPECTUS WITHIN THE MEANING OF THE LISTING RULES OF THE SIX SWISS EXCHANGE OR ANY OTHER REGULATED TRADING FACILITY IN SWITZERLAND, AND NEITHER THIS CIRCULAR NOR ANY OTHER MATERIAL RELATING TO THE NOTES MAY BE PUBLICLY DISTRIBUTED OR OTHERWISE MADE PUBLICLY AVAILABLE IN SWITZERLAND.

THE NOTES REFERRED TO IN THIS CIRCULAR ARE NOT COLLECTIVE INVESTMENT SCHEMES AND CONSEQUENTLY ARE NOT SUBJECT TO ANY INVESTMENT FUND SUPERVISION IN SWITZERLAND. AS A RESULT, INVESTORS CANNOT CLAIM ANY PROTECTION UNDER THE SWISS FEDERAL ACT ON COLLECTIVE INVESTMENT SCHEMES OF JUNE 23, 2006 AS AMENDED ("**CISA**") AND THE CORRESPONDING COLLECTIVE INVESTMENT SCHEMES ORDINANCE AS AMENDED ("**CISO**").

THE ISSUER IS NOT SUBJECT TO THE SUPERVISION OF THE SWISS FINANCIAL MARKET SUPERVISORY AUTHORITY ("**FINMA**") AND THE DISTRIBUTION OF THE NOTES IN OR FROM SWITZERLAND HAS NOT BEEN AUTHORISED BY FINMA. ACCORDINGLY, THE DISTRIBUTION OF THE NOTES WILL BE EXCLUSIVELY MADE TO, AND DIRECTED AT, QUALIFIED INVESTORS ("**QUALIFIED INVESTORS**"), AS DEFINED IN CISA AND CISO. NEITHER THIS CIRCULAR NOR ANY OTHER OFFERING MATERIALS RELATING TO THE NOTES MAY BE DISTRIBUTED OR MADE AVAILABLE IN OR FROM SWITZERLAND TO ANY PERSON OR ENTITY OTHER THAN QUALIFIED INVESTORS.

THIS CIRCULAR MAY NOT BE COPIED, REPRODUCED, DISTRIBUTED OR PASSED ON TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF THE ISSUER.

NOTICE TO RESIDENTS OF THE UNITED KINGDOM

IN THE UNITED KINGDOM, THE OFFERING CIRCULAR AND THIS OFFERING CIRCULAR SUPPLEMENT ARE ONLY BEING DISTRIBUTED TO, AND ARE ONLY DIRECTED AT PERSONS WHO (I) HAVE PROFESSIONAL EXPERIENCE IN MATTERS RELATING TO INVESTMENTS AND FALL WITHIN ARTICLE 19 ("INVESTMENT PROFESSIONALS") OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (FINANCIAL PROMOTIONS) ORDER 2005 (AS AMENDED) (THE "**ORDER**"); OR (II) ARE PERSONS FALLING WITHIN ARTICLE 49(2)(A) TO (D) ("HIGH NET WORTH COMPANIES, UNINCORPORATED ASSOCIATIONS, ETC.") OF THE ORDER; (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS "**RELEVANT PERSONS**"). THE NOTES ARE OFFERED ONLY TO RELEVANT PERSONS AND NO INVITATION, OFFER OR AGREEMENT TO SUBSCRIBE, PURCHASE OR OTHERWISE ACQUIRE THE NOTES MAY BE PROPOSED OR MADE TO PERSONS OTHER THAN RELEVANT PERSONS. ANY PERSON IN THE UNITED KINGDOM THAT IS NOT A RELEVANT PERSON SHOULD NOT ACT ON OR RELY ON THIS CIRCULAR OR ANY OF ITS CONTENTS.

THIS CIRCULAR IS NOT A PROSPECTUS FOR THE PURPOSES OF THE EUROPEAN UNION'S DIRECTIVE 2003/71/EC (AND ANY AMENDMENTS THERETO) AS IMPLEMENTED IN MEMBER STATES OF THE EUROPEAN ECONOMIC AREA.

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AIR accepts responsibility for the information contained in the AIR Expert Risk Analysis Reports (subject to the limitations and disclaimers in respect thereof set forth in this Circular, including, but not limited to, the sections entitled "*Disclaimer for AIR Expert Risk Analysis Reports*" on pages xxii through xxviii and "*Risk Factors*" on pages 51 to 84 hereof) and (subject to the limitations and disclaimers in respect thereof set forth in this Circular, including, but not limited to, the sections entitled "*Disclaimer for AIR Expert Risk Analysis Reports*" on pages xxii through xxviii and "*Risk Factors*" on pages 51 to 84 hereof) AIR has taken reasonable care and is of the belief that the AIR Expert Risk Analysis Reports are in accordance with the facts and is not aware of the omission of any major critical feature likely to affect the import of such information. The AIR Expert Risk Analysis Reports have been included in this Circular in the form and context in which they appears and AIR has consented to the inclusion of the AIR Expert Risk Analysis Reports in the form and context in which they are included in this Circular. Investors may have different views on the relative importance of a wide range of factors; consequently, AIR makes no representations about whether any particular information should or should not have been included herein. AIR has consented to the inclusion of the "*AIR Expert Risk Analysis*" attached hereto as Annex A, the "*AIR Expert Risk Analysis Results*" attached hereto as Annex B and the "*AIR Data File*" attached hereto as Annex C and the form and context in which it is included herein.

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THIS CIRCULAR DOES NOT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY SECURITY OTHER THAN THE NOTES, NOR DOES IT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY OF THE NOTES, TO ANY PERSON IN ANY JURISDICTION IN WHICH IT IS UNLAWFUL TO MAKE SUCH AN OFFER OR

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THIS CIRCULAR CONTAINS DESCRIPTIONS BELIEVED TO BE ACCURATE WITH RESPECT TO THE MATERIAL TERMS OF CERTAIN DOCUMENTS, BUT REFERENCE IS MADE TO THE ACTUAL DOCUMENTS, INCLUDING THE CONSTITUTION OF THE ISSUER AND THE FORMS OF THE CERTIFICATES REPRESENTING THE NOTES FOR COMPLETE INFORMATION WITH RESPECT THERETO, AND SUCH DESCRIPTIONS ARE QUALIFIED IN THEIR ENTIRETY BY SUCH REFERENCE. COPIES OF SUCH DOCUMENTS MAY BE OBTAINED UPON WRITTEN REQUEST TO THE ISSUER. SEE ALSO "*AVAILABLE INFORMATION*."

IN RELIANCE ON RULE 4.13(a)(3) ISSUED BY THE COMMODITY FUTURES TRADING COMMISSION ("**CFTC**") AND THE RELATED GUIDANCE ISSUED BY THE CFTC IN LETTER NO. 14-152, HORSESHOE ILS SERVICES UK LTD INTENDS TO FILE A NOTICE OF EXEMPTION FROM THE REQUIREMENT TO REGISTER AS A COMMODITY POOL OPERATOR ("**CPO**") WITH RESPECT TO THE ISSUER PURSUANT TO THE COMMODITY EXCHANGE ACT. THEREFORE, UNLIKE A REGISTERED CPO, HORSESHOE ILS SERVICES UK LTD WOULD NOT BE REQUIRED TO DELIVER A CFTC DISCLOSURE DOCUMENT TO PROSPECTIVE INVESTORS, NOR WOULD IT BE REQUIRED TO PROVIDE INVESTORS WITH CERTIFIED ANNUAL REPORTS THAT SATISFY THE REQUIREMENTS OF CFTC RULES APPLICABLE TO REGISTERED CPOs.

DISCLAIMER FOR AIR EXPERT RISK ANALYSIS REPORTS

AIR WORLDWIDE CORPORATION ("**AIR**") HAS PERFORMED, AND WILL PERFORM, CERTAIN STATISTICAL MODELING AND OTHER SERVICES, AS DESCRIBED IN THIS CIRCULAR, INCLUDING AS MODELING FIRM, CALCULATION AGENT AND RESET AGENT.

THE STATISTICAL DATA, MODELING AND EXPLANATIONS CONTAINED IN THE "**AIR EXPERT RISK ANALYSIS**" ATTACHED HERETO AS ANNEX A, THE "**AIR EXPERT RISK ANALYSIS RESULTS**" ATTACHED HERETO AS ANNEX B, THE AIR DATA FILE INFORMATION REFERRED TO IN ANNEX C AND ACCOMPANYING THIS CIRCULAR AND ANY ANALYSIS OR INFORMATION PROVIDED BY AIR IN CONNECTION WITH ANY RESET OR REPORTING AGENCY FAILURE EVENT, IF APPLICABLE (JOINTLY REFERRED TO HEREIN AS THE "**AIR EXPERT RISK ANALYSIS REPORTS**"), HAVE BEEN PREPARED BY AIR AS EXPERTS IN STATISTICAL MODELING AND THE ANALYSIS OF RISKS ASSOCIATED WITH NAMED STORMS, EARTHQUAKES AND EUROPE WINDSTORMS. INVESTORS ARE ADVISED THAT THE LOSS CALCULATIONS REPORTED IN THE AIR EXPERT RISK ANALYSIS REPORTS ARE BASED ON (I) VERSION 16.1 OF THE AIR HURRICANE MODEL FOR THE UNITED STATES (THE "**AIR HURRICANE MODEL FOR THE UNITED STATES**"), VERSION 3.1 OF THE AIR TROPICAL CYCLONE MODEL FOR HAWAII (THE "**AIR TROPICAL CYCLONE MODEL FOR HAWAII**"), AND VERSION 9.1 OF THE AIR TROPICAL CYCLONE MODEL FOR THE CARIBBEAN (THE "**AIR TROPICAL CYCLONE MODEL FOR THE CARIBBEAN**") (TOGETHER, THE "**AIR U.S. HURRICANE MODEL**"), EACH AS IMPLEMENTED IN TOUCHSTONE 6.0.4 AND CATRADER 20.2.0, (II) VERSION 10.2 OF THE AIR EARTHQUAKE MODEL FOR THE UNITED STATES AND CANADA (THE "**AIR EARTHQUAKE MODEL FOR THE UNITED STATES AND CANADA**"), VERSION 1.8 OF THE AIR EARTHQUAKE MODEL FOR ALASKA (THE "**AIR EARTHQUAKE MODEL FOR ALASKA**") VERSION 1.7 OF THE AIR EARTHQUAKE MODEL FOR HAWAII (THE "**AIR EARTHQUAKE MODEL FOR HAWAII**"), AND VERSION 2.0 OF THE AIR EARTHQUAKE MODEL FOR THE CARIBBEAN (THE "**AIR EARTHQUAKE MODEL FOR THE CARIBBEAN**") (TOGETHER, THE "**AIR EARTHQUAKE MODELS**"), EACH AS IMPLEMENTED IN TOUCHSTONE 6.0.4 AND CATRADER 20.2.0 AND (III) THE AIR EXTRATROPICAL CYCLONE MODEL FOR EUROPE VERSION 5.1 (THE "**AIR EUROPE WINDSTORM MODEL**"), AS IMPLEMENTED IN TOUCHSTONE 6.0.4 AND CATRADER 20.2.0, (EACH, AN "**AIR MODEL" AND COLLECTIVELY, THE "AIR MODELS**"). THE AIR

HURRICANE MODEL FOR THE UNITED STATES, THE AIR TROPICAL CYCLONE MODEL FOR THE CARIBBEAN AND THE AIR EARTHQUAKE MODEL FOR THE UNITED STATES AND CANADA WERE LAST UPDATED IN 2017, THE AIR TROPICAL CYCLONE MODEL FOR HAWAII WAS LAST UPDATED IN 2013, THE AIR EARTHQUAKE MODEL FOR ALASKA WAS LAST UPDATED IN 2002, THE AIR EARTHQUAKE MODEL FOR HAWAII WAS LAST UPDATED IN 2013, THE AIR EUROPE WINDSTORM MODEL WAS LAST UPDATED IN 2018.

THE LOSS CALCULATIONS REPORTED IN THE AIR EXPERT RISK ANALYSIS REPORTS ARE SUBJECT TO NUMEROUS ASSUMPTIONS, UNCERTAINTIES AND THE INHERENT LIMITATIONS OF ANY STATISTICAL ANALYSIS. ACTUAL LOSS EXPERIENCE IS INHERENTLY UNPREDICTABLE. INVESTORS ARE URGED TO READ CAREFULLY THE MATERIAL CONTAINED IN THE "*AIR EXPERT RISK ANALYSIS*" ATTACHED HERETO AS ANNEX A, THE "*AIR EXPERT RISK ANALYSIS RESULTS*" ATTACHED HERETO AS ANNEX B AND UNDER THE CAPTION "*RISK FACTORS*" FOR A MORE DETAILED DESCRIPTION OF SUCH ASSUMPTIONS, UNCERTAINTIES AND LIMITATIONS.

THE DATA AND METHODOLOGY DESCRIBED IN THE AIR EXPERT RISK ANALYSIS AND RISK ANALYSIS RESULTS REPORTS ARE PROVIDED "AS IS" WITHOUT WARRANTY OR ANY GUARANTY OF ANY KIND. THESE ANALYSES AND ESTIMATES ARE PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY AND ARE NOT INTENDED TO PROVIDE, NOR SHOULD THEY BE INTERPRETED AS PROVIDING, ANY FACTS REGARDING, OR ANY GUARANTY OR PREDICTION OR FORECAST OF, THE LIKELIHOOD THAT INVESTORS IN THE NOTES WILL RECEIVE PAYMENT THEREON. NOTWITHSTANDING THE ANALYSES, ESTIMATES AND ASSUMPTIONS SET FORTH IN THIS CIRCULAR, ONE OR MORE COVERED EVENTS COULD OCCUR AT ANY TIME DURING THE RISK PERIOD, RESULTING IN A FULL OR PARTIAL LOSS OF THE OUTSTANDING PRINCIPAL AMOUNT OF THE NOTES. ANY SUCH COVERED EVENT MAY HAVE CHARACTERISTICS SIMILAR TO OR DIFFERENT FROM THOSE OF SIMULATED EVENTS THAT DID NOT QUALIFY AS COVERED EVENTS IN THE AIR EXPERT RISK ANALYSIS REPORTS, OR CHARACTERISTICS NOT CONSIDERED IN THE AIR EXPERT RISK ANALYSIS REPORTS.

AIR DOES NOT REPRESENT INVESTORS IN THE NOTES OR THEIR INTERESTS IN ANY WAY. AIR DOES NOT SPONSOR, ENDORSE, OFFER OR PROMOTE THE NOTES, NOR DOES IT MAKE ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, REGARDING THE ADVISABILITY OF INVESTING IN THE NOTES OR THE LEGALITY OF AN INVESTMENT IN THE NOTES. AIR IS NOT RESPONSIBLE FOR AND HAS NOT PARTICIPATED IN THE DETERMINATION OF THE STRUCTURE OR PRICING OF THE NOTES. FURTHERMORE, AIR HAS NO OBLIGATION OR LIABILITY IN CONNECTION WITH THE ADMINISTRATION OR MARKETING OR TRADING, IF ANY, OF THE NOTES OR LIABILITY FOR ANY ADVERSE FINANCIAL RESULT OR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES WHATSOEVER. AIR MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SET FORTH IN THIS CIRCULAR, INCLUDING THE AIR EXPERT RISK ANALYSIS REPORTS. FURTHER, AIR ASSUMES NO RESPONSIBILITY FOR THE CONTENT OF ANY AGREEMENTS TO WHICH IT IS NOT A SIGNATORY, AND IN PARTICULAR, BUT NOT BY WAY OF LIMITATION, HAS NO RESPONSIBILITY FOR ASSURING THAT THE PROCEDURES AND PROVISIONS OF ANY SUCH AGREEMENTS ARE CONSISTENT WITH THIS DOCUMENT OR WITH ANY OTHER AGREEMENT EXECUTED IN CONNECTION WITH THIS TRANSACTION.

NO SCIENTIFIC CONSENSUS ON MODELS OR RISK PARAMETERS EXISTS. AIR ACKNOWLEDGES THAT OTHER CREDIBLE, PUBLISHED MODELS AND/OR RISK PARAMETERS, IF USED, COULD PRODUCE MATERIALLY DIFFERENT RESULTS. AIR ALSO HAS NOT VERIFIED THE AUTHENTICITY OR ACCURACY OF ALL THE ORIGINAL DATA IN THE HISTORICAL CATALOGS OR OTHER DATA SOURCES USED TO DEVELOP THE AIR MODELS. THE AIR MODELS DO NOT PREDICT THE PROBABILISTIC OCCURRENCE OF ANY NAMED STORM, EARTHQUAKE OR EUROPE WINDSTORM. INVESTORS SHOULD CONSULT THEIR OWN EXPERT ADVISORS, WHOSE CONCLUSIONS MAY DIFFER FROM THOSE OF AIR.

THE RESULTS OF AIR'S ANALYSIS SHOULD NOT BE VIEWED AS FACTS OR FORECASTS OF FUTURE COVERED EVENTS, OR OF PRINCIPAL REDUCTIONS OR PRINCIPAL INCREASES, AND SHOULD NOT BE RELIED UPON AS A REPRESENTATION OF THE FUTURE VALUE OF

THE NOTES. ACTUAL LOSS EXPERIENCE, INCLUDING THE FREQUENCY AND SEVERITY OF COVERED EVENTS, CAN DIFFER MATERIALLY FROM THAT GENERATED BY THE AIR MODELS. CERTAIN PROBABILISTIC LOSS DISTRIBUTIONS GENERATED BY AIR AND CERTAIN ADDITIONAL ANALYSES BY AIR ARE INCLUDED IN THE AIR EXPERT RISK ANALYSIS REPORTS. THESE LOSS DISTRIBUTIONS CONSTITUTE ESTIMATED LOSSES BASED ON ASSUMPTIONS RELATING TO ENVIRONMENTAL, DEMOGRAPHIC, AND COST FACTORS, MANY OF WHICH REPRESENT SUBJECTIVE JUDGMENTS, ARE INHERENTLY UNCERTAIN, AND ARE BEYOND THE CONTROL OF AIR, AND ANY ONE OF WHICH ALONE CAN CAUSE THE ACTUAL LOSS ULTIMATELY SUSTAINED WITH RESPECT TO A COVERED EVENT TO BE SIGNIFICANTLY DIFFERENT FROM THE RELEVANT ESTIMATED EVENT INDEX VALUE, RESULTING IN SIGNIFICANTLY DIFFERENT LOSSES SUSTAINED BY THE NOTES FROM SUCH COVERED EVENT.

FURTHERMORE, CONSIDERABLE UNCERTAINTY EXISTS IN THE AIR MODELS AND THE PARAMETERS USED IN THE AIR EXPERT RISK ANALYSIS REPORTS ARISING FROM INSUFFICIENT DATA, LIMITED SCIENTIFIC KNOWLEDGE AND ALTERNATIVE EMPIRICAL RELATIONSHIPS, AS WELL AS FROM THE RANDOM NATURE OF NAMED STORMS, EARTHQUAKES AND EUROPE WINDSTORMS. THE AIR MODELS CANNOT INCORPORATE ALL SOURCES OF UNCERTAINTY. FURTHERMORE, THE ASSUMPTIONS AND METHODOLOGIES USED BY AIR DO NOT CONSTITUTE THE EXCLUSIVE SET OF REASONABLE ASSUMPTIONS AND MAY NOT BE CORRECT. USE OF ALTERNATIVE ASSUMPTIONS AND/OR MODELS COULD YIELD RESULTS MATERIALLY DIFFERENT THAN THOSE PRODUCED BY AIR. AIR DID NOT ELICIT FROM OTHER EXPERTS ALTERNATIVE INTERPRETATIONS OF ITS DATA OR METHODS, NOR DID AIR RESEARCH ALL POTENTIALLY AVAILABLE INTERPRETATIONS OF SUCH DATA AND METHODS ON THE BASIS THAT AIR CONSIDERED ITS OWN INTERPRETATIONS TO BE MORE RELIABLE.

WITH RESPECT TO NAMED STORMS IMPACTING THE UNITED STATES (WITH THE EXCEPTION OF HAWAII), THE LOSSES ESTIMATED IN THE AIR EXPERT RISK ANALYSIS REPORTS WERE (AND IN SOME CASES WILL BE) CALCULATED USING THE AIR MODELS, WHICH DO NOT MODEL THE PROBABILITY OF LOSSES RESULTING FROM (I) TROPICAL STORMS THAT AT NO POINT ARE CLASSIFIED AS A HURRICANE OR (II) HURRICANES THAT DEGRADE TO TROPICAL STORM FORCE AND SUBSEQUENTLY MAKE LANDFALL IN THE UNITED STATES AS A TROPICAL STORM OR, FOR STORMS THAT NEVER MAKE LANDFALL IN THE UNITED STATES, THAT FAIL TO CAUSE WINDS OF GREATER THAN OR EQUAL TO 40 MILES PER HOUR OVER ANY POINT IN THE UNITED STATES WHILE CAUSING WINDS OF GREATER THAN OR EQUAL TO 74 MILES PER HOUR OFFSHORE, AS DESCRIBED IN THE "*AIR EXPERT RISK ANALYSIS*" ATTACHED HERETO AS ANNEX A, EVEN THOUGH SUCH EVENTS ARE INCLUDED IN THE DEFINITION OF "NAMED STORM." ACCORDINGLY, THE ACTUAL FREQUENCY AND SEVERITY OF NAMED STORMS COULD DIFFER MATERIALLY FROM THE FREQUENCY AND SEVERITY ESTIMATED BY AIR.

WITH RESPECT TO NAMED STORMS IMPACTING HAWAII AND THE CARIBBEAN REGION, WHICH INCLUDES PUERTO RICO AND THE U.S. VIRGIN ISLANDS, THE LOSSES ESTIMATED IN THE AIR EXPERT RISK ANALYSIS REPORTS WERE (AND IN SOME CASES WILL BE) CALCULATED USING THE AIR MODELS, WHICH DO MODEL THE PROBABILITY OF LOSSES RESULTING FROM (I) HURRICANES AND (II) TROPICAL STORMS. THE ACTUAL FREQUENCY AND SEVERITY OF NAMED STORMS COULD DIFFER MATERIALLY FROM THE FREQUENCY AND SEVERITY ESTIMATED BY AIR.

MODELING INDUSTRY INSURED PROPERTY LOSSES RESULTING FROM NAMED STORMS, EARTHQUAKES AND EUROPE WINDSTORMS IS AN INHERENTLY SUBJECTIVE AND IMPRECISE PROCESS, INVOLVING AN ASSESSMENT OF INFORMATION THAT COMES FROM A NUMBER OF SOURCES THAT MAY NOT BE COMPLETE OR ACCURATE. NO MODEL OF CATASTROPHIC EVENTS IS, OR COULD BE, AN EXACT REPRESENTATION OF REALITY. THE AIR MODELS RELY ON VARIOUS METHODOLOGIES AND ASSUMPTIONS (INCLUDING ASSUMPTIONS ABOUT THE AUTHENTICITY, ACCURACY AND COMPLETENESS OF HISTORICAL DATA), SOME OF WHICH ARE SUBJECTIVE AND SUBJECT TO UNCERTAINTY, AND WHICH MIGHT NOT BE USED IN MODELS PROVIDED BY OTHER MODELING FIRMS. FURTHERMORE, THERE MAY BE DIFFERENCES IN THE WAY IN WHICH THESE ELEMENTS ARE CONSIDERED BY OTHER MODELING FIRMS. CONSEQUENTLY, THERE CAN BE NO

ASSURANCE THAT THE AIR MODELS WILL PROVE TO BE AN ACCURATE ESTIMATION OF THE RISK OF LOSS OR A REDUCTION OF THE PRINCIPAL OF, OR INTEREST ON, THE NOTES. ACCORDINGLY, THE EXPECTED LOSS ESTIMATES AND RELATED PROBABILITIES PRODUCED BY THE AIR MODELS ARE THEMSELVES SUBJECT TO UNCERTAINTY. AIR REVIEWS MODEL ASSUMPTIONS FROM TIME TO TIME IN VIEW OF NEW DATA AND OTHER INFORMATION TO REFINE AND MODIFY ITS MODELS AS SUCH INFORMATION BECOMES AVAILABLE. FURTHERMORE, TO THE EXTENT THAT AIR BECOMES AWARE OF ISSUES EITHER IN ITS MODELS OR IN THE SOFTWARE EXPRESSION OF SUCH MODELS WHICH MAY AFFECT THEIR OUTPUT IN UNINTENDED WAYS, IT MAY, DEPENDING ON THE MATERIALITY OF THE ISSUES, COMMUNICATE SUCH ISSUES TO ITS LICENSEES AND REUSE THEM IN SUBSEQUENT VERSIONS OF ITS MODELS. AS SUCH, THE AIR MODELS MAY NOT NECESSARILY REFLECT THE MOST CURRENT NAMED STORM, EARTHQUAKE OR EUROPE WINDSTORM MODEL OF AIR AT ANY TIME. ESTIMATES GENERATED BY SUCH REFINED OR MODIFIED MODELS MAY DIFFER MATERIALLY FROM THE ESTIMATES GENERATED BY THE AIR MODELS, AND THE USE OF SUCH MODELS IN LIEU OF THE AIR MODELS MIGHT SIMILARLY ALTER MATERIALLY THE INFORMATION PROVIDED IN THE AIR EXPERT RISK ANALYSIS REPORTS.

AIR MODELED INDUSTRY INSURANCE LOSSES ACROSS ALL SIMULATED LINES OF BUSINESS ARE USED AS A PROXY FOR POTENTIAL LOSS AMOUNTS; HOWEVER, DIFFERENCES BETWEEN AIR MODELED INDUSTRY INSURANCE LOSSES AND LOSS AMOUNTS ESTIMATED BY A REPORTING AGENCY OR, IF APPLICABLE, A FALL-BACK DATA PROVIDER CAN ARISE DUE TO LIMITATIONS RELATING TO THE AIR MODELS AND THE FACT THAT SOME LOSSES INCLUDED IN THE REPORTING AGENCY ESTIMATES ARE NOT ACCOUNTED FOR IN THE AIR MODELS. SUCH UNMODELED LOSSES INCLUDE, BUT ARE NOT LIMITED TO, TROPICAL CYCLONES FORMED WITHIN THE PACIFIC BASIN (OTHER THAN THOSE AFFECTING HAWAII) OR NAMED STORMS AFFECTING AREAS OUTSIDE OF ALABAMA, ARKANSAS, CONNECTICUT, DELAWARE, WASHINGTON DC, FLORIDA, GEORGIA, ILLINOIS, INDIANA, KENTUCKY, LOUISIANA, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, MISSOURI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, OHIO, OKLAHOMA, PENNSYLVANIA, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, TEXAS, VERMONT, VIRGINIA, AND WEST VIRGINIA; FIRE FOLLOWING EARTHQUAKES IN ALASKA AND HAWAII; STORM SURGE IN HAWAII; TSUNAMI IN THE UNITED STATES; INDUCED SEISMIC EVENTS (INCLUDING EVENTS CAUSED BY HUMAN ACTIVITY SUCH AS UNDERGROUND INJECTION OF WASTEWATER); LOSS ADJUSTMENT EXPENSES, DEMOLITION AND DEBRIS REMOVAL, INLAND MARINE LOSSES, CERTAIN FLOOD LOSSES, HAZARDOUS WASTE CLEAN-UP, MOLD LOSSES, STRIKES, RIOTS OR CIVIL COMMOTION, INDIRECT BUSINESS INTERRUPTION LOSSES AND LOSSES RESULTING FROM SPRINKLER LEAKAGE AS A RESULT OF NAMED STORMS, EARTHQUAKES, OR EUROPE WINDSTORMS.

IN ADDITION, THE AIR MODELS REFLECT USE OF A FUNCTION TO ACCOUNT FOR THE EFFECTS OF TEMPORARY INFLATION THAT CAN RESULT FROM INCREASED DEMAND FOR MATERIALS AND SERVICES TO REPAIR AND REBUILD DAMAGED PROPERTY AFTER A CATASTROPHIC EVENT. THIS DEMAND SURGE (AS DEFINED IN THE "*AIR EXPERT RISK ANALYSIS*" ATTACHED HERETO AS ANNEX A) FUNCTION IS CALCULATED BASED ON VERY FEW HISTORICAL DATA POINTS AND IS ALSO HIGHLY SUBJECTIVE. AS A RESULT, THE LOSS ESTIMATES PRESENTED IN THE AIR EXPERT RISK ANALYSIS REPORTS MAY UNDERSTATE OR OVERSTATE THE IMPACT OF DEMAND SURGE ON LOSSES, POSSIBLY MATERIALLY.

THE PROBABILITIES GENERATED BY THE AIR MODELS ARE NOT NECESSARILY PREDICTIVE OF FUTURE NAMED STORMS, EARTHQUAKES, OR EUROPE WINDSTORMS. INVESTORS IN THE NOTES SHOULD NOT VIEW THE EXPECTED LOSS ESTIMATES AND RELATED PROBABILITIES GENERATED BY THE AIR MODELS AS NECESSARILY PREDICTING THE LIKELIHOOD OF THE OCCURRENCE DURING THE RISK PERIOD OF ONE OR MORE LOSS EVENTS RESULTING IN A REDUCTION OF THE PRINCIPAL OF, AND INTEREST ON, THE NOTES. AIR HAS NOT MADE ANY EFFORT, NOR DOES IT HAVE THE ABILITY TO PREDICT, NAMED STORMS, EARTHQUAKES, OR EUROPE WINDSTORMS AFFECTING THE APPLICABLE COVERED AREA DURING THE RISK PERIOD. ACCORDINGLY,

THE ACTUAL FREQUENCY AND SEVERITY OF COVERED EVENTS COULD DIFFER MATERIALLY FROM THE FREQUENCY AND SEVERITY ESTIMATED BY AIR.

NONE OF THE ISSUER, THE RISK TRANSFEROR, THE INITIAL PURCHASERS, THE TRUSTEE, OR ANY OF THEIR RESPECTIVE AFFILIATES OR REPRESENTATIVES, OR ANY OF THEIR RESPECTIVE DIRECTORS OR OFFICERS, HAS REVIEWED, OR MAKES, OR SHALL BE DEEMED TO MAKE, ANY REPRESENTATION WITH RESPECT TO THE AIR EXPERT RISK ANALYSIS REPORTS, INCLUDING, WITHOUT LIMITATION, THE ADEQUACY, COMPLETENESS, APPROPRIATENESS OR OTHERWISE, OF THE AIR EXPERT RISK ANALYSIS REPORTS. THE "*AIR EXPERT RISK ANALYSIS*" ATTACHED HERETO AS ANNEX A, THE "*AIR EXPERT RISK ANALYSIS RESULTS*" ATTACHED HERETO AS ANNEX B AND THE AIR DATA FILE INFORMATION REFERRED TO IN ANNEX C AND ACCOMPANYING THIS CIRCULAR WHICH ARE INCLUDED HEREIN IN RELIANCE UPON AIR AS EXPERTS IN SUCH MATTERS. SEE "*EXPERTS*" SECTION IN THIS CIRCULAR. THE AIR EXPERT RISK ANALYSIS REPORTS ARE, AS NOTED ABOVE, BASED ON CERTAIN ASSUMPTIONS, JUDGMENTS, AND METHODOLOGIES OF AIR, A NUMBER OF WHICH ARE CONFIDENTIAL AND PROPRIETARY TO AIR.

WITHOUT INTENDING TO LIMIT THE FOREGOING, IN PARTICULAR, NONE OF THE ISSUER, THE RISK TRANSFEROR, THE INITIAL PURCHASERS, THE TRUSTEE OR ANY OF THEIR RESPECTIVE AFFILIATES OR REPRESENTATIVES, OR ANY OF THEIR DIRECTORS OR OFFICERS, HAS REVIEWED THE AIR EXPERT RISK ANALYSIS REPORTS TO DETERMINE (I) THE REASONABLENESS OF THE ASSUMPTIONS, JUDGMENTS AND METHODOLOGIES USED BY AIR, (II) WHETHER SUCH ASSUMPTIONS, JUDGMENTS AND METHODOLOGIES SHOULD BE SUPPLEMENTED IN ANY WAY THROUGH THE USE OF ALTERNATIVE ASSUMPTIONS, JUDGMENTS OR METHODOLOGIES, (III) WHETHER THE ASSUMPTIONS, JUDGMENTS AND METHODOLOGIES USED BY AIR INCLUDE ALL APPROPRIATE FACTORS THAT COULD CONTRIBUTE TO A PRINCIPAL REDUCTION AND (IV) WHETHER THE USE OF ALTERNATIVE ASSUMPTIONS, JUDGMENTS AND METHODOLOGIES, OR THE USE OF A DIFFERENT CATASTROPHE SIMULATION MODEL, COULD YIELD RESULTS MATERIALLY DIFFERENT FROM THOSE GENERATED BY THE AIR MODELS.

BECAUSE OF THE INHERENT LIMITATIONS OF RELYING ON THE AIR EXPERT RISK ANALYSIS REPORTS FOR LOSS ESTIMATION, AND BECAUSE OF THE SUBJECTIVE NATURE OF MANY OF AIR'S ASSUMPTIONS, JUDGMENTS AND METHODOLOGIES IN PREPARING THE AIR EXPERT RISK ANALYSIS REPORTS, EACH OF THE ISSUER, THE RISK TRANSFEROR, THE INITIAL PURCHASERS, THE TRUSTEE AND THEIR RESPECTIVE AFFILIATES AND REPRESENTATIVES EXPRESSLY DISCLAIMS ANY RESPONSIBILITY FOR, AND ANY LIABILITY BASED UPON, A FINDING THAT THE AIR EXPERT RISK ANALYSIS REPORTS INCLUDE ANY UNTRUE STATEMENT OF A MATERIAL FACT OR THAT THE AIR EXPERT RISK ANALYSIS REPORTS OMIT TO STATE A MATERIAL FACT NECESSARY IN ORDER TO MAKE THE STATEMENTS, IN LIGHT OF THE CIRCUMSTANCES UNDER WHICH THEY WERE MADE, NOT MISLEADING.

THE CALCULATION OF ANY LOSS PERIOD PAYMENT AMOUNT AND ANY RELATED PRINCIPAL REDUCTION OR PRINCIPAL INCREASE TO BE PERFORMED BY AIR IN ITS CAPACITY AS CALCULATION AGENT, INCLUDING UPON THE OCCURRENCE OF A REPORTING AGENCY FAILURE EVENT, WILL RESULT IN A FACTUAL DETERMINATION AS TO WHETHER AN ISSUER PAYMENT OR A NEGATIVE LOSS PAYMENT WILL BE DUE AND PAYABLE, AS WELL AS THE RELATED PRINCIPAL REDUCTION OR PRINCIPAL INCREASE. THE DETERMINATION WILL BE PERFORMED IN ACCORDANCE WITH THE METHODOLOGIES DESCRIBED IN THIS CIRCULAR AND AS SPECIFIED IN THE CALCULATION AGENT AGREEMENT. THE TERMS OF THE NOTES PROVIDE THAT ALL FACTUAL DETERMINATIONS MADE BY AIR AS CALCULATION AGENT ARE FINAL AND BINDING, ABSENT MANIFEST ERROR. NO SEPARATE REVIEW OR APPRAISAL OF THE ACCURACY OF THE DEFINED METHODOLOGIES OR DATA USED WILL BE PERFORMED. INVESTORS ARE ADVISED THAT THE CALCULATION OF AN ISSUER PAYMENT AND THE RELATED PRINCIPAL REDUCTION, AS WELL AS THE CALCULATION OF A NEGATIVE LOSS PAYMENT AND THE RELATED PRINCIPAL INCREASE, WILL BE FINAL, REGARDLESS OF ANY ACTUAL, POTENTIAL OR THEORETICAL DISCREPANCIES BETWEEN THE METHODOLOGIES USED BY THE CALCULATION AGENT AND ANY OTHER POSSIBLE

METHODOLOGIES FOR ASSESSING THE SAME FACTS OR ANY LOSSES WHICH ARE ACTUALLY EXPERIENCED IN REALITY AS A RESULT OF THE ASSOCIATED COVERED EVENT. THESE INHERENT LIMITATIONS ARE POTENTIALLY EXACERBATED BY THE POTENTIAL FOR UNRELIABLE DATA, OR THE UNAVAILABILITY OF DATA, FROM THE REPORTING AGENCY OR THE FALL-BACK DATA PROVIDER, IF APPLICABLE.

IN DETERMINING WHETHER ANY NAMED STORM, EARTHQUAKE OR EUROPE WINDSTORM OCCURRING DURING THE RISK PERIOD QUALIFIES AS A COVERED EVENT, THE CALCULATION AGENT WILL USE DATA OBTAINED FROM THE REPORTING AGENCY OR, IF APPLICABLE, THE RELEVANT FALL-BACK DATA PROVIDER. NEITHER THE APPLICABLE REPORTING AGENCY NOR ANY FALL-BACK DATA PROVIDER GIVES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, IN RELATION TO THE ACCURACY OR RELIABILITY OF THE DATA THAT IT PROVIDES. NEITHER THE ISSUER, THE RISK TRANSFEROR, THE INITIAL PURCHASERS, THE CALCULATION AGENT, NOR ANY PARTY TO THE BASIC DOCUMENTS WILL TAKE ANY ACTION TO VERIFY THE METHODOLOGY, ACCURACY, TECHNICAL DATA OR INSTRUMENTATION OF THE REPORTING AGENCY OR ANY FALL-BACK DATA PROVIDER. THE ISSUER, THE RISK TRANSFEROR, THE CALCULATION AGENT AND THE OTHER PARTIES TO THE BASIC DOCUMENTS DISCLAIM ANY AND ALL LIABILITY, INCLUDING ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM LOSSES DUE TO THE ERRORS, OMISSIONS, OR INACCURACIES IN THE DATA FROM THE REPORTING AGENCY OR ANY FALL-BACK DATA PROVIDER USED IN ANY CALCULATION OF ANY LOSS PERIOD PAYMENT AMOUNT AND THE RELATED PRINCIPAL REDUCTION(S) OR PRINCIPAL INCREASE(S).

THE DATA USED TO DETERMINE A LOSS TO INVESTORS MAY NOT BE THE FINAL DATA WITH REGARD TO ANY COVERED EVENT. CONSEQUENTLY, INVESTORS MAY SUFFER A PRINCIPAL REDUCTION (OR A REDUCED PRINCIPAL INCREASE) WITH RESPECT TO ONE OR MORE COVERED EVENTS FOR WHICH AN ISSUER PAYMENT MIGHT NOT HAVE BEEN PAYABLE OR A NEGATIVE LOSS PAYMENT MIGHT HAVE BEEN PAYABLE IF FINAL DATA FROM THE REPORTING AGENCY HAD BEEN PUBLISHED OR DELIVERED AT THE TIME OF THE LOSS PERIOD PAYMENT AMOUNT RESULTING FROM SUCH COVERED EVENT.

IN ADDITION, THE DATA AS REPORTED BY THE APPLICABLE REPORTING AGENCY OR, IF APPLICABLE, THE FALL-BACK DATA PROVIDER, IS SUBJECT TO CERTAIN MARGINS OF ERROR AS A RESULT OF THE DEGREE OF PRECISION AND THE METHODOLOGIES USED BY THE APPLICABLE REPORTING AGENCY OR SUCH FALL-BACK DATA PROVIDER. THERE IS AN INHERENT RISK THAT ANY LOSS PERIOD PAYMENT AND THE RELATED PRINCIPAL REDUCTION CALCULATED USING THE DATA WOULD HAVE BEEN SMALLER, OR THAT NO ISSUER PAYMENT AND PRINCIPAL REDUCTION WOULD HAVE OCCURRED AT ALL, HAD THE APPLICABLE REPORTING AGENCY OR FALL-BACK DATA PROVIDER USED MORE PRECISE OR DIFFERENT METHODOLOGIES. INVESTORS IN THE NOTES WILL HAVE NO RECOURSE TO THE ISSUER, THE RISK TRANSFEROR, THE CALCULATION AGENT, THE INITIAL PURCHASERS, THE APPLICABLE REPORTING AGENCY, ANY FALL-BACK DATA PROVIDER, ANY AGENTS OR AFFILIATES THEREOF OR ANY OTHER ENTITY SHOULD A PRINCIPAL REDUCTION OCCUR AS A RESULT OF THE APPLICATION OF THE PARAMETERS AS REPORTED BY THE APPLICABLE REPORTING AGENCY OR FALL-BACK DATA PROVIDER.

AIR PROVIDES CONSULTING SERVICES AND OTHER SERVICES TO THE INSURANCE INDUSTRY, INCLUDING THE RISK TRANSFEROR (INCLUDING IN RESPECT OF THIS OFFERING), THE INITIAL PURCHASERS AND THEIR RESPECTIVE AFFILIATES. AIR EXPECTS TO PROVIDE ADDITIONAL SERVICES FOR THE RISK TRANSFEROR, THE INITIAL PURCHASERS AND THEIR RESPECTIVE AFFILIATES FROM TIME TO TIME IN THE FUTURE. THE ISSUER HAS AGREED TO PAY THE FEES AND EXPENSES OF AIR FOR ITS SERVICES IN CONNECTION WITH THE NOTES, WHICH FEES WILL BE REIMBURSED TO THE ISSUER BY THE RISK TRANSFEROR PURSUANT TO THE RISK TRANSFER AGREEMENT. IN ADDITION, THE ISSUER AND THE RISK TRANSFEROR HAVE AGREED TO INDEMNIFY AIR FOR CERTAIN CLAIMS, LIABILITIES AND EXPENSES ARISING OUT OF SUCH SERVICES. AIR IS AN AFFILIATE OF PCS, WHICH IS ACTING AS AN REPORTING AGENCY.

AIR HAS PROVIDED ITS ANALYSES, EXPECTED LOSS ESTIMATES AND RELATED PROBABILITIES CONTAINED WITHIN THE AIR EXPERT RISK ANALYSIS REPORTS. NOTEHOLDERS WILL HAVE NO RIGHT TO ENFORCE OR TAKE ACTIONS AGAINST AIR OR ANY OTHER RIGHT UNDER THE CALCULATION AGENT AGREEMENT OR IN CONNECTION THEREWITH. THE ISSUER'S USE OF THE INFORMATION PROVIDED BY AIR, PARTICULARLY WITH REGARD TO ANY DISCLOSURE MADE OR OMITTED IN THIS CIRCULAR, IS COMPLETELY WITHIN THE ISSUER'S SOLE DISCRETION, AND NOT THE RESPONSIBILITY OF AIR.

DISCLAIMER FOR PCS ESTIMATES

ISO SERVICES, INC. AND ITS SUBSIDIARIES AND AFFILIATES ("ISO") AND THE PROPERTY CLAIM SERVICES DIVISION OF ISO ("**PCS**") ARE NOT RESPONSIBLE FOR AND HAVE NOT PARTICIPATED IN CREATING, OFFERING OR SELLING THE NOTES OR THE DETERMINATION OF THE TIMING, QUANTITIES OR PRICES AT WHICH ANY NOTES WILL BE OFFERED OR. ISO AND PCS ARE NOT RESPONSIBLE FOR AND WILL NOT PARTICIPATE IN THE DETERMINATION OR CALCULATIONS USED FOR PURPOSES OF THE NOTES OR THE AMOUNT ULTIMATELY OWED UNDER THE NOTES. ISO AND PCS HAVE NOT REVIEWED OR APPROVED THE CIRCULAR OR ANY OTHER DOCUMENTS, MATERIALS OR INFORMATION PERTAINING TO THE NOTES AND ASSUME NO LIABILITY PERTAINING THERETO.

ISO AND PCS MAKE NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, TO OFFEREES, PURCHASERS OR NOTEHOLDERS REGARDING THE ADVISABILITY OF INVESTING IN SECURITIES GENERALLY OR THE NOTES IN PARTICULAR. ISO AND PCS DO NOT SPONSOR, ENDORSE, SELL OR PROMOTE ANY SECURITY NOR DOES PROVISION OF THE PCS ESTIMATES REFERENCE TO PCS' IDENTIFICATION OF A PARTICULAR EVENT AS A "CATASTROPHE" IN THIS CIRCULAR OR IN ANY CIRCULAR SUPPLEMENT IN ANY WAY SUGGEST OR IMPLY AN OPINION AS TO THE ATTRACTIVENESS OF INVESTMENT IN THE NOTES OR THAT ISO OR PCS HAS ASSUMED ANY OBLIGATION TO, OR RELATION OR AGENCY OR TRUST FOR OR WITH, THE ISSUER, THE RISK TRANSFEROR, THE INITIAL PURCHASERS, OR ANY OF THE OFFEREES, PURCHASERS, OWNERS OR NOTEHOLDERS.

NEITHER ISO, PCS, NOR PERSONS ACTING ON THEIR BEHALF, NOR PERSONS OR ENTITIES PROVIDING INFORMATION FOR USE IN PREPARING THE PCS ESTIMATES OR ANY OTHER ISO PROPERTY MAKE ANY WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE PCS ESTIMATES, THE MANNER OF ESTIMATING AND REPORTING SUCH ESTIMATES, ANY COMPONENT, COMBINATION, COMPILATION OR DERIVATIVE THEREOF OR ANY OTHER ISO PROPERTY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE.

PREPARING AN ESTIMATE OF THE INSURED LOSSES RESULTING FROM A CATASTROPHE IS AN INHERENTLY SUBJECTIVE AND IMPRECISE PROCESS, INVOLVING ASSESSMENT OF INFORMATION WHICH COMES FROM A NUMBER OF SOURCES AND WHICH MAY NOT BE COMPLETE OR ACCURATE. MOREOVER, THE INSURED LOSSES FOR CERTAIN CATASTROPHES MAY CONTINUE TO DEVELOP OVER PERIODS OF TIME WHICH EXCEED THE EXTENSION OR DEVELOPMENT PERIOD(S) EMPLOYED FOR THE NOTES. DUE TO A LACK OF INFORMATION AND UNCERTAINTY OR ERROR IN EXTRAPOLATING FROM REPORTED INFORMATION, PCS ESTIMATES OF INSURED LOSSES FROM CATASTROPHES MAY BE MATERIALLY DIFFERENT FROM ACTUAL LOSSES. IN ADDITION, THE ISSUER AND RISK TRANSFEROR WILL AGREE TO INDEMNIFY PCS FOR CERTAIN CLAIMS, LIABILITIES AND EXPENSES ARISING OUT OF THE PCS AGREEMENT AND PCS' ENGAGEMENT IN CONNECTION WITH THE NOTES. PCS IS AN AFFILIATE OF AIR, WHICH IS SERVING AS CALCULATION AGENT IN CONNECTION WITH THE NOTES.

NEITHER ISO, PCS, NOR PERSONS ACTING ON THEIR BEHALF, NOR PERSONS OR ENTITIES PROVIDING INFORMATION FOR USE IN PREPARING THE PCS ESTIMATES GUARANTEE THE ACCURACY AND/OR COMPLETENESS OF THE PCS ESTIMATES, ANY OTHER ISO PROPERTY OR ANY DATA INCLUDED OR REFLECTED THEREIN, OR MAKE ANY WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY ANY PERSON OR ANY ENTITY FROM THE USE OF THE PCS ESTIMATES, ANY OTHER ISO PROPERTY OR ANY COMPONENT,

COMBINATION, COMPILATION OR DERIVATIVE THEREOF FOR ANY PURPOSE OR USE. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL ISO OR PCS HAVE ANY LIABILITY TO ANY OFFEREE, PURCHASER OR HOLDER FOR LOSS OF INVESTMENT OR OTHER FINANCIAL INTEREST WITH RESPECT TO THE NOTES OR FOR ANY SPECIAL, PUNITIVE, INDIRECT OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFITS), INCLUDING ANY LIABILITIES UNDER FEDERAL OR STATE SECURITIES LAWS.

"ISO," "PROPERTY CLAIM SERVICES" AND "PCS" ARE TRADEMARKS OF ISO AND ITS AFFILIATES.

ANY INFORMATION PROVIDED TO A PURCHASER OR A PROSPECTIVE TRANSFEREE OF NOTES WHICH INCLUDES PCS ESTIMATES (INCLUDING INFORMATION AS TO INDUSTRY INSURED PROPERTY LOSSES) SHALL BE FOR THE SOLE PURPOSE OF ASSESSING THE INVESTMENT AND ALL SUCH INFORMATION IS AND SHALL REMAIN THE SOLE AND EXCLUSIVE PROPERTY OF ISO. AS A CONDITION OF ACCESS TO SUCH INFORMATION, EACH PURCHASER AGREES THAT NEITHER IT NOR ANY PROSPECTIVE TRANSFEREE MAY DISCLOSE ANY SUCH INFORMATION TO THIRD PARTIES OTHER THAN AS REQUIRED BY APPLICABLE LAW, INCLUDING U.S. FEDERAL AND U.S. STATE SECURITIES LAWS, NOR USE THE INFORMATION FOR ANY PURPOSE OTHER THAN INVESTMENT ANALYSIS.

DISCLAIMER FOR PERILS ESTIMATES

THE NOTES ARE NOT ISSUED, SPONSORED, ENDORSED, SOLD OR PROMOTED BY PERILS AG ("**PERILS**"). PERILS DOES NOT MAKE ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, TO PROSPECTIVE OWNERS OR HOLDERS OF THE NOTES OR ANY MEMBER OF THE PUBLIC REGARDING THE ADVISABILITY OF INVESTING IN THE NOTES. PERILS' ONLY RELATIONSHIP TO THE NOTES IS THE LICENSING OF CERTAIN TRADEMARKS AND TRADE NAMES OF PERILS AND OF THE PERILS INDEX AND PERILS EXPOSURE DATABASE, WHICH IS DETERMINED AND CALCULATED BY PERILS OR ITS AGENTS WITHOUT REGARD TO THE ISSUER OR THE NOTES. PERILS IS NOT RESPONSIBLE FOR, AND HAS NOT PARTICIPATED IN, THE ISSUANCE, THE DETERMINATION OF THE PRICES AND AMOUNT OF THE NOTES OR THE TIMING OF THE ISSUANCE OR SALE OF THE NOTES OR IN THE DETERMINATION OR CALCULATION OF ANY LOSS PAYMENT. FURTHERMORE, PERILS HAS NO OBLIGATION OR LIABILITY IN CONNECTION WITH THE NOTES, INCLUDING WITHOUT LIMITATION THE ISSUANCE, TRADING, MARKETING OR ADMINISTRATION OF THE NOTES.

PERILS DOES NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF THE PERILS INDEX AND PERILS EXPOSURE DATABASE OR ANY DATA INCLUDED THEREIN, AND PERILS SHALL HAVE NO LIABILITY FOR ANY ERRORS, OMISSIONS OR INTERRUPTIONS THEREIN. ESTIMATES SET FORTH BY ANOTHER METHOD FOR CALCULATING THE PERILS INDEX OR THE PERILS EXPOSURE DATABASE MAY MATERIALLY DIFFER FROM THE ESTIMATES SET FORTH IN THE PERILS INDEX OR THE PERILS EXPOSURE DATABASE IN CONNECTION WITH THE NOTES. HOWEVER, PERILS EXPRESSLY DISCLAIMS ANY OBLIGATION OR DUTY TO ADJUST THE PERILS INDEX OR ANY PRIOR VERSIONS OF THE PERILS INDEX OR THE PERILS EXPOSURE DATABASE. PERILS MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY THE ISSUER OF THE NOTES, THE OWNERS OF THE NOTES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE PERILS INDEX. PERILS MAKES NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE PERILS INDEX. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL PERILS HAVE ANY LIABILITY FOR ANY SPECIAL, PUNITIVE, INDIRECT, OR CONSEQUENTIAL DAMAGES OR LOST PROFITS, EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES OR LOST PROFITS.

AVAILABLE INFORMATION

The Issuer extends to each prospective purchaser the opportunity, prior to the consummation of the sale of the Notes, (i) to ask questions of, and receive answers from, the Issuer concerning the Issuer, the Notes and the terms and conditions of this Offering and (ii) to obtain any additional information such prospective purchaser may consider necessary in making an informed investment decision or in order to verify the information set forth herein, to the extent the Issuer possesses the same or can acquire such information without unreasonable effort or expense.

Prior to the consummation of sale of the Notes, the Issuer will make the following transaction documents available in draft form to prospective purchasers for review: (i) the Risk Transfer Agreement; (ii) the Trust Deed; (iii) the Custody Agreement; and (iv) the Calculation Agent Agreement (collectively, the "**Selected Transaction Documents**").

For as long as the Notes are listed on the Official List of Euronext Dublin and admitted to trading on the Global Exchange Market, the following documents will be made available in electronic format for inspection: (i) the memorandum and articles of association of the Issuer; and (ii) all reports, letters and other documents, valuation and statements prepared by any expert at the Issuer's request which is included in this Circular (the "**Listing Information**").

After the sale of the Notes and for so long as the Notes are outstanding, the Issuer will furnish to the Principal Paying Agent and make available, or cause to be made available, to Noteholders and prospective purchasers (who are permitted transferees) of the Notes final execution copies of the Selected Transaction Documents and the following information, within no more than four (4) Business Days from when such information has become available to the Issuer: (i) any Event Notice; (ii) any Event Report; (iii) following submission of an Event Notice in connection with a Named Storm, Earthquake, or Europe Windstorm, any Reporting Agency Report made available to the Issuer for such Named Storm, Earthquake or Europe Windstorm; (iv) any Reset Report and Variable Reset Notice, including the list of Updated Factors used in connection therewith; (v) notice of any Early Redemption Event or Optional Redemption Event; (vi) any Optional Extension Notice, including notice of any Partial Extension; (vii) any Optional Extension Discontinuation Notice; (viii) any Optional Extension Verification Report; (ix) any notice of a Reporting Agency Failure or Reporting Agency Failure Event; (x) any notice of a failure by the Fall-Back Data Provider to provide the information necessary for the Calculation Agent to render an Event Report with respect to a Named Storm Event, Earthquake Event or Europe Windstorm Event as applicable; (xi) notice of any Issuer Payment or Principal Reduction, including the amounts thereof; (xii) notice of any Negative Loss Payment or Principal Increase, including the amounts thereof; (xiii) any EBRD Put Notice; (xiv) any information relating to a downgrade of the EBRD (if any) that is made available to the Issuer; (xv) the nominal amount of the EBRD Notes, the applicable securities identification number (i.e., "ISIN" and/or "Common Code") for the EBRD Notes and the then-current Issuer rating of the EBRD by Standard & Poor's Credit Market Services Europe Limited; (xvi) notice of the EBRD Notes Issuance Date; (xvii) for any Money Market Fund Shares constituting a Permitted Investment for the Notes, if applicable, the name and ratings of the relevant Money Market Fund and the aggregate and per share market value of the fund, the ratings of the fund and most recent accrued dividend for such Money Market Fund Shares, all of which will be made available on a monthly basis to the extent such information is available to the Issuer; (xviii) any interest calculation notice provided by the Note Calculation Agent to the Issuer in connection with an Accrual Period; (xix) notice of any Event of Default under the Notes or the Trust Deed; (xx) any notice from the Risk Transferor or the Issuer terminating the Risk Transfer Agreement or declaring an event of default thereunder; (xxi) any notice of a failure by the Calculation Agent to perform its duties and obligations under the Calculation Agent Agreement; and (xxii) any supplemental information the Risk Transferor may, in its discretion, furnish to the Issuer for distribution to the Noteholders (each of the foregoing (i) to (xxii), together with the final execution copies of the Selected Transaction Documents and the Listing Information, the "**Available Information**").

With respect to the offering of the Notes, the Available Information and drafts of the Selected Transaction Documents (prior to the Issuance Date) will be made available to Noteholders and prospective purchasers (who are permitted transferees) of the Notes via a secured password protected online workspace internet site maintained by Horseshoe ILS Services UK Ltd (the "**Workspace Administrator**") on behalf of the Issuer with IntraLinks®, Inc. ("**IntraLinks**").

The Issuer is not subject to the informational requirements of the Exchange Act. The Issuer agrees that at any time while the Notes are outstanding, it will, upon request, furnish to the Noteholders or prospective

purchasers (who are permitted transferees) of the Notes the information required to be delivered pursuant to Rule 144A(d)(4) under the Securities Act (or any similar successor rule) to permit compliance with Rule 144A in connection with resales of the Notes ("**Rule 144A Information**").

In order to receive access to Available Information or Rule 144A Information, a Noteholder or prospective purchaser (who is a permitted transferee) of Notes must submit the Request for Access to Information Form attached to this Circular as Annex F (the "**Request for Access to Information Form**") to Atlas Capital UK 2019 PLC c/o Intertrust Corporate Services Limited, 35 Great St. Helen's, London, EC3A 6AP.

As a condition to access Available Information and Rule 144A Information, Noteholders and prospective purchasers must agree not to disclose any such information to third parties other than as required by applicable law, including U.S. federal and state securities laws or, in connection with the potential resale of Notes, to a prospective purchaser that is a permitted transferee. Any such information may not be used for any purpose other than an analysis of an investment in the Notes.

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TRANSACTION OVERVIEW

The following overview of the transaction is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this Circular. When a term is defined in this Circular, it is printed in bold-faced type. Certain capitalised terms used but not defined in this overview are used herein as defined elsewhere in this Circular. Annex G to this Circular includes an "Index of Defined Terms" that lists defined terms used herein and the page on which such terms are defined.

Prospective investors should consider carefully the information set forth under the caption "Risk Factors" in this Circular and all other information set forth in this Circular, including the annexes attached hereto, prior to making an investment in Notes.

THE OFFERING

Issuer; HoldCo	Atlas Capital UK 2019 PLC (the "**Issuer**") is an insurance special purpose vehicle incorporated under the Companies Act 2006 on 8 April 2019 with company number 11931846 and LEI 549300TJTLMYVJ4MEN80 and is licensed as a transformer vehicle under the laws of England and Wales. Atlas Capital UK Holdings 2019 Limited ("**HoldCo**") is a limited liability company incorporated in England and Wales under the Companies Act 2006. HoldCo was incorporated on 8 April 2019 with company number 11931539.
Notes Offered; Notes	USD 250,000,000 Series 2019-1 Principal At-Risk Variable Rate Notes due 7 June 2023 (the "**Notes**") issued by the Issuer, which will be exposed to Covered Events consisting of Named Storm Events affecting the Named Storm Covered Area, Earthquake Events affecting the Earthquake Covered Area and Europe Windstorm Events affecting the Europe Windstorm Covered Area on an annual aggregate basis during each Loss Period within the Risk Period. The Issuer is issuing the Notes to collateralise and fund its obligations under the Risk Transfer Agreement, as further described in this Circular.
Transaction Documents .	Transaction Documents shall refer to this Circular as well as the following documents entered into on or about the Issuance Date: (i) the **Risk Transfer Agreement**, to be entered into between the Issuer and the Risk Transferor; (ii) the **Trust Deed**, to be entered into between the Issuer, the Trustee, the Principal Paying Agent, the Account Bank, the Note Calculation Agent, the Custodian, the Registrar, the Transfer Agent, the Insurance Manager and the Risk Transferor; (iii) the **Deed of Charge**, to be entered into between the Issuer, the Trustee and the Risk Transferor; (iv) the **Agency Agreement**, to be entered into between the Issuer, the Trustee, the Principal Paying Agent, the Note Calculation Agent, the Registrar, the Transfer Agent and the Risk Transferor; (v) the **Custody Agreement**, to be entered into between the Issuer, the Trustee, the Custodian and the Risk Transferor; (vi) the **Account Bank Agreement**, to be entered into between the Issuer, the Trustee and the Account Bank; (vii) the **Calculation Agent Agreement**, to be entered into between the Issuer and the Calculation Agent;

(viii) the **Purchase Agreement**, to be entered into between the Issuer and the Initial Purchasers;

(ix) the **Escrow Agreement**, to be entered into between the Issuer, the Escrow Agent, and the Calculation Agent;

(x) the **PCS License Agreement**, to be entered into between the Issuer and PCS;

(xi) the **PERILS Trading License Agreement**, to be entered into between the Issuer and PERILS; and

(xii) any other agreement entered into in relation to documents (i) to (xi) above with respect to the Notes.

Risk Transferor ..... SCOR SE (the "**Risk Transferor**").

As of the date hereof, the Risk Transferor's financial strength was rated "AA-" by Standard & Poor's Credit Market Services Europe Limited ("**S&P**"), "Aa3" by Moody's Investors Service Limited ("**Moody's**"), "A+" by A.M. Best Europe Ratings Services Limited and "AA-" by Fitch Ratings Limited, each of which rating agencies is established in the European Union and is registered under Regulation (EC) No. 1060/2009 (the "**Credit Rating Agency Regulation**").

The foregoing ratings of the Risk Transferor relate to its financial strength and are not an evaluation regarding the Notes, which are without recourse to the Risk Transferor or any of its affiliates. The applicable rating agency can withdraw or change its rating at any time and for any reason. Prospective investors should consider carefully the information set forth under the caption "*Risk Factors—Ratings*" before making an investment in the Notes.

Trustee..... BNY Mellon Corporate Trustee Services Limited, One Canada Square, London E14 5AL, United Kingdom (the "**Trustee**").

Principal Paying Agent; Account Bank; Note Calculation Agent; Custodian ..... The Bank Of New York Mellon acting through its London Branch, whose principal office is at One Canada Square, London E14 5AL, United Kingdom (the "**Principal Paying Agent**", the "**Custodian**", the "**Account Bank**" and the "**Note Calculation Agent**").

Registrar; Transfer Agent..... The Bank Of New York Mellon SA/NV, Luxembourg Branch, Vertigo Building – Polaris, 2-4 rue Eugène Ruppert, L-2453 Luxembourg (the "**Registrar**" and "**Transfer Agent**")

Insurance Manager ..... Horseshoe ILS Services UK Ltd, whose registered office is at Collingham House, 6-12 Gladstone Road, Wimbledon, London, SW19 1QT, United Kingdom (the "**Insurance Manager**").

Corporate Services Provider..... Intertrust Management Limited (the "**Corporate Services Provider**").

Offering Price ..... 100% of the Original Principal Amount (the "**Offering Price**").

Issuance Date..... The date on which the Notes will be issued, which is expected to be on or about 31 May 2019 (the "**Issuance Date**").

Issuance Currency..... U.S. dollars ("**USD**" or "**$**").

Use of Proceeds; Collateral..... On the Issuance Date, all of the proceeds paid to the Issuer from the sale of the Notes will be deposited into the Collateral Account and will be invested in Permitted Investments, as further described herein (the "**Collateral**"). Such proceeds will be available to satisfy the obligations of the Issuer to the

Risk Transferor under the Risk Transfer Agreement and after the fulfilment of such obligations to make payments in respect of the Outstanding Principal Amount of the Notes.

Limited Recourse..... Noteholders will have recourse only to the Collateral in the Collateral Account for repayment of the Outstanding Principal Amount and will not have recourse to any other property or assets of the Issuer save for the assets in the Collateral Payment Account in relation to the payment of interest amounts in respect of the Notes. Each holder of the Notes will rank *pari passu* with all other Noteholders.

No Recourse..... Neither the Risk Transferor nor any of its affiliates is a guarantor of, or obligor on, the Notes. Noteholders will not have any recourse to or against the Risk Transferor or any of its affiliates for any amounts due and payable by the Issuer on the Notes for any reason, including in the event of a default by the Issuer.

THE NOTES

Principal Amount

Original Principal Amount..... USD 250,000,000 (the "**Original Principal Amount**").

Outstanding Principal Amount..... As of any date of determination, the Original Principal Amount of the Notes (i) as reduced by the aggregate of all Principal Reductions applicable to the Notes made on any and all Payment Dates prior to and including such date of determination and (ii) as increased by the aggregate of all Principal Increases applicable to the Notes made on all Payment Dates prior to and including such date of determination (the "**Outstanding Principal Amount**"); **provided, that** the Outstanding Principal Amount shall neither be less than zero nor greater than the Original Principal Amount. Any such adjustment to the Original Principal Amount will be allocated *pro rata* among the Noteholders (or otherwise in accordance with the applicable procedures of DTC).

Principal Reduction ..... On each Payment Date, the Outstanding Principal Amount will be reduced by an amount equal to (i) the Positive Accrual Period Loss Payment Amount, if any, relating to such Payment Date, plus (ii) the Partial Redemption Amount, if any, relating to such Payment Date (each such reduction, a "**Principal Reduction**").

Principal Increase..... On each Payment Date, the Outstanding Principal Amount will be increased by an amount equal to the absolute value of the Negative Accrual Period Loss Payment Amount, if any, relating to such Payment Date (each such increase, a "**Principal Increase**").

Redemption Date

Redemption Date ..... The "**Redemption Date**" in relation to the Notes will be the earliest to occur of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date; **provided, that** following a Mandatory Extension Event or an Optional Extension Event, the Redemption Date will instead be on the earlier of the last Extended Redemption Date and the Final Extended Redemption Date.

Redemption Amount..... The "**Redemption Amount**" will be 100% of the Outstanding Principal Amount, determined as of the relevant Redemption Date, but in no event will the Redemption Amount be greater than the sum of the liquidation proceeds of the Investments held in the Collateral Account, plus 100% of the Early

	Redemption Payment if applicable, plus 100% of the Optional Redemption Payment, if applicable or each as further described below.
Scheduled Redemption Date; Scheduled Termination Date	7 June 2023 (or if such day is not a Business Day, the next succeeding Business Day) (the "**Scheduled Redemption Date**"). The Scheduled Redemption Date for the Notes shall be the same date as the "**Scheduled Termination Date**" under the Risk Transfer Agreement.
Early Redemption Date; Early Termination Date	If an Early Redemption Event has occurred with respect to the Notes, the Notes will be redeemed on the "**Early Redemption Date**" which will be the first Payment Date that occurs at least thirty-five (35) calendar days after the date of the Early Redemption Event having occurred; **provided, that**, if an Early Redemption Event occurs less than thirty-five (35) calendar days prior to the Scheduled Redemption Date or, where applicable, an Extended Redemption Date, then the Early Redemption Date will be that Scheduled Redemption Date or Extended Redemption Date, as the case may be. The Early Redemption Date shall be the same date as the "**Early Termination Date**" under the Risk Transfer Agreement.
Optional Redemption Date; Optional Termination Date	If an Optional Redemption Event has occurred with respect to the Notes, the Notes will be redeemed on the date (the "**Optional Redemption Date**") first to occur of: (i) the Payment Date occurring in June 2020; (ii) the Payment Date occurring in June 2021; or (iii) the Payment Date occurring in June 2022 (each a "**June Payment Date**") following the occurrence of such Optional Redemption Event, subject to any Extension Event. The Optional Redemption Date for the Notes shall be the same date as the "**Optional Termination Date**" under the Risk Transfer Agreement.
Extension of Early Redemption or Optional Redemption..	If, following the determination of an Early Redemption Date or an Optional Redemption Date under the Notes, but prior to the occurrence of such Early Redemption Date or Optional Redemption Date (as applicable), an Optional Extension Event occurs (as defined below), the Notes shall not be redeemed on the scheduled Early Redemption Date or Optional Redemption Date, but shall instead be redeemed on earlier of the last Extended Redemption Date and the Final Extended Redemption Date.
Extended Redemption Date; Extended Termination Date	Each date to which the maturity of the Notes may be extended following one or more Extension Events with respect thereto shall be an "**Extended Redemption Date**" (as further described below). Each Extended Redemption Date shall be the same date as an "**Extended Termination Date**" under the Risk Transfer Agreement. The last Extended Redemption Date will be the first Extended Redemption Date which is also an Extension Discontinuation Date under the Risk Transfer Agreement, **provided that** the last Extended Redemption Date will not be later than the Final Extended Redemption Date.
Final Extended Redemption Date; Final Extended Termination Date	The "**Final Extended Redemption Date**" will be the earliest to occur of: (i) if one or more Covered Events have occurred, 8 June 2026 (or if any such day is not a Business Day, the next succeeding Business Day); (ii) the first Payment Date occurring during the Extension Period on or immediately after the Event Reporting Date on which a Final Event Report has been delivered by the Calculation Agent for all Covered Events for which an Event Notice has been delivered;

(iii) the first Payment Date occurring during the Extension Period on or immediately after which (a) the sum of the Issuer Payments (net of Negative Loss Payments) in respect of one or more Covered Events equals the Original Principal Amount and (b) a Final Event Report has been issued for each such Covered Event; and

(iv) if an Early Redemption Date occurs during an Extension Period, such Early Redemption Date.

The Final Extended Redemption Date shall be the same date as the "**Final Extended Termination Date**" under the Risk Transfer Agreement.

Early Redemption

Early Termination Event; Early Redemption Event; Clean-Up Call Redemption Event; Fall-Back Data Provider Failure Redemption Event; Service Provider Failure Redemption Event; Service Provider; Service Provider Agreement; Risk Transferor Default Redemption Event; Change in Tax Law Redemption Event; Dodd-Frank; Change in Law Redemption Event; EBRD Redemption Event; Budget Exhaustion Redemption Event; Material Transaction Redemption Event.....

Each of the following is an "**Early Redemption Event**" in relation to the Notes and will occur:

(i) on the date that the Risk Transferor gives written notice to the Issuer that it elects to trigger a termination of the Risk Transfer Agreement if the Outstanding Principal Amount is, or on the next Payment Date will be, equal to or less than 10% of the Original Principal Amount; **provided, that** such Risk Transfer Agreement may not be so terminated, and the Notes may not be so redeemed, (a) prior to, but not including, the fourth (4th) Payment Date following the Issuance Date or (b) while a Minimum Development Period, if any, has commenced and is continuing (a "**Clean-Up Call Redemption Event**");

(ii) on the date that the Risk Transferor gives written notice to the Issuer that it elects to trigger a termination of the Risk Transfer Agreement following the certification by the Calculation Agent in writing to the effect that (i) a Reporting Agency Failure Event has occurred, (ii) if applicable, the relevant Fall-Back Data Provider has ceased or otherwise failed to provide the information necessary for the Calculation Agent to provide an Event Report with respect to a Covered Event, and (iii) that the Calculation Agent has been unable within sixty (60) calendar days to find a replacement for the relevant Fall-Back Data Provider reasonably satisfactory to, and unaffiliated with, the Risk Transferor (a "**Fall-Back Data Provider Failure Redemption Event**");

(iii) on the date that the Risk Transferor gives written notice to the Issuer that it elects to trigger a termination of the Risk Transfer Agreement, following certification by the Risk Transferor in writing that at least forty-five (45) calendar days have passed after the date a Service Provider has become insolvent, has become incapable of performing or has failed to perform its respective duties and obligations under the applicable Service Provider Agreement if the Issuer, after having used commercially reasonable efforts in cooperation with the Risk Transferor, has been unable to engage a suitable substitute service provider reasonably satisfactory to, and unaffiliated with, the Risk Transferor to perform such duties and obligations (a "**Service Provider Failure Redemption Event**"). For the purposes of a Service Provider Failure Redemption Event, "**Service Provider**" means the Insurance Manager or the Calculation Agent, and "**Service Provider Agreement**" means the Insurance Management Agreement or the Calculation Agent Agreement, as the case may be;

(iv) on the date on which there has been a failure by the Risk Transferor under the Risk Transfer Agreement to make any Periodic Payment or Negative Loss Payment when due under such Risk Transfer

Agreement (and such default has not been cured within five (5) Business Days following the date on which the Issuer has provided a written notice of such default to the Risk Transferor) (a "**Risk Transferor Default Redemption Event**");

(v) on the date that is specified in a written notice given by the Risk Transferor to the Issuer that it elects to trigger a termination of the Risk Transfer Agreement if, in the Risk Transferor's sole judgment (following written advice from the Risk Transferor's counsel with a copy provided to the Issuer) any amendment to, or change in, the laws or regulations of any relevant jurisdiction affecting taxation, or the issuance of, or an amendment to, or change in, or clarification of, an official interpretation or application of such laws or regulations, subjects the Issuer or the Risk Transferor to taxation (or an increase in taxation) in any jurisdiction that could reasonably be expected to (a) materially increase the amount of payments owed by the Risk Transferor to the Issuer under the Risk Transfer Agreement or (b) result in any other material adverse consequences for the Risk Transferor (a "**Change in Tax Law Redemption Event**");

(vi) on the date that is specified in a written notice given by the Risk Transferor to the Issuer that it elects to trigger a termination of the Risk Transfer Agreement if, in the Risk Transferor's sole judgment (following written advice from the Risk Transferor's counsel with a copy provided to the Issuer) there is any amendment to, implementation of, effectiveness of, change in, or issuance of, laws or regulations of any relevant jurisdiction (or any official interpretation, guidance or application thereof) that would (x) materially and adversely impair the Risk Transferor's ability to lawfully perform, or would result in material adverse consequences or materially increase the regulatory burden for the Risk Transferor if it continued to perform, its obligations under such Risk Transfer Agreement or (y) materially and adversely impair the Issuer's ability to lawfully perform, or would result in material adverse consequences or materially increase the regulatory burden for the Issuer if it continued to perform, its obligations under the Notes, the Trust Deed or the Risk Transfer Agreement (a "**Change in Law Redemption Event**");

(vii) on the date on which the Risk Transferor gives written notice to the Issuer that it elects to trigger the termination of the Risk Transfer Agreement following the occurrence of an EBRD Put Event described in subsection (d), (e) or (f) in the definition of EBRD Put Event (an "**EBRD Redemption Event**");

(viii) on the date on which the Risk Transferor gives written notice to the Issuer that it elects to trigger the termination of the Risk Transfer Agreement if the amount of Supplemental Expense Amounts paid or expected to be payable by the Risk Transferor in connection with the Notes exceeds or is expected to exceed USD 300,000 in any calendar year (a "**Budget Exhaustion Redemption Event**"); and

(ix) on the date on which the Risk Transferor gives written notice (delivered not less than thirty-five (35) and not more seventy-five (75) Business Days prior to end of the then-current Loss Period) to the Issuer that it elects to terminate the Risk Transfer Agreement (effective as of the end of the then-current Loss Period) if the ultimate parent company of the Risk Transferor has publicly announced a Material Transaction that, as determined in the Risk Transferor's sole discretion, could result in a material change in the

business which is the subject matter of the Risk Transfer Agreement (a "**Material Transaction Redemption Event**").

Each Early Redemption Event shall be the same event as the "**Early Termination Event**" under the Risk Transfer Agreement.

Material Transaction..... "**Material Transaction**" shall mean any change in Control of the Risk Transferor, or any material acquisition, disposition, business combination or sale, whether through sale or purchase of securities or assets, bulk reinsurance, merger, amalgamation or other corporate reorganisation, or otherwise, between, among or involving (a) the Risk Transferor or any Affiliate thereof, and (b) any insurance holding company, insurer (whether organised as a stock insurance company, mutual insurance company, reciprocal, Lloyd's syndicate or otherwise, irrespective of the manner of organisation thereof), or any Affiliate of any such insurance holding company or insurer, but excluding any such insurance holding company, insurer, or Affiliate that, prior to such change in Control, acquisition, disposition, business combination, sale, or reinsurance, is an Affiliate of the Risk Transferor. For the purposes of this definition, "**Control**" means the possession, directly or indirectly, of the power to direct or cause the management of a Person, whether through the ability to exercise voting power, by contract or otherwise and the term "**Affiliate**" means a Person or entity that directly or indirectly Controls, is Controlled by, or is under common Control with, another Person or entity. The occurrence of a Material Transaction shall be determined in the sole discretion of the Risk Transferor.

"**Person**" means any individual, corporation, estate, partnership, joint venture, association, joint stock company, limited liability company, designated activity company, trust (including any beneficiary thereof), unincorporated organization, or government or any agency or political subdivision thereof or other entity, including any governmental authority.

Early Redemption Payment..... Where an Early Redemption Event for the Notes occurs (i) prior to the Scheduled Redemption Date and, (ii) as a result of a Risk Transferor Default Redemption Event, the "**Early Redemption Payment**" for the Notes will be equal to the sum of the present values, discounted at the Interest Spread in force at the time of the Risk Transferor Default Redemption Event, of each of the scheduled Interest Spread payments calculated on the Outstanding Principal Amount, determined as of the Early Redemption Date, for each Accrual Period from the first day of the Accrual Period that begins on such Early Redemption Date up to the Scheduled Redemption Date.

In any other circumstances, the Early Redemption Payment will be zero.

Optional Redemption

Optional Termination Notice; Optional Termination Event; Optional Redemption Event ..... If at least thirty-five (35) calendar days, but no more than seventy-five (75) calendar days prior to a June Payment Date, the Risk Transferor delivers written notice (an "**Optional Termination Notice**") to the Issuer and the Insurance Manager pursuant to the Risk Transfer Agreement (an "**Optional Termination Event**"), an "**Optional Redemption Event**" shall occur in relation to the Notes and the Issuer shall fully redeem the Notes on the Optional Redemption Date.

Optional Redemption Payment..... The "**Optional Redemption Payment**" payable on the Notes in connection with an Optional Redemption Event will be equal to:

(a) if the applicable Optional Redemption Date is on the Payment Date occurring in June 2020, 8.00% of the Outstanding Principal Amount

(after giving effect to any Accrual Period Loss Payment Amount made on such date);

(b) if the applicable Optional Redemption Date is on the Payment Date occurring in June 2021, 5.50% of the Outstanding Principal Amount (after giving effect to any Accrual Period Loss Payment Amount made on such date); and

(c) if the applicable Optional Redemption Date is on the Payment Date occurring in June 2022, 2.75% of the Outstanding Principal Amount (after giving effect to any Accrual Period Loss Payment Amount made on such date).

Extension

Extension; Partial Extension; Partial Redemption Amount... If a Mandatory Extension Event, Optional Extension Event I or Optional Extension Event II occurs, the term of the Risk Transfer Agreement may be extended for one or more Extension Periods (each, an "**Extension**") and the Notes will not be redeemed on the Early Redemption Date, the Optional Redemption Date or the Scheduled Redemption Date (as applicable) but will instead be redeemed on the earlier of the last Extended Redemption Date and the Final Extended Redemption Date at an amount equal to the Redemption Amount.

In connection with any Extension under the Risk Transfer Agreement, the Risk Transferor may, either at the time of the Mandatory Extension Event or the Optional Extension Event or at any time which the Extension Event is continuing under the Risk Transfer Agreement, elect a "**Partial Extension**" by giving a partial extension notice to the Issuer and the Insurance Manager on or prior to the Extension Determination Date preceding the Early Redemption Date, the Optional Redemption Date, the Scheduled Redemption Date or the specified Extended Redemption Date, as applicable. To the extent that the maturity of the Notes is extended pursuant to a Partial Extension, the portion of the Notes that is not extended pursuant to such Partial Extension (the "**Partial Redemption Amount**") will be redeemed by the Issuer on the Early Redemption Date, the Optional Redemption Date, the Scheduled Redemption Date or the specified Extended Redemption Date, as applicable, *pro rata* among the Noteholders, at a redemption price equal to the Outstanding Principal Amount of such Partial Redemption Amount (in each case, subject to the procedures of DTC).

Extension Events under the Risk Transfer Agreement

Extension Event..... An "**Extension Event**" will occur as of an Extension Determination Date if a Mandatory Extension Event has occurred or if an Optional Extension Event I or an Optional Extension Event II has occurred and is continuing. An Extension Event of one type may be followed by an Extension Event of another type for a subsequent Extension Period if the conditions for such other type of Extension Event have been satisfied. For the avoidance of doubt, if the conditions for two or more types of Extension Event are satisfied for an Accrual Period, the lowest applicable Extension Spread will apply.

Extension Period; Extended Redemption Date ..... Each period of one (1) calendar month for which the Risk Transfer Agreement will be extended following the occurrence of an Extension Event, which will commence on and include the Early Redemption Date, the Optional Redemption Date, the Scheduled Redemption Date or the relevant Extended Redemption Date, as the case may be, and end on and include the immediately succeeding Extended Redemption Date up to the earlier of the last Extended Redemption Date or the Final Extended Redemption Date

	(each, an "**Extension Period**") and the final day of any such Extension Period being an "**Extended Redemption Date**".
Extension Discontinuation Date ..	Following the occurrence of one or more Extension Events, the "**Extension Discontinuation Date**" will be the Extended Redemption Date immediately succeeding the first Extension Determination Date as of which: (i) no Optional Extension Event is continuing; and (ii) no Mandatory Extension Event is continuing.
Extension Determination Date.....	Any date that is eight (8) Business Days prior to the Early Redemption Date, the Optional Redemption Date, the Scheduled Redemption Date or any Extended Redemption Date, as the case may be; *provided*, if a potential Covered Event (as determined by the Risk Transferor in good faith) occurs between the period from the eighth (8th) Business Day prior to the Scheduled Redemption Date to the end of the Risk Period, the date that is three (3) Business Days prior to the Scheduled Redemption Date (each, an "**Extension Determination Date**").
Optional Extension Event	An "**Optional Extension Event**" shall mean either an Optional Extension Event I or an Optional Extension Event II, as the case may be. An Optional Extension Event will be considered to be automatically continuing as of any Extension Determination Date, if, on or prior to such Extension Determination Date, the Risk Transferor has delivered an Optional Extension Notice in respect of which the Risk Transferor has not subsequently delivered an Optional Extension Discontinuation Notice.
Optional Extension Notice	A notice delivered by the Risk Transferor to the Issuer on or prior to any Extension Determination Date (each, an "**Optional Extension Notice**"), electing an Optional Extension Event and/or specifying whether a Partial Extension is elected.
Optional Extension Discontinuation Notice	A notice delivered by the Risk Transferor to the Issuer and the Insurance Manager, on or prior to any Extension Determination Date (an "**Optional Extension Discontinuation Notice**") electing to discontinue an Optional Extension Event and specifying therein the last Extended Redemption Date.
Optional Extension Event I; Optional Extension Event II	An "**Optional Extension Event I**" with respect to an Extension Period will occur as of any Extension Determination Date, if, on or prior to such Extension Determination Date, the Risk Transferor has delivered an Optional Extension Notice in respect of which the Risk Transferor has not subsequently delivered an Optional Extension Discontinuation Notice. An "**Optional Extension Event II**" with respect to an Extension Period will occur as of any Extension Determination Date if, on or prior to such Extension Determination Date, the Calculation Agent has delivered to the Issuer (with a copy to the Insurance Manager) an Optional Extension Verification Report, confirming that the Optional Extension Event II Conditions applicable to such Extension Period have been satisfied.
Optional Extension Type Determination Date	The date that is three (3) Business Days prior to the Early Redemption Date, the Optional Redemption Date, the Scheduled Redemption Date, or any Extended Redemption Date, as the case may be (each, an "**Optional Extension Type Determination Date**").
Optional Extension Type Determination Period	For the purposes of determining whether an Optional Extension Event II has occurred for the second and each subsequent Extension Period thereafter, the "**Optional Extension Type Determination Period**" will commence on the previous Optional Extension Type Determination Date up to and including the then-current Optional Extension Type Determination Date.

Optional Extension Event II Conditions..... The "**Optional Extension Event II Conditions**" mean the following conditions, to the extent applicable to the Notes for the relevant Extension Period:

(i) with respect to any Extension Period, a Covered Event has occurred during the Risk Period for which a Final Event Report has not been delivered prior to the Event Reporting Date preceding such Extension Period; and

(ii) with respect to the fourth and each subsequent Extension Period, the Loss Period Index Value for any Loss Period on any date of determination during the relevant Optional Extension Type Determination Period is equal to or greater than the minimum percentage specified in the table below:

(a) if none of the Covered Events occurring within such Loss Period is an Earthquake Event:

Extension Period	**Minimum Percentage**
Fourth Extension Period through Twelfth Extension Period	50% of Attachment Level*
Thirteenth Extension Period through Eighteenth Extension Period	75% of Attachment Level*
Nineteenth Extension Period through Thirty-Sixth Extension Period	90% of Attachment Level*

* Denotes the Attachment Level in effect during such Loss Period

(b) if any of the Covered Events occurring within such Loss Period is an Earthquake Event:

Extension Period	**Minimum Percentage**
Fourth Extension Period through Sixth Extension Period	25% of Attachment Level*
Seventh Extension Period through Twelfth Extension Period	40% of Attachment Level*
Thirteenth Extension Period through Fifteenth Extension Period	50% of Attachment Level*
Sixteenth Extension Period through Eighteenth Extension Period	60% of Attachment Level*
Nineteenth Extension Period through Twenty-Second Extension Period	75% of Attachment Level*
Twenty-Third Extension Period through Thirty-Sixth Extension Period	90% of Attachment Level*

* Denotes the Attachment Level in effect during such Loss Period

Optional Extension Verification Report	No less than five (5) Business Days prior to each Optional Extension Type Determination Date, the Risk Transferor may instruct the Calculation Agent to deliver, on or prior to such Optional Extension Type Determination Date, a report (each, an "**Optional Extension Verification Report**") to the Issuer and the Risk Transferor specifying whether the Optional Extension Event II Conditions have been satisfied; **provided, that** if a potential Covered Event occurs within ten (10) Business Days prior to the Scheduled Redemption Date, the Early Redemption Date or the Optional Redemption Date, as applicable, the Risk Transferor may, no less than three (3) Business Days following the Date of Loss of such potential Covered Event, instruct the Calculation Agent to deliver the initial Optional Extension Verification Report, and the Calculation Agent will be required to deliver such Optional Extension Verification Report within five (5) Business Days following the date of such instruction; **provided, however, that** in the event of a Reporting Agency Failure Event, an Optional Extension Verification Report will be delivered in accordance with the Calculation Agent's latest available post-event loss calculation procedure for the relevant Covered Event.
Mandatory Extension Event	A "**Mandatory Extension Event**" will have occurred as of any Extension Determination Date, if (i) an Issuer Payment has been made (or will be made on the immediately succeeding Payment Date) by the Issuer to the Risk Transferor under the Risk Transfer Agreement and (ii) the Minimum Development Period remains in effect for any Loss Period relating to any such Issuer Payment.
Minimum Development Period	If an Issuer Payment has been made (or will be made on the immediately succeeding Payment Date) by the Issuer to the Risk Transferor in respect of a Loss Period, then for each Covered Event during such Loss Period for which an Event Notice has been delivered, a "**Minimum Development Period**" for such Loss Period will commence on the Date of Loss of the earliest Covered Event that occurred during such Loss Period and will continue until the earlier of (i) thirty-six (36) calendar months from the Date of Loss for the last Covered Event that occurred during such Loss Period, (ii) the first Event Reporting Date as of which the Reporting Agency has released a Reporting Agency Report with its final Resurvey Estimate for all Covered Events during such Loss Period, (iii) the date on which the applicable Reporting Agency ceases to exist and (iv) the Event Reporting Date on which (a) the aggregate of all Issuer Payments (net of Negative Loss Payments) equals the Original Principal Amount and (b) a Final Event Report has been issued for each Covered Event giving rise to such Issuer Payment(s).
Interest on the Notes	
Interest Calculation.....	For each Accrual Period from and including the Issuance Date to, but excluding, the applicable Redemption Date, interest on the Notes will be calculated by the Note Calculation Agent as the sum of: (i) the Permitted Investment Yield relating to such Accrual Period; *plus* (ii) the aggregate of the following amount (the sum of (a), (b), (c), (d) and (e)): (a) for all calendar days during such Accrual Period that occur during the period from and including the Issuance Date to, but excluding the first day of the First Loss Period: interest accrued at the Non-Risk Period Interest Spread calculated on the Original Principal Amount; (b) for all calendar days during such Accrual Period that occur during the period from and including the first day of the

Risk Period to and including the last day of the First Loss Period: interest accrued at the Initial Interest Spread calculated on the Original Principal Amount; **provided, that** if the Outstanding Principal Amount is reduced to zero as a result of one or more Loss Payment Amounts on any of the Payment Dates prior to the end of the First Loss Period, the Residual Interest Amount will be paid on such Payment Date, in addition to the accrued interest for the prior Accrual Period, on such Payment Date and no further interest will be paid;

(c) for all calendar days during such Accrual Period that occur from and including the first day of the Second Loss Period to and including the last day of the Risk Period: the sum of interest accrued at the applicable Interest Spread calculated on the Outstanding Principal Amount as of the first day of the applicable Accrual Period;

(d) for all calendar days during such Accrual Period that occur from but excluding the last day of the Risk Period to but excluding such Early Redemption Date, the Optional Redemption Date or the Scheduled Redemption Date, as applicable: interest accrued at the Non-Risk Period Interest Spread calculated on the Outstanding Principal Amount as of the first day of the applicable Accrual Period; and

(e) for all calendar days during such Accrual Period that occur during the period from and including the Early Redemption Date, the Optional Redemption Date, or the Scheduled Redemption Date to but excluding the earlier of the last Extended Redemption Date and the Final Extended Redemption Date: interest accrued at the applicable Extension Spread calculated on the Outstanding Principal Amount,

in each case (a) to (e), calculated in accordance with the Interest Calculation Convention.

Interest Calculation Convention..... The portion of interest calculated by reference to Interest Spread, Non-Risk Period Interest Spread and Extension Spread will be calculated on the basis of the actual number of days elapsed in the related Accrual Period and a 360-day year (the "**Interest Calculation Convention**").

Payment Dates ..... Interest will be payable on the Notes quarterly, or following an Extension Event, monthly, in arrears on the following dates (or if any such day is not a Business Day, the next succeeding Business Day) (each a "**Payment Date**"):

(i) each of 1 March, 1 June, 1 September, and 1 December in each year, commencing on the First Payment Date and continuing to, but excluding, the earliest of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date, as applicable;

(ii) the earliest of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date, as applicable; and

(iii) if one or more Extension Events have occurred and are continuing, the first day of each calendar month during the period commencing on the first day of the calendar month immediately following the earliest of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date, as applicable, and ending

on (and including) the date which is the earlier of the Extended Redemption Date or the Final Extended Redemption Date.

First Payment Date ..... 2 September 2019 (or if such day is not a Business Day, the next succeeding Business Day) (the "**First Payment Date**").

Accrual Period ..... In respect of each Payment Date, the period from and including the immediately preceding Payment Date (or the Issuance Date, in the case of the First Payment Date) to, but not including, such Payment Date (each, an "**Accrual Period**").

Interest Spread ..... The Initial Interest Spread; **provided, however, that** if a Variable Reset has been elected as of a Reset Effective Date, the applicable Updated Interest Spread will be applicable (the "**Interest Spread**").

Initial Interest Spread..... A per annum rate equal to 11.75% (the "**Initial Interest Spread**").

Non-Risk Period Interest Spread..... A per annum rate equal to 0.50% (the "**Non-Risk Period Interest Spread**").

Residual Interest Amount..... An amount equal to the sum of the present values, discounted at a rate equal to the Initial Interest Spread, of each of the scheduled payments of Interest Spread that would have been payable on each Payment Date following that Payment Date until and including the fourth Payment Date immediately following the Issuance Date (the "**Residual Interest Amount**")

Updated Interest Spread If the Risk Transferor elects a Variable Reset in connection with a Loss Period, the Reset Agent will use the Initial Interest Spread, the Initial One Year Expected Loss and the Updated One Year Expected Loss to calculate the Updated Interest Spread for such Loss Period ("**Updated Interest Spread**") according to the following formula:

if $EL_u < EL_i$ then: $IS_u = IS_i + 1.15 \times (EL_u - EL_i)$

otherwise: $IS_u = IS_i + 1.25 \times (EL_u - EL_i)$

provided that the IS_u shall be subject to a maximum of 12.375% and a minimum of 11.175%.

where:

IS_i = Initial Interest Spread

IS_u = Updated Interest Spread

EL_i = Initial One Year Expected Loss

EL_u = Updated One Year Expected Loss

The calculation of the Updated Interest Spread will be rounded to the nearest 1/1000th of 1%.

The foregoing calculation by the Reset Agent will be referred herein to as the "**Interest Spread Calculation**".

Extension Spread ..... "**Extension Spread**" means:

(i) with respect to any Accrual Period being an Extension Period resulting from an Optional Extension Event I only, a *per annum* rate equal to 2.50%;

(ii) with respect to any Accrual Period being an Extension Period resulting from an Optional Extension Event II only, a *per annum* rate equal to 0.50%; and

(iii) with respect to any Accrual Period being an Extension Period from a Mandatory Extension Event (whether or not in combination with an Optional Extension Event), a *per annum* rate equal to 0.10%.

Permitted Investment Yield; MMF Negative Yield Event ..... For each Accrual Period, an amount equal to the investment earnings actually received by the Issuer on the Permitted Investments prior to the applicable Payment Date, which have not been previously distributed, net of applicable withholding taxes and fees imposed on such earnings, if any ("**Permitted Investment Yield**"); *provided that*, for the purposes of determining the Interest Amount (as defined in the Conditions), the definition of Permitted Investment Yield for any Accrual Period shall be reduced by the amount of any MMF Negative Yield Deficit determined as of the Business Day prior to the relevant Payment Date.

To the extent that an MMF Negative Yield Event has occurred and is continuing on a Payment Date, the Issuer shall not distribute any amounts representing Permitted Investment Yield until such time as the MMF Negative Yield Deficit has been reduced to zero.

For the purposes of the foregoing:

(i) an "**MMF Negative Yield Event**" shall occur as of any Payment Date if (a) all or a portion of the Permitted Investments consist of Money Market Fund Shares and (b) the Outstanding Principal Amount exceeds the Total Permitted Investment Amount, after giving effect to any Principal Reduction or Principal Increase on such Payment Date;

(ii) As of any date of determination, the "**Total Permitted Investment Amount**" will be an amount equal to (a) the product of (1) the number of Money Market Fund Shares, if any, in the Collateral Account and (2) the corresponding par value of each such share, plus (b) the principal amount of Permitted Investments consisting of EBRD Notes, if any, plus (c) the amount of any cash in the Collateral Account, in each case as of such date of determination; and

(iii) as of any date of determination, the "**MMF Negative Yield Deficit**" will be equal to the amount, if any, by which the Outstanding Principal Amount exceeds the Total Permitted Investment Amount, after giving effect to any Principal Reduction or Principal Increase on such day.

LOSS DETERMINATION

General

Risk Period.....	The period commencing at 12:00:00 a.m., (a) for Named Storm Events and Earthquake Events, Atlantic Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 1 June 2019 and continuing up to and including the earliest of (i) 11:59:59 p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 31 May 2023, (ii) in the event of an Early Redemption Event (other than a Risk Transferor Default Redemption Event) or Optional Redemption Event, 11:59:59 p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian Standard Time and (b) for Europe Windstorm Events, UTC, in each case on the tenth (10th) Business Day prior to the applicable Early Redemption Date or Optional Redemption Date and (iii) in the event of a Risk Transferor Default Redemption Event, 11:59:59 p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian Standard Time and (b) for Europe Windstorm Events, UTC, in each case on the last day of the related cure period (the "**Risk Period**"). If the Risk Period commences while a potential Covered Event with a Date of Loss earlier than the time and date of the commencement of the Risk Period is in progress, the Issuer's liability under the Risk Transfer Agreement will be determined as if the entire potential Covered Event had occurred prior to the commencement of the Risk Period and therefore will not be covered under the Risk Transfer Agreement. If the Risk Period ends while a potential Covered Event with a Date of Loss during the Risk Period is in progress, the Issuer's liability under the Risk Transfer Agreement will, subject to the other terms and conditions of the Risk Transfer Agreement, be determined as if the entire Covered Event had occurred prior to the end of the Risk Period.
Loss Period; First Loss Period; Second Loss Period; Third Loss Period; Fourth Loss Period	The periods (each, a "**Loss Period**") within the Risk Period commencing at: (i) 12:00:00 a.m., (a) for Named Storm Events and Earthquake Events, Atlantic Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 1 June 2019 to and including 11:59:59 p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 31 May 2020 (the "**First Loss Period**"); (ii) 12:00:00 a.m., (a) for Named Storm Events and Earthquake Events, Atlantic Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 1 June 2020 to and including 11:59:59 p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 31 May 2021 (the "**Second Loss Period**"); (iii) 12:00:00 a.m., (a) for Named Storm Events and Earthquake Events, Atlantic Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 1 June 2021 to and including 11:59:59 p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 31 May 2022 (the "**Third Loss Period**"); and (iv) 12:00:00 a.m., (a) for Named Storm Events and Earthquake Events, Atlantic Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 1 June 2022 to and including 11:59:59 p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian

Standard Time and (b) for Europe Windstorm Events, UTC, in each case on 31 May 2023 (the "**Fourth Loss Period**").

In the event that the Risk Period terminates prior to 31 May 2023, the relevant Loss Period will terminate simultaneously with the end of the Risk Period. If a Loss Period expires while a Covered Event is in progress, the entire Event Index Value from such Covered Event will be included in the determination of the Loss Period Index Value for the Loss Period in which the Date of Loss for such Covered Event falls and will be excluded from any other Loss Period.

Covered Event.....	Any Named Storm Event, Earthquake Event or Europe Windstorm Event (each, a "**Covered Event**").
Qualifying Event.....	Each Covered Event for which the Event Index Value is equal to or greater than the Index Deductible (each, a "**Qualifying Event**").
Reporting Agency.....	PCS, with respect to Named Storm Events and Earthquake Events, or PERILS, with respect to Europe Windstorm Events (the "**Reporting Agency**").
Reporting Agency Report.....	For Named Storm Events and Earthquake Events, any Catastrophe Bulletin, and for Europe Windstorm Events, any PERILS Loss Report (each, a "**Reporting Agency Report**").
Covered Area	The Named Storm Covered Area, the Earthquake Covered Area and the Europe Windstorm Covered Area, as applicable (each, a "**Covered Area**").
Date of Loss	The Named Storm Date of Loss, the Earthquake Date of Loss, and the Europe Windstorm Date of Loss as applicable (each, a "**Date of Loss**").
PCS.....	Property Claim Services, a division of ISO Services, Inc., or any successor in interest thereto or, if no successor exists or PCS ceases to provide Catastrophe Bulletins, a replacement named by the Calculation Agent ("**PCS**").
PCS License Agreement.	On the Issuance Date, the Issuer will enter into a license agreement with PCS relating to the use of PCS prepared information by the Issuer in connection with the Notes (the "**PCS License Agreement**").
PERILS	PERILS AG, incorporated in Zurich, Switzerland as a joint stock company or any successor-in-interest thereto, or if no successor exists or PERILS ceases to provide PERILS Loss Reports, a replacement named by the Calculation Agent in cooperation with the Risk Transferor and the Issuer under the terms of the Calculation Agent Agreement ("**PERILS**").
PERILS Trading License Agreement.....	On the Issuance Date, the Issuer will enter into a license agreement with PERILS relating to the use of PERILS-prepared information by the Issuer in connection with the Notes (the "**PERILS Trading License Agreement**").
Catastrophe Bulletin; PCS Resurvey Estimate	Any catastrophe bulletin (each, a "**Catastrophe Bulletin**") originated and disseminated by PCS (including through ISOnet PCS) that identifies and assigns a catastrophe number to a catastrophe identified herein as a Named Storm or an Earthquake (or if the same Earthquake impacts both the United States and Canada, the two separate catastrophe bulletins originated and disseminated by PCS identifying and assigning two separate numbers to such Earthquake, where at least one such bulletin cross references the other, or a comparable notification in the event a replacement Reporting Agency is named by the Calculation Agent) or similarly identified, and/or gives preliminary or, subsequently as it deems appropriate in the exercise of its judgment, adjusted estimates (each such adjusted estimate, a "**PCS Resurvey Estimate**"), of industry insured property losses arising from a Named Storm or an Earthquake, or a comparable notification in the event a replacement reporting agency is

named by the Calculation Agent pursuant to the terms of the Calculation Agent Agreement.

PCS estimates of industry insured property losses are typically specified by state and line of business, which include personal lines, commercial lines and automobile lines, and may include workers' compensation losses and National Flood Insurance Program ("**NFIP**") or write-your-own flood line losses. Only PCS estimates of industry insured property losses that include personal lines, commercial lines, and automobile lines will be used in determining the Event Index Value for a Named Storm or an Earthquake. Any losses from workers' compensation lines or NFIP or write-your-own flood lines, will be excluded in determining the Event Index Value for a Named Storm Event or an Earthquake Event.

For the avoidance of doubt, if PCS separately reports industry insured property losses from a Named Storm Event or an Earthquake Event for commercial lines and industrial lines, the applicable Named Storm State PCS Loss or Named Storm County PCS Loss, Earthquake State PCS Loss or Earthquake County PCS Loss or Earthquake Province PCS Loss, as applicable, shall include both commercial and industrial lines losses.

PERILS Loss Report; PERILS Resurvey Estimate.....

Any report (each, a "**PERILS Loss Report**") originated and disseminated by PERILS that identifies and assigns an event name and occurrence date to a catastrophe identified herein as a Europe Windstorm and/or gives preliminary estimates or, subsequently as it deems appropriate in the exercise of its judgment, adjusted estimates (each such adjusted estimate, a "**PERILS Resurvey Estimate**") of industry insured property losses arising from a Europe Windstorm or a comparable notification in the event a replacement Reporting Agency is named by the Calculation Agent pursuant to the terms of the Calculation Agent Agreement.

Estimates of insured property losses are typically specified by (i) CRESTA Zone and (ii) line of business, which includes residential lines, commercial lines, industrial lines, and agricultural lines or aggregation thereof.

Final Resurvey Estimate.

For the avoidance of doubt, the determination of whether a Resurvey Estimate in respect of a Covered Event is "final" will be as specified by the Reporting Agency in the relevant Reporting Agency Report. If the Reporting Agency deems it appropriate, in the exercise of its judgment, to restate or reopen an estimate of industry insured property losses resulting from a Covered Event that has at one time been labelled as "final" by such Reporting Agency, such previously released but reopened or restated "final" Resurvey Estimate will no longer be deemed final for purposes of the Notes and the Risk Transfer Agreement; **provided, that** no such new Resurvey Estimate will be taken into account to the extent that it is issued after the date that is five (5) Business Days prior to the Event Reporting Date immediately prior to the Redemption Date.

Reporting Agency Failure; Reporting Agency Failure Event ..

In connection with the preparation of each Event Report, the Calculation Agent will use commercially reasonable efforts to obtain the necessary and relevant data from the Reporting Agency.

However, if the Reporting Agency has failed, during the three-month period following the occurrence of a potential Covered Event, to issue a Reporting Agency Report with respect to such potential Covered Event that specifies industry insured property losses from personal, commercial and automobile lines, or has ceased to exist without having issued such Reporting Agency Report (each, a "**Reporting Agency Failure**"), then the Calculation Agent shall (i) provide written notice to the Issuer and the Risk Transferor specifying such Reporting Agency Failure and (ii) use its reasonable best efforts, in cooperation with the Issuer and Risk Transferor, to appoint a replacement for

the Reporting Agency that is reasonably satisfactory to and unaffiliated with the Risk Transferor within sixty (60) calendar days after such Reporting Agency Failure. If the Calculation Agent is unable to find such replacement Reporting Agency within ten (10) calendar days following the expiration of such sixty (60) day period, a "**Reporting Agency Failure Event**" shall be deemed to have occurred.

Fall-Back Data Provider . With respect to Named Storm Events, the Named Storm Data Provider and, with respect to Earthquake Events, the Earthquake Data Provider (each, a "**Fall-Back Data Provider**").

Named Storm Data Provider ..... The National Hurricane Center ("**NHC**") of the National Weather Service or its successor ("**NWS**"); **provided, that** in the event NHC ceases to exist or provide the relevant data, the Weather Prediction Center or its successor ("**WPC**"); *provided further*, in the event that NHC and WPC cease to exist or provide the relevant data, the International Best Track Archive for Climate Stewardship or its successor ("**IBTrACS**"); *provided even further*, in the event that NHC, WPC, and IBTrACS cease to exist or provide the relevant data, another organisation chosen by the Calculation Agent that provides equivalent data that is reasonably satisfactory to the Risk Transferor ("**Named Storm Data Provider**").

Earthquake Data Provider The United States Geological Survey or its successor ("**USGS**"), and in the event that USGS ceases to exist or provide the relevant data, another organisation chosen by the Calculation Agent that provides equivalent data to the data provided by USGS's ShakeMap™ product or USGS's FMTS product and that is reasonably satisfactory to the Risk Transferor ("**Earthquake Data Provider**").

ShakeMap; FMTS..... The USGS's ShakeMap™ product or similar product (chosen by the Calculation Agent) that is provided by the then-current Earthquake Data Provider ("**ShakeMap**") and the USGS's Fast Moment Tensor Solution product or similar product ("**FMTS**").

Named Storm

Named Storm ..... Any event that is identified and assigned a number by PCS as a "catastrophe" (whether or not such identification and assignment is made during the Risk Period), where the perils identified by PCS with respect to such catastrophe include the peril of tropical cyclone, tropical depression, tropical storm, post-tropical storm or hurricane (or similar term used for the same purpose) (each, a "**Named Storm**"); **provided, that** if a Reporting Agency Failure Event has occurred, a Named Storm will be deemed to have occurred if a storm or storm system has been declared by the Named Storm Data Provider to be a tropical cyclone, tropical depression, tropical storm, post-tropical storm or hurricane at any time during such storm or storm system.

Named Storm Date of Loss ..... The first date specified in the "Dates" data field of a Catastrophe Bulletin for a Named Storm, or the comparable data field in the event PCS changes its reporting format or a replacement to PCS is named by the Calculation Agent pursuant to the terms of the Calculation Agent Agreement ("**Named Storm Date of Loss**"); **provided, that** if a Reporting Agency Failure Event has occurred with respect to a Named Storm, the Named Storm Date of Loss shall be deemed to have occurred on the earliest date that a "watch," "warning," advisory or other bulletin for such Named Storm is first issued by the Named Storm Data Provider with respect to any part of the Named Storm Covered Area.

Named Storm Event..... Any Named Storm with a Named Storm Date of Loss (based on local date and time) within the Risk Period having caused industry insured property losses in the Named Storm Covered Area (each, a "**Named Storm Event**"); **provided,**

	that if a Reporting Agency Failure Event has occurred, a Named Storm Event will be deemed to have occurred if a Named Storm has occurred with a Named Storm Date of Loss within the Risk Period.
Named Storm Covered Area	With respect to the peril of Named Storm, all fifty (50) states of the United States of America, the District of Columbia, Puerto Rico and the U.S. Virgin Islands (each a "**State**" and collectively the "**States**") (the "**Named Storm Covered Area**").
Preliminary Named Storm Event Parameters Date	For each Named Storm Event, the date that is thirty (30) Business Days prior to the Payment Date immediately following the Initial Event Reporting Date of such Named Storm Event (the "**Preliminary Named Storm Event Parameters Date**").
Final Named Storm Event Parameters Date.	The earlier of (a) the date on which the first version of a Tropical Cyclone Report for such Named Storm Event is released by the Named Storm Data Provider, and (b) the date that is 120 calendar days after the Named Storm Date of Loss of such Named Storm Event (the "**Final Named Storm Event Parameters Date**").
Named Storm Event Parameters; Named Storm Event Parameters Date	The following physical characteristics of any Named Storm as reported by the Named Storm Data Provider: (i) the date and time of such event, (ii) the location, forward speed, central barometric pressure and radius of maximum winds at six-hour (6-hour) intervals or more frequently if provided by the Named Storm Data Provider, and (iii) any other parameter provided by the Named Storm Data Provider necessary to conduct the Named Storm Post Event Loss Calculations as described in the Calculation Agent Agreement (the "**Named Storm Event Parameters**"). The "**Named Storm Event Parameters Date**" shall mean: (i) the Final Named Storm Event Parameters Date if such Final Named Storm Event Parameters Date occurs at least twenty-three (23) Business Days prior to the Payment Date immediately following such Named Storm Event Reporting Date, or otherwise, (ii) the Preliminary Named Storm Event Parameters Date. For the avoidance of doubt, any updated Named Storm Event Parameters made publicly available by the Named Storm Data Provider after the Final Named Storm Event Parameters Date will be disregarded by the Calculation Agent when performing any Named Storm Post Event Loss Calculations.
Tropical Cyclone Report.	A report issued by the Named Storm Data Provider containing meteorological statistics, post-event analysis best track and other information about a named storm (a "**Tropical Cyclone Report**").
Named Storm State Modeled Loss; Named Storm County Modeled Loss; Named Storm Post Event Loss Calculations; Named Storm County Percentage	Following each Named Storm Event, the Calculation Agent will obtain from the Named Storm Data Provider the Named Storm Event Parameters with respect to such Named Storm Event and will withdraw from escrow the applicable Escrow Model and the Industry Exposure Database. The Calculation Agent will use the applicable Escrow Model and Named Storm Event Parameters to calculate each State-level loss from personal lines, commercial lines (excluding any workers' compensation losses or NFIP or write-your-own flood line losses) and automobile lines to the Industry Exposure Database ("**Named Storm State Modeled Loss**") for each State in the Named Storm Covered Area and each county level loss to the Industry Exposure Database ("**Named Storm County Modeled Loss**") for each county in the Named Storm Covered Area pursuant to the procedures set forth in the Calculation Agent Agreement ("**Named Storm Post Event Loss Calculations**").

For each county within each State in the Named Storm Covered Area, the Calculation Agent will calculate a percentage ("**Named Storm County Percentage**") equal to (i) the relevant county's Named Storm County Modeled Loss divided by (ii) the Named Storm State Modeled Loss for such county's State.

Named Storm State PCS Loss ..... On any date of determination and for each Named Storm Event, an amount equal to the total amount of estimated industry insured property losses from personal lines, commercial lines (excluding any workers' compensation losses or NFIP write your own flood line losses), and automobile lines for each State calculated separately in the Named Storm Covered Area as stated in the most recent Catastrophe Bulletin and verified by the Calculation Agent (the "**Named Storm State PCS Loss**"), **provided that**, if PCS separately reports industry insured property losses from a Named Storm for commercial and industrial lines, the applicable Named Storm County PCS Loss shall include both commercial and industrial lines.

Named Storm County PCS Loss ..... On any date of determination, for each Named Storm Event and for each county within each State in the Named Storm Covered Area, an amount equal to (i) the Named Storm State PCS Loss for such State *multiplied by* (ii) the Named Storm County Percentage for such county in such State (the "**Named Storm County PCS Loss**").

Fall-Back Named Storm Industry Loss..... If a Reporting Agency Failure Event has occurred with respect to a Named Storm, the Calculation Agent will determine the Named Storm State PCS Loss for each State in the Named Storm Covered Area using the relevant event parameters reported by the Named Storm Data Provider for such Named Storm and the Calculation Agent's latest available post-event loss calculation procedure, in conjunction with the Calculation Agent's latest commercially available models, software, and industry exposure database. The Calculation Agent will follow the steps in the post event loss calculation procedure to create a modeled footprint of the Named Storm, perform an analysis of the Named Storm in the Calculation Agent's latest commercially available model, and generate with respect to such Named Storm, for each State in the Named Storm Covered Area, the modeled loss to the applicable insured industry personal, commercial and automobile property portfolio using the latest commercially available industry exposure database ("**Fall-Back Named Storm Industry Loss**"). In such case, the modeled loss to the applicable industry insured personal, commercial (excluding any worker's compensation losses or NFIP or write-your-own flood line losses) and automobile portfolio determined by the Calculation Agent will be deemed to be the Named Storm State PCS Loss.

Named Storm Payout Factors ..... The applicable Named Storm payout factors set forth in the data file described in Annex C hereto (the "**Initial Named Storm Payout Factors**") and, following any Reset, the Updated Named Storm Payout Factors (the "**Named Storm Payout Factors**").

Named Storm Index Value ..... For any Named Storm Event, the "**Named Storm Index Value**" will be calculated by the Calculation Agent using the following formula and rounded to two decimal places:

Named Storm Index Value =

$$\left(\sum_{c}(\Pi_C^S \times \mathrm{I}_C^S)\right) + \left(\sum_{S}\left(\Pi_s \times \mathrm{I}_s\right)\right) - \text{Index Deductible}^*$$

* Denotes the Index Deductible in effect on the applicable Named Storm Date of Loss.

where,

Π_C^S = the Named Storm Payout Factor in effect on the Named Storm Date of Loss for each county (C) within each State within the Named Storm Covered Area; and

I_C^S = the Named Storm County PCS Loss for each county (C) within each State within the Named Storm Covered Area, divided by USD 1,000,000;

If the Named Storm Post Event Loss Calculations cannot be conducted for one or more States within the Named Storm Covered Area that are capable of being modeled by the Calculation Agent because the relevant Named Storm State PCS Loss is below USD 1,000,000 or is zero (0), then the Calculation Agent will apply the lowest Named Storm Payout Factor stated for a county in such State to the relevant Named Storm State PCS Loss.

If the Named Storm Payout Factor is the same for all counties within a State and where the Named Storm State Modeled Loss is zero as a result of such State being incapable of being modeled by the Calculation Agent and the Named Storm State PCS Loss is greater than zero, then,

Π_S = the Named Storm Payout Factor in effect on the Named Storm Date of Loss for such State (S) within the Named Storm Covered Area; and

I_S = the Named Storm State PCS Loss for each State (S) within the Named Storm Covered Area.

provided, that in either case, if the Named Storm Index Value for any Named Storm Event is less than zero, then such Named Storm Index Value will be deemed to be zero.

Any change in the Named Storm County PCS Loss for a Named Storm Event after the earlier of (i) the Event Reporting Date that occurs at least five (5) Business Days after the date PCS releases a Catastrophe Bulletin with its final Resurvey Estimate for such Named Storm Event and (ii) five (5) Business Days prior to the Event Reporting Date immediately prior to the Redemption Date will be disregarded by the Calculation Agent when calculating the Named Storm Index Value and any corresponding Accrual Period Loss Payment Amount.

Earthquake

Earthquake ..... Any event that is identified and assigned a number by PCS as a "catastrophe" (whether or not such identification and assignment is made during the Risk Period), where the perils identified by PCS with respect to such catastrophe include the peril of earthquake (each, an "**Earthquake**"); **provided, that** if a Reporting Agency Failure Event has occurred, an Earthquake will be deemed to have occurred if such earthquake resulted in a Spectral Acceleration of at least 0.084g reported within the Earthquake Covered Area (irrespective of the location of the Epicentre of the earthquake), as reported by the Earthquake Data Provider; **provided, further, that** if a nuclear explosion reported by a U.S. or Canadian government agency has occurred (i) within one hour prior to the relevant Earthquake Date of Loss and (ii) within a Distance of 10 kilometres from the Epicentre of such earthquake to the location of such nuclear explosion as reported by such government agency, then such deemed earthquake shall not be an Earthquake.

"**Spectral Acceleration**" is the one second spectral acceleration (measured in multiples of the acceleration of gravity) as made available by the relevant Earthquake Data Provider in its "grid.xyz" file or a successor product thereof,

the "**Epicenter**" is the point on the surface of the Earth, whether on land or on surface of the ocean, directly above the Hypocentre, the "**Distance**" is the closest distance in kilometres or miles, as applicable, between two points on the earth's surface as further specified below ("**Distance**" or "**D**"), and the "**Hypocentre**" is the point at which the sudden displacement that generates an Earthquake is initiated.

"**D**" in kilometres is calculated as follows:

$$\begin{aligned} D = 6378 \times \text{arccosine}(&\cos(\text{lat } 1) \times \cos(\text{lon } 1) \times \cos(\text{lat } 2) \times \cos(\text{lon } 2) \\ &+ \cos(\text{lat } 1) \times \sin(\text{lon } 1) \times \cos(\text{lat } 2) \times \sin(\text{lon } 2) \\ &+ \sin(\text{lat } 1) \times \sin(\text{lat } 2)) \end{aligned}$$

where: (lon 1, lat 1) and (lon 2, lat 2) are the longitude in radians (+ for east, – for west) and latitude in radians (+ for north, – for south) of two points.

Earthquake Date of Loss. The first date specified in the "Dates" data field of a Catastrophe Bulletin for an Earthquake, or the comparable data field in the event PCS changes its reporting format or a replacement to PCS is named by the Calculation Agent pursuant to the terms of the Calculation Agent Agreement (each, an "**Earthquake Date of Loss**"); **provided, that** in the case where the same Earthquake impacts both the United States and Canada, the Earthquake Date of Loss will be the earlier of (i) the Earthquake Date of Loss listed in the Catastrophe Bulletin for the United States and (ii) the Earthquake Date of Loss listed in the Catastrophe Bulletin for Canada, where at least one such bulletin cross references the other; **provided, further that** if a Reporting Agency Failure Event has occurred with respect to an Earthquake, the Earthquake Date of Loss will be deemed to have occurred on the earliest date reported by the Earthquake Data Provider with respect to such Earthquake.

Earthquake Event..... Any Earthquake (including all fires following such Earthquake) with an Earthquake Date of Loss (based on local date and time)within the Risk Period having caused industry insured property losses in the Earthquake Covered Area (each, an "**Earthquake Event**"); **provided, that** an Earthquake impacting both the United States and Canada identified by PCS in separate Catastrophe Bulletins and assigned two separate numbers where at least one such bulletin cross references the other shall be considered one Earthquake Event; *provided, further* if a Reporting Agency Failure Event has occurred, an Earthquake Event will be deemed to have occurred if an Earthquake occurred with an Earthquake Date of Loss within the Risk Period.

Earthquake Covered Area ..... The "**Earthquake Covered Area**" will consist of (i) all fifty (50) states of the United States of America, the District of Columbia, Puerto Rico and the U.S. Virgin Islands (the "**U.S. Earthquake Covered Area**") and (ii) all Provinces of Canada (the "**Canadian Earthquake Covered Area**").

Province ..... Each of the provinces and territories of Canada (each, a "**Province**").

Earthquake Event Parameters; Earthquake Event Parameters Date. The following physical characteristics of any Earthquake obtained from the Earthquake Data Provider and reported by the Earthquake Data Provider within ninety (90) calendar days after the Earthquake Date of Loss of such Earthquake Event (each, an "**Earthquake Event Parameters Date**"): (i) the date and time of such event, (ii) the ShakeMap ground motion file, or, if such ground motion file is not available, the moment magnitude, location of epicentre, focal depth, rupture azimuth, dip angle and fault type (the "**Earthquake Event Parameters**").

Earthquake State Modeled Loss; Following each Earthquake Event, the Calculation Agent will obtain from the Earthquake Data Provider the Earthquake Event Parameters with respect to

	such Earthquake Event and will withdraw from escrow the applicable Escrow Model and the Industry Exposure Database.
Earthquake County Modeled Loss; Earthquake Post Event Loss Calculations; Earthquake County Percentage	The Calculation Agent will use the applicable Escrow Model and the Earthquake Event Parameters to calculate each State-level loss from personal lines, commercial lines (excluding any workers' compensation losses or NFIP or write-your-own flood line losses) and automobile lines to the Industry Exposure Database ("**Earthquake State Modeled Loss**") for each State in the U.S. Earthquake Covered Area and each county level loss to the Industry Exposure Database ("**Earthquake County Modeled Loss**") for each county in the U.S. Earthquake Covered Area pursuant to the procedures set forth in the Calculation Agent Agreement and as described in the "*AIR Expert Risk Analysis Results*" attached hereto as Annex B ("**Earthquake Post Event Loss Calculations**"). For each county within each State in the U.S. Earthquake Covered Area, the Calculation Agent will calculate a percentage ("**Earthquake County Percentage**") equal to (i) the relevant county's Earthquake County Modeled Loss divided by (ii) the Earthquake State Modeled Loss for such county's State.
Earthquake State PCS Loss	On any date of determination and for each Earthquake Event, an amount equal to the total amount of estimated insured property losses from personal lines, commercial lines (excluding any workers' compensation losses) and automobile lines for each State calculated separately in the U.S. Earthquake Covered Area as stated in the most recent Catastrophe Bulletin and verified by the Calculation Agent (the "**Earthquake State PCS Loss**"), **provided that**, if PCS separately reports industry insured property losses from an Earthquake for commercial and industrial lines, the applicable Earthquake State PCS Loss shall include both commercial and industrial lines.
Earthquake County PCS Loss	On any date of determination, for each Earthquake Event and for each county within each State in the U.S. Earthquake Covered Area, an amount equal to (i) the Earthquake State PCS Loss for such State multiplied by (ii) the Earthquake County Percentage for such county in such State (the "**Earthquake County PCS Loss**").
Earthquake Province PCS Loss	On any date of determination and for each Earthquake, an amount equal to the total amount of estimated insured property losses from personal lines, commercial lines (excluding any workers' compensation losses) and automobile lines for each Province calculated separately in the Canadian Earthquake Covered Area as stated in the most recent Catastrophe Bulletin and verified by the Calculation Agent (the "**Earthquake Province PCS Loss**") **provided that**, if PCS separately reports industry insured property losses from an Earthquake Event for commercial and industrial lines, the applicable Earthquake Province PCS Loss shall include both commercial and industrial lines losses. The Earthquake Province PCS Loss for each Province will be reported in Canadian dollars and converted to U.S. dollars using the Canada FX Conversion Factor, as described under "*—Earthquake Index Value*" below. In case the same Earthquake impacts both the United States and Canada, the industry insured property losses from the two separate Catastrophe Bulletins where at least one such bulletin cross references the other shall be combined.
Fall-Back Earthquake Industry Loss; Fall-Back Industry Loss	If a Reporting Agency Failure Event has occurred with respect to an Earthquake, the Calculation Agent will determine the Earthquake State PCS Loss for each State and Earthquake Province PCS Loss for each Province in the Earthquake Covered Area using the relevant event parameters reported by the Earthquake Data Provider for such Earthquake and the Calculation Agent's latest available post-event loss calculation procedure, in conjunction with the Calculation Agent's latest commercially available models, software, and

industry exposure database. The Calculation Agent will follow the steps in the post event loss calculation procedure to create a modeled footprint of the Earthquake, perform an analysis of the Earthquake Event in the Calculation Agent's latest commercially available model, and generate with respect to such Earthquake, for each State and Province in the Earthquake Covered Area, the modeled loss to the applicable industry insured personal, commercial (excluding any workers' compensation losses) and automobile property portfolio using the latest commercially available industry exposure database ("**Fall-Back Earthquake Industry Loss**", and together with the Fall-Back Named Storm Industry Loss, the "**Fall-Back Industry Loss Amount**"). In such case, the modeled loss to the applicable industry insured personal, commercial (excluding any workers' compensation losses) and automobile property portfolio determined by the Calculation Agent will be deemed to be the Earthquake State PCS Loss and Earthquake Province PCS Loss, as applicable.

Earthquake Payout Factors ..... The applicable Earthquake payout factors set forth in the data file described in Annex C hereto (the "**Initial Earthquake Payout Factors**") and, following any Reset, the Updated Earthquake Payout Factors (the "**Earthquake Payout Factors**").

Canada FX Conversion Factor; Initial Canada FX Conversion Factor; Updated Canada FX Conversion Factor..... 1.000 CAD per 0.75079 USD (the "**Initial Canada FX Conversion Factor**") and, following any update in connection with a Reset, the updated Canada currency conversion factor as provided by the Risk Transferor (the "**Updated Canada FX Conversion Factor**").

The Initial Canada FX Conversion Factor and the Updated Canada FX Conversion Factor are each a "**Canada FX Conversion Factor**".

Earthquake Index Value . For any Earthquake Event, the "**Earthquake Index Value**" will be calculated by the Calculation Agent using the following formula and rounded to two decimal places:

Earthquake Index Value =

$$\left(\sum_{C}(\Pi_c \times \mathrm{I}_C)\right) + \left(\sum_{p}\frac{(\Pi_P \times \mathrm{I}_P)}{FX}\right) - \text{Index Deductible}^*$$

* Denotes the Index Deductible in effect on the applicable Earthquake Date of Loss.

where,

Π_c = the Earthquake Payout Factor in effect on the Earthquake Date of Loss for each County (C) within each State within the U.S. Earthquake Covered Area; and

I_c = the Earthquake County PCS Loss for each County (C) within each State within the U.S. Earthquake Covered Area, divided by USD 1,000,000;

If the Earthquake Post Event Loss Calculations cannot be conducted for one or more States within the Earthquake Covered Area that are capable of being modeled by the Calculations Agent because the relevant Earthquake State PCS Loss is below USD 1,000,000 or CAD 1,000,000 (as the case may be) or is zero (0), then the Calculation Agent will apply the lowest Earthquake Payout Factor stated for a county in such State or the Earthquake Payout Factor for the Province, as the case may be, to the relevant Earthquake State PCS Loss.

Π_p = the Earthquake Payout Factor in effect on the Earthquake Date of Loss for each Province (P) within the Canadian Earthquake Covered Area; and

I_p = the Earthquake Province PCS Loss for each Province (P) within the Canadian Earthquake Covered Area, divided by CAD 1,000,000;

FX = the Canada FX Conversion Factor in effect on the Earthquake Date of Loss;

provided, that if the Earthquake Index Value for any Earthquake Event is less than zero, then such Earthquake Index Value will be deemed to be zero.

Any change in the Earthquake County PCS Loss or Earthquake Province PCS Loss for an Earthquake Event after the earlier of (i) thirty-six (36) months from the Earthquake Date of Loss for such Earthquake Event; (ii) the Event Reporting Date that occurs at least five (5) Business Days after the date PCS releases a Catastrophe Bulletin with its final Resurvey Estimate for such Earthquake Event; and (iii) five (5) Business Days prior to the Event Reporting Date immediately prior to the Redemption Date will be disregarded by the Calculation Agent when calculating the Earthquake Index Value and any corresponding Loss Period Payment Amount.

Europe Windstorm

Europe Windstorm..... Any event that is identified and assigned a unique event identifier by PERILS as an "Extratropical Cyclone" (excluding United Kingdom flood) (whether or not such identification and assignment is made during the applicable Risk Period) (each, a "**Europe Windstorm**").

Europe Windstorm Event Any Europe Windstorm with a Europe Windstorm Date of Loss (based on local date and time) within the Risk Period having caused industry insured property losses in the Europe Windstorm Covered Area (each, a "**Europe Windstorm Event**").

Europe Windstorm Covered Area ..... With respect to the peril of Europe Windstorm, Austria, Belgium, Denmark, France, Germany, Ireland, Luxembourg, The Netherlands, Norway, Sweden, Switzerland and the United Kingdom (the "**Europe Windstorm Initial Covered Area**") and, following a Reset, the Europe Windstorm Initial Covered Area and any of Czech Republic, Estonia, Finland, Latvia, Lithuania, Monaco and Poland (the "**Europe Windstorm Updated Covered Area**") as specified by the Risk Transferor on or prior to the Reset Determination Date if PERILS commences reporting of industry insured property losses arising from a Europe Windstorm in such elected Europe Windstorm Updated Covered Area (the Europe Windstorm Initial Covered Area and, following a Reset, the Europe Windstorm Updated Covered Area, the "**Europe Windstorm Covered Area**").

CRESTA Zone..... The "Catastrophe Risk Evaluation and Standardizing Target Accumulations" (each, a "**CRESTA Zone**"), which are the standard geographic regions used by the insurance industry to reference exposure locations.

Europe Windstorm Date of Loss..... The event start date specified in the data field labelled "Event Start Date" of a PERILS Loss Report for a Europe Windstorm, or the comparable data field in the event PERILS changes its reporting format or a replacement to PERILS is named by the Calculation Agent pursuant to the terms of the Calculation Agent Agreement (each, a "**Europe Windstorm Date of Loss**").

Europe Windstorm Payout Factor ..... The Initial Europe Windstorm Payout Factor and, following any Reset, the applicable Updated Europe Windstorm Payout Factor (each a "**Europe Windstorm Payout Factor**").

Initial Europe Windstorm Payout Factor; Europe Windstorm Payout Factor.....	For each CRESTA Zone in the Europe Windstorm Covered Area, as set forth in the AIR Data File attached hereto as Annex C (each an "**Initial Europe Windstorm Payout Factor**") and, following any Reset, the Updated Europe Windstorm Payout Factors (the "**Europe Windstorm Payout Factors**").
Europe Windstorm Loss Amount.....	On any date of determination and for each Europe Windstorm, an amount equal to the total amount of estimated industry insured property losses from residential, commercial, industrial and agricultural lines, or aggregations thereof for each CRESTA Zone in the Europe Windstorm Covered Area (the "**Europe Windstorm Loss Amount**"), as stated in the most recent PERILS Loss Report for such Europe Windstorm Event and verified by the Calculation Agent.
Europe Windstorm Index Value	For any Europe Windstorm Event, the "**Europe Windstorm Index Value**" will be calculated by the Calculation Agent using the following formula and rounded to two decimal places: Europe Windstorm Index Value = $$\left(\sum_z (\Pi_Z \times I_Z)\right) - \text{Index Deductible}^*$$ * Denotes the Index Deductible in effect on the applicable Europe Windstorm Date of Loss. where, Π_Z = the Europe Windstorm Payout Factor in effect on the Europe Windstorm Date of Loss for each CRESTA Zone (Z) within the Europe Windstorm Covered Area; I_Z = the Europe Windstorm Loss Amount for each CRESTA Zone (Z) within the Europe Windstorm Covered Area, divided by EUR 1,000,000; If the Europe Windstorm Loss Amount in a CRESTA Zone is below EUR 1,000,000 or is zero (0), then the Calculation Agent will apply the lowest Europe Windstorm Payout Factor stated for a CRESTA Zone in such country to the relevant Europe Windstorm Loss Amount. Any change in the Europe Windstorm Loss Amount for a Europe Windstorm Event after the earlier of (i) thirty-six (36) months from the Europe Windstorm Date of Loss for such Europe Windstorm; (ii) the Event Reporting Date that occurs at least five (5) Business Days after the date that PERILS releases a PERILS Loss Report with its final PERILS Resurvey Estimate for such Europe Windstorm Event; and (iii) the Event Reporting Date immediately prior to the Redemption Date, will not be taken into account when calculating the Europe Windstorm Index Value.
Europe FX Conversion Factors; Initial Europe FX Conversion Factors; Updated Europe FX Conversion Factors	Each of the following is an initial Europe currency conversation factor ("**Initial Europe FX Conversion Factor**"): USD (per CHF): 1.00042 USD (per DKK): 0.15191 USD (per EUR): 1.13350 USD (per GBP): 1.31706 USD (per NOK): 0.11553 USD (per SEK): 0.10700 (collectively, the "**Initial Europe FX Conversion Factors**") and, following any update in connection with a Reset, the updated Europe currency

	conversion factors as provided by the Risk Transferor (the "**Updated Europe FX Conversion Factors**").
	The Initial Europe FX Conversion Factors and the Updated Europe FX Conversion Factors are the "**Europe FX Conversion Factors**".
Loss Calculation	
European Covered Event	Europe Windstorm Events in the Europe Windstorm Covered Area.
North America Covered Event.....	Named Storm Events in the Named Storm Covered Area and Earthquake Events in the Earthquake Covered Area.
Attachment Level.....	The Initial North America Attachment Level or the Initial European Attachment Level, as applicable, and, following any update in connection with a Reset, the applicable Updated North America Attachment Level and Updated European Attachment Level, as applicable (the "**Attachment Level**").
Initial Attachment Level.	The Initial North America Attachment Level and the Initial European Attachment Level, as the case may be.
Exhaustion Level	The Initial North America Exhaustion Level or the Initial European Exhaustion Level, and following any Reset, the applicable Updated North America Exhaustion Level or the Updated European Exhaustion Level, (together the "**Exhaustion Level**").
Initial Exhaustion Level..	Either the Initial North America Exhaustion Level or the Initial European Exhaustion Level, as the case may be (the "**Initial Exhaustion Level**").
Initial Augmented PERILS Industry Exposure Database.....	The PERILS Industry Exposure Databases as augmented using the most recent industry exposure databased released by the Calculation Agent as of the date of the initial risk analysis.
Initial North America Attachment Level.....	1,060 index points ("**Initial North America Attachment Level**")
Initial North America Exhaustion Level	1,310 index points ("**Initial North America Exhaustion Level**")
Initial European Attachment Level.....	1,200 index points ("**Initial European Attachment Level**")
Initial European Exhaustion Level	1,420 index points ("**Initial European Exhaustion Level**")
Layer	For each type of Covered Event, the difference in index points between the Exhaustion Level and the Attachment Level (the "**Layer**").
Initial Index Event Deductible	For Named Storm Events and Earthquake Events, 45 index points. For Europe Windstorm Events, 40 index points (the "**Initial Index Event Deductible**").
Index Deductible.....	The Initial Index Event Deductible for the relevant Covered Event and, following any update in connection with a Reset, the Updated Index Event Deductible for the relevant Covered Event (the "**Index Deductible**").
Event Index Value	For each Covered Event, the Named Storm Index Value, the Earthquake Index Value or the Europe Windstorm Index Value, as applicable (each, an "**Event Index Value**").
Loss Period Index Value.	As of any date of determination, for each Loss Period calculated separately, an amount (calculated separately for North America Covered Events and European Covered Events) equal to the sum of Event Index Values for all

North America Covered Events or European Covered Events, as applicable, with a Date of Loss during such Loss Period ("**Loss Period Index Value**").

Loss Period Payment Amount..... As of any date of determination, the "**Loss Period Payment Amount**" will be calculated separately for North America Covered Events and European Covered Events and for each Loss Period pursuant to the following formula, using the applicable Attachment Level and the applicable Exhaustion Level in effect for such Loss Period for such type of Covered Event:

Loss Period Payment Amount =

$$\text{Original Principal Amount} \times \left(\frac{\text{Loss Period Index Value} - \text{Attachment Level}}{\text{Exhaustion Level} - \text{Attachment Level}}\right)$$

If the Loss Period Index Value is less than the applicable Attachment Level for such type of Covered Event, then the Loss Period Index Value for determining the Loss Period Payment Amount will be deemed to be equal to the Attachment Level for such type of Covered Event. If the Loss Period Index Value is greater than the applicable Exhaustion Level for such type of Covered Event, then the Loss Period Index Value for such type of Covered Event for determining the Loss Period Payment Amount will be deemed to be equal to the Exhaustion Level for such type of Covered Event.

Aggregate Loss Payment Amount..... As of each Payment Date, an amount equal to the sum of all of the Loss Period Payment Amounts for North America Covered Events and European Covered Events respectively for all Loss Periods ("**Aggregate Loss Payment Amount**"). The Aggregate Loss Payment Amount may not exceed the Original Principal Amount.

Accrual Period Loss Payment Amount; Positive Accrual Period Loss Payment Amount; Negative Accrual Period Loss Payment Amount..... As of each Payment Date, the "**Accrual Period Loss Payment Amount**" is an amount equal to (a) the Aggregate Loss Payment Amount calculated for such Payment Date minus (b) the Aggregate Loss Payment Amount calculated for the immediately preceding Payment Date (if the result of such calculation is greater than or equal to zero, such result is referred to herein as a "**Positive Accrual Period Loss Payment Amount**"; if the result of such calculation is less than zero, such result is referred to herein as a "**Negative Accrual Period Loss Payment Amount**"); **provided, that** any Positive Accrual Period Loss Payment Amount will not be greater than the Outstanding Principal Amount on the immediately prior Payment Date (less the absolute value of any Negative Accrual Period Loss Payment Amounts which have fallen due on or before such immediately prior Payment Date and which remain unpaid as at the current Payment Date) or in the case of the First Payment Date, the Issuance Date, as applicable.

EVENT REPORTING

Calculation Agent	AIR Worldwide Corporation, a Delaware corporation with its principal place of business at 131 Dartmouth Street, Boston, Massachusetts 02116, or its successor, or any replacement Calculation Agent under the terms of the Calculation Agent Agreement (the "**Calculation Agent**" or "**AIR**").
Calculation Agent Agreement	On the Issuance Date, the Issuer will enter into a Calculation Agent Agreement with AIR, pursuant to which AIR will provide certain services to the Issuer in connection with the Notes, including services relating to Resets and the provision of Event Reports and Optional Extension Verification Reports (the "**Calculation Agent Agreement**").
Event Notice.....	Following a potential Covered Event, the Risk Transferor may provide written notice to the Issuer, the Calculation Agent and the Insurance Manager (each, an "**Event Notice**") instructing the Calculation Agent to provide an Event Report for such potential Covered Event pursuant to and in accordance with the Calculation Agent Agreement.
Event Report	Following receipt of an Event Notice in respect of a potential Covered Event, the Calculation Agent will issue a report (each, an "**Event Report**") to the Issuer, the Insurance Manager and the Risk Transferor stating the Date of Loss for such potential Covered Event and the results of the procedures carried out by the Calculation Agent in determining whether such potential Covered Event is a Covered Event and, if a Covered Event, (i) the Event Index Value for such Covered Event, (ii) the Loss Period Index Value for the relevant Loss Period, and, except where an Accrual Period Loss Payment Amount will be equal to zero on the immediately following Payment Date, (iii) the Loss Period Payment Amount, (iv) the Aggregate Loss Payment Amount, (v) the Positive Accrual Period Loss Payment Amount, or as applicable, the Negative Accrual Period Loss Payment Amount, (vi) the Issuer Payment, (vii) the Principal Reduction or Principal Increase, and (viii) the resulting Outstanding Principal Amount.
Event Reporting Date	Pursuant to the terms of the Calculation Agent Agreement, the Calculation Agent, with respect to a potential Covered Event, will be required to submit an Event Report to the Issuer and the Risk Transferor at least seven (7) Business Days prior to the first Payment Date following the date on which the relevant Event Notice is issued (the "**Initial Event Reporting Date**"), using the latest Reporting Agency Report available as of five (5) Business Days prior to such Initial Event Reporting Date; **provided, however, that** if an Event Notice is issued less than twelve (12) Business Days prior to such first Payment Date, the Initial Event Reporting Date will be on the seventh (7th) Business Day prior to the next succeeding Payment Date; **provided, further, that** if no Reporting Agency Report is available for the applicable Covered Event as of five (5) Business Days prior to such Initial Event Reporting Date, then the Initial Event Reporting Date will instead be seven (7) Business Days prior to the first Payment Date for which a Reporting Agency Report is available for such Covered Event at least twelve (12) Business Days prior to such Payment Date. Thereafter, the Calculation Agent will continue to be required to issue an Event Report at least seven (7) Business Days prior to each subsequent Payment Date (the "**Subsequent Event Reporting Date**" and, together with the Initial Event Reporting Date, an "**Event Reporting Date**") until and including the Final Event Report for such Covered Event, in each case using the latest Reporting Agency Report available as of five (5) Business Days prior to such Subsequent Event Reporting Date; **provided, that** in the case of the Final Extended Redemption Date, the Subsequent Event Reporting Date will be three (3) Business Days prior to the Final Extended Redemption Date.

Final Event Report.....	For each Covered Event, the report issued by the Calculation Agent using any of the following, whichever is available earliest, will be a "**Final Event Report**": (i) the Reporting Agency Report containing a final Resurvey Estimate for such Covered Event, (ii) if the Reporting Agency has ceased to exist or is unable to provide data necessary for the Calculation Agent to issue an updated version of an Event Report, and no replacement reporting agency has been identified by the Calculation Agent, the most recent Reporting Agency Report for such Covered Event available on or immediately before the date when the Reporting Agency has ceased to exist or failed to deliver such data, and (iii) the most recent Reporting Agency Report available on or immediately before the date that occurs eight (8) Business Days prior to the Final Extended Redemption Date.

RESETS

Modeling Firm	AIR Worldwide Corporation or its successor (the "**Modeling Firm**").
Reset Agent.....	AIR Worldwide Corporation or its successor, or any replacement reset agent under the terms of the Calculation Agent Agreement (in such capacity, "**Reset Agent**").
Initial Industry Exposure Database; Updated Industry Exposure Database; Industry Exposure Database.....	AIR has based its initial risk analysis results contained in this Circular on AIR's industry insured exposure databases for U.S. hurricanes as of 31 December 2017, Puerto Rico and the U.S. Virgin Islands hurricanes as of 31 December 2017, U.S. earthquakes as of 31 December 2017, Puerto Rico and the U.S. Virgin Islands earthquakes as of 31 December 2017, Canada earthquakes as of 31 December 2015, and the Augmented PERILS Industry Exposure Database with exposure values as of 1 January 2018 for Europe Windstorm Events (each an "**Initial Industry Exposure Database**"). The Reset Agent shall provide written notice to the Risk Transferor and the Issuer at least one month prior to each Reset Determination Date specifying the Industry Exposure Database to be used in the forthcoming Reset. In performing each Reset, the Calculation Agent will use the latest industry insured exposure database commercially released by the Calculation Agent at least one (1) month prior to the Reset Determination Date and the latest applicable Augmented PERILS Industry Exposure Database available at least one (1) month prior to the Reset Determination Date, (each an "**Updated Industry Exposure Database**" and, together with the Initial Industry Exposure Database, each an "**Industry Exposure Database**"). The Reset Agent will also place the Industry Exposure Database into escrow with the Escrow Agent. The Calculation Agent will retain a copy certified by the Calculation Agent to be a duplicate version that is identical to the Industry Exposure Database deposited with the Escrow Agent. The Calculation Agent may use such certified copy of the Industry Exposure Database to perform any services required. In any such instance, such certified copy of the Industry Exposure Database will be deemed to be such Industry Exposure Database. If no changes have been made to the Industry Exposure Database since the initial risk analysis or the previous Reset Determination Date, as applicable, then in the applicable Reset Report, the Calculation Agent will affirm that such Initial Industry Exposure Database or Updated Industry Exposure Database, as the case may be, is still the Calculation Agent's best estimate of industry insured exposures with respect to Named Storms, Earthquakes, and Europe Windstorms. The PERILS Industry Exposure Databases have been augmented using the most recent industry exposure database released by AIR as of the date of the initial risk analysis (each an "**Initial Augmented PERILS Industry Exposure Database**"). The augmentation process is further described in the "**AIR Expert Risk Analysis Results**" attached hereto as Annex B. In performing each Reset, the Reset Agent will use the latest PERILS Industry Exposure Database commercially released at least one (1) month prior to the Reset Determination Date and augment this database with the escrowed additional industry exposure database of AIR as of the date of the initial risk analysis (each an "**Updated Augmented PERILS Industry Exposure Database**" and, together with the applicable Initial Augmented PERILS Industry Exposure Database, each an "**Augmented PERILS Industry Exposure Database**").
Factors; Initial Factors	The Named Storm Payout Factors, the Earthquake Payout Factors, the Europe Windstorm Payout Factors, the Canada FX Conversion Factor, the Europe FX Conversion Factors and the Index Deductible for each type of Covered Event, as applicable (the "**Factors**"). The Initial Named Storm Payout Factors, the

	Initial Earthquake Payout Factors, the Initial Europe Windstorm Payout Factors, the Initial Europe FX Conversion Factors, the Initial Canada FX Conversion Factor and the Initial Index Event Deductible for each type of Covered Event are the "**Initial Factors**".
Updated Index Event Deductible; Updated FX Conversion Factors; Updated Named Storm Payout Factors; Updated Earthquake Payout Factors; Updated Europe Windstorm Payout Factors; Updated Factors; Factor and Layer Reset Notice	In connection with each Reset, the Risk Transferor may, at its option, update: (i) the Index Deductible for each type of Covered Event (the "**Updated Index Event Deductible**"), if applicable, **provided, that** such Updated Index Event Deductible is not less than 30 index points; (ii) the Canada FX Conversion Factor and the Europe FX Conversion Factors (the "**Updated FX Conversion Factors**"), if applicable; (iii) the Named Storm Payout Factors (the "**Updated Named Storm Payout Factors**"), if applicable, **provided that** no Updated Named Storm Payout Factor may exceed 30%; (iv) the Earthquake Payout Factors (the "**Updated Earthquake Payout Factors**"), if applicable, **provided that** no Updated Earthquake Payout Factor may exceed 30%; and (v) the Europe Windstorm Payout Factors, **provided that** no Updated Europe Windstorm Payout Factor may exceed 30% (the "**Updated Europe Windstorm Payout Factors**", together with the Updated Named Storm Payout Factors, the Updated FX Conversion Factors, the Updated Earthquake Payout Factors, and the Updated Index Event Deductible, the "**Updated Factors**"), if applicable. If the Risk Transferor delivers a notice (a "**Factor and Layer Reset Notice**") exercising such option to update certain Factors and/or the Layer for any type of Covered Event to the Reset Agent and the Issuer, such notice, together with the Updated Factors and the updated Layer, must be delivered no later than the applicable Reset Determination Date; **provided, that** the foregoing shall not limit the Risk Transferor from resubmitting different Updated Factors within seven (7) calendar days after the Reset Determination Date. The Updated Factors, if any, and the updated Layer will be applied for the Reset and will become effective as of the Reset Effective Date. If any Reset does not meet the Reset Limitations, the Risk Transferor will have the ability to amend the Updated Factors by providing the Reset Agent with an amended Factor and Layer Reset Notice, and the Calculation Agent will use commercially reasonable efforts to perform a Reset meeting the Reset Limitations using such amended Updated Factors prior to the Reset Effective Date. If there has not been a Reset meeting the Reset Limitations by the Reset Effective Date, the Reset Agent will perform such Reset pursuant to the Calculation Agent Agreement applying the Factors as in effect prior to the relevant Reset Determination Date. Any such Reset will be deemed to be effective as of the relevant Reset Effective Date.
Initial One Year Attachment Probability	6.25% (the "**Initial One Year Attachment Probability**").
One Year Expected Loss	The Initial One Year Expected Loss and, following any update in connection with a Reset, the Updated One Year Expected Loss (the "**One Year Expected Loss**").
Initial One Year Expected Loss	5.46% (the "**Initial One Year Expected Loss**"). Prospective purchasers of the Notes should consider carefully the information set forth in the "AIR *Expert Risk Analysis*" attached hereto as Annex A and the

"AIR *Expert Risk Analysis Results*" attached hereto as Annex B for a more detailed description of the Initial One Year Attachment Probability and the Initial One Year Expected Loss.

Updated One Year Expected Loss	If the Risk Transferor delivers a Variable Reset Notice to the Reset Agent electing to update the Attachment Level for the Second Loss Period, the Third Loss Period or the Fourth Loss Period to the applicable Updated Attachment Level, the one-year modeled expected loss for such Loss Period shall be calculated using such Updated Attachment Level ("**Updated One Year Expected Loss**").
Reset Determination Date	15 April 2020, 15 April 2021 and 15 April 2022, as applicable (or if any such day is not a Business Day, the next succeeding Business Day) (each, a "**Reset Determination Date**").
Reset Effective Date	For the first Reset, 1 June 2020, for the second Reset, 1 June 2021 and for the third Reset, 1 June 2022, as the case may be (each, a "**Reset Effective Date**").
Reset; Preliminary Updated Attachment Level; Reset Limitations; Variable Reset Notice; Variable Reset; Updated Attachment Level.....	Annually beginning on each Reset Determination Date and using: (i) the Industry Exposure Database as of such Reset Determination Date; (ii) the Initial Factors or the Updated Factors as provided by the Risk Transferor as applicable; (iii) the updated Layer for each type of Covered Event as provided by the Risk Transferor; and (iv) the Escrow Models the Reset Agent will reset (each, a "**Reset**") the Attachment Level for each type of Covered Event, the Exhaustion Level for each type of Covered Event, and, if the Risk Transferor elects a Variable Reset, the Updated One Year Expected Loss and the Updated Interest Spread; **provided, that** in performing a Reset, the following conditions must be satisfied, as verified by the Reset Agent in a Reset Report: (a) no Named Storm Payout Factor, Earthquake Payout Factor or Europe Windstorm Payout Factor will exceed 30%; (b) the Index Deductible may not be less than 30 index points; (c) the modelled contribution to the One Year Expected Loss from a Named Storm Event in the state of Florida may not exceed 40% and from an Earthquake Event in the state of California may not exceed 40%; (d) the modelled contribution to the One Year Expected Loss from Earthquake Events cannot exceed 60%; (e) the modelled contribution to the One Year Expected Loss from Europe Windstorm Events may not be less than 5%; and (f) the Updated One Year Expected Loss cannot exceed 5.96% nor be less than 4.96%, ((a) – (f) together, the "**Reset Limitations**"). The Reset Agent will reset the Attachment Level for North America Covered Events and European Covered Events (to the nearest index point), such that the modeled one-year expected loss is the highest percentage equal to or less than the Initial One Year Expected Loss and the contribution to one-year

expected loss for each Covered Event is closest to the initial contribution to one-year expected loss for each type of Covered Event (the "**Preliminary Updated Attachment Level**").

The Reset Agent will provide to the Risk Transferor the calculations of the Preliminary Updated Attachment Level for each type of Covered Event and the corresponding updated AIR Data File (described in Annex C) (the "**Data File**") no later than 1 May preceding the applicable Reset Effective Date, if necessary (or if such day is not a Business Day, the next succeeding Business Day).

No later than 15 May preceding the applicable Reset Effective Date (or if such day is not a Business Day, the next succeeding Business Day), the Risk Transferor may elect, by notice ("**Variable Reset Notice**") to the Reset Agent, to update ("**Variable Reset**") the Attachment Level for any type of Covered Event for the Notes ("**Updated Attachment Level**"). If the Risk Transferor makes such election to update the Attachment Level for any type of Covered Event for the Notes, the Reset Agent will perform an Interest Spread Calculation. If the Risk Transferor makes no such election, the Updated Attachment Level for each type of Covered Event shall be set to the Preliminary Updated Attachment Level for each type of Covered Event and the Reset Agent will not perform an Interest Spread Calculation.

For each Reset, the "**Updated Exhaustion Level**" for a type of Covered Event for the Notes shall be set to an amount equal to the Updated Attachment Level for such type of Covered Event plus the updated Layer for such type of Covered Event provided by the Risk Transferor on the applicable Reset Determination Date.

Reset Report..... In connection with each Reset, the Reset Agent will prepare and provide a report to the Issuer, the Insurance Manager and the Risk Transferor setting forth the Updated Attachment Level for each type of Covered Event, the Updated Exhaustion Level for each type of Covered Event, the Updated Factors, if any, the date of the Industry Exposure Database used for such Reset and in the case of a Variable Reset, the Updated One Year Expected Loss and the Updated Interest Spread (a "**Reset Report**"). The Reset Report will be due from the Reset Agent no later than five (5) Business Days prior to each Reset Effective Date, except in the event of a Variable Reset, in which case the due date will be the Reset Effective Date. In addition, each Reset Report will verify whether a Reset was performed in accordance with the Reset Limitations and will provide certain calculations with respect to such verification. In each Reset Report, the Reset Agent will also update certain tables contained in the "*AIR Expert Risk Analysis Results*" attached hereto as Annex B, as specified in the Calculation Agent Agreement.

In connection with any Reset, the Issuer, the Reset Agent and the Risk Transferor may mutually agree in their discretion to extend or waive any of the delivery deadlines and other timeframes in connection with such Reset, so long as the Reset Report has been completed and delivered to the Issuer, the Insurance Manager and the Risk Transferor no later than the applicable due date.

Escrow Models..... (i) the AIR Hurricane Model for the United States version 16.1, the AIR Tropical Cyclone Model for Hawaii version 3.1 and the AIR Tropical Cyclone Model for the Caribbean version 9.1, each as implemented in Touchstone version 6.0.4 and CATRADER version 20.2.0, in order to estimate loss probabilities for Named Storms, (ii) the AIR Earthquake Model for the United States and Canada version 10.2, the AIR Earthquake Model for Hawaii version 1.7, the AIR Earthquake Model for Alaska version 1.8 and the AIR Earthquake Model for the Caribbean version 2.0, in each case as implemented in Touchstone version 6.0.4 and CATRADER version 20.2.0, in order to estimate

loss probabilities for North America Earthquakes, and (iii) the AIR Extratropical Cyclone Model for Europe version 6.0, as implemented in Touchstone version 6.0.4 and CATRADER version 20.2.0, in order to estimate loss probabilities for Europe Windstorms (each, an "**Escrow Model**" and, together, the "**Escrow Models**").

Promptly following the Issuance Date, the Reset Agent will place the Escrow Models into escrow with the Escrow Agent. The Reset Agent will retain a copy of the Escrow Models certified by the Reset Agent to be a duplicate version that is identical to the Escrow Models deposited with the Escrow Agent. The Reset Agent may use such certified copy of the Escrow Models to perform any services required under the Calculation Agent Agreement. In any such instance, such certified copy of the Escrow Models will be deemed to be such Escrow Models.

The Reset Agent will also place into escrow with the Escrow Agent each Industry Exposure Database. The Reset Agent will retain a copy of the Industry Exposure Databases certified by the Reset Agent to be a duplicate version that is identical to the Industry Exposure Databases deposited with the Escrow Agent. The Reset Agent may use such certified copy of the Industry Exposure Database to perform any services required under the Calculation Agent Agreement. In any such instance, such certified copy of the Industry Exposure Database will be deemed to be such Industry Exposure Database.

The Reset Agent will be required on a timely basis, to the extent possible, and with notice to the Issuer and the Risk Transferor, to make such formatting and other changes to each Escrow Model as may be necessary, in its discretion, to reflect changes in data inputs and formats, computer and operating systems and other such factors that would otherwise invalidate the use of such Escrow Model, **provided, that** the scientific and probabilistic assumptions underlying the Escrow Models may not be changed.

Escrow Agent..... InnovaSafe, Inc., or its successor (the "**Escrow Agent**").

RISK TRANSFER AGREEMENT

Risk Transfer Agreement	No later than the Issuance Date, the Issuer will enter into an annual aggregate excess of loss Risk Transfer Agreement, as risk transfer counterparty, with the Risk Transferor providing for payments to the Risk Transferor following the occurrence of one or more Covered Events as described in this Circular (the "**Risk Transfer Agreement**").
Issuer Payment; Negative Loss Payment	As of each Payment Date, if the Accrual Period Loss Payment Amount is greater than zero, the Risk Transfer Agreement will require the Issuer to make a payment (each, an "**Issuer Payment**") to the Risk Transferor on such Payment Date in an amount equal to such Positive Accrual Period Loss Payment Amount. As of each Payment Date, if the Accrual Period Loss Payment Amount is less than zero, funds in an amount equal to the absolute value of such Negative Accrual Period Loss Payment Amount will be transferred by the Risk Transferor to the Issuer on such Payment Date (each, a "**Negative Loss Payment**"). In connection with an Issuer Payment to be paid on a Payment Date, the Issuer, or the Insurance Manager on its behalf, will deliver an EBRD Put Notice to the EBRD for the amount of the Issuer Payment less the value of any other available Permitted Investments not less than six (6) Business Days prior to the applicable EBRD Coupon Payment Date (except that no such EBRD Put Notice is required if all of the relevant EBRD Notes have already been redeemed or are to be redeemed on or before such Payment Date and any EBRD Put Notice required has already been provided to the EBRD). Any interest payable on the EBRD Notes that is included in the cash proceeds of a redemption of the EBRD Notes will be part of the Permitted Investment Yield and, accordingly, will be included in the interest payable on the Notes and excluded from any Issuer Payment to the Risk Transferor.
Aggregate Limit and Limited Recourse	The amount of any Issuer Payment to be made by the Issuer to the Risk Transferor on any Payment Date may not exceed the Outstanding Principal Amount on (i) the immediately prior Payment Date less the amount of any Negative Loss Payments which have fallen due on or before such immediately prior Payment Date and which remain unpaid as at the current Payment Date or (ii) the Issuance Date in the case of the First Payment Date (the "**Aggregate Limit**"). The obligations of the Issuer to make any Issuer Payment to the Risk Transferor on any Payment Date shall be limited recourse obligations of the Issuer payable solely out of the Collateral Account and subject to the terms of the Deed of Charge.
Periodic Payment; Initial Expense Amount; Supplemental Expense Amounts	The Risk Transferor will be obligated to make the following payments to the Issuer pursuant to the Risk Transfer Agreement on the Business Day immediately preceding each applicable Payment Date (each a "**Periodic Payment**" and, collectively, the "**Periodic Payments**"): (i) up to and including the earliest of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date, as the case may be, an amount equal to the Interest Spread portion of interest payable by the Issuer on the Notes for the relevant Accrual Period calculated on the basis of the actual number of days elapsed in the Accrual Period and a 360-day year; (ii) during an Extension Period, if any, an amount equal to the applicable Extension Spread portion of interest payable by the Issuer on the Notes for the relevant Accrual Period, calculated on the basis of the actual number of days elapsed in the Accrual Period and a 360-day

year, provided that, if the conditions for two or more types of Extension Event are satisfied for an Accrual Period, the lowest applicable Extension Spread shall apply;

(iii) for all calendar days during the relevant Accrual Period that occur during the period from and including the Issuance Date to, but excluding the first day of the First Loss Period, or that occur from but excluding the last day of the Risk Period to but excluding such Early Redemption Date, the Optional Redemption Date or the Scheduled Redemption Date, as applicable, an amount equal to the Non-Risk Period Interest Spread portion of interest payable by the Issuer on the Notes for the relevant Accrual Period calculated on the basis of the actual number of days elapsed in the Accrual Period and a 360-day year;

(iv) the Residual Interest Amount if due on the Notes on such Payment Date;

(v) the Early Redemption Payment if due on the Notes on such Payment Date;

(vi) the Optional Redemption Payment if due on the Notes on such Payment Date; and

(vii) any Additional Amount.

Pursuant to the Risk Transfer Agreement, the Risk Transferor will make a payment to the Issuer (i) on or promptly following the Issuance Date in an amount expected to cover the Issuer's expenses in connection with the issuance of the Notes (the "**Initial Expense Amount**") and (ii) from time to time thereafter in an amount equal to scheduled fees and reasonable costs and expenses incurred or expected to be incurred by the Issuer relating to the Insurance Manager, the Corporate Services Provider, the Trustee, the Calculation Agent, the Notes Calculation Agent, Custodian, the Paying Agent, the Registrar, the Account Bank, PCS, PERILS AG and any other service providers of the Issuer during such annual period during the term of the Risk Transfer Agreement and such other administrative expenses as may be incurred by the Issuer and any Tax payable by the Issuer (such amounts within clause (ii) "**Supplemental Expense Amounts**").

The Risk Transferor will not be obligated to pay for Supplemental Expense Amounts under the Risk Transfer Agreement to the extent that such amounts in the aggregate for the Notes are in excess of USD 300,000 in any calendar year.

The Initial Expense Amount and any Supplemental Expense Amounts will be deposited into the Expenses Account and will not form part of the Collateral.

Additional Amount ..... In the event that any withholding or deduction for or on account of any tax, including any excise tax, is required by law on any payment to be made by the Risk Transferor to the Issuer under the Risk Transfer Agreement, the Risk Transferor will:

(a) promptly notify the Issuer of such requirement;

(b) make all such deductions and withholdings in respect of such tax;

(c) pay the full amount deducted or withheld in respect of such tax (including the full amount required to be deducted or withheld from any Additional Amount paid under (e) below) to the relevant taxation authority or other governmental authority promptly upon the earlier of

determining that such deduction or withholding is required or receiving notice that such amount has been assessed against;

(d) as soon as practicable after the date of any payment of such tax to the relevant taxation authority or other governmental authority, furnish to the Issuer the official receipt or a certified copy thereof, evidencing payment thereof; and

(e) pay to the Issuer, in addition to the payment to which the Issuer is otherwise entitled under the relevant Risk Transfer Agreement, such additional amount ("**Additional Amount**") as is necessary to ensure that the net amount actually received by the Issuer (free and clear of all taxes) will equal the full amount the Issuer would have received had no such deduction or withholding in respect of tax been required.

PERMITTED INVESTMENTS

Permitted Investments .... The investments for the Notes (the "**Permitted Investments**") will consist of:

(i) the EBRD Notes;

(ii) Money Market Fund Shares; or

(iii) if Money Market Fund Shares are not available or the Money Market Fund does not satisfy the Money Market Fund Criteria, a cash credit balance in the Collateral Account.

EBRD Notes

EBRD; EBRD Notes..... The Issuer will use the proceeds from the sale of the Notes to purchase unsecured notes issued by the European Bank for Reconstruction and Development (the "**EBRD**") pursuant to its existing Global Medium Term Note Programme (such unsecured notes with respect to the Notes, the "**EBRD Notes**"), which will be deposited into the Collateral Account.

According to publicly available documents, the EBRD is an international organisation formed under the Agreement Establishing the European Bank for Reconstruction and Development dated 29 May 1990, signed by 40 countries, together with the European Economic Community and the European Investment Bank. As of the date of this Circular, the EBRD has 69 members. The purpose of the EBRD is to foster the transition towards open market-oriented economies and to promote private and entrepreneurial initiatives in its countries of operation, which are committed to and applying the principles of multi-party democracy, pluralism and market economics.

Following the purchase of the EBRD Notes and until one (1) Business Day prior to the Scheduled Redemption Date for the Notes, the Collateral Account is expected to contain only the EBRD Notes unless the EBRD Notes are wholly or partially redeemed early as provided herein, the Risk Transferor is required to make a Negative Loss Payment under the Risk Transfer Agreement or an Extension Event occurs, in which case the related amounts will be used to purchase the Money Market Fund Shares if available and if the Money Market Fund satisfies the Money Market Fund Criteria. The EBRD Notes, if they are still outstanding in connection with the Redemption Date of the Notes, will be redeemed and the proceeds thereof will be used to pay the Redemption Amount on such Redemption Date.

As of the date of this Circular, the EBRD has been assigned a credit rating of "AAA" by S&P, an "Aaa" credit rating by Moody's and an "AAA" credit rating by Fitch Ratings Limited ("**Fitch**"), each of which rating agencies is established in the European Union and is registered under the Credit Rating Agency Regulation.

EBRD Notes Issuance Date; EBRD Notes Maturity Date;..... On a date no later than the fifth (5th) Business Day immediately following the Issuance Date (the "**EBRD Notes Issuance Date**"), the EBRD will issue and the Issuer will purchase EBRD Notes in an amount equal to the Original Principal Amount. The EBRD Notes will be denominated in USD with a scheduled maturity date of 6 June 2023 (or if such day is not a Business Day, the next preceding Business Day) (the "**EBRD Notes Maturity Date**").

EBRD Notes Interest Rate..... A per annum rate of interest, which will not be less than zero, equal to U.S. Dollar LIBOR determined by the EBRD Note Interest Rate Calculation Agent in accordance with the terms of the EBRD Notes, using a designated maturity of three (3) months, minus 0.16% (the "**EBRD Notes Interest Rate**").

Under the terms of the EBRD Note, in the event that a published three-month U.S. Dollar LIBOR rate is unavailable or if three-month U.S. Dollar LIBOR

	rate ceases to exist or to be an industry accepted rate for debt market instruments during the life of the EBRD Notes, the EBRD Note Interest Rate Calculation Agent will determine whether to use a substitute or successor base rate that it has determined, in its sole discretion and acting in good faith, is most comparable to three-month U.S. dollar LIBOR rate; **provided that**, if the EBRD Note Interest Rate Calculation Agent determines that there is, at any time while the EBRD Notes are outstanding, an industry accepted successor base rate for debt market transactions linked to three-month U.S. Dollar LIBOR rate, the EBRD Note Interest Rate Calculation Agent shall use such a successor base rate from the next Accrual Period following such determination. Under the terms of the EBRD Note, if the EBRD Note Interest Rate Calculation Agent determines that there is no industry accepted successor base rate for debt market instruments linked to the three-month US Dollar LIBOR rate, and that no substitute or other successor base rate is comparable to the three-month U.S. Dollar LIBOR rate, the EBRD Note Interest Rate Calculation Agent will request, from four major banks in the London interbank market, selected by the EBRD Note Interest Rate Calculation Agent in consultation with the EBRD, quotations for the offered rate for three month U.S. Dollar unsecured deposits to prime banks in the London interbank market. If at least two quotations are provided, the EBRD Note Interest Rate Calculation Agent will determine the LIBOR rate as the arithmetic mean of those quotations. If fewer than two quotations are provided, the EBRD Note Interest Rate Calculation Agent will request such quotations from four major banks in New York City, from which the arithmetic mean will be taken as the three-month U.S. Dollar LIBOR rate. If at least two quotations are provided by such New York City banks, the EBRD Note Interest Rate Calculation Agent will determine the three-month LIBOR rate as the arithmetic mean of those quotations. If fewer than two such New York City banks provide quotations, the three-month U.S. Dollar LIBOR rate will be determined by the EBRD Note Interest Rate Calculation Agent in its sole discretion and acting in good faith.
EBRD Note Interest Rate Calculation Agent	"**EBRD Note Interest Rate Calculation Agent**" means Citibank, N.A., as agent under the EBRD's Global Medium Term Note Programme, or any successor agent thereunder, for the EBRD Notes.
EBRD Notes Coupon Payment; EBRD Coupon Payment Date .	Interest payments under the EBRD Notes (each, an "**EBRD Notes Coupon Payment**") will be paid by the EBRD one (1) Business Day prior to each Payment Date (each such date, an "**EBRD Coupon Payment Date**"). Interest at the EBRD Note Interest Rate on each EBRD Note in respect of each Payment Date for the Notes will accrue from, and including, the immediately preceding Payment Date (or, in the case of the First Payment Date, the date of issue of the EBRD Note) to, but excluding, such Payment Date, except that in connection with the redemption or partial redemption of the EBRD Note, interest from the EBRD to the Issuer with respect to the EBRD Note will be paid on such redemption date and will accrue up to, but excluding, such redemption date.
EBRD Put Notice; EBRD Put Date; EBRD Put Notice Date; EBRD Default Event; EBRD Default Acceleration Notice	Following an EBRD Put Event, the Issuer, or the Insurance Manager on its behalf, will deliver a notice effecting a redemption of EBRD Notes in the Collateral Account to the EBRD (with a copy to Citibank, N.A. and the Risk Transferor) (each, an "**EBRD Put Notice**") no later than the EBRD Put Notice Date in relation to such EBRD Put Event. The EBRD Notes may be wholly or partially (in minimum denominations of USD 10,000 and multiples of USD 1,000 in excess thereof) redeemed at par (in minimum denominations of USD 1,000) on any EBRD Coupon Payment Date prior to the EBRD Notes Maturity Date (each, an "**EBRD Put Date**").

The Issuer, or the Insurance Manager on its behalf, will be required to deliver an EBRD Put Notice effecting a redemption of all or a portion of the EBRD Note: (i) in the case of an EBRD Default Event, an EBRD Payment Default or an EBRD Ratings Event (as further described below), two (2) Business Days following the Issuer having actual knowledge of the such EBRD Put Event (which will entail no independent investigation by the Issuer other than at the time of and with respect to a monthly ratings review of the EBRD); and (ii) in connection with any other EBRD Put Event, six (6) Business Days prior to the EBRD Coupon Payment Date on which such redemption is to be effective (as specified in the relevant EBRD Put Notice), (each an "**EBRD Put Notice Date**" in relation to the relevant EBRD Put Event).

EBRD Put Event ..... An "**EBRD Put Event**" under the EBRD Notes relating to the Notes will occur in the following instances:

(a) on or prior to the date that is eight (8) Business Days prior to the applicable Payment Date, the Issuer has received an Event Report from the Calculation Agent specifying a Positive Accrual Period Loss Payment Amount;

(b) the Risk Transferor has delivered an Optional Termination Notice and no Optional Extensions Event has occurred on or prior to the date that is eight (8) Business Days prior to the Optional Redemption Date;

(c) an Early Redemption Event has occurred and is continuing on or prior to the date that is eight (8) calendar days prior to any Payment Date;

(d) there has been a default by the EBRD in the performance of any other covenant or agreement contained in the EBRD Notes and any such default continues for a period of ninety (90) calendar days after written notice thereof is given to the EBRD by the Issuer (an "**EBRD Default Event**");

(e) if the EBRD defaults in the payment of the principal of, or interest on, any bonds, notes (including the EBRD Notes), or similar obligations which have been issued, assumed or guaranteed by the EBRD, and such default continues for a period of ninety (90) days (an "**EBRD Payment Default**"); or

(f) the rating of the EBRD is lower than "AA-" by S&P, "Aa3" by Moody's or "AA-" by Fitch, each as reported by Bloomberg L.P., or any successor or replacement thereof as of the date of determination ("**EBRD Ratings Event**").

Money Market Funds

Money Market Fund ..... "**Money Market Fund**" means each of the money market funds listed in order of priority in the Trust Deed to the extent that (i) such money market fund satisfies the Money Market Fund Criteria and (ii) the respective Money Market Fund Shares are available.

Money Market Fund Shares ..... "**Money Market Fund Shares**" means the class of shares having an ISIN in the respective Money Market Fund.

Money Market Fund Criteria..... "**Money Market Fund Criteria**" means, with respect to a Money Market Fund:

(i) that such Money Market Fund:

(a) is denominated in U.S. dollars;

(b) invests at least 99.5% of its total assets in cash or direct U.S. federal government obligations, such as U.S. Treasury bills, as well as other short-term securities backed by the full faith and credit of the U.S. federal government, each with a maturity equal to or less than 397 calendar days ("**Government Securities**");

(c) has a principal stability fund rating on the date its shares are deposited into the Collateral Account of at least "AAm" by S&P or "Aa-mf" by Moody's, and thereafter is rated by either S&P or Moody's; and

(d) gives rise only to payments that are not subject to U.S. or foreign withholding tax;

(ii) if the Money Market Funds referred to in the immediately preceding paragraph (i) above are not available or are unable to accept the full amount of funds in the Collateral Account, then such Money Market Fund:

(A) is denominated in U.S. dollars;

(B) invests at least 99.5% of its total assets in cash or in Government Securities or securities issued by an agency of the U.S. federal government and/or repurchase and reverse repurchase agreements collateralised by the aforementioned securities;

(C) has a principal stability fund rating on the date its shares are deposited into the Collateral Account of at least "AAm" by S&P or "Aa-mf" by Moody's, and thereafter is rated by either S&P or Moody's; and

(D) gives rise only to payments that are not subject to U.S. or foreign withholding tax;

(iii) if the Money Market Funds referred to in the immediately preceding paragraphs (i) and (ii) are not available or are unable to accept the full amount of funds in the Collateral Account, then such Money Market Funds in order of priority will be acquired satisfying the criteria described in either of the immediately preceding paragraphs (i) and (ii) in that order, except that any such Money Market Fund may give rise to payments that are subject to withholding tax on income (but not on invested capital).

To the extent that such Money Market Funds specified in clauses (i), (ii) or (iii) above are not available, are unable to accept the full amount of funds in the Collateral Account for the Notes or during any period between the liquidation and the reinvestment of any of the foregoing, such funds will be uninvested and held in cash pursuant to the terms of the Trust Deed.

Permitted Investments may include Money Market Funds for which the Trustee, the Account Bank, the Custodian or an affiliate thereof serves as manager, investment advisor, administrator, shareholder, servicing agent and/or custodian or sub-custodian and for which the Trustee, the Account Bank, the Custodian or an affiliate thereof may receive fees. The fund may charge management and other fees in accordance with its own fee schedules. Permitted Investments consisting of Money Market Funds may be held on the Trustee's, Account Bank's or Custodian's money market fund platform.

Failure to Meet Money Market Fund Criteria....	If the Issuer or its agent, the Insurance Manager, has actual knowledge that a Permitted Investment consisting of a Money Market Fund no longer satisfies the criteria in (i), (ii) or (iii) (without independent investigation other than in connection with the delivery of a monthly report as provided by the relevant Money Market Fund) (or that one or more of the other Money Market Funds available to accept the funds in the Collateral Account satisfies a higher level of such criteria), then the Issuer, or the Insurance Manager on its behalf, will instruct the Custodian to liquidate the shares of such Money Market Fund as promptly as practicable and the proceeds will be invested in an alternative Money Market Fund in accordance with the procedures specified in the Circular. If the Issuer or the Insurance Manager acting as its agent has actual knowledge (without independent investigation other than in connection with the delivery of the monthly report described above) that gross proceeds from the disposition or redemption of a Permitted Investment consisting of a Money Market Fund will become subject to withholding tax on uninvested capital (other than withholding tax on gross proceeds attributable to accrued income), then shares of such Money Market Fund will be liquidated prior to the time that gross proceeds from the disposition or redemption of such Money Market Fund become subject to withholding tax and the proceeds of such liquidation will be invested in an alternative Permitted Investment in accordance with the procedures specified in this Circular.
Non-QEF Investment Funds	Pursuant to the terms of the Trust Deed for the Notes, on the first (1st) Business Day of each calendar year, the shares of a Money Market Fund that is a Permitted Investment and that does not provide upon request the information necessary for a U.S. Holder to make a QEF election (a "**Non-QEF Investment Fund**") with respect to such Money Market Fund, the investment in such Money Market Fund will be liquidated, and as promptly as practicable thereafter, the proceeds from such liquidation will be used to purchase shares in a Money Market Fund constituting a Permitted Investment other than a Non-QEF Investment Fund with respect to which shares were held in the immediately preceding year. To the extent no other Money Market Fund that is a Permitted Investment is available other than a Non-QEF Investment Fund with respect to which shares were held in the immediately preceding calendar year, or the available Money Market Funds that are Permitted Investments are not able to accept the full amount of funds in the Collateral Account, the proceeds of such liquidation held in the Collateral Account will be transferred pursuant to the terms of the Trust Deed and for the periods specified in the Trust Deed. To the extent no Money Market Fund constituting a Permitted Investment is available, the funds will remain uninvested in the Collateral Account pursuant to the terms of this Circular.
Liquidation at Redemption	To the extent that Permitted Investments consist of Money Market Fund Shares, such Permitted Investments will be liquidated prior to the Redemption Date of the Notes (including, to the extent necessary, in connection with any Partial Extension or Issuer Payment) and, once the Issuer's obligations to the Risk Transferor under the Risk Transfer Agreement have been fully discharged in accordance with its terms, the proceeds thereof will be used to pay the Redemption Amount for the Notes on such Redemption Date for such Notes.
Collateral; Deed of Charge	
Beneficiaries; Collateral Account; Collateral Payment Account; Charged Accounts, Account; Assigned Agreements;	The Issuer will, pursuant to the applicable Deed of Charge, charge to the Trustee for the benefit of each of those persons listed as entitled to payment in any of the Post Enforcement Priorities of Payments (as further described below) (the "**Beneficiaries**") as security for the Issuer's obligations to such parties, all the Issuer's right, title and interest from time to time in and to: (i) the cash and securities account in the name of the Issuer for the custody and

Collateral; Obligations; Custodian; Deed of Charge	safekeeping of the related Permitted Investments ("**Collateral Account**") relating to the Notes and all amounts therein or credited thereto; (ii) the payment account established by the Payment Agent pursuant to the Trust Deed ("**Collateral Payment Account**") and all amounts therein or credited thereto; and (iii) the "**Expenses Account**" and all amounts therein or credited thereto (together the "**Charged Accounts**"). Each account charged as part of the Collateral (each an "**Account**") will be held by the Issuer with the Custodian and/or the Account Bank in the United Kingdom. The security interest over the Charged Accounts will be governed by and created under the Deed of Charge, which will be governed by English law. Under the Deed of Charge for the Notes, the Issuer will also assign absolutely to the Trustee for the benefit of the Beneficiaries, all of the Issuer's right, title, benefit and interest in and to the Insurance Management Agreement, the Calculation Agent Agreement, the Escrow Agreement, the Custody Agreement, the Agency Agreement, the Account Bank Agreement and the Risk Transfer Agreement for the Notes (the "**Assigned Agreements**"). The assets and property charged in favour of the Trustee (on behalf of itself and the other Beneficiaries) under the Deed of Charge will collectively constitute the "**Collateral**" in connection with all amounts and liabilities of the Issuer in connection with the Risk Transfer Agreement, the issue of the Notes and the related arrangements described herein (the "**Obligations**").
Funds Available for Payment of Principal....	The Issuer will deposit an amount equal to the proceeds from the sale of the Notes into the Collateral Account. Amounts credited to the Collateral Account will be invested in Permitted Investments. Prior to the delivery of an Enforcement Notice, the principal portion of amounts standing to the credit of the Collateral Account will be available to satisfy (in order of priority): (i) any obligations of the Issuer to the Risk Transferor under the Risk Transfer Agreement; and (ii) any obligations of the Issuer to Noteholders under the Trust Deed. Prior to any enforcement, the Issuer's sole source of funds for repayment of the Outstanding Principal Amount will be the principal amount of the Permitted Investments held in the Collateral Account (subject to the prior rights of the Risk Transferor therein). Permitted Investment Yield on the assets credited to the Collateral Account is the property of the Issuer and is not subject to any prior claim of the Risk Transferor.
Funds Available for Payment of Interest	Periodic Payments will be paid to the Collateral Payment Account and Permitted Investment Yield arising from the Permitted Investments will be transferred from the Collateral Account to the Collateral Payment Account. Prior to any enforcement, the Issuer's sole sources of funds for payments of interest on the Notes will be (i) the Periodic Payments received from the Risk Transferor under the Risk Transfer Agreement relating to the Interest Spread or Extension Spread and (ii) the Permitted Investment Yield, if any. The net investment earnings on the Permitted Investments will be less than the amounts payable by the Issuer in respect of interest on the Outstanding Principal Amount. Accordingly, in the event of the failure of the Risk Transferor to make Periodic Payments when due under the Risk Transfer

Agreement, the Issuer would be unable to make full payment of interest on the Outstanding Principal Amount.

Proceeds of Enforcement

Following enforcement of the security over the Collateral, the Trustee will apply the proceeds of enforcement over each Account in the following order of priority (the "**Post-Enforcement Priorities of Payment**"):

(a) in relation to the Collateral Account for the Notes (excluding any amount of Permitted Investment Yield standing to the credit of the Collateral Account for the Notes), the following order of priority:

(i) *first*, to satisfy, any unpaid obligations of the Issuer to the Trustee and any Receiver (as defined in the Trust Deed) in each case to the extent not satisfied by application of monies from the Expenses Account in accordance with the Post-Enforcement Priorities of Payment (as defined in the Trust Deed) applicable to the Expenses Account;

(ii) *second*, to satisfy, *pro rata* and *pari passu*, any unpaid obligations of the Issuer to the Custodian, the Account Bank and/or the Principal Paying Agent, in each of their respective capacities hereunder (individual or otherwise), in each case to the extent not satisfied by application of monies from the Expenses Account in accordance with the Post-Enforcement Priorities of Payment applicable to the Expenses Account;

(iii) *third*, to satisfy the obligations of the Issuer to the Risk Transferor in respect of any amounts owed and unpaid under the Risk Transfer Agreement (and **provided that** no further payments under any subsequent limb of this priority of payments shall be made unless the Risk Transferor has confirmed in writing that payment of all present and future amounts payable under the Risk Transfer Agreement are satisfied, such confirmation not to be unreasonably withheld, conditioned or delayed);

(iv) *fourth*, *pari passu* and *pro rata*, to satisfy the obligations of the Issuer to the Noteholders in respect of the aggregate Outstanding Principal Amount of the Notes; and

(v) *fifth*, *pari passu* and *pro rata*, to satisfy any other unpaid liabilities of the Issuer to any Transaction Party under the Transaction Documents relating to the Notes, including any indemnification amounts payable by the Issuer, but only if (1) no Notes are outstanding and all amounts in respect thereto have been paid in full and (2), the Risk Transfer Agreement relating to the Notes has been terminated in accordance with its own terms and all obligations thereunder have been satisfied and only to the extent such liabilities have not been satisfied by application of monies from the Expenses Account in accordance with the Post-Enforcement Priorities of Payment applicable to the Expenses Account.

(b) in respect of the Collateral Payment Account and any amount of Permitted Investment Yield standing to the credit of the Collateral account;

(i) *first*, *pari passu* and *pro rata*, to satisfy the obligations of the Issuer to the Noteholders in respect of any amount of interest owed and unpaid on the Notes; and

(ii) *second*, the remainder to the Collateral Account.

(c) in relation to the Expenses Account, the following order of priority:

(i) *first*, to satisfy, *pro rata* and *pari passu*, any unpaid obligations of the Issuer to the Trustee and any Receiver;

(ii) *second*, to satisfy, *pro rata* and *pari passu*, any unpaid obligations of the Issuer to the Custodian, the Note Calculation Agent, the Account Bank, the Principal Paying Agent, the Insurance Manager, the Calculation Agent, the Corporate Services Provider and any other service provider appointed in accordance with the Transaction Documents; and

(iii) *third*, the remainder to the Risk Transferor.

Any monies held by any receiver or the Trustee after application of monies received or recovered after delivery of an Enforcement Notice and not required for application in discharge of the Obligations in accordance with Post-Enforcement Priorities of Payment shall be paid by the receiver (as defined in the Trust Deed) or the Trustee to the Issuer for application in or towards meeting the obligations of the Issuer, which do not constitute Obligations, as such obligations fall due.

Limited Recourse Obligations

Limited Recourse Obligations ..... All obligations of the Issuer under the Trust Deed relating to the Notes and the Notes will be limited recourse obligations of the Issuer payable solely from the Collateral Account (after satisfaction of prior claims) and the Collateral Payment Account relating to the Notes and will be deemed extinguished if, at any time, such assets in the Collateral Account (after satisfaction of prior claims) and Collateral Payment Account relating to the Notes are exhausted (and there are no claims that may be asserted by the Issuer with respect to contractual obligations of third parties to the Issuer).

All obligations of the Issuer under the Risk Transfer Agreement will be limited recourse obligations of the Issuer payable solely from the Collateral for the Notes in the Collateral Account for the Notes and will be deemed extinguished if, at any time, such Collateral Account is exhausted (and there are no claims that may be asserted by the Issuer with respect to contractual obligations of third parties to the Issuer).

All obligations of the Issuer under each of the Insurance Management Agreement, the Calculation Agent Agreement, the Escrow Agreement, the PCS License Agreement and the PERILS Trading License Agreement in relation to the Notes will be limited recourse obligations of the Issuer payable solely from the Expenses Account or, only when no Notes remain outstanding and the Risk Transfer Agreement for the Notes has been terminated in accordance with its terms, from any assets remaining in the Collateral Account for the Notes, and will be deemed extinguished if, at any time, the Expenses Account and the Collateral Account for the Notes are exhausted (and there are no claims that may be asserted by the Issuer with respect to contractual obligations of third parties to the Issuer).

Neither the Risk Transferor nor any of its affiliates is a guarantor of or obligor on the Notes, and Noteholders will not have any recourse against the Risk Transferor or its affiliates in the event of a default by the Issuer.

No Petition ..... In the event that the assets of the Issuer are insufficient to meet the obligations of the Issuer under the Trust Deed, the Notes, the Risk Transfer Agreement or

any other Transaction Documents relating to the Notes, any obligations remaining after the application of proceeds shall be extinguished and each counterparty under each of the Transaction Documents relating to the Notes undertakes to take no further action against the Issuer in respect of any such obligations. In particular, no counterparty under each of the Transaction Documents relating to the Notes nor any party acting on its behalf shall petition or take any steps for the winding up or receivership of the Issuer.

MANNER OF OFFERING; TRANSFER RESTRICTIONS

Clearing System.....	The Notes will be cleared through DTC (the "**Clearing System**").
Nominee.....	Cede & Co.
Listing	Application has been made to the Irish Stock Exchange plc trading as Euronext Dublin ("**Euronext Dublin**") for the approval of this Circular. Application has been made to Euronext Dublin for the Notes to be admitted to the Official List and trading on the Global Exchange Market which is the exchange regulated market of Euronext Dublin. The Global Exchange Market is not a regulated market for the purposes of Directive 2014/65/EU.
Permitted U.S. Jurisdiction.....	The District of Columbia and all states of the United States, except for the states of Hawaii, Montana and Nevada (the "**Permitted U.S. Jurisdictions**"). No U.S. territory shall be a Permitted U.S. Jurisdiction.
Permitted Non-U.S. Jurisdiction.....	Argentina, Australia, Austria, Bahrain, Barbados, Belgium, Bermuda, British Virgin Islands, Canada (the provinces of British Columbia, Ontario and Quebec only), Cayman Islands, China, Denmark, Dubai International Financial Centre, France, Germany, Guernsey, Hong Kong, Ireland, Israel, Italy, Japan, Jersey, Kuwait, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Portugal, Republic of Korea, Singapore, Spain, Sweden, Switzerland and the United Kingdom (the "**Permitted Non-U.S. Jurisdictions**"). The designation of a jurisdiction as a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction relates solely to the characterisation of the Notes for certain insurance law purposes. Any person who holds any interest in the Notes, who does not reside and hold such interest in a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction, may be forced to transfer such interest to a person in a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction.

U.K. TAX AND U.S. FEDERAL INCOME TAX MATTERS; ERISA MATTERS

Tax Status of Issuer.....	The Issuer expects to benefit from the special tax treatment set out in Regulation 4 of the Risk Transformation (Tax) Regulations 2017 (the "**Tax Regulations**"). The Tax Regulations set out a special tax regime for qualifying transformer vehicles and it is the intention of the directors of the Issuer that the Issuer will constitute a qualifying transformer vehicle for these purposes. A transformer vehicle will be a qualifying transformer vehicle if it is a company limited by shares that (i) carries out the activity of insurance risk transformation where substantially all of that activity relates to business other than basic life assurance and general annuity business and (ii) is authorised under Part 4A of the Financial Services and Markets Act 2000 to carry out insurance risk transformation. The Tax Regulations provide that no liability to corporation tax arises in respect of the profits arising from the activity of insurance risk transformation carried out by a qualifying transformer vehicle. Any profits arising from administrative or management activities or where profits arise as a result of holding investments in excess of the minimum amount reasonably required to satisfy the fully funded requirement in relation to the company, as applicable, are not treated as arising from an activity of insurance risk transformation and so cannot benefit from the special tax treatment mentioned above.

	The special tax treatment referred to above will not apply in relation to profits in the accounting period in which either of two conditions is met, or treated as met, or in any subsequent accounting period. Broadly, the first condition will be met if the qualifying transformer vehicle is liable to certain penalties in relation to certain tax administrative matters and the second condition will be met, if, having regard to all the circumstances, it would be reasonable to conclude that the main purpose, or one of the main purposes, of the insurance risk transformation, or of arrangements which the insurance risk transformation forms part of, is to secure a tax advantage for any person.
Interest Withholding Tax	The Issuer should not be required to withhold tax on account of United Kingdom income tax when making interest payments on the Notes provided it falls within the special tax regime referred to above (for further details on the United Kingdom withholding tax treatment of the Notes please See "*Tax Considerations—United Kingdom Taxation*").
U.S. Federal Income Tax Consequences.....	Prospective purchasers of the Notes should consider carefully the discussion set forth in the section entitled "*Certain Tax Considerations—United States Taxation*".
Certain ERISA and Related Considerations	Prospective purchasers of the Notes should consider carefully the discussion set forth in the section entitled "*Certain ERISA and Related Considerations*".

OTHER PROVISIONS

Business Day.....	A day that is not (i) a Saturday, (ii) a Sunday or (iii) a day on which banking institutions or trust companies in the City of New York, United States, the City of London, England, or the City of Paris, France are authorised or required by applicable law, regulation or executive order to remain closed (each, a "**Business Day**").
Functions to be Carried Out from Locations Outside the United States	Pursuant to the Trust Deed and the Issuer's Memorandum and Articles of Association, the following functions are required to be carried out by or on behalf of the Issuer from a location outside the United States: (i) communicating with the Issuer's shareholders and Noteholders (including the furnishing of financial reports), except that the Insurance Manager may, as an administrative function, from a location within the United States, furnish or pass to Noteholders a communication from the Issuer to Noteholders; (ii) communicating with the general public; (iii) soliciting sales of the Issuer's shares; (iv) accepting the subscriptions of new shareholders and Noteholders; (v) maintaining the Issuer's principal corporate records and books of account; (vi) auditing the Issuer's books of account; (vii) maintaining the Issuer's bank accounts; (viii) disbursing payments of dividends, interest, legal fees, accounting fees, payments to service providers, and officers' and directors' salaries; (ix) publishing or furnishing the offering and redemption price of the shares issued by the Issuer; (x) conducting meetings of the Issuer's shareholders, officers and directors; (xi) making redemptions of the Issuer's shares and repayment of the Notes; (xii) all general and extraordinary meetings; and (xiii) making all decisions with respect to deposits or disbursements from any Issuer account. In addition, each of the Issuer's directors must act exclusively from outside of the United States.
UTC.....	Coordinated Universal Time ("**UTC**").
Risk Factors	Prospective investors should consider carefully the information set forth under the caption "*Risk Factors*" in this Circular and all other information set forth in this Circular before making any investment in the Notes.
Rating	The Notes have not been rated by any rating agency, and the Issuer has not and will not engage any rating agency to assign a rating to the Notes.

Denomination.....	The Notes will be issued in minimum denominations of USD 250,000 and integral multiples of USD 1,000 in excess thereof.
CUSIP	04921QAA8
ISIN	US04921QAA85

RISK FACTORS

The following descriptions of certain risk factors related to an investment in the Notes to be issued by the Issuer. These risk factors do not purport to be all inclusive or to contain all the information that a prospective investor may desire in investigating the Issuer. Additional risks may have a material adverse effect on the Issuer's business, results of operations and financial condition. If any of these risks and uncertainties actually occurs, an investor may lose all or part of its investment in the Notes. Prospective investors should reach an investment decision only after carefully considering the suitability of the Notes in light of their particular circumstances.

General Investment Risks

The Notes are complex speculative instruments and are intended for sale only to investors capable of fully understanding and assuming the high risks entailed in such instruments. Potential investors are strongly encouraged to consult with their financial, accounting, legal and tax advisors before making any investment decision in respect of the Notes.

Loss of Principal and Interest

The Issuer is exposed to the occurrence, frequency and severity of Covered Events, which are inherently unpredictable. Accordingly, no prediction can be made as to whether a Covered Event occurring during the Risk Period will obligate the Issuer to make one or more Issuer Payments to the Risk Transferor under the Risk Transfer Agreement. Issuer Payments made by the Issuer under the Risk Transfer Agreement as a result of one or more Covered Events will result in a corresponding reduction of the Outstanding Principal Amount of the Notes, as well as interest accruing thereon. Consequently, Noteholders bear the risk that they could lose all or a portion of the principal of, and interest on, any Notes, if during the Risk Period there are one or more Covered Events resulting in an Issuer Payment. See also "*Reliance on the Risk Transferor*" below.

Reliance on the Risk Transferor

The Permitted Investment Yield will be less than the full amount of interest due on the Notes. If the Risk Transferor fails to make any Periodic Payment when due under the Risk Transfer Agreement whether due to the creditworthiness of the Risk Transferor or for any other reason, the Issuer will be unable to pay the Non-Risk Period Interest Spread, Interest Spread or Extension Spread component, as applicable, of interest due and payable on the Notes.

In addition, any failure of the Risk Transferor to make a Negative Loss Payment to the Issuer when due under the Risk Transfer Agreement whether due to the creditworthiness of the Risk Transferor or for any other reason, will result in the Issuer not having sufficient funds on the Redemption Date to pay the Outstanding Principal Amount to Noteholders.

Maturity

The maturity date of the Notes may be extended by the Issuer beyond the Scheduled Redemption Date upon the occurrence of an Extension Event. Whether an Extension Event will occur is unpredictable and, in some cases, in the sole discretion of the Risk Transferor. During any Extension Period, interest payable on the Notes will no longer be based on the Non-Risk Period Interest Spread or Interest Spread, as applicable, but a reduced Extension Spread.

Risk of Early Redemption

If an Early Redemption Event or Optional Redemption Event occurs, the Notes will be redeemed prior to the Scheduled Redemption Date, as a whole for cash, for the Redemption Amount, which may not include the full premiums. In the event of an Early Redemption Event or Optional Redemption Event, Noteholders may be unable to reinvest the Redemption Amount in investments with a yield greater than or equal to the Notes.

Limited Liquidity

There is currently no secondary market for the Notes. The Initial Purchasers will be under no obligation to make a market in the Notes and, to the extent that such market making is commenced, it may be

discontinued at any time. There is no assurance that a secondary market will develop or, if it does develop, that it will provide Noteholders with liquidity of investment or that it will continue until the Outstanding Principal Amount of the Notes is repaid. In addition, in the event of the occurrence of one or more Covered Events, the liquidity of the Notes may be materially impaired.

Given the risks associated with an investment in the Notes, the high minimum denominations and the restrictions on transfer, investors may have difficulty locating persons willing and able to purchase the Notes from them. Consequently, a Noteholder may not be able to liquidate its investment readily, and the Notes may not be readily accepted as collateral for loans. Prospective investors should proceed on the assumption that they may have to bear the economic risk of an investment in the Notes until their maturity.

Volatility

Even if a secondary market develops, the fair market value of the Notes can be expected to exhibit substantial volatility to the extent there are market expectations of one or more Covered Events to which the principal and interest of the Notes is exposed. The fair market value of the Notes may also be affected if the market experiences limited liquidity at such times.

Limited Recourse to Issuer; No Recourse to the Risk Transferor

The Notes are with limited recourse to certain assets of the Issuer and without recourse to the Risk Transferor or any of its affiliates. Noteholders will have recourse only to assets in the Collateral Account (subject to the prior interest of the Trustee and the Risk Transferor in such assets), assets in the Collateral Payment Account, the Periodic Payments under the Risk Transfer Agreement and will not have recourse to any other property or assets of the Issuer. Noteholders will not have any recourse to or against the Risk Transferor or any of its affiliates, for any amounts due and payable by the Issuer to any Noteholder for any reason, including in the event of a default by the Issuer.

The Trustee or Custodian May Be Unable to Liquidate Investments in a Timely Manner

The Redemption Amount of the Notes is limited to the proceeds of the liquidation of the applicable Permitted Investments. There can be no assurance that there will not be a delay in the ability of the Trustee or Custodian to liquidate the applicable Permitted Investments or, upon such liquidation, that the amounts realised from the liquidation of the applicable Permitted Investments will not be less than the Outstanding Principal Amount of the Notes.

Related Parties

In the ordinary course of their respective businesses, the various entities involved in the Offering, such as the Initial Purchasers, the Trustee, the Risk Transferor and each of their respective affiliates, have engaged, and/or expect to engage in the future, in financial services and reinsurance brokerage, reinsurance, investment banking, general financing and banking and other transactions with such other parties and their respective affiliates, including the provision of certain advisory services.

In the ordinary course of their various business activities, the various entities involved in the Offering, such as the Initial Purchasers, the Trustee, the Risk Transferor and each of their respective affiliates, may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Issuer or the Risk Transferor and their respective affiliates.

Risk Relating to Permitted Investments

Noteholders are exposed to the value of the underlying Permitted Investments

The Issuer's sources of funds for repayment of the Outstanding Principal Amount will be the proceeds of the redemption or liquidation of the Permitted Investments. There can be no assurance that there will be no default with respect to payments on the Permitted Investments or mark-to-market declines in the value of Permitted Investments.

Interest payments may be reduced by fees and withholding tax

The Issuer's sources of funds for payment of interest on the Notes will comprise the Periodic Payments received from the Risk Transferor under the Risk Transfer Agreement and the Permitted Investment Yield. The interest on the Notes will be paid to Noteholders net of any applicable withholding taxes and fees and no "gross-up" payment or additional amounts will be paid to the Noteholders in this respect (See "*Tax Risks*" below for further information).

Permitted Investments may be affected by the insolvency of the Trustee, the Custodian or any intermediary or clearing system

In the event of the occurrence of any insolvency or similar proceedings involving the Custodian or any intermediary or clearing system in, through or with which the Permitted Investments are held, the recovery by the Issuer (or the Trustee enforcing the Deed of Charge) of the Permitted Investments or the income relating thereto is dependent on the right against the entity which is the subject of such proceedings to deliver the Permitted Investments being recognised under all applicable laws as constituting a proprietary interest in the Permitted Investments and not merely a personal right, and on that entity having treated the Permitted Investments in a manner consistent with the existence of such a proprietary interest. A failure by the Issuer to recover the Permitted Investments or the income relating thereto in full or on time in such circumstances may render it unable to make payments of interest on, or repay the principal amount of, the Notes.

Limited Sources of Funds for Repayment of Principal

The Issuer's sole source of funds for repayment of the Outstanding Principal Amount of the Notes will be the principal amount of the Permitted Investments held in the Collateral Account (subject to the prior rights of the Trustee and the Risk Transferor therein).

Accordingly, if the principal amount of applicable Permitted Investments is insufficient to repay the Outstanding Principal Amount of the Notes, whether due to a default on or decline in the value of the applicable Permitted Investments, the failure of the Risk Transferor to make any Negative Loss Payment when due, or for any other reason, the Issuer would be unable to make full payment of the Outstanding Principal Amount of the Notes on the Redemption Date.

Limited Sources of Funds for Payment of Interest

The Issuer's sole sources of funds for payments of interest on the Notes will be (a) the Periodic Payments received from the Risk Transferor under the Risk Transfer Agreement relating to the Interest Spread or Extension Spread, as applicable and (b) the applicable Permitted Investment Yield, if any.

The net investment earnings on the applicable Permitted Investments for the Notes will be less than the amounts payable by the Issuer in respect of interest on the Outstanding Principal of the Notes. Accordingly, in the event of the failure of the Risk Transferor to make Periodic Payments when due under the Risk Transfer Agreement, the Issuer would be unable to make full payment of interest on the Outstanding Principal Amount of the Notes.

Effective Subordination; Limitations on Enforcement

The principal portion of Permitted Investments held in the Collateral Account for the Notes will be available, prior to an Event of Default, to satisfy, *first*, any obligations of the Issuer to the Risk Transferor under the Risk Transfer Agreement and *second*, any obligations of the Issuer to the Noteholders in respect of the Outstanding Principal Amount of the Notes.

Accordingly, the repayment of the Outstanding Principal Amount of the Notes is effectively subordinated to the Issuer's obligations under the Risk Transfer Agreement. In addition the rights of the Trustee and the Noteholders upon the occurrence of an Event of Default under the Trust Deed to declare the Notes to be immediately due and payable and to exercise certain remedial proceedings are subject to the prior consent of the Risk Transferor and access to any Permitted Investments to fund payment of the Redemption Amount for the Notes is subject, as long as the Risk Transfer Agreement is in effect, to the rights of the Risk Transferor to be paid in full under the Risk Transfer Agreement.

Insolvency

Operating expenses of the Issuer are payable principally out of the Initial Expense Amount and any Supplemental Expense Amounts received by the Issuer from the Risk Transferor under the Risk Transfer Agreement. While the Issuer believes that its intended business operations will permit it to pay its debts as they fall due, and the Transaction Documents are each subject to limited recourse provisions and non-petition provisions, if any unsatisfied liabilities arise which are not subject to limited recourse provisions and non-petition provisions, there is a risk of insolvency of the Issuer.

Consolidation

Under generally accepted accounting principles, including U.S. GAAP and IFRS, the Issuer may be considered a variable interest entity or investee, as applicable. A purchaser of the Notes may be considered to hold a variable interest in a variable interest entity or investee, as applicable. Under certain circumstances, generally accepted accounting principles require a holder of a variable interest in a variable interest entity or investee, as applicable, to consolidate the variable interest entity or investee, as applicable. Additionally, generally accepted accounting principles regarding variable interest entities or investees are subject to change at any time and may apply retroactively. In addition, under generally accepted accounting principles, including U.S. GAAP and IFRS, Noteholders may be required to account for their beneficial ownership of the Notes as insurance contracts under certain circumstances. Noteholders are urged to consult their accounting advisors with respect to the accounting treatment of the Notes including the potential consolidation of the Issuer and any related accounting implications.

Enforcement of Risk Transfer Agreement

Neither the Trustee nor the Noteholders are parties to the Risk Transfer Agreement and absent an Event of Default, they have no right to enforce or take actions thereunder against the Risk Transferor or any other rights thereunder. The Issuer alone has such rights.

EBRD Notes

In the event that Permitted Investments consist only or mainly of EBRD Notes, the Issuer's sole source of funds for repayment of the Outstanding Principal Amount of the Notes will be the proceeds of the liquidation of such EBRD Notes. Any failure of the EBRD to redeem such EBRD Notes in whole or in part upon the delivery of an EBRD Put Notice or on the EBRD Notes Maturity Date whether due to the creditworthiness of the EBRD or for any reason could result in the Issuer not having sufficient funds on the Redemption Date to repay the Outstanding Principal Amount of the Notes.

To the extent that Permitted Investments consist of EBRD Notes, the Issuer's sole sources of funds for payments of interest on the Notes will be the Periodic Payments received from the Risk Transferor under the Risk Transfer Agreement and the Permitted Investment Yield relating to such EBRD Notes.

In addition, with respect to the Offering of the Notes, if the EBRD fails within five (5) Business Days following the Issuance Date to issue the EBRD Notes, or if for any reason they are not delivered to the Collateral Account, the proceeds from the issuance of the Notes will be invested in Money Market Fund Shares, if available, or cash instead of the EBRD Notes, and Noteholders would be subject to the risks described below.

For the Notes, if (i) a Covered Event occurs after the date that is eight (8) Business Days prior to the Scheduled Redemption Date and (ii) an EBRD Put Notice has been delivered prior to the occurrence of such Covered Event, the Permitted Investments during any Extension Period will consist of applicable Money Market Fund Shares, if available, or cash.

There is currently no secondary market for the EBRD Notes and there is no assurance that a secondary market will develop or, if it does develop, that it will provide liquidity of investment with respect to the EBRD Notes or that it will continue until the EBRD Notes Maturity Date. For the avoidance of doubt, the Initial Purchasers are not obligated to make a market in the EBRD Notes and, to the extent it does so, may discontinue it at any time. As a result, upon the occurrence of a payment default by the EBRD, the Trustee may not be able to sell the EBRD Notes.

In addition, in the absence of a secondary market, the EBRD Notes may be difficult to value and none of the Issuer, the Risk Transferor, the Trustee, the Initial Purchasers or any of their respective affiliates or

representatives are under any obligation to furnish an estimate of the market value of the EBRD Notes to Noteholders.

The EBRD has not had any involvement in the preparation of this Circular and does not make any representation or warranty, express or implied, as to the accuracy or completeness of the information set forth in this Circular.

Money Market Funds

In the event that Permitted Investments consist of Money Market Fund Shares, the Issuer's sole source of funds for repayment of the Outstanding Principal Amount of the Notes will be the proceeds of the liquidation of such Money Market Fund Shares. Noteholders will be exposed to the market value of the underlying assets of the relevant Money Market Funds, which could materially adversely affect the ability of the Issuer to make payments of principal in full on the Redemption Date.

In the event that Permitted Investments consist of Money Market Fund Shares, the Issuer's sources of funds for payments of interest on the Notes will be the Periodic Payments received from the Risk Transferor under the Risk Transfer Agreement and the Permitted Investment Yield relating to such Money Market Fund Shares.

The Permitted Investment Yield from any Money Market Fund Shares will be paid to Noteholders (if required) net of any applicable withholding taxes and fees and no "gross-up" payment or additional amounts will be paid to the Noteholders in this respect.

A Money Market Fund may, pursuant to the terms of the relevant Money Market Fund Shares, be able to suspend or delay redemptions. Any suspension or delay of redemptions may cause a delay or loss in the payment of principal of or interest on the Notes.

The Money Market Funds are not U.S.-domiciled and, therefore, are not required to comply with Rule 2a-7 or other restrictions under the Investment Company Act. This could create a greater risk of loss than if funds were invested in U.S. domiciled money market funds registered pursuant to the Investment Company Act, which must comply with Rule 2a-7.

The European Securities and Markets Authority has published "Guidelines on a common definition of European Money Market Funds" (the "**ESMA MMF Guidelines**"). The ESMA MMF Guidelines set out criteria which a collective investment undertaking authorised or regulated under the laws of EU member states must satisfy in order for it to describe itself as a money market fund or a short-term money market fund. The ESMA MMF Guidelines applied from 1 January 2012 in respect of funds authorised prior to 1 July 2011 and are implemented by the laws and/or regulators of EU member states.

Each of the Money Market Funds is authorised and regulated under the laws of an EU member state and accordingly became subject to the ESMA MMF Guidelines from 1 January 2012. Each of the Money Market Funds has stated that it satisfies the criteria in the ESMA MMF Guidelines for short-term money market funds. However, none of the Issuer, the Trustee, the Custodian, the Risk Transferor or the Initial Purchasers or any of their respective affiliates and representatives, or any of their respective directors or officers, has verified that any such Money Market Fund in fact satisfies such criteria and shall not be deemed to make, any representation with respect to the satisfaction of such criteria.

Any Money Market Fund Shares constituting a Permitted Investment could experience a loss and the underlying Money Market Fund's net asset value may be affected when selling securities to meet redemption requests if the redemption requests are large or frequent, occur in times of overall market turmoil or declining prices for the securities sold, or when the securities that such Money Market Fund wishes to or is required to sell are illiquid. Furthermore, when markets are illiquid, a Money Market Fund may be unable to sell illiquid securities at its desired time or price. Illiquidity can be caused by, among other things, a drop in overall market trading volume, an inability to find a ready buyer, or legal restrictions on the securities' resale. Certain securities that were liquid when purchased may later become illiquid, particularly in times of overall economic distress. Certain Money Market Funds may not enter into repurchase transactions. As a result, they may from time to time engage in portfolio trading for liquidity purposes. In selling securities prior to maturity, any such Money Market Fund may realise a price higher or lower than that paid to acquire such securities, depending upon whether interest rates have decreased or

increased since their acquisition. Any of these conditions could materially and adversely affect the Issuer's ability to pay the Outstanding Principal Amount of or interest on the Notes.

Although the market value, yield and liquidity of Money Market Fund Shares are generally less sensitive to changes in market interest rates than are funds that invest in longer-term securities, changes in short-term interest rates may cause changes to a Money Market Fund Share's market value, yield and liquidity. During periods of rising interest rates, a Money Market Fund Share's yield (and the market value of its securities) will tend to be lower than prevailing market rates. In addition, a low-interest rate environment may prevent any Money Market Fund Share from providing a positive yield or maintaining a stable net asset value of USD 1.00, and may cause a Money Market Fund to provide a negative yield. Market disruptions also may impair the liquidity of Money Market Fund Shares. If the market value, yield and/or liquidity of a Money Market Fund is impaired, the Issuer's ability to pay the Outstanding Principal Amount of and/or interest on the Notes could be materially and adversely affected.

If a Money Market Fund incurs a management fee during a low interest rate environment, the payment of such fee may prevent the Money Market Fund from providing a positive yield or maintaining a stable net asset value of USD 1.00, and may cause the Money Market Fund Share to provide a negative yield. Similarly, if the underlying securities are issued with a negative yield by the U.S. government, or if a change in regulation requires Money Market Funds to mark to market, the Money Market Fund Share may be prevented from providing a positive yield or maintaining a stable net asset value of USD 1.00. In either case, the Issuer's ability to pay the Outstanding Principal Amount of and/or interest on the Notes could be materially and adversely affected.

To the extent that Permitted Investments consist of Money Market Fund Shares and a MMF Negative Yield Event occurs for any reason, including a reverse distribution mechanism by the applicable Money Market Fund, then the net investment earnings actually received by the Issuer from and including such Payment Date until such time as the MMF Negative Yield Deficit has been reduced to zero will be reinvested in Permitted Investments and excluded from the definition of Permitted Investment Yield payable to Noteholders. In such case, the amount of interest that would otherwise be received by the Noteholders will be reduced. In addition, if a MMF Negative Yield Event occurs, the Issuer may be unable to repay the full Outstanding Principal Amount of the Notes on the Redemption Date.

Cash

In the event that Permitted Investments consist of a cash credit balance to the Collateral Account: (i) the Permitted Investment Yield will be significantly lower than if the Permitted Investments consist of EBRD Notes or Money Market Fund Shares; and (ii) the Issuer will be exposed to credit risk of the Account Bank, including the risk of insolvency or receivership. In the event of insolvency or receivership proceedings involving the Account Bank, cash held in the Collateral Account may not be recoverable in full (or at all) as the Issuer will be treated as an unsecured creditor of the bank. A failure by the Issuer to recover the cash in full or on time in such circumstances may render it unable to repay the principal amount of the Notes.

In addition, to the extent that a relevant central bank's rate from time to time results in the Account Bank incurring costs, charges or expenses as a result of maintaining any accounts on its behalf, the Issuer will be required to reimburse the Account Bank in an amount equal to such additional costs, charges or expenses. The Account Bank may also charge a spread on the aggregate balance standing to the credit of each account with, or to be opened with, the Account Bank. In the event of the foregoing, the Issuer may have insufficient funds to repay the Outstanding Principal Amount on the Redemption Date.

Changes to the methodology for setting LIBOR may adversely impact Noteholders

To the extent that Permitted Investments for the Notes consist of EBRD Notes, the Permitted Investment Yield will be based on LIBOR. LIBOR, the Euro Interbank Offered Rate ("**EURIBOR**") and other indices which are deemed "benchmarks" are the subject of recent national, international and other regulatory guidance and reform. Some of these reforms are already effective whilst others are yet to apply. These reforms may cause such "benchmarks", including LIBOR to perform differently than in the past, or to disappear entirely, or have other consequences which cannot be predicted. As of the date of this Circular, no prediction can be made as to what impact such changes, if any, will have on the amount of Permitted Investment Yield paid to the Noteholder.

Key international reforms of "benchmarks" include IOSCO's Principles for Financial Market Benchmarks (July 2013) (the "**IOSCO Benchmark Principles**") and the new European regulation on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (the "**Benchmarks Regulation**").

The IOSCO Benchmark Principles aim to create an overarching framework of principles for benchmarks to be used in financial markets, specifically covering governance and accountability as well as the quality and transparency of benchmark design and methodologies. The first review published by IOSCO in February 2015 of the status of the voluntary market adoption of the IOSCO Benchmark Principles noted that, as the benchmarks industry is in a state of change, further steps may need to be taken by IOSCO in the future, but that it is too early to determine what those steps should be. The first review noted that there has been a significant market reaction to the publication of the IOSCO Benchmark Principles, and widespread efforts being made to implement the IOSCO Benchmark Principles by the majority of administrators surveyed.

In February 2016, IOSCO published its second review of the implementation of the IOSCO Benchmark Principles by administrators of EURIBOR, LIBOR and the Tokyo Inter-Bank Offer Rate ("**TIBOR**"). The second review noted that the administrators of LIBOR, EURIBOR and TIBOR had been proactively engaged in addressing the issues raised in the first review. Nevertheless, the second review set out recommendations for each administrator in order to strengthen the implementation of the IOSCO Benchmark Principles and proposed that relevant national authorities monitor the progress made by the three administrators in order to implement those recommendations.

The Benchmarks Regulation entered into force on 30 June 2016 and the majority of its provisions apply from 1 January 2018. The Benchmarks Regulation applies to "administrators" of, "contributors" to, and "users" of "benchmarks" in the EU. Among other things, the Benchmarks Regulation: (i) requires EU benchmark administrators to be authorised or registered by a national regulator (unless an exemption applies); (ii) provides that in order to be used by supervised entities in the EU, a non-EU benchmark must be qualified for use in the EU under the third-country regime (through equivalence, recognition or endorsement) and comply with extensive requirements in relation to the administration of the non-EU benchmark; and (iii) bans the use by "supervised entities" of: (a) EU "benchmarks" whose administrators are not authorised or registered; and (b) non-EU "benchmarks" that are not qualified for use in the EU under the third-country regime.

The scope of the Benchmarks Regulation is wide and, in addition to so-called "critical benchmarks" such as LIBOR, could also potentially apply to many other interest rate indices, as well as equity, commodity and foreign exchange rate indices and other indices (including "proprietary" indices or strategies) which are referenced in certain financial instruments (including securities or OTC derivatives traded on an EU Regulated Market, EU multilateral trading facility (MTF), EU organised trading facility (OTF) or via a "systematic internaliser"), certain financial contracts and investment funds. Different types and categories of "benchmark" are subject to more or less stringent requirements, and in particular a lighter touch regime may apply where a "benchmark" is not based on interest rates or commodities and the value of financial instruments, financial contracts or investment funds referring to a benchmark is less than €50bn, subject to further conditions.

The Benchmarks Regulation could have a material impact on any listed instruments linked to a "benchmark" index, including in any of the following circumstances:

(a) a rate or index which is a "benchmark" could not be used as such if its administrator does not obtain authorisation/registration or is not able to rely on one of the regimes available to non-EU benchmarks. In such event, depending on the particular "benchmark" and the applicable terms of the instruments, the instruments could be de-listed, adjusted, redeemed or otherwise impacted; and

(b) the methodology or other terms of the "benchmark" could be changed in order to comply with the terms of the Benchmarks Regulation, and such changes could have the effect of reducing or increasing the rate or level or affecting the volatility of the published rate or level and, depending on the particular "benchmark" and the applicable terms of the instruments, could lead to adjustments to the terms of the instruments, including Calculation Agent determination of the rate or level in its discretion.

Any of the international, national or other reforms or the general increased regulatory scrutiny of "benchmarks" could increase the costs and risks of administering or otherwise participating in the setting of a "benchmark" and complying with any such regulations or requirements. Such factors may have the effect of discouraging market participants from continuing to administer or participate in certain "benchmarks", trigger changes in the rules or methodologies used in certain "benchmarks" or lead to the disappearance of certain "benchmarks". The disappearance of a "benchmark" or changes in the manner of administration of a "benchmark" could result in adjustment to the terms and conditions, early redemption or termination, discretionary valuation by the EBRD Note Interest Rate Calculation Agent, delisting or other consequence in relation to the EBRD Notes linked to LIBOR. Any such consequence could have a material adverse effect on the value of and return on the EBRD Notes.

On 27 July 2017, the UK Financial Conduct Authority announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR benchmark after 2021 (the "**FCA Announcement**"). The FCA Announcement indicates that the continuation of LIBOR on the current basis (or at all) cannot and will not be guaranteed after 2021.

Any such consequences could have a material adverse effect on the Notes. The potential elimination of the LIBOR benchmark or changes in the manner of administration of LIBOR, could require or result in an adjustment to the interest provisions of the Notes or result in other consequences, in respect of the Notes. Furthermore, even prior to the implementation of any changes, uncertainty as to the nature of alternative reference rates and as to potential changes to LIBOR may adversely affect LIBOR during the term of the Notes, the return on the Notes and the trading market for securities based on LIBOR. Investors should consider these matters when making their investment decision with respect to the Notes.

Investors in the Notes should be aware that, if LIBOR were to be discontinued or otherwise unavailable, or if three-month US Dollar LIBOR ceases to be an industry accepted rate for debt market instruments during the life of the Notes, as determined by the EBRD Note Interest Rate Calculation Agent in its sole discretion, the rate of interest on the EBRD Notes will be determined for the relevant period(s) by the fallback provisions set out in condition 20 of the pricing supplement in relation to the EBRD Notes. These fallback provisions provide that the EBRD Note Interest Rate Calculation Agent will determine whether to use a substitute rate or successor base rate that is most comparable to the three-month US Dollar LIBOR rate. If the EBRD Note Interest Rate Calculation Agent, in its sole discretion, determines that there is no such comparable substitute rate or successor base rate, the EBRD Note Interest Rate Calculation Agent will request quotations for the offered rate for three month US Dollar unsecured deposits first from four major banks in the London interbank market, and if there are fewer than two such quotations, from four major banks in the New York market. The provisions include the possibility that if fewer than two quotations are received, the rate of interest would be determined by the EBRD Note Interest Rate Calculation Agent.

No consent of the Noteholders shall be required in connection with effecting any relevant successor rate or substitute rate (as applicable) or any other related adjustments and/or amendments described above.

Risks relating to the Structure of the Notes

Delay in Payments

Under the Agency Agreement and the Terms and Conditions of the Notes ("**Conditions**"), the Principal Paying Agent and the other paying agents named in the Agency Agreement together with any successor or additional paying agent appointed in connection with the Notes (the "**Paying Agents**") are instructed not to make payments of principal due on a date unless and until the Principal Paying Agent has been put in funds by or on behalf of the Issuer sufficient to make all such payments of principal due on that date and the Principal Paying Agent has verified receipt of such funds. Payment instructions in respect of payments of principal will not be initiated until such funds have been received by the Principal Paying Agent and the Principal Paying Agent has verified receipt thereof which may not occur until a date falling after the due date for such amounts under the Conditions, if at all. The Paying Agents have a discretion in respect of interest payments due under the Notes to initiate payment instructions before receipt and verification of sufficient funds by the Principal Paying Agent. Noteholders shall not be entitled to any interest or other payment in respect of any delay in payment of principal, interest or otherwise and no Event of Default or potential Event of Default will occur as a result thereof.

Payments under the Collateral are, subject to the terms and conditions of the assets comprising the Collateral, due to be made on Payment Dates. Payments under the Collateral will be used by the Issuer to

make payments due under the Notes. There is a risk that, even if payments are made on the due date thereof under the Collateral, the Principal Paying Agent will not be put in funds in time to enable it to verify the receipt of the necessary monies and therefore to allow payments to be made on the Notes on the due date therefor. This could mean that payments are made in respect of the Notes after the due date therefor. The Conditions afford no compensation or means of redress for any Noteholder should such a delay in payment occur.

Reliance on certain Transaction Parties

The Issuer is a party to contracts with a number of third parties who have agreed to perform certain services in relation to, amongst other things, the Notes. For example, the Risk Transferor has agreed to enter into the Risk Transfer Agreement with the Issuer, the Corporate Services Provider has agreed to provide various corporate services to the Issuer, the Account Bank and the Custodian have agreed to provide custodial services in relation to the Collateral and the Principal Paying Agent has agreed to provide payment services in relation to the Notes. In the event that any relevant third party fails to perform its obligations under the respective agreements to which it is a party, the Noteholders may be adversely affected.

Noteholders may be affected by the insolvency of the Principal Paying Agent

The ability of the Issuer to meet its obligations under the Notes will be dependent, among other things, upon the payment by the Principal Paying Agent of the payments required pursuant to the Agency Agreement.

Accordingly, Noteholders are exposed to the creditworthiness of the Principal Paying Agent. In the event of the occurrence of any insolvency or similar proceedings involving the Principal Paying Agent, the Issuer may be unable to make payments of interest on, or repay the principal of, the Notes when due.

As of the date hereof, the Principal Paying Agent's financial strength was rated AA- by S&P and Aa1 by Moody's.

Additional Risks Relating to an Extension Event following an Early Redemption Event or Optional Redemption Event

In the event of an Early Redemption Event (other than a Risk Transferor Default Redemption Event) or Optional Redemption Event, the Risk Period will not end immediately. Instead the Risk Period will continue until the tenth (10th) Business Day prior to the applicable Early Redemption Date or Optional Redemption Date. As a result, even after the Risk Transferor has elected an Early Redemption Event or Optional Redemption Event, investors may lose all or a portion of the principal of, and interest on, the Notes.

A Mandatory Extension Event or Optional Extension Event may occur subsequent to the Risk Transferor's election to trigger an Early Redemption Event or Optional Redemption Event. The occurrence of an Extension will not have the effect of extending the Risk Period. With respect to any Extension Period, the Notes will accrue interest at the applicable Extension Spread in lieu of the Interest Spread.

In addition, if a potential Covered Event occurs subsequent to the Risk Transferor's election to trigger an Early Redemption Event or Optional Redemption Event, the Risk Transferor may still extend the maturity of the Notes for one or more Extension Periods to permit for the loss development of such Covered Event. In such case, the Notes will accrue interest at the applicable Extension Spread (in lieu of the Interest Spread) and investors will receive the Redemption Amount on the last Extended Redemption Date, after taking account of such loss development.

Regulatory Risks

Dodd-Frank's Volcker Rule Could Restrict the Ability of Certain Investors to Invest in the Notes.

Under Section 619 of the U.S. Dodd-Frank Act and the corresponding implementing rules (the "**Volcker Rule**") relevant banking entities (as defined under the Volcker Rule) are generally prohibited from, among other things, (i) engaging in proprietary trading in financial instruments unless the transaction is excluded from the scope of the rule, or (ii) acquiring or retaining any "ownership interest" in, or in "sponsoring", a "covered fund", subject to certain exemptions and exclusions. In addition, in certain circumstances, the Volcker Rule restricts relevant banking entities from entering into certain transactions with covered funds.

An "ownership interest" is defined widely and may arise through a holder's exposure to the profits and losses of the "covered fund", as well as through certain rights of the holder to participate in the selection or removal of, among others, an investment advisor, investment or collateral manager, general partner, trustee, member of a board of directors or similar governing body of the "covered fund". A "covered fund" is defined widely, and includes any Issuer which would be an investment company under the Investment Company Act 1940 (the "**ICA**") but is exempt from registration solely in reliance on either section 3(c)(1) or 3(c)(7) of that Act, subject to certain exemptions found in the Volcker Rule's implementing regulations.

The Issuer may be deemed to be a "covered fund" under the Volcker Rule and, in such circumstances, in the absence of regulatory relief, the provisions of the Volcker Rule and its related regulatory provisions, will severely limit the ability of U.S. "banking entities" and non-U.S. affiliates of U.S. banking institutions to hold an ownership interest in the Issuer or enter into financial transactions with the Issuer. If the Issuer is deemed to be a "covered fund", this could significantly impair the marketability and liquidity of the Notes.

There is limited interpretive guidance regarding the Volcker Rule, and implementation of the regulatory framework for the Volcker Rule is still evolving. The Volcker Rule's prohibitions and lack of interpretive guidance could negatively impact the liquidity and value of the Notes. Any entity that is a "banking entity" as defined under the Volcker Rule and is considering an investment in the Notes should consider the potential impact of the Volcker Rule in respect of such investment and on its portfolio generally. Each purchaser must determine for itself whether it is a banking entity subject to regulation under the Volcker Rule. No representation is made as to what effect, if any, the Volcker Rule and its implementing regulations will have (i) the status of the Issuer under the Volcker Rule or (ii) the ability of any purchaser to acquire or hold the Notes, now or at any time in the future. Each prospective investor in the Notes should independently consider the potential impact of the Volcker Rule in respect of any investment in the Notes.

Implementation of and/or changes to the Basel II risk-weighted asset framework may result in changes to the risk-weighting of the Notes

The regulatory capital framework published by the Basel Committee on Banking Supervision (the "**Basel Committee**") in 2006 (the "**Basel II Framework**") has not been fully implemented in all participating countries. The implementation of the Basel II Framework in relevant jurisdictions may affect the risk-weighting of the Notes for investors who are or may become subject to capital adequacy requirements that follow the Basel II Framework.

It should also be noted that the Basel Committee has approved significant changes to the Basel II Framework (such changes being commonly referred to as "**Basel III**"), including new capital and liquidity requirements intended to reinforce capital standards and to establish minimum liquidity standards for credit institutions. In particular, the changes refer to, among other things, new requirements for the capital base, measures to strengthen the capital requirements for counterparty credit exposures arising from certain transactions and the introduction of a leverage ratio as well as short-term and longer-term standards for funding liquidity (referred to as the "**Liquidity Coverage Ratio**" and the "**Net Stable Funding Ratio**"). Participating countries were required to implement the new capital standards from January 2013 and will be required to implement the new Liquidity Coverage Ratio from January 2015 and the Net Stable Funding Ratio from January 2018. Implementation of Basel III requires national legislation and therefore the final rules and timetable for implementation in each jurisdiction may be subject to some level of national variation. The changes approved by the Basel Committee may have an impact on incentives to hold the Notes for investors that are subject to requirements that follow the revised framework and, as a result, they may affect the liquidity and/or value of the Notes.

On 27 June 2013, the Capital Requirements Regulation ("**CRR**") and Capital Requirements Directive adopted by the European Parliament and the Council of the European Union (collectively referred to as "**CRD IV**") were published in the Official Journal of the European Union. Among other things, CRD IV implements the Basel III standards in the European Economic Area ("**EEA**") and generally took effect beginning 1 January 2014. In July 2013, the U.S. banking regulators issued a final rule to implement Basel III in the United States (the "**U.S. Basel III final rule**"). Among other things, the U.S. Basel III final rule contains new capital standards that raise capital requirements, strengthen counterparty credit risk capital requirements and replace the use of externally developed credit ratings with alternatives such as the Organisation for Economic Co-operation and Development's country risk classifications. The general effective date of the U.S. Basel III final rule is 1 January 2015, although certain large and internationally

active U.S. banking organisations became subject to the U.S. Basel III final rule beginning on 1 January 2014.

In general, investors should consult their own advisers as to the regulatory capital requirements in respect of the Notes and as to the consequences to and effect on them of any changes to the Basel II Framework (including the Basel III changes described above) and the relevant implementing measures. No predictions or representations can be made as to the precise effects of such matters on any investor or otherwise.

The Securitisation Regulation

Regulation (EU) 2017/2402 (the "**Securitisation Regulation**") applies, in general, to securitisations issued on or after 1 January 2019.

Article 7 of the Securitisation Regulation requires an originator, sponsor and SSPE of a securitisation to make certain information available to holders of a securitisation position, to competent authorities and, upon request, to potential investors.

Article 6 of the Securitisation Regulation requires an originator, sponsor or original lender of a securitisation to retain, on an ongoing basis, a material net economic interest of not less than 5 percent in that securitisation.

Article 5 of the Securitisation Regulation requires that a credit institution or investment firm, insurance undertaking, reinsurance undertaking, alternative investment fund manager, institution for occupational retirement provision, UCITS management company, authorised in a Member State of the EEA and in certain cases consolidated group affiliates thereof (each, an "**Institutional Investor**") be able to demonstrate that it has undertaken certain due diligence in order to verify (among other things) that an originator, sponsor or original lender has retained a material net economic interest (of no less than 5 per cent.) in the securitisation, that the sponsor or originator of a securitisation meets certain underwriting and originating criteria in granting credit and that procedures have been established for monitoring the performance of the underlying exposures on an on-going basis.

Failure by an Institutional Investor that is a credit institution, investment firm, (or certain affiliates thereof) to comply with Article 5 of the Securitisation Regulation may result in the imposition of a penal capital charge or an increased risk-weighting applying with respect to the investment made in the securitisation by such Institutional Investors (pursuant to Article 270a of Regulation 575/2013) proportionate additional capital charges may be imposed upon insurance undertakings and reinsurance undertakings in similar circumstances, pursuant to delegated acts made under Article 135 of Directive 2009/138).

Furthermore, alternative investment fund managers who discover after the assumption of a securitisation exposure that the retained interest does not meet the requirement set out in the Securitisation Regulation are required to take such corrective action as is in the best interests of investors, pursuant to Article 17 of Directive 2011/61 (as amended by the Securitisation Regulation).

For the purposes of the Securitisation Regulation, "securitisation" is defined as a "transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranched, having [both] of the following characteristics: (a) payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures; [and] (b) the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme" (but excluding certain specialised lending exposures). It is the view of the Issuer that event risk linked notes such as the Notes do not constitute a "securitisation position" for the purposes of the Securitisation Regulation.

Investors should be aware that the regulatory capital treatment of any investment in the Notes will be determined by the interpretation which an investor's regulator places on the provisions of the Securitisation Regulation and related requirements. Prospective investors should therefore be aware that should the relevant investor's regulator interpret the regulations such that such requirements do apply to an investment in the Notes, significantly higher capital charges may be applied to that investor's holding. Some uncertainty remains as to which transactions are subject to the Securitisation Regulation and there can be no assurance that the Notes do not constitute a securitisation position for such purposes.

No originator, sponsor or original lender (as such terms are used in the Securitisation Regulation) in respect of the Permitted Investments or the Notes nor any party to the transaction has retained or committed to retain any material net economic interest in the transaction for purposes of the Securitisation Regulation or

taken any other action which may be required by investors for the purposes of their compliance with the Securitisation Regulation and related requirements. Each prospective investor in the Notes to whom the Securitisation Regulation and related requirements might apply should consult its legal advisors to determine the applicability of such requirements to its investment in the Notes. None of the Issuer, the Risk Transferor, the Initial Purchasers or any other party to the transaction makes any representation to any prospective investor or purchaser of the Notes regarding the regulatory capital treatment of their investment in the Notes now or at any time in the future.

If applicable, the Securitisation Regulation and related requirements may negatively impact the regulatory position of individual investors and, in addition, have a negative impact on the price and liquidity of the Notes in the secondary market. No assurance can be given that further changes will not be made to the Securitisation Regulation and related requirements which could impact holders of the Notes.

Alternative Investment Fund Managers Directive (AIFMD)

EU Directive 2011/61/EU on Alternative Investment Fund Managers ("**AIFMD**") provides, among other things, that all alternative investment funds ("**AIFs**") managed within the scope of AIFMD must have a designated alternative investment fund manager with responsibility for portfolio and risk management. AIFMD is transposed into English law by the Alternative Investment Fund Managers Regulations 2013 (the "**AIFMD Regulations**"). The Issuer is exempt from AIFMD and the AIFMD Regulations if it is a securitisation special purpose entity ("**SSPE**") as defined in AIFMD, being an entity whose sole purpose is to carry on a securitisation within the meaning of Regulation (EC) No 24/2009 of the European Central Bank of 19 December 2008 concerning statistics on the assets and liabilities of financial vehicle corporations engaged in securitisation transactions, as amended, or, with effect from 1 January 2015, Regulation (EU) No 1075/2013 of the European Central Bank of 18 October 2013 concerning statistics on the assets and liabilities of financial vehicle corporations engaged in securitisation transactions (recast) (the "**FVC Regulation**").

The Issuer will treat itself as carrying on a securitisation for the purposes of the FVC Regulation. Accordingly, it expects to meet the definition of an SSPE and therefore does not currently expect to fall within the ambit of AIFMD.

On 8 November 2013, in order to assist in limiting any uncertainty until definitive positions and practises are finalised, the European Central Bank published a fifth edition of its AIFMD Questions and Answers ("**Q&A**"), pursuant to which (i) registered Financial Vehicle Corporations within the meaning of Article 1(2) the FVC Regulation or (ii) financial vehicles engaged solely in activities where economic participation is by way of debt or other corresponding instruments which do not provide ownership rights in the financial vehicle as are provided by the sale of its shares, are advised that they fall outside the scope of the AIFMD regime (unless the European Central Bank advises those entities otherwise in a replacement Q&A, which, according to the 17th and most recent edition of the Q&A published on 4 November 2015, it does not intend to do at least for so long as the European Securities and Markets Authority ("**ESMA**") continues its current work on the matter).

ESMA has not yet given any formal guidance on the application of AIFMD to entities such as the Issuer which issue solely debt securities.

As such, although the Issuer believes that it would be exempt from AIFMD and the AIFMD Regulations, there is a risk that the Central Bank may in the future state, either in generally applicable rules or guidelines or specifically in relation to the Issuer, that the Issuer is not so exempt from AIFMD and the AIFMD Regulations. If the Issuer is stated not to be exempt from AIFMD and the AIFMD Regulations, the Issuer would become subject to a number of requirements, including in relation to the Collateral, which could materially increase the regulatory burden for the Issuer. The Issuer would also be classified as a "financial counterparty" under the European Market Infrastructure Regulation EU 648/2012 and may be required to comply with clearing obligations or other risk mitigation techniques with respect to derivative transactions including obligations to post margin to any central clearing counterparty or market counterparty.

European Financial Transaction Tax

On 14 February 2013, the European Commission published a proposal (the "**Commission's Proposal**") for a directive for a common financial transactions tax (the "**FTT**") in Belgium, Germany, Estonia, Greece,

Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia (the "**participating Member States**"). However, Estonia has since stated that it will not participate.

The Commission's Proposal has very broad scope and could, if introduced, apply to certain dealings in the Notes (including secondary market transactions) in certain circumstances.

Under the Commission's Proposal the FTT could apply in certain circumstances to persons both within and outside of the participating Member States. Generally, it would apply to certain dealings in the Notes where at least one party is a financial institution, and at least one party is established in a participating Member State. A financial institution may be, or be deemed to be, "established" in a participating Member State in a broad range of circumstances, including (a) by transacting with a person established in a participating Member State or (b) where the financial instrument which is subject to the dealings is issued in a participating Member State.

The FTT proposal remains subject to negotiation between participating Member States. It may therefore be altered prior to any implementation, the timing of which remains unclear. Additional EU Member States may decide to participate.

Prospective holders of the Notes are advised to seek their own professional advice in relation to the FTT.

Legal and Regulatory Provisions Affecting the Issuer or the Risk Transferor

It is an Early Redemption Event in respect of the Notes if, in the Risk Transferor's sole judgment (following written advice of the Risk Transferor's counsel with a copy provided to the Issuer and the Trustee), any amendment to, or change in, the laws of any jurisdiction (including a change in any official interpretation or application thereof) becomes effective that would materially and adversely impair the Issuer's ability to lawfully perform its obligations under the Notes or the Risk Transferor's ability to lawfully perform its obligations under the Risk Transfer Agreement. Legal or regulatory changes affecting the Issuer or such Risk Transferor may indirectly affect the investors in the Notes by exposing such investors to reinvestment risk in respect of the proceeds of the Notes prior to the Scheduled Redemption Date.

Change of Law

The structure of the Notes and related agreements is based on the legal systems and administrative practice in each relevant jurisdiction in effect as at the date of this Circular. No assurance can be given as to the impact of any possible change in law or to administrative practice in any of the relevant jurisdictions after the date of this Circular, nor can any assurance be given as to whether any such change could adversely affect the ability of the Issuer to make payments under the Notes or increase the costs and expenses incurred by the Issuer.

A Change in Law Redemption Event will occur upon the Risk Transferor's decision, on the advice of its counsel, to terminate the Risk Transfer Agreement if there is any amendment to, implementation of, effectiveness of, change in, or issuance of, laws or regulations of any relevant jurisdiction (or any official interpretation, guidance or application thereof) that would materially impair the Risk Transferor's or Issuer's ability to lawfully perform their respective obligations under the Risk Transfer Agreement or result in material adverse consequences in relation to the performance of the Risk Transferor's or Issuer's respective obligations in relation to the Risk Transfer Agreement.

European Union Membership

On 23 June 2016, the United Kingdom held a referendum on the United Kingdom's continued membership of the European Union. A majority of voters voted for the United Kingdom to leave the European Union. The announcement of the referendum result caused significant volatility in global stock markets and currency exchange rate fluctuations immediately following the European Union referendum result that resulted in a significant weakening of the sterling against the U.S. Dollar, the euro and other major currencies.

A process of negotiation is on-going to determine the terms of the United Kingdom's exit from the European Union, and to set the framework for future discussions on the terms of the United Kingdom's relationship with the European Union. The uncertainty regarding the timing of, and the process for, the United Kingdom's exit from the European Union before, during and after the period of negotiation could have a negative economic impact and result in further volatility in the markets which could in turn adversely

impact the market value of the Notes and/or the ability of the Issuer to satisfy its obligations under the Notes.

Under Article 50 of the Treaty on European Union (Article 50) once the exit process is triggered by the withdrawing member state, a two-year period of negotiation begins to determine the terms of the withdrawing member's exit from the European Union with reference to the planned post-exit relationship, after which period its European Union membership ceases unless the European Union Council, together with the withdrawing member, unanimously decides to extend this period.

Following the United Kingdom Government's decision to invoke Article 50 on 29 March 2017, it is expected that the United Kingdom will leave the European Union on 29 March 2019, although this deadline could be extended or a transitional arrangement (currently anticipated to last until 31 December 2020) put in place, subject to agreement by all European Union member states. Negotiations relating to the terms of the United Kingdom's relationship with the European Union are likely to extend beyond the two-year period set forth therein which could create additional volatility in the markets. The timing of, and process for, such negotiations and the resulting terms of the United Kingdom's future economic, trading and legal relationships are uncertain, and will be impacted by the stance the current United Kingdom Government and the other European Union Member States adopt, which may be fluid. In addition, an unfavourable outcome of negotiations relating to the United Kingdom's exit from the European Union is likely to create further volatility in the markets.

Regulatory restrictions may affect the Issuer's ability to enter into hedge agreements.

In reliance on Rule 4.13(a)(3) issued by the Commodity Futures Trading Commission ("**CFTC**") and the related guidance issued by the CFTC in letter no. 14-152, Horseshoe ILS Services UK Ltd intends to file a notice of exemption from the requirement to register as a commodity pool operator ("**CPO**") with respect to the issuer pursuant to the Commodity Exchange Act. Therefore, unlike a registered CPO, Horseshoe ILS Services UK Ltd would not be required to deliver a CFTC disclosure document to prospective investors, nor would it be required to provide investors with certified annual reports that satisfy the requirements of CFTC rules applicable to registered CPOs.

The Issuer is not entering into any hedge agreements on the Closing Date and does not anticipate entering into such agreements. Nevertheless, economic and market conditions could change and the Issuer could conclude that it would be in the interest of the Issuer to enter into a hedge agreement to, for example, hedge interest rate risk. The restrictions imposed by the CPO regulations, however, may increase the cost of, or prevent the Issuer from, entering into such hedge agreements.

In 2012 the CFTC implemented rules that include "swaps" along with "commodities" as contracts which if traded by an entity may cause that entity to be a "commodity pool" under the Commodity Exchange Act. Under the CFTC's rules any person that engages in certain activity relating to swap transactions on behalf of a commodity pool could be subject to regulation as a "commodity pool operator" ("**CPO**") and a "commodity trading adviser" ("**CTA**"). Treatment of the Issuer as a commodity pool and regulation of any another transaction party as a CPO and CTA could cause that entity to be subject to extensive registration and reporting requirements and could cause any swap transactions executed by or for the Issuer to be subject to regulations that would involve significant costs to the Issuer. To mitigate those risks, the Issuer will rely on guidance issued by the CFTC permitting operators of insurance-linked securitizations that comply with certain conditions to rely on an exemption from registration under CFTC Rule 4.13(a)(3). As a result of those conditions, the Issuer may be prevented from entering into or amending hedge agreements in circumstances where it might otherwise have done so.

Risk relating to the Initial Purchasers and the Risk Transferor

The Initial Purchasers May Have Conflicts of Interest

Various potential and actual conflicts of interest may arise as a result of the investment banking, commercial banking, asset management, commodity pool operator, financing and financial advisory services, insurance and reinsurance, insurance and reinsurance related brokerage and products provided by the Initial Purchasers and their respective affiliates to the Issuer, the Trustee, the Risk Transferor, and others, as well as in connection with the investment, trading and brokerage activities of the Initial Purchasers and their respective affiliates.

The following briefly summarises some of these conflicts, but is not intended to be an exhaustive list of all such conflicts.

The Initial Purchasers will be paid fees and commissions for the services it has provided to the Issuer. Each Initial Purchaser or any of its affiliates may from time to time hold Notes for investment, trading or other purposes and may enter into derivatives, Risk Transfer Agreements or other financial instruments relating to or referencing the Notes. Each Initial Purchaser or its affiliates may provide investment banking, commercial banking, asset management, commodity pool operator, financing and financial advisory services, insurance and reinsurance, insurance and reinsurance related brokerage and products to the Risk Transferor or its affiliates, and may purchase, hold and sell, both for its accounts or for the account of their respective clients, on a principal or agency basis, loans, securities, and other obligations and financial instruments of the Risk Transferor or its respective affiliates. As a result of such transactions or arrangements, each Initial Purchaser or its affiliates may have interests adverse to those of the Issuer and the Noteholders.

As part of its regular business, each Initial Purchaser or its affiliates may also provide investment banking, commercial banking, asset management, commodity pool operator, financing and financial advisory services and products, insurance and reinsurance, insurance and reinsurance related brokerage to, and purchase, hold and sell, both for their respective accounts or for the account of their respective clients, on a principal or agency basis, loans, securities, and other obligations and financial instruments and engage in private equity investment activities. Neither the Initial Purchasers nor any of their affiliates will be restricted in its performance of any such services or in the types of debt or equity investments, which they may make. In conducting the foregoing activities, the Initial Purchasers will be acting for their own account or the account of their customers and will have no obligation to act in the interest of the Issuer.

Conflicts of Interest relating to the Risk Transferor

The Risk Transferor and its respective affiliates may from time to time hold Notes for investment, trading or other purposes and may enter into derivatives, Risk Transfer Agreements or other financial instruments relating to or referencing the Notes. In addition, as part of its regular business, the Risk Transferor and its respective affiliates invest in securities, including bonds, commercial paper and other debt securities and in equity securities of various issuers. It can be expected that the Risk Transferor and its affiliates may, at the time of issuance of the Notes and at all other times, own securities issued by participants engaged in diverse activities, including the financial services business. Such investments may include those issued by the Trustee, the Initial Purchasers, the Insurance Manager and other service providers or their respective affiliates. The Risk Transferor and its affiliates will not be restricted with regard to their investments in any issuer at any time.

The interests of the Risk Transferor may diverge from, and may be actually adverse to, the interests of Noteholders. In particular, the benefits that may be obtained by the Risk Transferor under the Risk Transfer Agreement by reason of losses paid to it would constitute losses of principal on the Notes.

Other Risks relating to the Risk Transferor and the Risk Transfer Agreement

Noteholders are exposed to the unpredictability of risk

When and if a Covered Event occurs, the Issuer may, as required under the Risk Transfer Agreement, pay an Issuer Payment greater than zero to the Risk Transferor and a related Principal Reduction under the Notes will occur. Consequently, the Issuer is exposed to the occurrence, frequency and severity of Covered Events. Because the frequency and severity of catastrophic events and extreme mortality events are inherently unpredictable, no prediction can be made as to whether Covered Events will result in an Issuer Payment that will exceed zero and therefore result in the Issuer incurring a liability under the Risk Transfer Agreement. Issuer Payments made by the Issuer as a result of one or more Covered Events will result in a reduction in all or a portion of the Outstanding Principal Amount of, and interest on the Notes exposed to such Covered Events. A principal reduction with respect to each Notes will not necessarily bear any direct correlation to losses actually incurred by the Risk Transferor as a result of the occurrence of a Covered Event.

The Issuer's ability to pay interest on, and principal of, the Notes is partly dependent on the Risk Transferor

The ability of the Issuer to pay interest on the Outstanding Principal Amount of the Notes is, in part, dependent on the payment by the Risk Transferor of the Periodic Payments to the Issuer under the Risk Transfer Agreement. Because the Issuer's sources for payment of the interest and principal on the Notes include the Periodic Payments and the Negative Loss Payments paid pursuant to the Risk Transfer Agreement, any failure of the Risk Transferor to pay the Periodic Payments or the Negative Loss Payments, if any, whether due to the creditworthiness of the Risk Transferor or for any other reason, would likely result in the Issuer not having sufficient funds to pay the full amount of the Outstanding Principal Amount or interest on the Notes.

Risks Related to the AIR Expert Risk Analysis Reports

The Data and Methodologies of AIR Described in the AIR Expert Risk Analysis Reports Are Provided "As Is" Without Warranty or Any Guaranty of Any Kind to the Noteholders

The statistical data, modeling and explanations contained in the "*AIR Expert Risk Analysis*" attached hereto as Annex A, the "*AIR Expert Risk Analysis Results*" attached hereto as Annex B, the AIR Data File information referred to in Annex C and accompanying this Circular and any analysis or information provided by AIR in connection with any reset or reporting agency failure event, if applicable (jointly referred to herein as the "**AIR Expert Risk Analysis Reports**"), have been prepared by AIR as experts in statistical modeling and the analysis of risks associated with Named Storms, Earthquakes and Europe Windstorms. Investors are advised that the loss calculations reported in the AIR Expert Risk Analysis Reports are based on (i) version 16.1 of the a AIR Hurricane Model for the United States (the "**AIR Hurricane Model for the United States**"), version 3.1 of the AIR Tropical Cyclone Model for Hawaii (the "**AIR Tropical Cyclone Model for Hawaii**"), version 9.1 of the AIR Tropical Cyclone Model for the Caribbean (the "**AIR Tropical Cyclone Model for the Caribbean**", together, with the AIR Hurricane Model for the United States and the AIR Tropical Cyclone Model for Hawaii, the "**AIR U.S. Hurricane Models**"), each as implemented in Touchstone 6.0.4 and CATRADER version 20.2.0, (ii) version 10.2 of the AIR Earthquake Model for the United States and Canada (the "**AIR Earthquake Model for the United States and Canada**"), version 1.8 of the AIR Earthquake Model for Alaska (the "**AIR Earthquake Model for Alaska**"), version 1.7 of the AIR Earthquake Model for Hawaii (the "**AIR Earthquake Model for Hawaii**"), and version 2.0 of the AIR Earthquake Model for the Caribbean (the "**AIR Earthquake Model for the Caribbean**") (collectively, the "**AIR Earthquake Models**"), each as implemented in Touchstone 6.0.4 and CATRADER 20.2.0 (iii) version 6.0 of the AIR Extratropical Cyclone Model for Europe (the "**AIR Europe Windstorm Model**"), as implemented in Touchstone 6.0.4 and CATRADER 20.2.0, (each, an "**AIR Model**" and collectively, the "**AIR Models**"). The AIR Hurricane Model for the United States, the AIR Tropical Cyclone Model for the Caribbean and the AIR Earthquake Model for the United States and Canada were last updated in 2017, the AIR Tropical Cyclone Model for Hawaii was last updated in 2013, the AIR Earthquake Model for Alaska was last updated in 2002, the AIR Earthquake Model for Hawaii was last updated in 2013, the AIR Europe Windstorm Model was last updated in 2018.

In addition, the "*AIR Expert Risk Analysis Results*" attached hereto as Annex B and the AIR Data File Information referred to in Annex C are further based on the AIR U.S. industry exposure database, which includes Alaska and Hawaii, as of 31 December 2017, the AIR Caribbean industry exposure database, which includes Puerto Rico and the U.S. Virgin Islands, as of 31 December 2017, and the AIR Canada industry exposure database as of 31 December 2015. The AIR Expert Risk Analysis Reports will not be updated to account for changes to any of AIR's industry exposure databases, except that in performing each Reset as described herein, the Calculation Agent will use the latest AIR industry insured exposure data commercially released by it at least one month prior to the relevant Reset Determination Date. A risk analysis using more current exposure data may have different results and such differences may be material. The data and methodologies of AIR described in the AIR Expert Risk Analysis Reports are provided "as is" without warranty or any guarantee of any kind. These analyses and estimates are provided for illustrative purposes only and are not intended to provide, nor should they be interpreted as providing, any facts regarding, or any guarantee or prediction or forecast of, the likelihood that investors in the Notes will receive payment thereon.

The loss calculations reported in the AIR Expert Risk Analysis Reports are subject to numerous assumptions, uncertainties and the inherent limitations of any statistical analysis. Actual loss experience is inherently unpredictable. Notwithstanding the analyses, estimates and assumptions set forth in the "*AIR Expert Risk Analysis*" attached hereto as Annex A and the "*AIR Expert Risk Analysis Results*" attached

hereto as Annex B one or more Covered Events could occur during the Risk Period, resulting in a full or partial loss of the Outstanding Principal Amount of the Notes and any interest accrued thereon. Any such Covered Event may have characteristics similar to or different from those of simulated events that did not qualify as Covered Events in the AIR Expert Risk Analysis Reports, or characteristics not considered in the AIR Expert Risk Analysis Reports. Accordingly, the actual frequency and severity of named storms could differ materially from the frequency and severity estimated by AIR.

AIR does not represent investors in the Notes or their interests in any way. AIR does not sponsor, endorse, offer or promote the Notes, nor does it make any representation or warranty, express or implied, regarding the advisability of investing in the Notes or the legality of an investment in the Notes. AIR is not responsible for and has not participated in the determination of the structure or pricing of the Notes. Furthermore, AIR has no obligation or liability in connection with the administration or marketing or trading, if any, of the Notes or liability for any adverse financial result or any direct, indirect, special, punitive or consequential damages whatsoever. AIR makes no representation or warranty, express or implied, as to the accuracy or completeness of the information set forth in this Circular or any supplement hereto, including the AIR Expert Risk Analysis Reports.

No scientific consensus on models or risk parameters exists. AIR acknowledges that other credible, published models and/or risk parameters, if used, could produce materially different results. AIR also has not verified the authenticity or accuracy of all the original data in the historical catalogues or other data sources used to develop the AIR Models. The AIR Models do not predict the probabilistic occurrence of any Covered Event. Investors should consult their own expert advisors, whose conclusions may differ from those of AIR.

The results of AIR's analysis should not be viewed as facts or forecasts of future Covered Events, or of Principal Reductions or Principal Increases, and should not be relied upon as a representation of the future value of the Notes. Actual loss experience can differ materially from that generated by the AIR Models. Certain probabilistic loss distributions generated by AIR and certain additional analyses by AIR are included in the AIR Expert Risk Analysis Reports. These loss distributions constitute estimated losses based on assumptions relating to environmental, demographic, and cost factors, many of which represent subjective judgments, are inherently uncertain, and are beyond the control of AIR, and any one of which alone can cause the actual loss ultimately sustained with respect to a Covered Event to be significantly different from the relevant estimated Event Index Value, resulting in significantly different losses sustained by the Notes from such Covered Event.

Furthermore, considerable uncertainty exists in the AIR Models and the parameters used in the AIR Expert Risk Analysis Reports arising from insufficient data, limited scientific knowledge and alternative empirical relationships, as well as from the random nature of Named Storms, Earthquakes and Europe Windstorms. The AIR Models cannot incorporate all sources of uncertainty. Furthermore, the assumptions and methodologies used by AIR do not constitute the exclusive set of reasonable assumptions and may not be correct. Use of alternative assumptions and/or models could yield results materially different than those produced by AIR. AIR did not elicit from other experts alternative interpretations of its data or methods, nor did AIR research all potentially available interpretations of such data and methods on the basis that AIR considered its own interpretations to be more reliable.

Modeling industry insured property losses resulting from Covered Events is an inherently subjective and imprecise process, involving an assessment of information that comes from a number of sources that may not be complete or accurate. No model of catastrophic events is, or could be, an exact representation of reality. The AIR Models rely on various methodologies and assumptions (including assumptions about the authenticity, accuracy and completeness of historical data), some of which are subjective and subject to uncertainty, and which might not be used in models provided by other modeling firms. Furthermore, there may be differences in the way in which these elements are considered by other modeling firms. Consequently, there can be no assurance that the AIR Models will prove to be an accurate estimation of the risk of loss or a reduction of the principal of, or interest on, the Notes. Accordingly, the expected loss estimates and related probabilities produced by the AIR Models are themselves subject to uncertainty. AIR reviews model assumptions from time to time in view of new data and other information to refine and modify its models as such information becomes available. Furthermore, to the extent that AIR becomes aware of issues either in its models or in the software expression of such models which may affect their output in unintended ways, it may, depending on the materiality of the issues, communicate such issues to its licensees and resolve them in subsequent versions of its models. As such, the AIR Models may not necessarily reflect the most current named storm or earthquake model of AIR, as the case may be, at any

time. Estimates generated by such refined or modified model may differ materially from the estimates generated by the AIR Models, and the use of such models in lieu of the AIR Models might similarly alter materially the information provided in the AIR Expert Risk Analysis Reports.

AIR modeled industry insurance losses across all simulated lines of business are used as a proxy for potential loss amounts; however, differences between AIR modeled industry insurance losses and loss amounts estimated by a reporting agency or, if applicable, a Fall-Back Data Provider can arise due to limitations relating to the AIR models and the fact that some losses included in the reporting agency estimates are not accounted for in the AIR models. Such unmodeled losses include, but are not limited to, Tropical Cyclones formed within the Pacific Basin (other than those affecting Hawaii) or Named Storms affecting areas outside of Alabama, Arkansas, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, and West Virginia; fire following earthquakes in Alaska and Hawaii; storm surge in Hawaii; tsunami in the United States; induced seismic events (including events caused by human activity such as underground injection of wastewater); loss adjustment expenses, demolition and debris removal, inland marine losses, certain flood losses, hazardous waste clean-up, mold losses, strikes, riots or civil commotion, indirect business interruption losses and losses resulting from sprinkler leakage as a result of Named Storms, Earthquakes, or Europe Windstorms.

In addition, the AIR Models reflect use of a function to account for the effects of temporary inflation that can result from increased demand for materials and services to repair and rebuild damaged property after a catastrophic event. The Demand Surge (as defined in the "**AIR Expert Risk Analysis**" attached hereto as Annex A) function is calculated based on very few historical data points and is also highly subjective. As a result, the loss estimates presented herein may understate or overstate the impact of Demand Surge on losses, possibly materially.

The estimated probabilities generated by the AIR models are not necessarily predictive of future Covered Events. Investors in the Notes should not view the expected loss estimates and related probabilities generated by the AIR models as necessarily predicting the likelihood of the occurrence during the Risk Period of one or more Covered Events resulting in a reduction of the principal of, and interest on, the Notes. AIR has not made any effort, nor does it have the ability to predict, Named Storms, Earthquakes, or Europe Windstorms affecting the applicable Covered Area during the Risk Period. Accordingly, the actual frequency and severity of Covered Events could differ materially from the frequency and severity estimated by AIR.

There are no representations with respect to the AIR Expert Risk Analysis Reports

None of the Issuer, the Risk Transferor, the Initial Purchasers, the Trustee, or any of their respective affiliates and representatives, or any of their respective directors or officers, has reviewed, or makes, or shall be deemed to make, any representation with respect to the AIR Expert Risk Analysis Reports, including, without limitation, the adequacy, completeness, appropriateness or otherwise, of the AIR Expert Risk Analysis Reports. The "*AIR Expert Risk Analysis*" attached hereto as Annex A, the "*AIR Expert Risk Analysis Results*" attached hereto as Annex B and the AIR Data File Information referred to in Annex C and accompanying this Circular are included herein in reliance upon AIR as experts in such matters. See "*Experts*" section in this Circular. The AIR Expert Risk Analysis Reports are, as noted above, based on certain assumptions, judgments, and methodologies of AIR, a number of which are confidential and proprietary to AIR.

Without intending to limit the foregoing, in particular, none of the Issuer, the Risk Transferor, the Initial Purchasers, the Trustee or any of their respective affiliates or representatives, or any of their directors or officers, has reviewed the AIR Expert Risk Analysis Reports to determine (i) the reasonableness of the assumptions, judgments and methodologies used by AIR, (ii) whether such assumptions, judgments and methodologies should be supplemented in any way through the use of alternative assumptions, judgments or methodologies, (iii) whether the assumptions, judgments and methodologies used by AIR include all appropriate factors that could contribute to a Principal Reduction and (iv) whether the use of alternative assumptions, judgments and methodologies, or the use of a different catastrophe simulation model, could yield results materially different from those generated by the AIR Models.

Because of the inherent limitations of relying on the AIR Expert Risk Analysis Reports for loss estimation, and because of the subjective nature of many of AIR's assumptions, judgments and methodologies in

preparing the AIR Expert Risk Analysis Reports, each of the Issuer, the Risk Transferor, the Initial Purchasers, the Trustee and their respective affiliates and representatives expressly disclaims any responsibility for, and any liability based upon, a finding that the AIR Expert Risk Analysis Reports include any untrue statement of a material fact or that the AIR Expert Risk Analysis Reports omit to state a material fact necessary in order to make the statements, in light of the circumstances under which they are made, not misleading.

The AIR Expert Risk Analysis Reports Do Not Include Losses Resulting from Tropical Storms in the United States

With respect to Named Storms impacting the United States, the losses estimated in the AIR Expert Risk Analysis Reports were (and in some cases will be) calculated using the AIR Models, which do not model the probability of losses resulting from (i) tropical storms that at no point are classified as a hurricane or (ii) hurricanes that degrade to tropical storm force and subsequently make landfall in the United States as a tropical storm or, for storms that never make landfall in the United States, that fail to cause winds of greater than or equal to 40 miles per hour over any point in the United States while hurricanes, as described in the "*AIR Expert Risk Analysis*" attached hereto as Annex A, even though such events are included in the definition of "Named Storm." Accordingly, the actual frequency and severity of Named Storms could differ materially from the frequency and severity estimated by AIR.

With respect to Named Storms impacting Hawaii and the Caribbean region, which includes Puerto Rico, the losses estimated in the AIR Expert Risk Analysis Reports were (and in some cases will be) calculated using the AIR Models, which do model the probability of losses resulting from (i) hurricanes and (ii) tropical storms. The actual frequency and severity of named storms could differ materially from the frequency and severity estimated by AIR.

Conflicts of Interest May Arise as a Result of AIR's Relationship with the Issuer, the Risk Transferor, the Initial Purchasers, PCS and PERILS

AIR provides consulting services and other services to the insurance industry, including the Risk Transferor (including in respect of this proposed Offering), the Initial Purchasers and their respective affiliates. AIR expects to provide additional services for the Risk Transferor, the Initial Purchasers and their respective affiliates from time to time in the future.

The Issuer has agreed to pay the fees and expenses of AIR for its services in connection with the Notes, which fees will be reimbursed to the Issuer by the Risk Transferor pursuant to the Risk Transfer Agreement. In addition, the Issuer and the Risk Transferor have agreed to indemnify AIR for certain claims, liabilities and exposures arising out of such services.

AIR is affiliated with PCS, which is a division of ISO.

AIR Has No Direct Contractual Liability to Noteholders

Noteholders will have no direct contractual right to enforce or take actions against AIR or any other right under the Calculation Agent Agreement or in connection therewith, including, but not limited to, the following:

- AIR's creation and provision of its analyses, expected loss estimates and related probabilities contained within the AIR Expert Risk Analysis Reports;
- AIR's role in modeling industry insured losses following the occurrence of a Reporting Agency Failure Event, if applicable;
- AIR's calculation of any Loss Period Payment Amount, whether based on the Reporting Agency, replacement for the Reporting Agency or Fall-Back Data Provider.

AIR's Calculation of the Loss Period Payment Amount, Which Has Inherent Limitations, Will Be Final and Binding Absent Manifest Error

The calculation of the Loss Period Payment Amount to be performed by AIR in its capacity as Calculation Agent, including upon the occurrence of a Reporting Agency Failure Event, will result in a factual determination as to whether an Issuer Payment or a Negative Loss Payment will be due and payable. The

determination will be performed in accordance with the methodologies described in this Circular and as specified in the Calculation Agent Agreement. The terms of the Notes provide that all factual determinations made by AIR as Calculation Agent are final and binding, absent manifest error. No separate review or appraisal of the accuracy of the defined methodologies or data used will be performed. The calculation of an Issuer Payment and the related Principal Reduction, as well as the calculation of a Negative Loss Payment and the related Principal Increase, will be final, regardless of any actual, potential or theoretical discrepancies between the methodologies used by the Calculation Agent and any other possible methodologies for assessing the same facts or any losses which are actually experienced in reality as a result of the associated Covered Event. These inherent limitations are potentially exacerbated by the potential for unreliable data, or the unavailability of data, from the Reporting Agency or, if applicable, the Fall-Back Data Provider.

In determining whether any Named Storm or Earthquake occurring during the Risk Period qualifies as a Covered Event, the Calculation Agent will use data obtained from the Reporting Agency or, if applicable, the Fall-Back Data Provider. Neither the Reporting Agency nor any Fall-Back Data Provider gives any representation or warranty, express or implied, in relation to the accuracy or reliability of the data that it provides. Neither the Issuer, the Risk Transferor, the Calculation Agent, nor any party to the Basic Documents will take any action to verify the methodology, accuracy, technical data or instrumentation of the Reporting Agency or any Fall-Back Data Provider. The Issuer, the Risk Transferor, the Calculation Agent and the other parties to the Basic Documents disclaim any and all liability, including any direct, indirect, special, incidental or consequential damages arising from losses due to the errors, omissions, or inaccuracies in the data from the Reporting Agency or Fall-Back Data Provider used in any calculation of an Issuer Payment and the related Principal Reduction.

The data used to determine a loss to investors may not be the final data with regard to any Covered Event. Consequently, investors may suffer a Principal Reduction with respect to one or more Covered Events for which an Issuer Payment might not have been payable if final data from the Reporting Agency or Fall-Back Data Provider had been published or delivered at the time of the Issuer Payment resulting from such Covered Event.

In addition, the data as reported by the Reporting Agency or Fall-Back Data Provider is subject to certain margins of error as a result of the degree of precision and the methodologies used by the Reporting Agency or Fall-Back Data Provider. There is an inherent risk that any Issuer Payment and the related Principal Reduction calculated using the data would have been smaller, or that no Issuer Payment and Principal Reduction would have occurred at all, had the Reporting Agency or Fall-Back Data Provider used more precise or different methodologies. Investors in the Notes will have no recourse to the Issuer, the Risk Transferor, the Calculation Agent, the Initial Purchasers, the Reporting Agency, any Fall-Back Data Provider, any agents or affiliates thereof or any other entity should a Principal Reduction occur as a result of the application of the parameters as reported by the Reporting Agency or Fall-Back Data Provider.

Risk relating to the Clearing System

Noteholders Must Rely on the Procedures of Applicable Clearing System

Notes issued by the Issuer will be represented on issuance by one or more Global Notes that may be deposited with a nominee for the Clearing System, as specified in this Circular and the Trust Deed. Except in the circumstances described in "*Description of the Notes—Definitive Notes*" and the Trust Deed, investors will not be entitled to receive Notes in definitive form. The Clearing System and its respective direct and indirect participants will maintain records of the beneficial interests in each Global Note held through it. While the Notes are represented by a Global Note, investors will be able to trade their beneficial interests only through the Clearing System and its participants.

While the Notes are represented by Global Notes, the Issuer will discharge its payment obligations under the Notes by making payments through the Clearing System. A holder of a beneficial interest in a Global Note must rely on the procedures of the Clearing System and its participants to receive payments under the Notes. The Issuer has no responsibility or liability for the records relating to, or payments made in respect of, beneficial interest in any Global Note.

Holders of beneficial interests in a Global Note will not have a direct right to vote in respect of the Notes so represented. Instead, such holders will be permitted to act only to the extent that they are enabled by the relevant clearing system and its participants to appoint appropriate proxies.

Risks relating to the Issuer

Operating History of the Issuer; Reliance on Agents

The Issuer, who is incorporated under the laws of England and Wales, operating within a regulated environment and is authorised under the Risk Transformation Regulations 2017 as a single arrangement insurance special purpose vehicle. The Issuer may enter into one contract of risk transfer (i.e. the Risk Transfer Agreement) and is not permitted to carry out any other regulated activity. The Issuer's business consists and will consist solely of the issuance of the Notes and the entering into and performance of the Risk Transfer Agreement and related agreements and activities, including the acquisition and holding of the Permitted Investments.

Certain of the business activities of the Issuer are to be carried out on its behalf by independent contractors appointed by the Issuer for such purpose. The Issuer will not have any role in determining or verifying the data or results received from any Reporting Agency or Calculation Agent, and any calculations derived therefrom. Consequently, the Issuer (and thus the Noteholders) will be relying on such independent contractors to perform their duties diligently and in good faith.

Limited Resources of the Issuer; Capitalisation of the Issuer

The Issuer is thinly capitalised. The issued ordinary share capital of the Issuer is 50,000 ordinary shares of £1 each paid up as to one quarter and the issued share capital will not increase materially. The income expected to be received by the Issuer from the investment of the Permitted Investments, the payment of Periodic Payments, Negative Loss Payments, if any, the Initial Expense Amount and any Supplemental Expense Amounts is expected to be sufficient to make payment of the projected expenses and liabilities of the Issuer. There can be no assurance that the Issuer will not incur expenses or liabilities other than as projected or that payments required to be made to the Issuer will in fact be made, or if made, will be made in a sufficient amount or in a timely manner. In the event of the occurrence of unanticipated expenses or liabilities not otherwise paid or provided for, the Issuer might incur otherwise unfunded expenses. In the event that unfunded expenses or liabilities exceed the available funds of the Issuer at that time and such expenses or liabilities are not subject to a limited recourse provision to protect the Issuer for insolvency, the Issuer could be forced to seek the protection of insolvency proceedings.

All of the issued and outstanding ordinary shares of the Issuer are registered in the name of Atlas Capital UK Holdings 2019 Limited ("**HoldCo**") and all of the issued and outstanding ordinary shares of HoldCo are registered in the name of Intertrust Corporate Services Limited, 35 Great St. Helen's, London EC3A 6AP as "**Share Trustee**". Each of the Share Trustee and HoldCo will be under no obligation to, and is not expected to, subscribe for additional shares of the Issuer or otherwise to provide funds or capital to the Issuer.

The Notes are not obligations of, and are not guaranteed by, the Risk Transferor or any of its affiliates.

Use of Different Models

The Risk Transferor may use for its own risk management purposes its own internal model or third party vendor models, which may produce significantly different results from that reflected in the AIR Expert Risk Analysis Reports. The Risk Transferor does not intend to, and will not be required to, disclose the results of these models to any purchaser of Notes. Accordingly, the Risk Transferor may have a materially different view of the risk of loss to the Notes than the investors or the modeling Firm. The Risk Transferor disclaims all responsibility for any modeling results and the views of any modeling firm included in this Circular.

In addition, affiliates of the Initial Purchasers are reinsurance intermediaries for many clients including the Risk Transferor. In the ordinary course of business, each such affiliate may become privy to client generated model output or may generate other model output using internal or third party vendor models. Such output may differ, in some cases significantly, from the output reflected in the AIR Expert Risk Analysis Reports.

Risks Relating to PCS

The Preparation of PCS Insured Property Loss Estimates Is Inherently Subjective and Imprecise

The Event Index Value arising from a Covered Event will be determined based upon industry insured property loss estimates that are compiled by PCS. To the extent that inflation increases materially from current levels, this determination may become more difficult as these estimates will require that PCS and its survey respondents have a view of inflation during the claims development period. The estimates of industry insured property personal, commercial losses and automobile losses that are prepared by PCS are provided in bulletins to its subscribers (including the Issuer and the Risk Transferor) in the ordinary course of business of PCS and there will not be any separate estimates prepared for purposes of the Notes or the Risk Transfer Agreement. Preparing an estimate of the insured property losses resulting from a catastrophe is an inherently subjective and imprecise process, involving an assessment of information which comes from a number of sources and which may not be complete or accurate.

Because the scope of property/casualty coverage varies by insurance carrier, policy type, line of insurance, claims adjustment variation and also changes over time, there is a significant measure of imprecision and variability in determining whether any particular loss will be covered and thus should be included in overall estimations of industry insured property losses. As a result of such imprecision, variability and the exclusions described above, as well as the inherently subjective nature of the estimating process, PCS' estimates may be materially different from the actual industry insured property losses experienced by the industry.

PCS also determines in its sole discretion whether various industry insured property losses arising from one or more distinct events occurring close in time to one another are to be considered the result of a single or multiple and separate PCS Identified Catastrophes. For instance, when two separate weather fronts may cause industry insured property losses at or near the same time in the same geographic area, PCS' judgment may be more complex. In determining whether one or more PCS Identified Catastrophes have occurred, PCS staff may, in the exercise of their judgment, analyse the geographic and temporal proximity of the events; review meteorological, and other scientific data concerning the event; and/or consider factors such as an inability on the part of field adjusters to distinguish the damage caused by the various events. The exercise of such judgment and discretion may result in the estimation of losses which may be materially different than an estimate performed by another methodology utilised in the insurance industry.

Any change in the Earthquake State PCS Loss or Named Storm State PCS Loss for a Covered Event after the earlier of (i) the Event Reporting Date that occurs at least five (5) Business Days after the date PCS releases a Catastrophe Bulletin with its final Resurvey Estimate for such Covered Event and (ii) ten (10) Business Days prior to the Redemption Date will not be taken into account when calculating the Event Index Value and any corresponding Loss Period Payment Amount.

The industry insured loss estimates for certain Covered Events as reported by PCS may continue to develop after the latest date on which the Risk Transferor would be required to make a Negative Loss Payment to the Issuer as a result of favourable developments in the PCS estimates. Although PCS releases final Resurvey Estimates after the occurrence of a catastrophe identified by PCS as a Named Storm or Earthquake, there can be no assurance that such final Resurvey Estimates will not be further revised by PCS. Due to a lack of information, and uncertainty or error in extrapolating from reported information, among other things, PCS estimates of industry insured property losses from Covered Events may be materially different from actual industry insured property losses. In these situations, Noteholders may suffer greater losses than would be indicated by the final PCS estimate or actual insurer losses, as the case may be.

PCS Survey Participants Report Their Loss Data Voluntarily and Such Data Is Not Audited by PCS

All insurance companies and individual agents and adjusters that participate in PCS' surveys do so voluntarily. Not all insurance companies participate in the PCS surveys. There is no industry, legal or contractual requirement that insurers, agents or adjusters participate in PCS data collection efforts. Moreover, PCS does not independently verify or audit the accuracy of reported loss data as part of its estimation methodology. Therefore, there can be no assurance that the data provided to PCS has been, is or will be accurate, timely or complete. Moreover, since PCS does not simply sum up the loss data reported by those it surveys, but instead applies subjective judgments to and makes extrapolations from the data it has gathered and considered in the exercise of its judgment, ISO and PCS do not guarantee, and there are

no assurances, that the PCS estimates have accurately reflected the reported losses. Accordingly, PCS loss estimates are the best estimates of PCS professionals and may or may not accurately and completely reflect actual insured property losses in the past or will do so in the future. The PCS estimates may be materially different from actual insured property losses. In order to preserve its flexibility to adjust to external circumstances and enhance the quality of its estimates, PCS may, in its sole discretion, change its general loss estimation or reporting methodology at any time and modify application of its methodology in connection with any particular catastrophe.

PCS Has a Small Professional Staff and the Loss of a Staff Member May Inhibit Their Ability to Develop Loss Estimates

PCS has a small professional staff of seven professionals and one support person. The loss or retirement of any key professional could have an adverse impact on PCS's ability to develop its insured loss estimates or the methodology used by PCS to determine such loss estimates.

Information Contributed or Not Contributed By the Ceding Company to PCS May Influence PCS's Estimates of Insured Property Losses

PCS collects information from various insurance industry participants to determine its estimates of industry insured property losses; however, the Risk Transferor has indicated as of the date hereof that it currently does not report losses of the Risk Transferor or any of its affiliates to PCS. Information provided to PCS by the Risk Transferor or any of its affiliates may affect the amount of industry insured property losses reflected in preliminary and Resurvey Estimates issued by PCS relating to a Covered Event, and may therefore affect the calculation of payments to the Risk Transferor under the Risk Transfer Agreement.

New Legal Theories May Re-Characterise Coverages Resulting in Additional Claims and Losses

As industry practices and legal, judicial, social and other environmental conditions change, unexpected issues related to claims and coverage may emerge. These issues may adversely affect the industry losses, and therefore PCS estimates, by either creating or extending coverage beyond the scope intended, or by increasing the nature, number or size of claims.

Legislative Changes to the National Flood Insurance Program May Result in Increases in PCS Loss Estimates

Homeowners insurance typically excludes coverage for damage due to flood. The Federal government offers flood insurance through the National Flood Insurance Program ("**NFIP**"). If the NFIP were to be cancelled or limited and insurers were to be required to cover flood risk under homeowner policies or did so voluntarily, it is reasonable to anticipate that PCS loss estimates will increase for Named Storm Events. It is not possible to predict whether the industry would be able or willing to track the non-flood losses separately from flood losses in a manner which would enable PCS to continue to maintain the same basis for the loss estimates that it currently uses, or whether, if separate numbers were reported, the separation would be accurately tracked. If flood losses are not separately tracked and accurately reported, the PCS loss estimates for future Named Storm Events may be materially higher than those used to model the attachment probability, exhaustion probability and expected loss for this transaction.

A Replacement of PCS May Result in Different Estimates of Industry Loss Figures Than That Currently Produced By PCS

If PCS ceases to exist and there is no successor in interest, or if PCS ceases to provide Catastrophe Bulletins, the Calculation Agent will use commercially reasonable efforts to name a replacement for PCS that is reasonably satisfactory to and unaffiliated with the Risk Transferor to perform PCS's duties and obligations. If such a replacement is found, the replacement may generate different estimates of industry loss figures than that currently produced by PCS.

Binding Nature of Reports Provided By PCS

The Calculation Agent will not undertake any independent assessment of the accuracy of the loss data it obtains from PCS but will only be responsible for reporting the estimated industry insured property losses reported by PCS. The Calculation Agent will not review or verify the methodology, accuracy, or technical data of PCS. There can be no assurance that reporting the estimated industry insured property losses

reported by PCS will bring to the attention of the Calculation Agent other matters which would have been brought to its attention had an audit of such data been undertaken.

Risks Relating to PERILS

PERILS has a limited operating history

PERILS was incorporated on 26 January 2009 and has a limited operating history.

The loss of any key professional could have an adverse impact on PERILS' ability to develop its insured exposure and loss estimates

PERILS' professional staff is limited to five professionals and one support staff. Due to confidentiality reasons, only two of the professionals have access to the insurance data reported by the data providing companies. As a result, the loss of any key professional could have an adverse impact on PERILS' ability to develop its insured exposure and loss estimates.

PERILS is Affiliated with an Initial Purchaser

An affiliate of MMC Securities LLC – a division of which, GC Securities, is an Initial Purchaser – is a shareholder of PERILS. As at the date of this Circular, no employees of GC Securities, or its affiliates, is a member of PERILS' board of directors.

The loss of any insurer to provide exposure or loss information could have an adverse impact on PERILS' ability to develop insured exposure or loss estimates for natural catastrophes

PERILS provides industry exposure databases and industry loss estimates. PERILS does not make public the identity of the insurance companies providing data nor the total market coverage of such companies. The methodology to compile the industry exposure database is consistent with the compilation of industry loss estimates (for more information see also "*Description of PERILS*").

Industry Exposure Database

PERILS prepares estimates of industry exposures and makes such estimates available to licensees as Industry Exposure Database through the PERILS portal on www.perils.org. Typical information provided by PERILS includes, where feasible, estimates of industry insured property losses in respect, for example, of Europe Windstorm Events, as applicable and as caused by natural catastrophes that are identified by PERILS as, for example, qualifying Europe Windstorm Events.

Preparing estimates of insured values is an inherently subjective and imprecise process and such estimates may be materially different from actual industry insured exposures

Preparing such estimates of insured values is an inherently subjective and imprecise process, involving an assessment of information which comes from a number of sources and which may not be complete or accurate. In addition, PERILS receives certain data from certain data providing insurance companies pursuant to contractual arrangements. There can be no assurance that the data providing insurance companies will continue to provide its exposure data to PERILS, and any loss of key data suppliers can adversely affect PERILS's ability to update estimates of industry insured exposures and the accuracy of such estimates. Therefore, due to uncertainty or error in extrapolating from information received from, or obtained by, PERILS and/or due to a lack of information, PERILS estimates of industry insured exposures may be materially different from actual industry insured exposures.

Where market coverage may be insufficient to calculate reliable industry exposures, PERILS may apply its professional judgment in its sole discretion to adjust the calculated industry exposure data. In making these judgments, PERILS may consider information provided by national and local authorities or industry insured sources, as it deems appropriate in the particular circumstances. The exercise of such judgment and discretion may result in the estimation of exposures which may be materially different than an estimate performed by another methodology. As a result of such imprecision and variability described above, as well as the inherently subjective nature of the estimation process, PERILS' estimates may be materially different from the actual industry insured exposures.

PERILS may, in its sole discretion, change its general exposure estimation methodology at any time

As part of its estimation methodology, PERILS does not independently verify or audit the accuracy of exposure data provided to PERILS by data providing companies. Thus, there can be no assurance that the data used by PERILS has been, is or will be accurate, timely or complete, and no representation, undertaking or warranty is made with respect to such exposure data. Moreover, since PERILS does not simply sum up the exposure data reported by those it surveys, but instead applies subjective judgments to and makes extrapolations from the data it has gathered and considered in the exercise of its judgment, PERILS does not guarantee that the PERILS estimates have accurately reflected the true exposures, and does not make any guarantee as to the accuracy or completeness of the PERILS exposure estimates. Accordingly, PERILS exposure estimates are the best estimates of PERILS professionals and may or may not accurately and completely reflect actual industry insured property values, and PERILS estimates may be materially different from actual insured values. In order to preserve its flexibility to adjust to external circumstances and enhance the quality of its estimates, PERILS may, in its sole discretion, change its general exposure estimation methodology at any time.

PERILS Industry Loss Estimates

A Europe Windstorm Index Value, arising from a Europe Windstorm Event will be determined in part based upon industry insured loss estimates that are compiled by PERILS. PERILS prepares the estimates of ultimate gross industry insured losses and makes such estimates available to licensees through the PERILS portal on www.perils.org or delivers such estimates to licensees via email and registered post pursuant to licenses that are specific to the relevant insurance-linked securitization transaction. These licenses define certain objective parameters of the relevant transaction, specifically (and with limitation) with respect to a particular covered territory, covered line of business and reporting currency. Typical information provided by PERILS includes, where feasible, estimates of industry insured property losses in respect, for example, of Europe Windstorm Events, and as caused by natural catastrophes that are identified by PERILS as qualifying Europe Windstorm Events.

Preparing estimates of the ultimate gross industry insured losses is an inherently subjective and imprecise process and such estimates may be materially different from actual losses

Preparing an estimate of the ultimate gross industry insured losses resulting, for example, from a Europe Windstorm Event, is an inherently subjective and imprecise process, involving an assessment of information which comes from a number of sources and which may not be complete or accurate. Moreover, the total industry insured losses for, for example, certain Europe Windstorm Events, may continue to develop upwards or downwards over periods of time which exceed the applicable Redemption Date for the Notes. Although PERILS releases updates to its initial estimates over the course of a twelve (12) month period and, in PERILS' sole discretion, up to a period of thirty-six (36) months (see "*Description of PERILS—Loss Reporting Schedule*" for more information), the total insured losses for a particular Europe Windstorm, may continue to develop upwards or downwards beyond the time periods that are used by PERILS to update its industry loss estimates. In addition, PERILS receives certain insured property loss data from certain data providing insurance companies pursuant to contractual arrangements (see "*Description of PERILS—Source of Data*" for more information). There can be no assurance that the data providing insurance companies will continue to provide their loss data to PERILS, and any loss of key data suppliers can adversely affect PERILS' ability to prepare estimates of industry insured property losses and the accuracy of such estimates. Therefore, due to uncertainty or error in extrapolating from information received from, or obtained by, PERILS and/or due to a lack of information, PERILS estimates of industry insured property losses from, for example, Europe Windstorm Events, may be materially different from actual losses, whether insured or not.

In addition, market coverage may be insufficient to calculate a reliable industry event loss index, in which case PERILS may apply its professional judgment in its sole discretion to adjust the calculated industry event loss data. In making these judgments, PERILS may consider factors such as meteorological and/or other scientific data, as well as information provided by national and local authorities or insurance industry sources, as it deems appropriate in the particular circumstances. The exercise of such judgment and discretion may result in the estimation of losses which may be materially different than an estimate performed by another methodology. Because the scope of property coverage varies by insurance carrier, policy type, line of insurance, claims adjustment variation and also changes over time, there is a significant measure of imprecision and variability in determining whether any particular loss will be covered and thus should be included in overall estimations of industry insured losses. As a result of such imprecision,

variability and the exclusions described above, as well as the inherently subjective nature of the estimating process, PERILS' estimates may be materially different from the actual insured losses experienced by the industry.

PERILS also determines, in its sole discretion, whether various insured losses occurring close in time to one another are to be considered the result of a single event or multiple (and separate) events. For example, in making this judgment with respect to a Europe Windstorm, PERILS typically aggregates insured loss data by reference to the names assigned to such events by a competent national or local authority. In determining whether one or more events have occurred, PERILS may also consider the prevailing event definition applied by the insurance and reinsurance industry markets and factors such as the inability on the part of insurance companies to distinguish the damage caused by the various events. The exercise of such judgment and discretion may result in the estimation of losses which may be materially different than an estimate performed by another methodology.

Any change in the Europe Windstorm Loss Amount for a Europe Windstorm Event after the earlier of (i) the Event Reporting Date that occurs at least five (5) Business Days after the date that PERILS releases a PERILS Loss Report with its final Resurvey Estimate for such Europe Windstorm Event and (ii) ten (10) Business Days prior to the Redemption Date for the Notes, will be disregarded when calculating the Europe Windstorm Index Value and any corresponding Accrual Period Loss Payment Amount.

The Europe Windstorm Loss Amount for certain Europe Windstorm Events may continue to develop after the latest date on which the Risk Transferor would be required to reimburse the Issuer as a result of favorable developments in the PERILS estimates. Although PERILS releases final Resurvey Estimates after the occurrence of a catastrophe identified by PERILS as a Europe Windstorm there can be no assurance that such final Resurvey Estimates will not be further revised by PERILS. Due to a lack of information, and uncertainty or error in extrapolating from collected information, PERILS estimates of insured property losses from Europe Windstorm Events may be materially different from PERILS final loss estimate or the actual industry insured property losses. In these situations, Noteholders may suffer greater losses than would be indicated by the final PERILS estimate or actual insurer losses, as the case may be.

PERILS may, in its sole discretion, change its general loss estimation methodology at any time

As part of its estimation methodology, PERILS does not independently verify or audit the accuracy of loss data provided to PERILS by data providing companies and loss data that is otherwise reported or available in the market. Thus, there can be no assurance that the data used by PERILS has been, is or will be accurate, timely or complete, and no representation, undertaking or warranty is made with respect to such data. Moreover, since PERILS does not simply sum up the loss data reported by those it surveys, but instead applies subjective judgments to and makes extrapolations from the data it has gathered and considered in the exercise of its judgment, PERILS does not guarantee that the PERILS estimates have accurately reflected the reported losses, and does not make any guarantee as to the accuracy or completeness of the PERILS loss estimates. Accordingly, PERILS loss estimates are the best estimates of PERILS professionals and may or may not accurately and completely reflect actual industry insured property losses in the past or will do so in the future, and PERILS estimates may be materially different from actual losses, whether insured or not. In order to preserve its flexibility to adjust to external circumstances and enhance the quality of its estimates, PERILS may, in its sole discretion, change its general loss estimation methodology including the loss reporting threshold at any time and modify application of it methodology in connection with any particular catastrophe.

Information that may be contributed by the Risk Transferor to PERILS may influence PERILS' estimates of industry insured property losses

PERILS collects information from various industry insured participants, which may include the Risk Transferor or any of its affiliates, to determine its estimates of industry insured property losses. Information provided to PERILS by the Risk Transferor or any of its affiliates may affect the amount of industry insured property losses reflected in preliminary and Resurvey Estimates issued by PERILS relating to a Europe Windstorm Event may therefore affect the calculation of payments to the Risk Transferor under the Risk Transfer Agreement. See "*Description of PERILS*" for a description of PERILS's methodology for estimating insured property losses.

New legal theories may re-characterize coverages resulting in additional claims and losses

As industry practices and legal, judicial, social and other environmental conditions change, unexpected issues related to claims and coverage may emerge. These issues may adversely affect the industry losses, and therefore PERILS's estimates, by either creating or extending coverage beyond the scope intended, or by increasing the nature, number or size of claims.

Binding Nature of Reports Provided by PERILS

The Calculation Agent will not undertake any independent assessment of the accuracy of the industry insured property loss data it obtains from PERILS but will only be responsible for reporting the estimated industry insured property losses reported by PERILS. The Calculation Agent will not review or verify the methodology, accuracy, or technical data of PERILS. There can be no assurance that reporting the estimated industry insured property losses reported by PERILS will bring to the attention of the Calculation Agent other matters which would have been brought to its attention had an audit of such data been undertaken.

A replacement of PERILS may result in different estimates of industry loss figures than that currently produced by PERILS

If PERILS ceases to exist after having issued any PERILS Loss Report, the Calculation Agent will use the most recent PERILS Loss Report issued with respect to a Europe Windstorm Event, to determine the related Europe Windstorm Index Value. This calculation of an Accrual Period Loss Payment Amount will be final and not subject to further change.

This may result in an Accrual Period Loss Payment Amount that is greater than the Accrual Period Loss Payment Amount that would have been calculated had PERILS continued to issue further PERILS Loss Reports with respect to such Europe Windstorm Event.

Permitted U.S. Jurisdictions and Permitted Non-U.S. Jurisdictions

The laws and regulations of the Permitted U.S. Jurisdictions and the Permitted Non-U.S. Jurisdictions contain broad definitions of the activities that may constitute the conduct of the business of insurance or reinsurance in such states or jurisdictions. The terms of the Notes are such that they could be construed to constitute insurance or reinsurance contracts in these jurisdictions, and accordingly subject the Noteholder to regulation as a provider of insurance or reinsurance coverage.

The Issuer has been advised by counsel that, in each of the Permitted U.S. Jurisdictions and Permitted Non-U.S. Jurisdictions, investors in the Notes should not be required solely by reason of such investment to be licensed as an insurer or reinsurer in such state or jurisdiction. This advice is based upon interpretations (either written or oral) received from the staff of the insurance regulatory body or local counsel in such states and jurisdictions with respect to securities having similar characteristics. Such interpretations have not been specifically obtained in connection with this Offering. In the event similar interpretations or advice (in the judgment of the Issuer, based on the written advice of counsel) are obtained from additional states or foreign jurisdictions, the Issuer may so notify the Trustee in writing, and thereafter transfers of Notes to Qualified Investors (that, with respect to U.S. Persons, are also Qualified Purchasers) in any such additional states or foreign jurisdictions will be permitted, subject to any transfer restrictions otherwise applicable as described herein. Insurance regulatory authorities have broad discretionary powers to modify or withdraw regulatory interpretations. Thus, such interpretations and the written advice of counsel received with respect to the laws of the Permitted U.S. Jurisdictions and the Permitted Non-U.S. Jurisdictions are not binding on a court or any third party and may be subject to challenge in administrative or judicial proceedings. There can be no assurance that such interpretations and advice will remain in effect or as to the outcome of any such third-party challenge. In the event that a Permitted U.S. Jurisdiction ceases to constitute a Permitted U.S. Jurisdiction, any Noteholder who resides in, and holds such interest in, such jurisdiction may be forced to transfer such person's interest to a person who is residing in, and acquiring and holding such interest in, a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction. In the event that a Noteholder wishes to transfer Notes into a jurisdiction that is not a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction, such Noteholder will be required to provide the Issuer and the Trustee with a written regulatory interpretation or opinion of counsel, in each case satisfactory in form and substance to the Issuer, its counsel and the Trustee, that the Notes would not subject such Noteholder, such Noteholder's transferee or the Issuer to the insurance laws and regulations of such jurisdiction.

Any person who holds any interest in the Notes, who does not reside and hold such interest in a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction, may be forced to transfer such interest to a person residing and holding in a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction. See "*Description of the Notes—Non-Permitted Noteholders*."

Legal and Regulatory Provisions Affecting Investors

The investment activities of certain investors are subject to legal investment laws and regulations, or review or regulation by certain authorities. Each potential investor in the Notes should consult its legal advisers to determine whether and to what extent (1) it has the legal power, authority and right to purchase the Notes, (2) the Notes can be used as collateral for various types of borrowing and (3) other restrictions apply to its purchase or pledge of any Notes. Financial institutions should consult their legal advisers or the appropriate regulators to determine the appropriate treatment of the Notes under any applicable risk based capital or similar rules. None of the Issuer, the Risk Transferor or the Initial Purchasers, nor any of their respective affiliates, expresses any view as to any of the foregoing matters. Each Initial Purchaser and any other purchaser of the Notes must be able to make (and will be deemed to have made) the representations and warranties in the "Notice to Investors" section of this Circular including, but not limited to, representing that it has the legal power, authority and right to purchase the Notes.

Regulation of the Issuer by a Regulatory Authority

The Issuer is authorised by the Prudential Regulation Authority and Financial Conduct Authority in the United Kingdom as a transformer vehicle pursuant to Chapter 13A of the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001 and is not licensed or authorised under any other securities, commodities, insurance or banking laws of any jurisdiction and has not applied (and does not expect to apply) for any other licenses or authorisations. There is no assurance, however, that regulatory authorities in one or more jurisdictions would not take a contrary view regarding the applicability of any such laws to the Issuer. The taking of a contrary view by any such regulatory authority could have an adverse impact on the Issuer or the Noteholders.

Tax Risks

Changes in Tax Law

Changes in (or in the interpretation, administration or application of) any law or treaty relating to tax, or any published practice or published concession of any relating taxing authority, after the date hereof may affect the underlying policies, the Permitted Investments, and/or payments under the Selected Transaction Documents and other transaction documents and the taxation of the Issuer, all of which may affect the rights of the Noteholders, the market value of the Notes, and the expected returns to Noteholders.

No Gross-Up in Respect of Notes

Payments of interests on the Notes shall be made without withholding or deduction for, on account of, any tax, unless the withholding or deduction of the taxes is required by applicable law. In that event, the Issuer shall make such payments after the withholding or deduction has been made and shall account to the relevant authorities for the amount required to be withheld or deducted. Neither the Issuer nor any other person shall be obliged to make any additional payments to Noteholders in respect of such withholding or deduction.

Disclosure of Information

The Issuer or the Insurance Manager may in certain circumstances be required by law or by a Tax Authority to disclose information about the Noteholders.

The Risk Transformation (Tax) Regulations 2017

The Issuer expects to benefit from the special tax treatment set out in Regulation 4 of The Risk Transformation (Tax) Regulations 2017 (the "**Tax Regulations**"). See "*Certain Tax Considerations*".

However, there can be no guarantee that this will be the case and any unforeseen taxable profits in the Issuer may have an adverse impact on the Issuer's ability to make interest payments and/or redemption payments

to Noteholders. In addition, prospective investors should note that the Tax Regulations are new and that the special tax regime set out therein is as yet untested.

Risks relating to ERISA

If the Issuer's assets are deemed to constitute "plan assets" for purpose of Title I of ERISA or Section 4975 of the Code, certain transactions that the Issuer might enter into, or may have entered into, in the ordinary course of the Issuer's business might constitute non-exempt prohibited transactions and might have to be rescinded and may give rise to prohibited transaction excise taxes and fiduciary liability, as described in this section. In addition, if the Issuer's assets are deemed to be "plan assets", the management, as well as various providers of fiduciary or other services to the Issuer, and any other parties with authority or control with respect to the Issuer, may be considered fiduciaries for purpose of Title I of ERISA or Section 4975 of the Code, or otherwise Parties in Interest by virtue of their provision of such services (and there could be an improper delegation of authority to such providers). Moreover, if the underlying assets of the Issuer were deemed to be assets constituting "plan assets," there are several other provisions of ERISA or the Code that could be implicated for a Plan if it were to acquire and hold Notes either directly or by investing in an entity whose underlying assets are deemed to be assets of the Plan.

U.S. Federal Income Tax Risks

The U.S. Foreign Account Tax Compliance Act

The U.S. Foreign Account Tax Compliance Act ("**FATCA**") provisions of the Hiring Incentives to Restore Employment Act of 2010, regulations issued thereunder and the intergovernmental agreement between the United Kingdom and the U.S. require certain foreign financial institutions ("**FFIs**") (which may include the Issuer) to disclose to the Commissioners for Her Majesty's Revenue and Customs (for transmittal to the U.S. Internal Revenue Service (the "**IRS**")) the name, address, tax identification number, and other specified information of certain U.S. and non-U.S. persons who own a direct or indirect interest in the FFI, or otherwise be subject to a 30% withholding tax with respect to (i) certain U.S. source income (including interest and dividends) ("**withholdable payments**") and (ii) beginning on the second anniversary of the date on which final U.S. Treasury Regulations defining such term are published in the U.S. Federal Register, "foreign passthru payments" (generally, withholdable payments and payments that are attributable to withholdable payments) made by FFIs. Further, if the Issuer is not characterised as an FFI, it may be characterised as a passive non-financial foreign entity, in which case it would be subject to such 30% withholding tax on certain payments unless it either provides information to withholding agents with respect to its "substantial U.S. owners" or makes certain certifications.

The Issuer may be subject to the requirements imposed on FFIs or passive non-financial foreign entities under FATCA and will use reasonable efforts to avoid the imposition of a withholding tax under FATCA, which may include reporting information to the Commissioners for Her Majesty's Revenue and Customs (for transmittal to the IRS). In this event, Noteholders will be required to provide any information, tax documentation and waivers that the Issuer determines are necessary to avoid the imposition of such withholding tax. The Issuer's ability to satisfy such obligations will depend on each Noteholder providing, or causing to be provided, any information, tax documentation and waivers, including information concerning the direct or indirect owners of such Noteholder, that the Issuer determines is necessary to satisfy such obligations. If the Issuer is unable to comply with FATCA, the Issuer intends to liquidate its money market fund assets, if any, and hold cash in its place. Holding cash instead of money market funds will reduce the amount available for Noteholders. Moreover, if the Issuer initially complies or intends to comply with FATCA but is subsequently unable to comply, or fails to comply, distributions from, and proceeds from the disposition of, its money market funds may be subject to a 30% withholding tax, in which case the Issuer will not have sufficient funds to make payments due under the Notes.

In the event any Noteholder fails to timely provide any information or tax documentation that the Issuer determines is necessary to satisfy any obligations that it may have under FATCA, or to the extent that the Noteholder's ownership otherwise would cause the Issuer to be subject to withholding tax under FATCA, (A) the Issuer (or its agents on its behalf) is authorised to withhold amounts otherwise distributable to the Noteholder as compensation for any amount withheld from payments to the Issuer as a result of such failure or such Noteholder's ownership, and (B) to the extent necessary to avoid an adverse effect on the Issuer or any other Noteholder as a result of such failure or such Noteholder's ownership, the Issuer will have the right to compel the Noteholder to sell its Notes and, if the Noteholder does not sell its Notes within 10 days after notice from the Issuer, to sell the Notes at a public or private sale called and conducted in any manner

permitted by law, and to remit the net proceeds of such sale (taking into account any taxes and expenses incurred by the Issuer in connection with such sale) to the Noteholder as payment in full for the Notes. The Issuer may also assign each such Note a separate CUSIP or ISIN number in the Issuer's sole discretion.

Potential FBAR Reporting and Reporting of "Specified Foreign Financial Assets"

U.S. Persons (as defined below) holding Notes should consider their possible obligation to file a FinCEN Form 114–Foreign Bank and Financial Accounts Report–with respect to the Notes. Additionally, such U.S. Persons should consider their possible obligations to annually report certain information with respect to the Issuer with their U.S. federal income tax returns. Noteholders should consult their tax advisors with respect to these or any other reporting requirement which may apply with respect to their acquisition of Notes.

Risk of Imposition of U.S. Federal Income Tax on the Issuer

If the Issuer were deemed to be engaged in a trade or business in the United States, it would be subject to U.S. federal income tax at regular corporate rates on the portion of its income that is effectively connected ("**ECI**") to such U.S. trade or business, as well as to the additional branch profits tax on its dividend equivalent amount, generally ECI (with certain adjustments) deemed withdrawn from the United States, in which case the Issuer's financial condition and the Issuer's ability to make principal and/or interest payments on the Notes could be materially adversely affected. Whether business is being conducted in the United States is an inherently factual determination. The Issuer intends to conduct substantially all of its operations outside the United States and limit its U.S. contacts so that the Issuer is not treated as engaged in the conduct of a trade or business in the United States. In this regard, the Issuer will receive the opinion of Clifford Chance US LLP, which opinion is based on certain assumptions and representations regarding this offering, the transactions related thereto and the Issuer's ongoing operations, that, although the matter is not free from doubt, the Issuer will not be treated as engaged in a trade or business within the United States. Because the Internal Revenue Code of 1986, as amended ("**Code**"), regulations and court decisions fail to definitively identify activities that constitute being engaged in a trade or business in the United States, the Issuer cannot be certain that the IRS will not contend successfully that the Issuer is or will be engaged in a trade or business in the United States for U.S. federal income tax purposes. The imposition of a U.S. federal income tax liability on the Issuer's ECI would substantially reduce the return to the Noteholders on their investment. See "*Certain Tax Considerations—United States Taxation—United States Taxation of the Issuer*".

Alternative Characterisations of the Notes and the Transactions of the Issuer

Although there are no relevant authorities that directly address characterisation of the Notes or of instruments substantially similar to the Notes for U.S. federal income tax purposes and the matter is not free from doubt, the Issuer intends to take the position that the Notes constitute equity interests in the Issuer for U.S. federal income tax purposes. However, other characterisations are possible. For example, the Notes could be treated as debt obligations of the Issuer, including contingent payment debt instruments for U.S. federal income tax purposes. If the IRS were successful in asserting that the Notes are contingent payment debt instruments, the timing and character of income thereon could be significantly affected. Potential investors are urged to consult their tax advisors with respect to the classification of the Notes for U.S. federal income tax purposes. In addition, as described more fully below, there are a number of other uncertainties relating to the U.S. federal income taxation of the Issuer's transactions, which, depending on the ultimate resolution of such uncertainties, could have adverse tax consequences to a direct or indirect Noteholder who is a U.S. Person (as defined below). See "*Certain Tax Considerations—United States Taxation—United States Taxation of Noteholders—U.S. Holders—Alternative Characterisations*".

Potential Adverse U.S. Federal Income Tax Consequences under the Passive Foreign Investment Company Rules

The Issuer expects to be treated as a passive foreign investment company ("**PFIC**"). Assuming the Issuer is so treated, each U.S. Person (as defined below) holding Notes (directly or, in certain cases, indirectly) would be subject to a penalty tax at the time of the sale at a gain of, or receipt of an "excess distribution" with respect to, its Notes, unless (i) such U.S. Person is characterised as a 10% U.S. Shareholder (as defined below) with respect to the Issuer and the Issuer is characterised as a controlled foreign corporation (as defined below) or (ii) such U.S. Person makes a timely qualified electing fund ("**QEF**") election with respect to the Issuer. If such U.S. Person timely makes a QEF election, it would be required to recognise currently its proportionate share of the Issuer's ordinary income and net capital gain, which may be greater, in any given year, than the amount of cash distributed with respect to its Notes. See "*Certain Tax*

Considerations—United States Taxation—United States Taxation of Noteholders—U.S. Holders—Treatment of Noteholders—Passive Foreign Investment Companies".

Application of the Passive Foreign Investment Company Rules with respect to Non-U.S. Domiciled Money Market Funds

Non-U.S. domiciled money market funds are generally characterised as PFICs for U.S. federal income tax purposes. Accordingly, in the event amounts in the Collateral Account are invested in non-U.S. domiciled money market funds, U.S. Persons holding Notes generally will be treated as holding indirect interests in lower-tier PFICs. Prospective investors in the Notes are urged to consult their tax advisors as to the application and effects of the PFIC rules on an indirect investment in a non-U.S. domiciled money market fund. See "*Certain Tax Considerations— United States Taxation—United States Taxation of Noteholders—U.S. Holders—Treatment of Noteholders—Passive Foreign Investment Companies*".

Potential Application of the Controlled Foreign Corporation Rules

A "**10% U.S. Shareholder**" (defined as a U.S. Person who owns (directly, indirectly through non-U.S. entities or constructively (as defined below)) at least 10% of the total combined voting power of all classes of stock entitled to vote or 10% or more of the total value of shares of all classes of stock) of a non-U.S. corporation that is a controlled foreign corporation ("**CFC**") at any time during a taxable year that owns shares in the non-U.S. corporation directly or indirectly through non-U.S. entities on the last day of the non-U.S. corporation's taxable year on which it is a CFC, must include in its gross income for U.S. federal income tax purposes its *pro rata* share of the CFC's "subpart F income" and "global intangible low-taxed income", even if the subpart F income and global intangible low-taxed income is not distributed. For these purposes, subpart F income includes foreign personal holding company income (such as dividends, interest, notional principal contract income, and certain other passive income), certain insurance income, as well as certain underwriting and investment income attributable to insurance operations, and global intangible low-taxed income applies broadly to certain income generated by a CFC and is intended to require 10% U.S. Shareholders to include income earned by a CFC from intangible assets, such as patents, trademarks and copyrights. It is expected that substantially all of the Issuer's income will be subpart F income or global intangible low-tax income. A non-U.S. corporation is considered a CFC if 10% U.S. Shareholders own (directly, indirectly through non-U.S. entities or by attribution by application of the constructive ownership rules of section 958(b) of the Code (i.e., "constructively")) more than 50% of the total combined voting power of all classes of stock of that non-U.S. corporation or the total value of all stock of that corporation.

Recent U.S. federal income tax legislation has significantly expanded the circumstances under which a U.S. Person is treated as a 10% U.S. Shareholder of a non-U.S. corporation. Prospective investors should consult with their tax advisors regarding the impact of this recent legislation on the tax consequences of an investment in the Notes.

Additionally, for purposes of taking into account insurance income as defined under Section 953 of the Code (including underwriting and investment income) as subpart F income, a CFC also includes a non-U.S. corporation in which more than 25% of the total combined voting power of all classes of stock (or more than 25% of the total value of the stock) is owned (directly, indirectly through non-U.S. entities or constructively) by 10% U.S. Shareholders on any day during the taxable year of such non-U.S. corporation if the gross amount of premiums or other consideration for the reinsurance or the issuing of insurance or annuity contracts (other than certain insurance or reinsurance related to same country risks written by certain insurance companies not applicable here) exceeds 75% of the gross amount of all premiums or other consideration in respect of all risks. The Issuer intends to treat the Issuer's income with respect to the Risk Transfer Agreements as reinsurance premiums for U.S. federal income tax purposes, although the issue is not free from doubt.

For purposes of the discussion in this section "*U.S. Federal Income Tax Risks*", the term "**U.S. Person**" means a person that is, for U.S. federal income tax purposes: (i) a citizen or resident of the United States, (ii) a partnership or corporation created or organised in or under the laws of the United States, or organised under the laws of any political subdivision thereof, (iii) an estate, the income of which is subject to U.S. federal income taxation regardless of its source, (iv) a trust if either (x) a court within the United States is able to exercise primary supervision over the administration of such trust and one or more U.S. Persons have the authority to control all substantial decisions of such trust or (y) the trust has a valid election in effect to be treated as a U.S. person for U.S. federal income tax purposes or (v) any other person or entity that is treated for U.S. federal income tax purposes as if it were one of the foregoing.

Although there are no relevant authorities that directly address characterisation of the Notes or of an instrument substantially similar to the Notes for U.S. federal income tax purposes and the matter is not free from doubt, as noted above the Issuer intends to take the position that the Notes constitute equity interests in the Issuer for *U.S.* federal income tax purposes. Accordingly, if more than 50% of the Issuer's equity (e.g., its shares and the Notes) (by vote or value) is owned directly, indirectly through non-U.S. entities or constructively by 10% U.S. Shareholders, the Issuer will be characterised as a CFC and any 10% U.S. Shareholders with respect to the Issuer who own Notes directly or indirectly through non-U.S. entities on the last day of the Issuer's taxable year must include in their gross income for U.S. federal income tax purposes their *pro rata* share of the Issuer's subpart F income and global intangible low-taxed income (or, if more than 25% but less than 50% of the Issuer's equity is owned directly, indirectly through non-U.S. entities or constructively by 10% U.S. Shareholders, subpart F insurance income) for the year, subject to certain limitations. See "*Certain Tax Considerations—United States Taxation—United States Taxation of Noteholders—U.S. Holders—Treatment of Noteholders—Classification of the Issuer as a CFC*".

Potential Application of the Related Person Insurance Income Rules

As noted above, the Issuer intends to treat the Issuer's income with respect to the Risk Transfer Agreement as reinsurance premiums, although the matter is not free from doubt. If (i) the Issuer's related person insurance income ("**RPII**"), determined on a gross basis, is 20% or more of the Issuer's gross insurance income for a taxable year, (ii) direct and indirect insureds and persons related to such insureds, whether or not U.S. Persons, are treated as owning (directly or indirectly through entities) 20% or more of the voting power or 20% or more of the value of the Issuer's equity and (iii) U.S. Persons are treated as owning (directly, indirectly through non-U.S. entities or constructively) 25% or more of the Issuer's equity by vote or value, then a U.S. Person who owns any Notes (directly or indirectly through non-U.S. entities) on the last day of the taxable year on which the Issuer is a CFC under the RPII rules would be required to include in such U.S. Person's gross income for U.S. federal income tax purposes such person's *pro rata* share of the Issuer's RPII for the portion of the taxable year during which the Issuer was a CFC under the RPII rules, determined as if all such RPII were distributed proportionately only to U.S. Persons (that own equity directly or indirectly through non-U.S. entities) at that date, regardless of whether such income is distributed. RPII is any insurance income attributable to policies of insurance or reinsurance with respect to which the person (directly or indirectly) insured is a RPII shareholder or a related person to such RPII shareholder. The term "**RPII shareholder**" means any U.S. Person who owns (directly or indirectly through non-U.S. entities) any amount of the Issuer's equity. Generally, the term "related person" for this purpose means someone who controls or is controlled by the RPII shareholder or someone who is controlled by the same person or persons which control the RPII shareholder. Control is measured by either more than 50% in value or more than 50% in voting power of stock applying certain constructive ownership principles. A non-U.S. corporation will be characterised as a CFC under the RPII rules if its equity is 25% or more owned (by vote or value) by U.S. Persons (directly, indirectly through non-U.S. entities or constructively) on any day during the taxable year of the non-U.S. corporation. See "*Certain Tax Considerations—United States Taxation—United States Taxation of Noteholders—U.S. Holders—Treatment of Noteholders—The RPII CFC Provisions*".

Recharacterisation of Gain on Disposition

Subject to a special rule for individual U.S. Persons that have held shares in a non-U.S. corporation for more than one year, Code section 1248 provides that if a U.S. Person sells or exchanges shares in a non-U.S. corporation and such person owned, directly, indirectly through non-U.S. entities or constructively, 10% or more of the voting power of the corporation at any time during the five-year period ending on the date of disposition when the corporation was a CFC, any gain from the sale or exchange of the shares will be treated as a dividend to the extent of the CFC's earnings and profits (determined under U.S. federal income tax principles) during the period that the shareholder held the shares and while the corporation was a CFC (with certain adjustments, including reductions for previously taxed income).

Additionally, Code section 1248 in conjunction with the RPII rules provides that if a U.S. Person disposes of shares in a non-U.S. corporation that has insurance income (as determined for U.S. federal income tax purposes) in which U.S. Persons own 25% or more of the shares (even if the amount of gross RPII is less than 20% of the corporation's gross insurance income and the ownership of its shares by direct or indirect insureds and related persons is less than the 20% threshold), any gain from the disposition will generally be treated as a dividend to the extent of the holder's share of the corporation's undistributed earnings and profits that were accumulated during the period that the holder owned the shares (whether or not such earnings and profits are attributable to RPII). If U.S. Persons own (directly, indirectly through non-U.S.

entities or constructively) 25% or more of the Issuer's equity, these RPII rules would apply to dispositions of Notes, in which case gain from the disposition earned by U.S. Persons holding Notes directly would be characterised as a dividend to the extent of the Issuer's earnings and profits attributable to the disposed of Notes. Noteholders that have made timely QEF elections should generally not be subject to such income recharacterisation with respect to their allocable share of the Issuer's earnings and profits previously subject to tax pursuant to such election. Potential investors are urged to consult their tax advisors with respect to these rules. See "*Certain Tax Considerations—United States Taxation—United States Taxation of Noteholders—U.S. Holders—Treatment of Noteholders—Dispositions of Notes*".

Unrelated Business Taxable Income

A U.S. tax-exempt organisation may recognise unrelated business taxable income if a portion of the Issuer's insurance income is allocated to the organisation. In general, insurance income will be allocated to a U.S. tax-exempt organisation if either the Issuer is a CFC and the tax-exempt Noteholder is a 10% U.S. Shareholder or if there is RPII and certain exceptions do not apply. Recent U.S. federal income tax legislation has significantly expanded the circumstances under which a U.S. tax-exempt organisation may be treated as a 10% U.S. Shareholder of a non-U.S. corporation. In addition, UBTI is separately calculated for each trade or business of a U.S. tax-exempt organisation. Thus, a U.S. tax-exempt organisation cannot use deductions relating to one trade or business to offset income from another. Accordingly, U.S. tax-exempt organisations should be aware that they could recognise significant UBTI as a result of an investment in the Notes and should consult with their own tax advisors regarding the potential impact of this recent legislation on the tax consequences of an investment in the Notes. See "*Certain Tax Considerations—United States Taxation—United States Taxation of Noteholders—U.S. Holders—Treatment of Noteholders—Classification of the Issuer as a CFC*" and "*Certain Tax Considerations—United States Taxation— United States Taxation of Noteholders—U.S. Holders—Treatment of Noteholders—The RPII CFC Provisions*". Potential U.S. tax-exempt investors are advised to consult their own tax advisers.

Changes in U.S. Federal Income Tax Law

The United States Congress enacted the Tax Cuts and Jobs Act (H.R. 1, the "**TCJA**") in December 2017. The TCJA imposed significant changes on the U.S. federal income tax laws applicable to non-U.S. entities and entities engaged in insurance operations. Certain aspects of the TCJA are unclear, and it is expected that future guidance will clarify the application of the TCJA. Accordingly, it is possible that such future guidance could adversely impact the U.S. federal income taxation of the Issuer or Noteholders. Prospective investors should consult with their tax advisors regarding the potential impact of the TCJA on the tax consequences of investing in the Notes.

Furthermore, it is possible that additional legislation could be introduced and enacted by the current Congress or future Congresses that could have an adverse impact on the Issuer or the Noteholders.

Additionally, the U.S. federal income tax laws and interpretations regarding whether a company is a PFIC, or whether U.S. Persons would be required to include in their gross income the subpart F income or RPII of a CFC, are subject to change, possibly on a retroactive basis. New regulations or pronouncements interpreting or clarifying such rules may be forthcoming. The Issuer cannot be certain if, when or in what form such regulations or pronouncements may be provided and whether such guidance will have a retroactive effect. Prospective investors are urged to consult with their tax advisors.

English Law Legal Risks

Risk Relating to English Law Charges

The security over the Collateral Account, the Collateral Payment Account and the Expenses Account under the applicable Deed of Charge will be structured as a fixed charge. It is possible that, in certain circumstances, such fixed charge may be recharacterised as a floating charge. Under English law, whether or not security over these accounts takes effect as a fixed or a floating charge will depend on the circumstances of the case and, in particular, whether the collateral-taker has the requisite degree of control over the secured assets. If any charges were held to take effect as a floating charge, the claims of the secured parties could, in an insolvency proceeding in an English court involving the Issuer, be subject to (i) avoidance or being set aside in certain circumstances, (ii) claims which may exist which are given priority over a floating charge by law, including certain prior floating charges, prior or subsequent mortgages or

fixed charges, (iii) the claims of preferential creditors and/or (iv) set-off. Furthermore, if any such security interest was held to be floating, in the case of a proceeding before the English Courts, a "prescribed part" of the Issuer's "net property" could be required to be made available for the satisfaction of unsecured debts, if any, in priority of the claim of the secured parties. In addition, in an English liquidation or administration of the Issuer, the remuneration and expenses of the liquidator or administrator shall have priority over claims to property comprised in, or subject to, any floating charge created by the Issuer.

In the event of the occurrence of any insolvency or similar proceedings involving the Trustee or the Custodian or any intermediary or clearing system in, through or with which the Permitted Investments are held, the recovery by the Issuer (or the Trustee enforcing the Deed of Charge) of the Permitted Investments or the income relating thereto is dependent on the right against the entity the subject of such proceedings to deliver the Permitted Investments being recognised under all applicable laws as constituting a proprietary interest in the Permitted Investments and not merely a personal right, and on that entity having treated the Permitted Investments in a manner consistent with the existence of such a proprietary interest. A failure by the Issuer to recover the Permitted Investments or the income relating thereto in full or on time in such circumstances may render it unable to make payments of interest on, or repay the principal amount of the Notes.

USE OF PROCEEDS

On the Issuance Date, all of the proceeds paid to the Issuer from the sale of the Notes will be deposited into the Collateral Account established specifically for the Notes and will be invested in Permitted Investments. Such proceeds will be available to satisfy the obligations of the Issuer to the Risk Transferor under the Risk Transfer Agreement and, only after the fulfilment of such obligations and the termination of the Risk Transfer Agreement in accordance with its terms, to make payments under the Trust Deed in respect of the Outstanding Principal Amount of the Notes.

Following the purchase of the EBRD Notes and until one (1) Business Day prior to the Redemption Date, the Permitted Investments will consist solely of EBRD Notes, unless, among other circumstances described herein:

(i) an EBRD Put Event occurs that results in a redemption of EBRD Notes, in which case, unless the proceeds of such redemption are scheduled to be paid out within three (3) Business Days of being deposited in the Collateral Account, the proceeds of such redemption will be used to purchase Money Market Fund Shares to the extent that they are available and that the Money Market Fund satisfies the Money Market Fund Criteria;

(ii) the Risk Transferor is required to make a Negative Loss Payment under the Risk Transfer Agreement, in which case the related amounts will be used to purchase Money Market Fund Shares to the extent that they are available and if the Money Market Fund satisfies the Money Market Fund Criteria; or

(iii) the Risk Transfer Agreement is extended beyond the Scheduled Termination Date, in which case on maturity of the EBRD Notes the proceeds of redemption shall be applied to purchase Money Market Fund Shares to the extent they are available and that the Money Market Fund satisfies the Money Market Fund Criteria.

As of the EBRD Notes Issuance Date and while the Notes are outstanding, the EBRD must have an issuer rating of at least "AA-" by S&P, at least "Aa3" by Moody's or at least "AA-" by Fitch. In the event that the Issuer or Custodian has actual knowledge that the EBRD is rated below "AA-" by S&P, below "Aa3" by Moody's or below "AA-" by Fitch, the Issuer shall cause the EBRD Notes to be redeemed on the earliest EBRD Put Date thereafter, and funds held in the Collateral Account will be invested in the Money Market Fund Shares, if available and if the Money Market Fund satisfies the Money Market Fund Criteria, or otherwise remain uninvested as a cash credit balance in the Collateral Account.

To the extent that Money Market Fund Shares are not available or the Money Market Fund does not satisfy the Money Market Fund Criteria, cash will remain uninvested as a cash credit balance in the Collateral Account.

The maturity date of the EBRD Notes will occur on 6 June 2023 (or if such day is not a Business Day, the next succeeding Business Day), and the EBRD Notes may be subject to early redemption as described further herein.

THE ISSUER

Atlas Capital UK 2019 PLC (the "**Issuer**") is an insurance special purpose vehicle incorporated in England and Wales under the Companies Act 2006 and is licensed as a transformer vehicle under the laws of England and Wales. The Issuer was incorporated on 8 April 2019 with company number 11931846 and LEI 549300TJTLMYVJ4MEN80.

The Issuer is expected to be authorised prior to the Issuance Date by the Prudential Regulation Authority and the Financial Conduct Authority in the United Kingdom as a transformer vehicle pursuant to Chapter 13A of the Financial Services and Markets Act (Regulated Activities) Order 2001 and is not licensed or authorised under any other securities, commodities, insurance or banking laws of any jurisdiction and has not applied (and does not expect to apply) for any other licenses or authorisations.

The Issuer's business consists and will consist solely of the issuance of the Notes and the entering into and performance of the Risk Transfer Agreement and related agreements and activities, including the acquisition and holding of the Permitted Investments. It will fund its obligations under the Risk Transfer Agreement relating to the Notes through the issuance of the Notes. The Issuer will not engage in other business, incur indebtedness for money borrowed (other than the Notes), pay dividends or make other distributions on its capital (other than a distribution upon liquidation of the Issuer) or enter into any risk transfer contracts other than the Risk Transfer Agreement and related agreements.

The Issuer's registered office is located at 35 Great St. Helen's London, EC3A GAP, United Kingdom.

Regulation of the Issuer

The Issuer must be authorised by the PRA and the FCA to perform the activity of insurance risk transformation, the activity specified in article 13A of the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001 (SI 2001/544) in accordance with the Financial Services and Markets Act 2000 ("**FSMA**"). Authorisation will only be granted where it can be shown that the Issuer satisfies, *inter alia*, the following conditions:

(a) it assumes risks from a (re)insurance undertaking through reinsurance contracts or through similar arrangements;

(b) the contractual arrangements relating to the transfer of risk from a (re)insurance undertaking ensure that the Issuer is at all times fully funded (as described in more detail below);

(c) the transfer of risk to the Issuer is effective in all circumstances and the extent of the risk transfer is clearly defined and incontrovertible;

(d) the claims of the Noteholders are at all times subordinate to the reinsurance obligations of the Issuer to the Risk Transferor; no payments are made to the Noteholders if following those payments the Issuer would no longer be fully funded; the Noteholders have no right of recourse to the assets of the Risk Transferor; and the Noteholders have no rights to apply for the winding-up of the Issuer;

(e) the persons that effectively run the Issuer are fit and proper to do so;

(f) the qualifying shareholders of the Issuer are fit and proper;

(g) the Issuer has an effective system of governance and has sound administrative and accounting procedures, adequate internal control mechanisms and risk-management requirements; and

(h) the Issuer is capable of meeting the supervisory reporting requirements and solvency requirements as set out in the in the Solvency II Directive (Directive 2009/138/EC), the Delegated Regulation (Commission Delegated Regulation EU (2015/35)), the PRA Rulebook and the FCA Handbook (together "**Issuer Regulations**").

The Issuer is required, *inter alia*, to meet the fully funded requirement and satisfy its supervisory reporting and solvency obligations under the Issuer Regulations on an ongoing basis. In order to be "fully funded" the Issuer must at all times have assets the value of which is equal to or exceeds its Aggregate Maximum Risk Exposure and is able to pay the amounts it is liable for as they fall due.

The PRA and the FCA may, in certain circumstances, cancel the Issuer's authorisation for a failure to comply with its regulatory obligations and the requirements under the Issuer Regulations.

Share Capital

Atlas Capital UK 2019 PLC has an issued ordinary share capital of 50,000 ordinary shares of £1 one of which is fully paid and 49,999 of which are paid up as to one quarter.

Directors

The directors of the Issuer and their respective business addresses and principal activities are:

Name	Address	Principal Activities
Helena Paivi Whitaker	35 Great St. Helen's, London EC3A 6AP	Company Director
Michael Baker	35 Great St. Helen's, London EC3A 6AP	Executive Officer and Chief Financial Officer
Malcolm Newman	35 Great St. Helen's, London EC3A 6AP	Company Director

The company secretary of the Issuer is:

Name	Business Address
Intertrust Corporate Services Limited	35 Great St. Helen's, London EC3A 6AP

Independent Auditor

The Issuer's financial statements will be audited annually by an independent auditor (the "**Independent Auditor**"), and the Issuer intends to appoint Mazars, whose member offices currently act as the independent auditors of several members of the SCOR group of companies. The Issuer intends to prepare its annual financial statements in accordance with International Financial Reporting Standards ("**IFRS**"). The Independent Auditor has neither examined, reviewed nor compiled the accompanying historical, statistical or modeling data, and, accordingly, the Independent Auditor does not express an opinion or any other form of assurance with respect thereto.

Financial Information

The financial year-end of the Issuer is 31 December of each year. The first annual accounts will be prepared in respect of the period ending 31 December 2019, which will be filed with Companies House. No financial statements have been prepared by the Issuer as at the date of this Circular.

Ongoing Information regarding the Issuer

The Issuer is not subject to the informational requirements of the Exchange Act. The Issuer agrees that at any time while the Notes are outstanding, it will, upon request, furnish to the Noteholders or prospective purchasers (who are permitted transferees) of the Notes the information required to be delivered pursuant to Rule 144A(d)(4) under the Securities Act (or any similar successor rule) to permit compliance with Rule 144A in connection with resales of the Notes ("**Rule 144A Information**").

In order to receive access to Available Information or Rule 144A Information, a Noteholder or prospective purchaser (who is a permitted transferee) of Notes must submit the Request for Access to Information Form attached to this Circular as Annex F (the "**Request for Access to Information Form**") to Atlas Capital UK 2019 PLC c/o Intertrust Corporate Services Limited, 35 Great St. Helen's, London, EC3A 6AP.

As a condition to access Available Information and Rule 144A Information, Noteholders and prospective purchasers must agree not to disclose any such information to third parties other than as required by applicable law, including U.S. federal and state securities laws or, in connection with the potential resale of Notes, to a prospective purchaser that is a permitted transferee. Any such information may not be used for any purpose other than an analysis of an investment in the Notes.

Expenses Account

The Issuer will maintain an account (the "**Expenses Account**") at a location outside of the United States in which amounts that are required to be paid to certain service providers of the Issuer, including the Insurance Manager, the Trustee, the Calculation Agent, the Notes Calculation Agent and other service providers of the Issuer, as well as certain other fees and expenses of the Issuer, including taxes, will be held. Amounts held in the Expenses Account will not be available to pay principal or interest on any Notes.

Capitalisation of Issuer

The following table illustrates the capitalisation of the Issuer, as of the date hereof and as adjusted as of the Issuance Date to give effect to the issuance of the Notes. The total shareholders' equity of the Issuer is one share of £1 fully paid up, and 49,999 shares of £1 each paid up as to one quarter of their nominal value. The total paid up shareholders' equity of the Issuer is therefore £12,500.75 and has been converted into USD using an exchange rate of USD 1.27 per £1.

	As of the date hereof	**As adjusted for the issuance of the Notes**
	(unaudited)	
Debt:		
Notes	$0	$250,000,000
Total Debt:	**$0**	**$250,000,000**
Shareholder's equity		
Paid up share capital (ordinary shares: one fully paid up and 49,999 paid up as to one quarter)	$15,875.95	$15,875.95
Total capitalisation:	**$15,875.95**	**$250,015,875.95**

HOLDCO

Atlas Capital UK Holdings 2019 Limited (the "**HoldCo**") is a limited liability company incorporated in England and Wales under the Companies Act 2006. HoldCo was incorporated on 8 April 2019 with company number 11931539.

The issued share capital of HoldCo comprises one ordinary share of £1. The share of HoldCo is held by Intertrust Corporate Services Limited as the Share Trustee, the benefit of which is expressed to be for discretionary purposes, under a declaration of trust dated 30 April 2019.

As at the date of this Circular, HoldCo does not have any borrowings or contingent liabilities.

HoldCo is organised as a special purpose company. HoldCo hold the entire beneficial interest in the issued share capital of the Issuer. Other than the Issuer, HoldCo has no subsidiaries.

The Risk Transferor does not own, directly or indirectly, any of the share capital of HoldCo and neither the Risk Transferor nor any company connected with the Risk Transferor can direct the Share Trustee and none of such companies has any control, direct or indirect, over HoldCo or the Issuer or any other similar vehicle.

There are no restrictions on the objects of HoldCo in its articles of association and HoldCo is therefore permitted, amongst other things, to borrow money, grant security over its property for the performance of its obligations and purchase property.

HoldCo has not engaged in any other activities since its incorporation other than those incidental to the authorising of the Transaction Documents to which it is or will be a party and other matters which are incidental to those activities. HoldCo has no employees.

Directors

The directors of HoldCo and their respective business addresses and principal activities are:

Name	Address	Principal Activities
Helena Paivi Whitaker	35 Great St. Helen's, London EC3A 6AP	Company Director
Intertrust Directors 1 Limited	35 Great St. Helen's, London EC3A 6AP	Corporate Director
Intertrust Directors 2 Limited	35 Great St. Helen's, London EC3A 6AP	Corporate Director

Financial Information

The financial year-end of HoldCo is 31 December of each year. The first annual accounts will be prepared in respect of the period ending 31 December 2019, which will be filed with Companies House. No financial statements have been prepared by HoldCo as at the date of this Circular.

PURPOSE OF OFFERING

The Issuer is issuing the Notes to collateralise and fund its obligations under the Risk Transfer Agreement to make certain payments to the Risk Transferor upon the occurrence of certain specified Covered Events during the Risk Period, as further described in this Circular.

THE RISK TRANSFEROR

SCOR SE (referred to as the "**Risk Transferor**"), acting for itself and on behalf of any affiliate of SCOR SE. SCOR SE is a member of the SCOR group of companies.

As of the date hereof, the Risk Transferor's financial strength was rated "AA-" by S&P, "Aa3" by Moody's, "A+" by A.M. Best Europe Ratings Services Limited and "AA-" by Fitch Ratings Limited, each of which rating agencies is established in the European Union and is registered under Regulation (EC) No. 1060/2009

The offices of SCOR SE are located at 5, avenue Kléber, 75795 Paris Cedex 16, France.

SUMMARY OF CERTAIN DOCUMENTS

The following describes certain terms of the documents to be entered into by the Issuer on or about the Issuance Date, including the Risk Transfer Agreement, the Calculation Agent Agreement, the PCS License Agreement and the PERILS Trading License Agreement. These summaries do not purport to be complete and are subject to, and are qualified in their entirely by reference to, all of the provisions of the specific documents including the definitions contained therein of certain terms. These documents may be obtained upon request to the Issuer by submitting a Request for Access to Information Form to the Issuer, substantially in the form attached hereto as Annex F. In addition, the Risk Transfer Agreement and the Calculation Agent Agreement will also be available for review in draft form to prospective purchasers of the Notes prior to the Issuance Date via a secured password protected internet site online workspace maintained by the Workspace Administrator on behalf of the Issuer with IntraLinks. See "Available Information".

Risk Transfer Agreement

General

On or about the Issuance Date, the Issuer will enter into a Risk Transfer Agreement with the Risk Transferor (the "**Risk Transfer Agreement**") for the Notes.

The Risk Transfer Agreement will cover Named Storm Events, Earthquake Events and Europe Windstorm Events affecting the applicable Covered Area during the Risk Period.

The Risk Period will commence at 12:00:00 a.m. (a) for Named Storm Events and Earthquake Events, Atlantic Standard Time; and (b) for Europe Windstorm Events, UTC, on 1 June 2019 (subject to a condition precedent that the Issuer is not on risk unless and until the Notes have been issued and the proceeds received by the Issuer) and continue up to and include the earliest of (i) 11:59:59 p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian Standard Time; and (b) for Europe Windstorm Events, UTC, on 31 May 2023 (the "**Scheduled Redemption Date**"), (ii) in the event of an Early Redemption Event (other than a Risk Transferor Default Redemption Event) or Optional Redemption Event, 11:59:59 p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian Standard Time; and (b) for Europe Windstorm Events, UTC, on the tenth (10th) Business Day prior to the applicable Early Redemption Date or Optional Redemption Date and (iii) in the event of a Risk Transferor Default Redemption Event, 11:59:59p.m., (a) for Named Storm Events and Earthquake Events, Hawaii-Aleutian Standard Time; and (b) for Europe Windstorm Events, UTC, on the last day of the related cure period. In the event that the Risk Period terminates prior to 31 May 2023, the relevant Loss Period will terminate simultaneously with the end of the Risk Period.

Issuer Payments

Subject to the Aggregate Limit, as of each Payment Date, if the Accrual Period Loss Payment Amount is greater than zero, the Risk Transfer Agreement will require the Issuer to make an Issuer Payment to the Risk Transferor on such Payment Date in an amount equal to such Positive Accrual Period Loss Payment Amount.

In connection with an Issuer Payment to be paid on a Payment Date, where required the Issuer will deliver an EBRD Put Notice to the EBRD for the amount of the Issuer Payment not less than six (6) Business Days prior to the applicable EBRD Coupon Payment Date (except that no such EBRD Put Notice is required if all of the relevant EBRD Notes have already been redeemed or are to be redeemed on or before such Payment Date and any EBRD Put Notice required has already been provided to the EBRD).

Unless a MMF Negative Yield Event has occurred and is continuing, any interest payable on the EBRD Notes that is included in the cash proceeds of a redemption of the EBRD Notes will be part of the Permitted Investment Yield and, accordingly, will be included in the interest payable on the Notes and excluded from any Issuer Payment to the Risk Transferor.

The Issuer is not required to gross up any Issuer Payments in order to account for any withholding or deductions which are required to be made in respect of Tax.

Aggregate Maximum Risk Exposure Limit

The amount of any Issuer Payment to be made by the Issuer on any Payment Date may not exceed the Outstanding Principal Amount on the immediately prior Payment Date (or the Issuance Date, in the case of the First Payment Date). The total amount of any Issuer Payments to be made by the Issuer to the Risk Transferor shall not exceed the Original Principal Amount minus the aggregate amount of any Negative Loss Payments which have fallen due but not have not been paid to the Issuer at the relevant Payment Date (the "**Aggregate Maximum Risk Exposure**"). The obligations of the Issuer to make any Issuer Payment shall be a limited recourse obligation of the Issuer payable solely out of the Collateral and subject to the terms of the Trust Deed.

Periodic Payments

The Risk Transferor will be obligated to make the following Periodic Payments to the Issuer pursuant to the Risk Transfer Agreement on the Business Day immediately preceding each applicable Payment Date:

(a) up to and including the earliest of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date, as the case may be, an amount equal to the Interest Spread Amount (as defined in the Risk Transfer Agreement) payable by the Issuer on the Notes for the relevant Accrual Period;

(b) during an Extension Period, if any, an amount equal to the applicable Extension Spread Amount (as defined in the Risk Transfer Agreement) payable by the Issuer on the Notes for the relevant Accrual Period calculated on the basis of the actual number of days elapsed in the Accrual Period and a 360 day year, provided that, if the conditions for two or more types of Extension Event are satisfied for an Accrual Period, the lowest applicable Extension Spread shall apply;

(c) the Residual Interest Amount if due on the Notes on such Payment Date;

(d) the Early Redemption Payment if due on the Notes on such Payment Date;

(e) the Optional Redemption Payment if due on the Notes on such Payment Date; and

(f) any Additional Amount.

In the event that any withholding or deduction for or on account of any tax, including any excise tax, is required by law on any payment to be made by the Risk Transferor to the Issuer under the Risk Transfer Agreement, the Risk Transferor will: (a) promptly notify the Issuer of such requirement; (b) make all such deductions and withholdings in respect of such tax; (c) pay the full amount deducted or withheld in respect of such tax (including the full amount required to be deducted or withheld from any additional amount paid under (e) below) to the relevant taxation authority or other governmental authority promptly upon the earlier of determining that such deduction or withholding is required or receiving notice that such amount has been assessed against; (d) as soon as practicable after the date of any payment of such tax to the relevant taxation authority or other governmental authority, furnish to the Issuer the official receipt or a certified copy thereof, evidencing payment thereof; and (e) pay to Issuer such additional amount as is necessary to ensure that the net amount received by the Issuer (free and clear of all Taxes) will equal the full amount the Issuer would have received had no such deduction or withholding in respect of Tax been required.

Event Notice

Following a potential Covered Event, the Risk Transferor may provide an Event Notice to the Issuer, the Insurance Manager and the Calculation Agent instructing the Calculation Agent to provide an Event Report for such potential Covered Event pursuant to and in accordance with the Calculation Agent Agreement.

Reset

Annually, in accordance with the procedure set out in the Calculation Agent Agreement, the Reset Agent will reset the Attachment Level for each type of Covered Event, the Exhaustion Level for each type of Covered Event and, if the Risk Transferor elects a Variable Reset, the Updated One Year Expected Loss and the Updated Interest Spread (as set out in further detail in the paragraph "Resets" of the summary of the Calculation Agent Agreement).

Early Redemption

The Risk Transferor may give written notice to the Issuer that it elects to trigger the termination of the Risk Transfer Agreement following the occurrence of certain events described under "*The Notes—Early Redemption*", giving rise to a Clean-Up Call Redemption Event, a Data Provider Failure Redemption Event, a Service Provider Failure Redemption Event, a Change in Tax Law Redemption Event, a Change in Law Redemption Event, an EBRD Redemption Event, a Budget Exhaustion Redemption Event, or a Material Transaction Redemption Event, as the case may be.

In addition, the Risk Transfer Agreement will terminate automatically upon the occurrence of a "**Risk Transferor Default Termination Event**", which is a failure by the Risk Transferor to make any Periodic Payment or Negative Loss Payment when due under the Risk Transfer Agreement (where such default has not been cured within five (5) Business Days following the date on which the Issuer has provided a written notice of such default to the Risk Transferor). The Issuer is required under the terms of the Risk Transfer Agreement to promptly provide written notice to the Risk Transferor (with a copy to the Insurance Manager) of any such failure by the Risk Transferor to pay any Periodic Payment or Negative Loss Payment when due and payable.

An additional redemption amount will be payable on the Notes on the Early Redemption Date upon the occurrence of a Risk Transferor Default Redemption Event prior to the Scheduled Redemption Date. If applicable, this additional Early Redemption Payment will be equal to the sum of the present values, discounted at Interest Spread in force at the time of the Risk Transferor Default Redemption Event, of each of the scheduled Interest Spread payments calculated on the Outstanding Principal Amount, determined as of the Early Redemption Date, for each Accrual Period from the first day of the Accrual Period that begins on such Early Redemption Date up to the Scheduled Redemption Date. In any other circumstances, the Early Redemption Payment will be zero.

In the event of any such early termination giving rise to a Risk Transferor Default Redemption Event, the Risk Transferor will be required to make a payment to the Issuer under the Risk Transfer Agreement in an amount equal to the applicable Early Redemption Payment.

Optional Redemption

The Risk Transferor may terminate the Risk Transfer Agreement effective on any June Payment Date during the Risk Period and consequently the Issuer shall redeem all, but not less than all, of the Notes on the Optional Redemption Date, at a redemption price which will include the Optional Redemption Payment, by providing written notice of such election to the Issuer and the Insurance Manager at least thirty-five (35) calendar days, but not more than seventy-five (75) calendar days, prior to the applicable Optional Redemption Date.

Extension

The Risk Transfer Agreement may be extended, and consequently the maturity of the Notes may be extended beyond the Scheduled Redemption Date, Early Redemption Date or Optional Redemption Date for the Notes for one or more Extension Periods as a result of the occurrence of an Extension Event or series of Extension Events, **provided that** the term of the Risk Transfer Agreement, may not be extended beyond the earlier of: (i) the Final Extended Redemption Date; and (ii) the Extension Discontinuation Date.

If, as of any Extension Determination Date, an Optional Extension Event I, an Optional Extension Event II or a Mandatory Extension Event has occurred and is continuing, then the term of the Risk Transfer Agreement, and the maturity of the Notes, will be extended automatically for an Extension Period, commencing on the Scheduled Redemption Date, Early Redemption Date, Optional Redemption Date or Extended Redemption Date, as the case may be, immediately following such Extension Determination Date where such Extension Determination Date is also an Extension Discontinuation Date; **provided, however, that** under no circumstances will the term of the Risk Transfer Agreement and the maturity of the Notes, be extended to a date following the Final Extended Redemption Date. The occurrence of an Extension will not have the effect of extending the Risk Period under the Risk Transfer Agreement.

The Risk Transferor may also elect under the Risk Transfer Agreement to extend the term of the Risk Transfer Agreement, and consequently the maturity of the Notes, on the Redemption Date or any Extended Redemption Date, as applicable, only with respect to a portion of the Aggregate Limit. If such a Partial

Extension is specified, the Issuer shall redeem the relevant portion of the Notes prior to the Final Extended Redemption Date and the remaining portion of the Notes shall remain outstanding until the earlier of (i) the last Extended Redemption Date; or (ii) the Final Extended Redemption Date.

Notwithstanding anything in this Circular to the contrary, in the event that (i) the Risk Transferor has delivered a written notice to the Issuer under the Risk Transfer Agreement triggering a Clean-Up Call Redemption Event, a Fall-Back Data Provider Failure Redemption Event, a Service Provider Failure Redemption Event, a Change in Tax Law Redemption Event, a Change in Law Redemption Event, an EBRD Redemption Event, a Budget Exhaustion Redemption Event, a Material Transaction Redemption Event or an Optional Redemption Event and (ii) a potential Covered Event has occurred subsequent to such written notice but prior to the end of the Risk Period, then the Risk Transferor may effect an Optional Extension Event under the terms of the Risk Transfer Agreement by delivering an Optional Extension Notice to the Issuer and the Insurance Manager prior to the applicable Extension Determination Date. The Risk Transferor may not elect an Extension in the case of a Risk Transferor Default Termination Event.

Governing Law

The Risk Transfer Agreement will be governed by and construed in accordance with the laws of England and Wales.

Calculation Agent Agreement

On or about the Issuance Date, the Issuer will enter into a Calculation Agent Agreement with AIR, pursuant to which AIR will provide certain services to the Issuer in connection with the Notes, including services relating to Resets and the provision of Event Reports and Optional Extension Verification Reports. The Issuer will indemnify the Calculation Agent in respect of certain claims, losses, damages, liabilities and expenses.

Event Reporting

Following receipt of an Event Notice following the occurrence of one or more potential Covered Events, the Calculation Agent will issue an Event Report to the Issuer, the Insurance Manager and the Risk Transferor stating the Date of Loss for such potential Covered Event and the results of the procedures carried out by the Calculation Agent in determining whether such potential Covered Event is a Covered Event and, if a Covered Event, (i) the Event Index Value for each such Covered Event, (ii) the Loss Period Index Value for the relevant Loss Period, and, except where an Accrual Period Loss Payment Amount will be equal to zero on the immediately following Payment Date, (iii) the Loss Period Payment Amount, (iv) the Aggregate Loss Payment Amount; (v) the Positive Accrual Period Loss Payment Amount, or, as applicable the Negative Accrual Period Loss Payment Amount; (vi) the Issuer Payment; (vii) the Principal Reduction or Principal Increase; and (viii) the resulting Outstanding Principal Amount.

Pursuant to the terms of the Calculation Agent Agreement, the Calculation Agent will be required to submit an initial Event Report to the Issuer, the Risk Transferor and the Insurance Manager at least seven (7) Business Days prior to the first Payment Date following the date on which the relevant Event Notice is issued (referred to herein as the "**Initial Event Reporting Date**"), using the latest Reporting Agency Report available as of five (5) Business Days prior to such Initial Event Reporting Date; **provided, however, that** if an Event Notice is issued less than twelve (12) Business Days prior to such first Payment Date, the Initial Event Reporting Date will be on the seventh (7th) Business Day prior to the next succeeding Payment Date; **provided, further, that** if no relevant Reporting Agency Report is available for the applicable Covered Event as of five (5) Business Days prior to such Initial Event Reporting Date, then the Initial Event Reporting Date will instead be seven (7) Business Days prior to the first Payment Date for which a relevant Reporting Agency Report is available for such Covered Event at least twelve (12) Business Days prior to such Payment Date. Thereafter, the Calculation Agent will continue to be required to issue an Event Report at least seven (7) Business Days prior to each subsequent Payment Date (each, a "**Subsequent Event Reporting Date**") until and including the Final Event Report for such Covered Event, in each case using the latest relevant Reporting Agency Report available as of five (5) Business Days prior to such Subsequent Event Reporting Date; **provided, that** in the case of the Final Extended Redemption Date, the Subsequent Event Reporting Date will be three (3) Business Days prior to the Final Extended Redemption Date.

For each applicable Covered Event, the Final Event Report shall be the Event Report issued on the earliest of (i) the Reporting Agency Report containing a final Resurvey Estimate for such Covered Event, (ii) if the

Reporting Agency has ceased to exist or is unable to provide data necessary for the Calculation Agent to issue an updated version of an Event Report, and no replacement reporting agency has been identified by the Calculation Agent, the most recent Reporting Agency Report for such Covered Event available on or immediately before the date when the Reporting Agency has ceased to exist or failed to deliver such data, and (iii) the most recent Reporting Agency Report available on or immediately before the date that occurs eight (8) Business Days prior to the Final Extended Redemption Date.

Resets

Pursuant to the terms of the Calculation Agent Agreement, annually beginning on each Reset Determination Date, the Reset Agent will use (i) the Industry Exposure Database as of such Reset Determination Date, (ii) the Initial Factors or the Updated Factors as provided by the Risk Transferor as applicable, (iii) the updated Layer for each type of Covered Event as provided by the Risk Transferor; and (iv) the Escrow Models, to reset the Attachment Level for each type of Covered Event, the Exhaustion Level for each type of Covered Event, and, if the Risk Transferor elects a Variable Reset, the Updated One Year Expected Loss and the Updated Interest Spread; **provided, that** each Reset must satisfy the Reset Limitations, as verified by the Reset Agent in a Reset Report.

If any Reset does not meet the Reset Limitations, the Risk Transferor will have the ability to amend any of the items that the Risk Transferor provided for the Reset for any type of Covered Event by providing the Reset Agent with an amended Factor and Layer Reset Notice, and the Reset Agent will use commercially reasonable efforts to perform a Reset meeting the Reset Limitations using such amended information for any type of Covered Event prior to the Reset Effective Date. If there has not been a Reset meeting the Reset Limitations by the Reset Effective Date, the Reset Agent will perform such Reset pursuant to the Calculation Agent Agreement applying the terms as in effect prior to the relevant Reset Determination Date. Any such Reset will be deemed to be effective as of the relevant Reset Effective Date.

The Reset Agent will reset the Attachment Level for each type of Covered Event to the Preliminary Updated Attachment Level.

No later than 1 May preceding the applicable Reset Effective Date, if necessary (or if such day is not a Business Day, the next succeeding Business Day), the Reset Agent will provide to the Risk Transferor the calculations of the Preliminary Updated Attachment Level for each type of Covered Event and the corresponding updated Data File.

No later than 15 May preceding the applicable Reset Effective Date, the Risk Transferor may elect a Variable Reset, by the delivery of a Variable Reset Notice (or if such day is not a Business Day, the next succeeding Business Day) to the Reset Agent, to update the Attachment Level for any type of Covered Event for the Notes. If the Risk Transferor makes such election to update the Attachment Level for any type of Covered Event for the Notes, the Reset Agent will perform an Interest Spread Calculation. If the Risk Transferor makes no such election for such type of Covered Event, the Updated Attachment Level for such type of Covered Event shall be set to the Preliminary Updated Attachment Level for such type of Covered Event and the Reset Agent shall not perform an Interest Spread Calculation.

If the Risk Transferor elects a Variable Reset in connection with a Loss Period, the Reset Agent will use the Initial Interest Spread, the Initial One Year Expected Loss and the Updated One Year Expected Loss to calculate the Updated Interest Spread.

For each Reset, the Updated Exhaustion Level for a type of Covered Event for the Notes shall be set to an amount equal to the Updated Attachment Level for such type of Covered Event plus the updated Layer for such type of Covered Event provided by the Risk Transferor on the applicable Reset Determination Date.

Termination

The Calculation Agent Agreement may be terminated by the Calculation Agent upon forty-five (45) calendar days' prior written notice by the Calculation Agent to the Issuer with a copy to the Risk Transferor and the Insurance Manager, if the Issuer fails to perform or commits a material breach of any provision of the Calculation Agent Agreement beyond any applicable notice and cure period.

The appointment of the Calculation Agent may be terminated by the Issuer upon three (3) Business Days' written notice by the Issuer (such notice to specify the date of termination, which, in the discretion of the Issuer, may be effective immediately but not be later than six (6) months following such notice), to the

Calculation Agent with a copy to Risk Transferor, if (x) the Calculation Agent fails to perform or to observe in any material respect, or otherwise commits a material breach of, any provision of the Calculation Agent Agreement and such failure or breach has not been cured to the reasonable satisfaction of the Issuer beyond any notice and cure period after the Calculation Agent has received written notice thereof and the termination date in the termination notice from the Issuer, (y) the occurrence of a Bankruptcy Event (as defined in the Calculation Agent Agreement) in respect of the Calculation Agent, or (z) upon thirty (30) calendar days' written notice (such notice specifying the date of termination) to the Calculation Agent and the Risk Transferor for any reason.

In the event of termination of the Calculation Agent Agreement, the Issuer will be required under the Risk Transfer Agreement to use its reasonable best efforts, in cooperation with the Risk Transferor, to engage a suitable replacement calculation agent. Any such replacement must (i) be an independent, internationally reputable modeling and engineering company or reinsurance broker experienced in performing services similar to those described in this Agreement, (ii) not be an affiliate of the Risk Transferor or the Issuer, (iii) have a current, in-force license from AIR for the use of AIR's CATRADER applications and (iv) deliver a written acceptance of its appointment to the retiring Calculation Agent and to the Issuer, with copies to the Risk Transferor and the Insurance Manager.

No termination of the Calculation Agent Agreement or other removal of the Calculation Agent, in each case by the Issuer, and no appointment of a successor calculation agent, shall become effective until the acceptance of appointment by the successor calculation agent pursuant to the Calculation Agent Agreement. Any successor calculation agent shall deliver a written acceptance of its appointment to the retiring Calculation Agent and to the Issuer, with a copy to the Risk Transferor.

Insurance Management Agreement

On or about the Issuance Date, the Issuer will enter into a management agreement ("**Insurance Management Agreement**") with Horseshoe ILS Services UK Ltd. Pursuant to the Insurance Management Agreement, the Insurance Manager is obligated to perform and provide, in and from within the United Kingdom, the services necessary or appropriate to permit the Issuer to conduct its business. Such services are directed to the administration of the Issuer's business and include, among other things, general banking services, record keeping, certain corporate matters, filing and correspondence with any regulatory authorities, assist with reporting and invoicing, correspondence relating to the Notes and the Risk Transfer Agreement.

In consideration of such services, the Issuer is required to pay a fee to the Insurance Manager as agreed separately in writing. The Issuer is required to indemnify the Insurance Manager against liabilities and actions as specified in the Insurance Management Agreement.

The Insurance Management Agreement may be terminated by the Insurance Manager (i) upon sixty (60) calendar days prior written notice by the Insurance Manager to the Issuer and the Risk Transferor if the Issuer fails to perform or commits a material breach of any material provision of the Insurance Management Agreement beyond any applicable notice and cure period; or (ii) upon prior written notice to the Issuer and the Risk Transferor if the Issuer fails otherwise than as a result of the default of the Insurance Manager to make payment of any fees or expenses due under the Insurance Management Agreement beyond any applicable notice and cure period.

The Insurance Management Agreement may be terminated by the Issuer (i) upon written notice by the Issuer to the Insurance Manager (such notice to specify the date of termination, which may be effective immediately, but may not be later than six (6) months following such notice) if the Insurance Manager fails to perform or commits a material breach of any material provision of the Insurance Management Agreement which is not cured to the Issuer's and the Risk Transferor's reasonable satisfaction within ten (10) days of receipt of such written notice thereof or the termination date in such notice; or (ii) upon sixty (60) days written notice to the Insurance Manager and the Risk Transferor for any reason.

In the event of termination of the Insurance Management Agreement, the Issuer shall immediately arrange for the return to the Issuer or transfer to a succeeding Insurance Manager, if any, of all books and records and of any documents with confidential information provided to the Insurance Manager and in case of appointment of a new insurance manager, for the transfer to the succeeding insurance manager.

No termination of the Insurance Management Agreement or other removal of the Insurance Manager, in each case by the Issuer, and no appointment of a successor Insurance Manager, shall become effective until the acceptance of appointment by the successor Insurance Manager pursuant to the Insurance Management Agreement. Any successor Insurance Manager shall deliver a written acceptance of its appointment to the retiring Insurance Manager and the Issuer.

PCS License Agreement

On or about the Issuance Date, the Issuer will enter into a license agreement with ISO Services, Inc. ("**PCS License Agreement**"), relating to the use of PCS data by the Issuer. The Issuer will pay the licensing fees for the use of the PCS data in connection with the Notes. In addition, the Issuer and the Risk Transferor have agreed to indemnify PCS for certain claims, liabilities and exposures arising out of the PCS License Agreement.

PERILS Trading License Agreement

On or about the Issuance Date, the Issuer will enter into a license agreement with PERILS AG ("**PERILS Trading License Agreement**"), relating to the use of PERILS data by the Issuer. The Issuer will pay the licensing fees for the use of the PERILS data in connection with the Notes. In addition, the Issuer and the Risk Transferor have agreed to indemnify PCS for certain claims, liabilities and exposures arising out of the PERILS Trading License Agreement.

Escrow Agreement

On or about the Issuance Date, the Issuer will enter into an escrow agreement with AIR Worldwide Corporation as Calculation Agent and InnovaSafe, Inc. as Escrow Agent (the "**Escrow Agreement**"). Pursuant to the Escrow Agreement, the Escrow Agent will hold in escrow the Escrow Materials (as defined in the Escrow Agreement), including the Calculation Agent Agreement and Escrow Models, for the sole purpose of ensuring that the Escrow Materials remain available for the Calculation Agent's use in providing future services under the Calculation Agent Agreement.

The Issuer is required to pay an annual fee to the Escrow Agent as specified in the Escrow Agreement.

The Escrow Agreement may be terminated (i) by the Issuer and Calculation Agent immediately upon notice to the Escrow Agent, or (ii) by the Escrow Agent upon thirty (30) days written notice for non-payment of the Escrow Agent's fees, provided that such fees were not paid for thirty (30) days following the receipt of an invoice for such fees and, following such time period, the Escrow Agent provided ten (10) days' written notice to the Issuer and the Calculation Agent of such non-payment of fees.

In the event of termination of the Escrow Agreement, all duties and obligations of the Escrow Agent to the Calculation Agent and the Issuer shall terminate and the Escrow Agent shall return the Escrow Materials to the Calculation Agent.

The Issuer will indemnify the Escrow Agent in respect to certain matters thereunder. All Obligations of the Issuer under the Escrow Agreement shall be limited recourse obligations of the Issuer payable solely from the Charged Property (as defined in the Trust Deed) as distributed in accordance with the Trust Deed.

EBRD NOTES

Overview of EBRD

The following information was derived from publicly available information, as described below:

Name:	European Bank for Reconstruction and Development
Address:	One Exchange Square, London EC2A 2JN, United Kingdom
Country of Incorporation:	Not applicable. The EBRD is an international organisation formed under the Agreement Establishing the European Bank for Reconstruction and Development dated 29 May 1990, as amended ("**EBRD Establishment Agreement**"), signed by 40 countries, together with the European Economic Community and the European Investment Bank. The EBRD is duly established under the EBRD Establishment Agreement. The EBRD has its headquarters in London. As of the date of this Circular, the EBRD has 69 members.
Nature of Business:	The purpose of the EBRD is to foster the transition towards open market oriented economics and to promote private and entrepreneurial initiatives in its countries of operation which are committed to and applying the principles of multi party democracy, pluralism and market economics.
Listing:	The EBRD Notes will not be listed or admitted to trading on any exchange. Certain securities issued under the EBRD's Global Medium Term Note Programme are admitted to the official list of the UK Listing Authority and admitted to trading on the London Stock Exchange's Regulated Market.
Governing law:	The EBRD Notes are governed by English law.
Credit Rating:	As of the date of this Circular, the EBRD has been assigned a credit rating of "AAA" by Standard & Poor's Credit Market Services Europe Limited, an "Aaa" credit rating by Moody's Investors Service Limited and an "AAA" credit rating by Fitch France S.A., each of which rating agencies is established in the European Union and is registered under Regulations (EC) No. 1060/2009 of the European Parliament and of the Council of September 2009 on credit rating agencies, as amended.

Further Information regarding EBRD and EBRD Notes

The information herein relating to EBRD and the EBRD Global Medium Term Note Programme was derived from and more information regarding EBRD and the EBRD's Global Medium Term Note Programme can be found on EBRD's official website http://www.ebrd.com. The extraction from this source has been accurately reproduced and, as far as the Issuer is aware and is able to ascertain from information published by that source, no facts have been omitted which would render the reproduced information inaccurate or misleading. None of the Issuer, the Risk Transferor, the Initial Purchasers, the Trustee nor any of their affiliates has independently verified any of the information herein in respect of EBRD and the EBRD's Global Medium Term Note Programme or any of the information contained on such website or any materials contained therein for the purpose of this Circular, or any other materials prepared in relation to the Notes nor do they accept responsibility for such material or any errors or omissions contained in such information or materials. Any such information on such website or any materials contained therein is not incorporated herein by reference, and does not form part of this Circular or any other materials prepared in relation to the Notes.

The maturity date of the EBRD Note is 6 June 2023, and the EBRD Note may be subject to early redemption as further described herein. At the option of the Issuer, the EBRD Note may be wholly or partially redeemed at par (in minimum denominations of USD 1,000) effective on any EBRD Coupon Payment Date upon delivery to the EBRD of an EBRD Put Notice not later than the sixth (6th) Business Day prior to such EBRD Coupon Payment Date. Any failure of the EBRD to redeem such EBRD Note in whole or in part upon the delivery of an EBRD Put Notice whether due to creditworthiness of the EBRD or for any other reason could

result in the Issuer not having sufficient funds on the Redemption Date for the Notes to repay the applicable Outstanding Principal Amount.

Under the terms of the EBRD Note, interest at the EBRD Note Interest Rate on each EBRD Note in respect of each Payment Date for the Notes will accrue from, and including, the immediately preceding Payment Date (or, in the case of the First Payment Date, the date of issue of the EBRD Note) to, but excluding, such Payment Date, except that in connection with the redemption or partial redemption of the EBRD Note, interest from the EBRD to the Issuer with respect to the EBRD Note will be paid on such redemption date and will accrue up to, but excluding, such redemption date.

The EBRD has had no involvement in the preparation of this Circular. The EBRD does not make any representation on warranty, express or implied, as to the accuracy or completeness of any information set out in this Circular.

DESCRIPTION OF THE NOTES

The following contains a summary of certain provisions of the Notes, the Trust Deed and the Deed of Charge. These summaries do not purport to be complete and are subject to, and are qualified in their entirety by reference to, all of the provisions of the specific documents including the definitions contained therein of certain terms. These documents may be obtained upon request to the Issuer by submitting a Request for Access to Information Form to the Issuer, substantially in the form attached to this Circular as Annex F. In addition, prior to the Issuance Date of the Notes, the Trust Deed, including the forms of certificates representing the Notes, will also be available for review in draft form to prospective purchasers of the Notes via a secured password protected internet site online workspace maintained by the Workspace Administrator on behalf of the Issuer with IntraLinks. See "Available Information" in this Circular.

General

The Notes have not been and will not be registered under the Securities Act or any U.S. state or foreign securities laws and are subject to substantial restrictions on transfer. See "*Notice to Investors*."

Noteholders will have recourse only to the Collateral in the Collateral Account for the repayment of the Outstanding Principal Amount and will not have recourse to any other property or assets of the Issuer save for access to the assets in the Collateral Payment Account in relation to the payment of interest amounts in respect of the Notes. Noteholders will rank *pari passu* with all other Noteholders and will be subordinated to the Issuer's Obligations to the Risk Transferor and otherwise as provided in the Deed of Charge and the Trust Deed.

Neither the Risk Transferor nor any of its affiliates is a guarantor of, or obligor on, the Notes. Noteholders will not have any recourse to or against the Risk Transferor or any of its affiliates for any amounts due and payable by the Issuer to any Noteholder for any reason, including in the event of a default by the Issuer.

Redemption

Redemption Amount

On the Redemption Date, Noteholders will receive, to the extent of the available funds therefor, the Redemption Amount plus any accrued but unpaid interest on the Notes. For the Notes, the Redemption Amount will equal 100% of the Outstanding Principal Amount of the Notes, determined as of the Redemption Date, plus, if applicable, an Early Redemption Payment or Optional Redemption Payment. See "*Risk Factors—Limited Sources of Funds for Repayment of Principal.*"

Redemption Date

The Redemption Date will be (i) the earliest to occur of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date, or (ii) following a Mandatory Extension Event or an Optional Extension Event, the earlier of the last Extended Redemption Date or the Final Extended Redemption Date.

Outstanding Principal Amount

Unless otherwise provided, as of any date of determination, the Outstanding Principal Amount of the Notes shall be equal to the Original Principal Amount (i) as reduced by the aggregate of all Principal Reductions made on all Payment Dates prior to and including such date and (ii) as increased by the aggregate of all Principal Increases made on all Payment Dates prior to and including such date; **provided, that** the Outstanding Principal Amount shall neither be less than zero nor greater than the Original Principal Amount for the Notes. Any such adjustment will be allocated *pro rata* among the holders of the applicable Notes.

Principal Reductions and Principal Increases

Principal Reductions and Principal Increases will be as specified in this Circular. The aggregate of all Principal Reductions (net of Principal Increases, if applicable) will not exceed the Original Principal Amount.

Early Redemption

If an Early Redemption Event has occurred, the Notes will be redeemed earlier than the Scheduled Redemption Date on the Early Redemption Date at a price equal to the Early Redemption Payment, subject to any Extension Event.

Optional Redemption

If an Optional Redemption Event has occurred, the Notes will be redeemed earlier than the Scheduled Redemption Date on the Optional Redemption Date at a price equal to the Optional Redemption Payment, subject to any Extension Event.

Extension of Maturity

Mandatory Extension

The maturity of the Notes may be extended beyond the Scheduled Redemption Date if, as of the Extension Determination Date immediately preceding the Scheduled Redemption Date, a Mandatory Extension Event has occurred and is continuing. If a Mandatory Extension Event occurs, the maturity of the Notes will be extended automatically beyond the Scheduled Redemption Date and the redemption date of the Notes shall instead be the earlier of the last Extended Redemption Date and the Final Extended Redemption Date. The occurrence of an Extension will not have the effect of extending the Risk Period under the Risk Transfer Agreement.

Optional Extension

If an Early Redemption Date or an Optional Redemption Date has been determined but has not yet occurred, and an Optional Extension Notice has been delivered under the Risk Transfer Agreement, the maturity of the Notes will be extended beyond the applicable Early Redemption Date or Optional Redemption Date (as applicable), and the redemption date of the Notes shall instead be extended to the earlier of the last Extended Redemption Date or the Final Extended Redemption Date.

Partial Extension

In connection with any Extension under the Risk Transfer Agreement, the Risk Transferor may, either at the time of the Mandatory Extension Event or the Optional Extension Event or at any time which the Extension Event is continuing under the Risk Transfer Agreement, elect a "**Partial Extension**" only. If Partial Extension is specified in an Extension Notice or Optional Extension Notice, the Issuer shall redeem the relevant portion of the Notes (the "**Partial Redemption Amount**") on the Scheduled Redemption Date, the Early Redemption Date, the Optional Redemption Date or the Extended Redemption Date, as applicable, and the remaining portion of the Notes shall remain outstanding until the earlier of the last Extended Redemption Date and the Final Extended Redemption Date. Notes representing the Partial Redemption Amount will be redeemed on a *pro rata* basis on the Partial Extension Redemption Date specified in the Extension Notice or Optional Extension Notice (as applicable), as the case may be, at a redemption price equal to the applicable *pro rata* portion of the Partial Redemption Amount (in each case, subject to the procedures of the DTC).

Notification to the Clearing Systems

If an Extension Event occurs, the Principal Paying Agent will notify the applicable Clearing System(s), not later than two (2) Business Days prior to the Early Redemption Date, the Optional Redemption Date or the Scheduled Redemption Date, as the case may be, of the extension of the maturity of the Notes and shall further notify the Clearing Systems when the Redemption Date has been finally determined.

Determination of Extended Redemption Date

In order that the Redemption Date may be determined, the Issuer shall notify the Trustee, the Principal Paying Agent, the Note Calculation Agent and the Noteholders as to whether an Extension Event has occurred or is continuing under the Risk Transfer Agreement as of such date and the type of such Extension Event and whether or not an Extension Discontinuation Date has occurred.

Interest

Payment of Interest

Interest for the Notes will accrue from the Issuance Date thereof, as calculated below, and will be payable quarterly (or following an Extension Event, monthly) in arrears on the dates specified in this Circular, ending on the earliest of the Early Redemption Date, the Optional Redemption Date and the Scheduled Redemption Date or, if a Mandatory Extension Event or an Optional Extension Event, the earlier of the last Extended Redemption Date and the Final Extended Redemption Date. See "*Risk Factors—Limited Sources of Funds for Payment of Interest*."

If on any Payment Date the Issuer has insufficient funds to make any payment of interest on any Notes, such interest shall be deferred and the Issuer shall, on the next Payment Date following such deferral (and only to the extent there are funds available following payment of interest arising on such Payment Date), pay such deferred interest (plus interest on such deferred interest at the applicable Interest Spread, Extension Spread or Non-Risk Period Interest Spread, as the case may be, for the Accrual Period or part thereof). Any deferred interest will be computed on the basis of the actual number of calendar days elapsed in the relevant Accrual Period during which the default occurred using a 360-day year.

Calculation of Interest

Notwithstanding anything in this Circular to the contrary, for each Accrual Period from and including the Issuance Date to, but excluding, the Redemption Date, interest on the Notes will be calculated by the Note Calculation Agent as the sum of:

(i) the Permitted Investment Yield relating to such Accrual Period; *plus*

(ii) the following amount (the sum of (a), (b), (c), (d) and (e)):

(a) for all calendar days during such Accrual Period that occur during the period from and including the Issuance Date to, but excluding the first day of the First Loss Period: interest accrued at the Non-Risk Period Interest Spread calculated on the Original Principal Amount;

(b) for all calendar days during such Accrual Period that occur during the period from and including the first day of the Risk Period to and including the last day of the First Loss Period: interest accrued at the Initial Interest Spread calculated on the Original Principal Amount; **provided, that** if the Outstanding Principal Amount is reduced to zero as a result of one or more Loss Payment Amounts on any of the Payment Dates prior to the end of the First Loss Period, the Residual Interest Amount will be paid on such Payment Date, in addition to the accrued interest for the prior Accrual Period, on such Payment Date and no further interest will be paid;

(c) for all calendar days during such Accrual Period that occur from and including the first day of the Second Loss Period to and including the last day of the Risk Period: the sum of interest accrued at the applicable Interest Spread calculated on the Outstanding Principal Amount as of the first day of the applicable Accrual Period;

(d) for all calendar days during such Accrual Period that occur from but excluding the last day of the Risk Period to but excluding such Early Redemption Date, the Optional Redemption Date or the Scheduled Redemption Date, as applicable, interest accrued at the Non-Risk Period Interest Spread calculated on the Outstanding Principal Amount as of the first day of the applicable Accrual Period; and

(e) for all calendar days during such Accrual Period that occur during the period from and including the Early Redemption Date, the Optional Redemption Date, or the Scheduled Redemption Date to but excluding the earlier of the last Extended Redemption Date and the Final Extended Redemption Date; interest accrued at the applicable Extension Spread calculated on the Outstanding Principal Amount,

in each case, calculated in accordance with the Interest Calculation Convention.

Collateral and Security

Collateral Account

The Issuer will deposit an amount equal to the proceeds from the sale of the Notes into a Collateral Account established solely for the Notes in the name of the Issuer with the Custodian. The amounts credited to each Collateral Account will be invested in Permitted Investments.

Prior to the occurrence of an Event of Default with respect to the Notes, the principal portion of amounts standing to the credit of the Collateral Account for the Notes will be available to satisfy (in order of priority): (i) any obligations of the Issuer to the Risk Transferor under the Risk Transfer Agreement; and (ii) any obligations of the Issuer to Noteholders under the Trust Deed.

Permitted Investment Yield on the assets credited to the Collateral Account is the property of the Issuer and is not subject to any prior claim of the Risk Transferor. Such Permitted Investment Yield is subject to a security interest in favour of the Trustee for the benefit of the Noteholders.

Collateral Payment Account

The Custodian will transfer the Permitted Investment Yield, if any, credited to the Collateral Account to the Collateral Payment Account for the Notes. The Issuer will also credit to the Collateral Payment Account the Periodic Payments received from the Risk Transferor under the Risk Transfer Agreement. The amounts standing to the credit of the Collateral Payment Account will be applied on each Payment Date to satisfy the payment obligations of the Issuer to the Noteholders under the Conditions of the Notes, *provided that*, to the extent that an MMF Negative Yield Event has occurred and is continuing on such Payment Date, the Issuer shall not distribute any amounts representing Permitted Investment Yield until such time as the MMF Negative Yield Deficit has been reduced to zero.

Deed of Charge

The Issuer will, pursuant to the Deed of Charge, charge to the Trustee for the benefit of each of those persons listed as entitled to payment in any of the Post Enforcement Priorities of Payments (as further described below) (the "**Beneficiaries**") as security for the Issuer's obligations to such parties, all the Issuer's right, title and interest from time to time in and to: (i) the cash and securities account in the name of the Issuer for the custody and safekeeping of the related Permitted Investments (the "**Collateral Account**") relating to the Notes and all amounts therein or credited thereto; (ii) the payment account established by the Payment Agent pursuant to the Trust Deed (the "**Collateral Payment Account**") and all amounts therein or credited thereto; and (iii) the "**Expenses Account**" and all amounts therein or credited thereto (together the "**Charged Accounts**").

Each account charged as part of the Collateral (each an "**Account**") will be held by the Issuer with the Custodian and/or the Account Bank in the United Kingdom.

The security interest over the Charged Accounts will be governed by and created under the Deed of Charge, which will be governed by English law.

Under the Deed of Charge, the Issuer will also assign absolutely to the Trustee for the benefit of the Beneficiaries, all of the Issuer's right, title, benefit and interest in, to and under the Insurance Management Agreement, the Calculation Agent Agreement, the Escrow Agreement, the Custody Agreement, the Agency Agreement, the Account Bank Agreement and the Risk Transfer Agreement (the "**Assigned Agreements**").

The assets and property charged in favour of the Trustee (on behalf of itself and the other Beneficiaries) under the Deed of Charge will collectively constitute the "**Collateral**" in connection with all amounts and liabilities of the Issuer in connection with the Risk Transfer Agreement, the issue of the Notes and the related arrangements described herein (the "**Obligations**").

Events of Default and Enforcement

The Conditions will specify the following "**Events of Default**" in respect of the Notes:

(a) a default for five (5) Business Days or more in the payment of any interest when due and payable under any Note;

(b) a default in the repayment of the Redemption Amount of any Note when due and payable;

(c) a default in the observance or performance of certain covenants of the Issuer or representations and warranties given by the Issuer and set out in the Trust Deed, which default has a material adverse effect on the Noteholders and such default shall continue and not be cured for a period of thirty (30) calendar days after there shall have been given, by registered or certified mail, to the Issuer by the Trustee or to the Issuer and the Trustee by Noteholders representing at least 25% of the Outstanding Principal Amount of the Notes, a written notice specifying such default or incorrect representation or warranty and requiring it to be remedied and stating that such notice is a notice of such default hereunder;

(d) the occurrence of an Insolvency Event in relation to the Issuer.

For the purposes of the above:

"**Extraordinary Resolution**" means a resolution passed by a meeting of Noteholders (whether originally convened or resumed following an adjournment) duly convened and held in accordance with the provisions for meetings of Noteholders set out in the Trust Deed by a majority of not less than three quarters of the votes cast;

"**Insolvency Event**" in respect of a company means:

(a) such company is unable or admits its inability to pay its debts as they fall due (after taking into account any grace period or permitted deferral), or suspends making payments on any of its debts;

(b) the value of the assets of such company is less than the amount of its liabilities;

(c) a moratorium is declared in respect of any indebtedness of such company;

(d) the commencement of negotiations with one or more creditors of such company with a view to rescheduling any indebtedness of such company other than in connection with any refinancing in the ordinary course of business;

(e) any corporate action, legal proceedings or other procedure or step is taken in relation to:

    (i) the appointment of an Insolvency Official in relation to such company or in relation to the whole or any part of the undertaking or assets of such company except, in the case of the Issuer, the application to the Court under paragraph 12 of Schedule B1 to the Insolvency Act or the filing of notice of intention to appoint an administrator under paragraph 26 of Schedule B1 to the Insolvency Act by the Issuer or its directors, or the appointment of an administrative receiver by the Trustee following any such application or notice; or

    (ii) an encumbrancer (excluding, in relation to the Issuer, the Trustee or any Receiver) taking possession of the whole or any part of the undertaking or assets of such company;

    (iii) the making of an arrangement, composition, or compromise (whether by way of voluntary arrangement, scheme of arrangement or otherwise) with any creditor of such company, a reorganisation of such company, a conveyance to or assignment for the creditors of such company generally or the making of an application to a court of competent jurisdiction for protection from the creditors of such company generally other than in connection with any refinancing in the ordinary course of business; or

    (iv) any distress, execution, attachment or other process being levied or enforced or imposed upon or against the whole or any part of the undertaking or assets of such company (excluding, in relation to the Issuer, by the Trustee or any Receiver); or

(f) any procedure or step is taken, or any event occurs, analogous to those set out in (a) to (e) above, in any jurisdiction; and

"**Insolvency Official**" means, in relation to a company, a liquidator, (except, in the case of the Issuer, a liquidator appointed for the purpose of a merger, reorganisation or amalgamation the terms of which have previously been approved either in writing by the Trustee or by an Extraordinary Resolution of the holders

of the Notes) provisional liquidator, administrator, bank administrator, bank liquidator, investment bank administrator administrative receiver, receiver, receiver or manager, compulsory or interim manager, nominee, supervisor, trustee, conservator, guardian or other similar officer in respect of such company or in respect of any arrangement, compromise or composition with any creditors or any equivalent or analogous officer under the law of any jurisdiction.

If an Event of Default occurs and is continuing, the Trustee shall:

(a) if so instructed by the Risk Transferor; or

(b) if so requested in writing by the holders of at least 25 per cent. of the aggregate Outstanding Principal Amount of the Notes or directed by an Extraordinary Resolution of the holders of the Notes, in each case, prior to the discharge and termination of the Risk Transfer Agreement in full (such discharge and termination having been notified to the Trustee by the Risk Transferor in writing), with the prior consent of the Risk Transferor,

deliver an Enforcement Notice to the Issuer declaring the Notes due and payable.

The requirement of the Trustee to deliver an Enforcement Notice shall be subject to: (a) in the case of a default in the observance or performance of certain covenants of the Issuer or representations and warranties given by the Issuer and set out in the Trust Deed, the Trustee having certified in writing that the happening of such event is in its opinion materially prejudicial to the interests of the Noteholders (unless instructed by the Risk Transferor); and (b) the Trustee having been indemnified and/or secured to its satisfaction (including where so required by the Trustee, by the provision of pre-funding) against all Liabilities to which it may thereby become liable or which it may incur by so doing.

Following delivery of an Enforcement Notice, the Trustee may at its discretion and without further notice, institute such proceedings as it thinks fit to enforce its rights under the Trust Deed in respect of the Notes and under the other Selected Transaction Documents, but it shall not be bound to do so unless (a) instructed by the Risk Transferor or (b) if requested in writing by the holders of at least 25 per cent. of the aggregate Outstanding Principal Amount of the Notes or directed by an Extraordinary Resolution of the holders of the Notes, in each case, prior to the discharge and termination of the Risk Transfer Agreement in full (such discharge and termination having been notified to the Trustee by the Risk Transferor in writing), with the prior consent of the Risk Transferor, and in any such case, only if the Trustee shall have been indemnified and/or secured to its satisfaction (including by way of pre-funding) against all Liabilities to which it may thereby become liable for which it may incur by so doing.

The "**Selected Transaction Documents**" are: (i) the Trust Deed and the Deed of Charge and (unless the context requires otherwise) any deed or other document executed in accordance with the provisions of the Trust Deed or (as applicable) the Deed of Charge and expressed to be supplemental to the Trust Deed or the Deed of Charge (as applicable); (ii) the Risk Transfer Agreement; (iii) the Custody Agreement; (iv) the Insurance Management Agreement and (v) the Agency Agreement.

Neither the Trustee in its individual capacity, nor any of its owners, beneficiaries, agents, officers, directors, employees, affiliates, successors or assigns will, in the absence of an express agreement to the contrary, be personally liable for the payment of any amounts required to be paid under the Notes or for the agreements of the Issuer contained in the Trust Deed.

Proceeds of Enforcement

Following enforcement of the security over the Collateral, the Trustee will apply the proceeds of enforcement over each Account in the following order of priority (the "**Post-Enforcement Priorities of Payment**"):

(c) in relation to the Collateral Account (excluding any amount of Permitted Investment Yield standing to the credit of the Collateral Account), the following order of priority:

(i) *first*, to satisfy any unpaid obligations of the Issuer to the Trustee in each case to the extent not satisfied by application of monies from the Expenses Account in accordance with the Post-Enforcement Priorities of Payment applicable to the Expenses Account;

(ii) *second*, to satisfy, *pro rata and pari passu*, any unpaid obligations of the Issuer to the Custodian, the Account Bank and/or the Principal Paying Agent, in each of their respective capacities hereunder (individual or otherwise), in each case to the extent not satisfied by application of monies from the Expenses Account in accordance with the Post-Enforcement Priorities of Payment applicable to the Expenses Account;

(iii) *third*, to satisfy the obligations of the Issuer to the Risk Transferor in respect of any amounts owed and unpaid under the Risk Transfer Agreement (and **provided that** no further payments under any subsequent limb of this priority of payments shall be made unless the Risk Transferor has confirmed in writing that payment of all present and future amounts payable under the Risk Transfer Agreement are satisfied, such confirmation not to be unreasonably withheld, conditioned or delayed);

(iv) *fourth*, *pari passu and pro rata*, to satisfy the obligations of the Issuer to the Noteholders in respect of the aggregate Outstanding Principal Amount of the Notes; and

(v) *fifth*, *pari passu and pro rata*, to satisfy any other unpaid liabilities of the Issuer to any Transaction Party under the Transaction Documents, including any indemnification amounts payable by the Issuer, but only if (1) no Notes are outstanding and all amounts in respect thereto have been paid in full and (2), the Risk Transfer Agreement has been terminated in accordance with its own terms and all obligations thereunder have been satisfied and only to the extent such liabilities have not been satisfied by application of monies from the Expenses Account in accordance with the Post-Enforcement Priorities of Payment applicable to the Expenses Account.

(a) in respect of the Collateral Payment Account and any amount of Permitted Investment Yield standing to the credit of the Collateral Account, the following order of priority;

(i) *first*, *pari passu and pro rata*, to satisfy the obligations of the Issuer to the Noteholders in respect of any amount of interest owed and unpaid on the Notes; and

(ii) *second*, the remainder, if any, to the Collateral Account.

(b) in relation to the Expenses Account, the following order of priority:

(i) *first*, to satisfy, *pro rata and pari passu*, any unpaid obligations of the Issuer to the Trustee and any Receiver;

(ii) *second*, to satisfy, *pro rata and pari passu*, any unpaid obligations of the Issuer to the Custodian, the Note Calculation Agent, the Account Bank, the Principal Paying Agent, the Insurance Manager, the Calculation Agent, the Corporate Services Provider and any other service provider appointed in accordance with the Transaction Documents; and

(iii) *third*, the remainder to the Risk Transferor.

Any monies held by the receiver or the Trustee after application of monies received or recovered after delivery of an Enforcement Notice and not required for application in discharge of the Obligations in accordance with Post-Enforcement Priorities of Payment shall be paid by the Receiver or the Trustee to the Issuer for application in or towards meeting the obligations of the Issuer, which do not constitute Obligations, as such obligations fall due.

Payments

Record Date

The "**Record Date**" with respect to an Payment Date or Redemption Date shall be the Definitive Note Record Date or the Global Note Record Date, as applicable. The "**Definitive Note Record Date**" shall be, in the case of any payment in respect of a Definitive Note, the open of business on the fifteenth day (whether or not such fifteenth day is a Business Day) before the relevant due date for such payment. The "**Global Note Record Date**" shall be, in the case of any payment in respect of a Global Note, the last day on which each Clearing System for which the Global Note is being held is open for business immediately preceding the relevant due date for such payment.

The Trust Deed

General

On or about the Issuance Date, the Issuer entered into the Trust Deed with, among others, the Trustee, the Principal Paying Agent, the Registrar and the Custodian.

The Trust Deed and the Notes will be governed by, and construed in accordance with, the laws of England and Wales.

Certain Covenants

For as long as any of the Notes remain outstanding, the Issuer will comply with the terms of certain covenants, including those set forth below:

(a) *Risk Transfer Agreement*. The Issuer will not substitute the related Risk Transfer Agreement with any other Risk Transfer Agreement or financial contract.

(b) *Records*. The Issuer will maintain records to the extent required under applicable law.

(c) *Collateral*. The Issuer will maintain the respective Collateral and the Trustee's security interest in the respective Collateral.

(d) *Maintenance of Existence*. The Issuer will maintain its existence and comply with applicable regulatory requirements.

(e) *Delivery of Notice of Certain Payments*. The Issuer will deliver to the Trustee notice of any Issuer Payment, Principal Reduction, Negative Loss Payment or Principal Increase applicable to the Notes.

(f) *Provision of Various Information*. Upon submission of a Request for Information Form by a Noteholder or prospective purchaser, the Issuer will provide, or cause to be provided, to the Noteholders or prospective purchasers designated by such Noteholders the Rule 144A Information, the Available Information and any other information required by law.

(g) *Prohibition on Other Business Activities.* The Issuer will not engage in any business other than as described herein or incidental or ancillary thereto.

(h) *Prohibition on Incurrence of Indebtedness*. The Issuer will not incur any indebtedness for borrowed money (other than the Notes).

(i) *Prohibition on Consolidation or Merger*. The Issuer may not consolidate or merge with or into any other person or dispose of all or substantially all of its assets.

(j) *Other Agreements.* The Issuer may not enter into any Risk Transfer Agreement or financial contract with respect to the Notes other than the Risk Transfer Agreement.

"**Trust Documents**" means the Trust Deed and the Deed of Charge and (unless the context requires otherwise) includes any deed or other document executed in accordance with the provisions of the Trust Deed or (as applicable) the Deed of Charge and expressed to be supplemental to the Trust Deed or the Deed of Charge (as applicable).

Modifications

The Trustee may, at any time and from time to time, without the consent or sanction of the Noteholders or any other Beneficiaries (other than the Risk Transferor) but with the prior consent of the Risk Transferor, concur with the Issuer and any other relevant parties in making:

(a) any modification to the Conditions, the Trust Documents (other than in respect of a Reserved Matter or any provision of the Trust Documents referred to in the definition of a Reserved Matter), the Notes, the Risk Transfer Agreement or the other Transaction Documents in relation to which its consent is required which, in the opinion of the Trustee, will not (i) be materially prejudicial to

the interests of the Noteholders, and (ii) as evidenced by an opinion of counsel, have any material adverse impact on the U.S. federal income taxation of any Notes or any Noteholder; or

(b) any modification to the Conditions, Trust Documents, the Notes, the Risk Transfer Agreement or the other Transaction Documents, in relation to which its consent is required, if, in the opinion of the Trustee, such modification is of a formal, minor or technical nature, or is made to correct a manifest error.

"**Reserved Matter**" means any proposal:

(a) to change any date fixed for payment of principal or interest in respect of the Notes or any of them;

(b) to reduce the amount of principal or interest due on any date in respect of the Notes or any of them;

(c) to alter the method of calculating the amount of any payment in respect of the Notes or any of them on redemption or maturity;

(d) to release or substitute the Security or any part thereof except in accordance with the Transaction Documents;

(e) to effect the exchange, conversion or substitution of the Notes or any of them for, or the conversion of such Notes into, shares, bonds or other obligations or securities of the Issuer or any other person or body corporate formed or to be formed;

(f) to change the currency in which amounts due in respect of the Notes or any of them are payable;

(g) to alter the priority of payment of interest or principal in respect of the Notes or any of them;

(h) to change the quorum required at any meeting of Noteholders (whether originally convened or resumed following an adjournment) or the majority required to pass an Extraordinary Resolution; or

(i) to amend this definition.

Any modification in respect of a Reserved Matter shall require the prior consent of an affirmative vote of Noteholders representing not less than three quarters of the Outstanding Principal Amount of the Notes.

Modifications Without Risk Transferor Consent

No term of the Trust Deed or any other Transaction Document may be amended without the prior written consent of the Risk Transferor.

Events of Default and Remedies

No Petition

By its acquisition of a Note, each Noteholder will agree that neither it nor the Trustee on its behalf will institute against the Issuer, or join in any institution against the Issuer of, any bankruptcy, reorganisation, arrangement, examination, insolvency, liquidation or similar proceeding with respect to the Issuer under any U.S. federal, U.S. state or foreign law. The Noteholders will only have recourse to the Issuer's Collateral for the Notes as provided in the Deed of Charge and the Trust Deed.

Extinguishment of Obligations

All obligations of the Issuer under the Trust Deed and the Notes will be limited recourse obligations of the Issuer payable solely from the Collateral in the Collateral Account and the Collateral Payment Account and will be deemed extinguished if, at any time, such Collateral is exhausted (and there are no claims that may be asserted by the Issuer with respect to contractual obligations of third parties to the Issuer).

All obligations of the Issuer under the Risk Transfer Agreement will be limited recourse obligations of the Issuer payable solely from the Collateral in the Collateral Account and the Collateral Payment Account and will be deemed extinguished if, at any time, such Collateral is exhausted (and there are no claims that may be asserted by the Issuer with respect to contractual obligations of third parties to the Issuer).

All obligations of the Issuer under each of the Insurance Management Agreement, the Calculation Agent Agreement, the Escrow Agreement, the PCS License Agreement and the PERILS Trading License Agreement will be limited recourse obligations of the Issuer payable solely from the Expenses Account and (if applicable) the Collateral Account but only when no Notes remain outstanding and the Risk Transfer Agreement has been terminated in accordance with its terms and will be deemed extinguished if, at any time, the Expenses Account and the Collateral Account are exhausted (and there are no claims that may be asserted by the Issuer with respect to contractual obligations of third parties to the Issuer).

Neither the Risk Transferor nor any of its affiliates is a guarantor of or obligor on the Notes, and Noteholders will not have any recourse against the Risk Transferor or its affiliates in the event of a default by the Issuer.

In addition, claims for principal and interest in respect of the Notes shall become void unless the relevant Notes are presented for payment within two (2) years of the applicable Redemption Date.

Money for Payments to be Held by the Trustee and the Paying Agent

If the Trustee, with the approval of the Risk Transferor, determines that (i) all of the Obligations and all other obligations secured by any of the Trust Documents have been fully and finally discharged and (ii) none of the Beneficiaries is under any commitment, obligation or liability (whether actual or contingent) to make advances or provide other financial accommodation to the Issuer pursuant to the Transaction Documents, the trusts set out in the Trust Deed shall be wound up. At that time (the "**Final Discharge Date**") the Trustee shall release, without recourse or warranty, all of the Security then held by it and the rights of the Trustee under each of the Trust Documents, at which time each of the parties to the Trust Deed shall be released from its obligations under the Trust Deed (save for those which arose prior to the winding-up). For the avoidance of doubt, if the Trustee (on the basis of legal advice received by it for this purpose) considers that an amount paid to it or any Beneficiary for application in or towards repayment of the Obligations is (having regard to the circumstances then existing) capable of being avoided or otherwise set aside on the liquidation or administration of the Issuer or otherwise, such amount shall not be considered to have been paid and such Obligations shall not be considered to have been discharged in full and the Trustee shall not be obliged to release the relevant Security.

Purchase of Notes by Issuer and Others

None of the Trust Deed, the Conditions or the Memorandum and Articles of Association of the Issuer restrict the Issuer or the Risk Transferor from purchasing the Notes.

Trustee

BNY Mellon Corporate Trustee Services Limited will be the Trustee under the Trust Deed.

The Trustee may resign at any time upon not less than three calendar months' prior written notice to the Issuer and the Risk Transferor or may be removed, with the consent of the Risk Transferor, by the Issuer as directed by Noteholders representing a majority of the Outstanding Principal Amount of the Notes. The Issuer also has the right to remove the Trustee for ineligibility, bankruptcy, insolvency, receivership or other incapability to act. If the Trustee resigns or is removed, or if a vacancy occurs in the office of the trustee for any reason, a successor Trustee shall be appointed in accordance with the provisions of the Trust Deed. No such resignation or removal shall be effective until a successor Trustee has been appointed.

The Issuer will indemnify the Trustee with respect to certain matters relating to the Trust Deed.

Non-Permitted Noteholder

Upon notice that any Noteholder is either (a) not a resident of a Permitted U.S. Jurisdiction or Permitted Non-U.S. Jurisdiction, (b) not a Qualified Institutional Buyer, Qualified Eligible Person and, if a U.S. Person, not a Qualified Purchaser at the time of acquiring an interest in the Notes or (c) not a Qualified Investor, then, if the Issuer determines, with respect to (a) above, after requiring such Noteholder to show proof of residency and based on written advice from its legal counsel, that such Noteholder does not reside in a Permitted U.S. Jurisdiction or Permitted Non-U.S. Jurisdiction, with respect to (b) above, based on written advice from its legal counsel, that such Noteholder is not a Qualified Institutional Buyer, a Qualified Eligible Person and, if a U.S. Person, not a Qualified Purchaser or with respect to (c) above, based on written advice from its legal counsel, that such Noteholder is not a Qualified Investor (a "**Non-Permitted**

Noteholder"), the Issuer shall require (i) the Non-Permitted Noteholder described in (a) above to sell its interest in the Notes to a Person who is a resident of a Permitted U.S. Jurisdiction or Permitted Non-U.S. Jurisdiction, a Qualified Institutional Buyer, a Qualified Eligible Person and, if a U.S. Person, a Qualified Purchaser, and a Qualified Investor within thirty (30) calendar days after notice from the Issuer that it must sell such Note (or its interest in such Note) to such a Person and (ii) the Non-Permitted Noteholder described in (b) above to sell its interest in the Notes (or its interest in such Note) to a Person who is a Qualified Institutional Buyer, Qualified Eligible Person and, if a U.S. Person, a Qualified Purchaser and, if a U.S. Person, a Qualified Purchaser, and a Qualified Investor within thirty (30) calendar days after notice from the Issuer that it must sell such Note (or its interest in such Note) to a Person who is a Qualified Institutional Buyer and meets the other applicable transfer requirements. If such Non-Permitted Noteholder fails to effect the sale within such 30-day period, the Issuer shall have the right, without further notice to such Non-Permitted Noteholder, to compel such Non-Permitted Noteholder to sell such Notes or interest in Notes to a purchaser selected by the Issuer who meets the applicable transfer requirements on such terms as the Issuer may choose. The Issuer may select the purchaser by soliciting one or more bids from one or more brokers or other market professionals that regularly deal in securities similar to the Notes, and selling such Notes to the highest such bidder. However, the Issuer may select a purchaser by any other means determined by the Issuer in its sole discretion. Each Noteholder (or interest therein), the Non-Permitted Noteholder and each other Person in the chain of title from the new Noteholder to the Non-Permitted Noteholder, by its acceptance of an interest in the Notes, agrees to co-operate with the Issuer to effect such transfers. The proceeds of such sale, net of any commissions, expenses and taxes due in connection with such sale shall be remitted to the Non-Permitted Noteholder. The terms and conditions of any sale shall be determined in the sole discretion of the Issuer, and the Issuer shall not be liable to any person having an interest in the Notes sold as a result of any such sale or the exercise of such discretion.

Book-Entry, Delivery and Form

The Notes will be represented by one or more fully registered global security certificates (each, a "**Global Note**") and will be available for purchase solely through the book-entry system provided by the applicable Clearing System, as specified in this Circular.

Unless and until Definitive Notes are issued under the limited circumstances described herein, no purchaser of an ownership interest in the Notes ("**Beneficial Owner**") will be entitled to receive a Definitive Note representing such Beneficial Owner's interest in such Note. Until such time, all references herein to actions by Noteholders will refer to actions taken by the applicable Clearing System upon instructions from its participating organisations ("**Participants**"), and all references herein to distributions, notices, reports, and statements to such Clearing System or its nominee, as the registered holder of the Notes, for distribution to the appropriate Noteholders in accordance with such Clearing System's procedures. Interests in any Global Note or Definitive Notes for the Notes will be recorded only in permitted denominations as provided in this Circular.

The Notes have not been and will not be registered under the Securities Act and are subject to substantial restrictions on transfer. The Notes (including beneficial interests therein) are being offered only to investors ("**Eligible Purchasers**") that are (i) Qualified Investors, Qualified Institutional Buyers and Qualified Eligible Persons that, with respect to U.S. Persons, are also Qualified Purchasers, and (ii) residents of, and purchasing in, a Permitted U.S. Jurisdiction or Permitted Non-U.S. Jurisdiction (and meet the other requirements set forth under "*Notice to Investors*", except as otherwise specified in this Circular). The Notes will bear a legend and may not be transferred except in compliance with the transfer restrictions set forth in the Notes and such legend. The Notes may be reoffered and sold only to Eligible Purchasers. See "*Notice to Investors.*" Each purchaser of a Note will be deemed to have made the representations set forth in "*Notice to Investors—Representations of Purchasers*", except as otherwise specified in this Circular.

A Beneficial Owner's ownership of a Global Note will be recorded on the records of the brokerage firm, bank, thrift institution or other financial intermediary (each, a "**Financial Intermediary**") that maintains the Beneficial Owner's account for such purpose. In turn, the Financial Intermediary's ownership of such Global Note will be recorded on the records of the relevant Clearing System (or of a Participant that acts as agent for the Financial Intermediary, whose interest will in turn be recorded on the records of the relevant Clearing System, if the Beneficial Owner's Financial Intermediary is not a Participant and on the records of the relevant Clearing System, as appropriate).

Beneficial Owners will receive all distributions allocable to the Global Notes from the Paying Agents through the applicable Clearing System and its Participants. While the Global Notes are outstanding (except

under the circumstances described below), under the rules, regulations and procedures creating, governing and affecting the applicable Clearing System and its operations (in each case, the "**Rules**"), such Clearing System is required to make book-entry transfers among its Participants on whose behalf it acts with respect to the Notes. Each Clearing System is required to receive and transmit distributions allocable to the Notes. Participants and Financial Intermediaries with whom Beneficial Owners have accounts with respect to any Notes are similarly required to make book-entry transfers and receive and transmit such distributions on behalf of their respective Beneficial Owners. Accordingly, although Beneficial Owners will not possess physical certificates, the applicable Rules provide a mechanism by which Beneficial Owners will receive distributions and will be able to transfer their beneficial ownership interests in the Notes.

Beneficial Owners will not receive or be entitled to receive Definitive Notes, except under the limited circumstances described below. Unless and until Definitive Notes are issued, Beneficial Owners who are not Participants in a Clearing System may transfer ownership of Notes only through Participants and Financial Intermediaries by instructing such Participants and Financial Intermediaries to transfer beneficial ownership interests in the Notes by book-entry transfer through the applicable Clearing System for the account of the purchasers of the Notes, which account is maintained with their respective Participants or Financial Intermediaries. Under the Rules and in accordance with the applicable Clearing System's normal procedures, transfers of ownership of Notes will be executed through such Clearing System and the accounts of the respective Participants will be debited and credited. Similarly, the Participants and Financial Intermediaries will make debits or credits, as the case may be, on their records on behalf of the selling and purchasing Beneficial Owners.

No Clearing System has knowledge of the actual Beneficial Owners of the Notes held within such Clearing System and their records will reflect only the identity of the direct Participants to whose accounts such Global Notes are credited, which may or may not be the Beneficial Owners. The Participants will remain responsible for keeping account of their holdings on behalf of their customers. Conveyance of notices and other communications by the Clearing Systems to direct Participants, by direct Participants to indirect Participants, and by direct Participants and indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

DTC

The Depository Trust Company has advised that it is a New York-chartered limited purpose trust company that performs services for DTC Participants, some of which (and/or their representatives) own DTC. In accordance with its normal procedures, DTC is expected to record the positions held by each DTC participant in the Global Note for the Notes, whether held for its own account or as a nominee for another person. In general, beneficial ownership of Global Notes clearing through DTC will be subject to the DTC Rules as in effect from time to time.

Principal Paying Agent; Registrar

The Issuer will appoint The Bank of New York Mellon, London Branch as Principal Paying Agent for the Notes. In such capacity, the Principal Paying Agent will be responsible for, among other things, (i) ensuring that payments received from the Issuer or the Risk Transferor by the Principal Paying Agent are duly paid to the applicable Noteholders in accordance with the Agency Agreement and (ii) transmitting to the Issuer any notices from the applicable Noteholders and any notices from the Issuer to the applicable Noteholders. Payment on the Notes will be made in accordance with the standard practices of the applicable Clearing System.

The Issuer will appoint The Bank of New York SA/NV, Luxembourg Branch as Registrar for the Notes who in such capacity will be responsible for maintaining a register outside the United States and the United Kingdom in which the Issuer will provide for the registration of the Notes and registration of transfers of the Notes, and accepting applicable Notes for exchange and registration of transfer.

The Issuer may vary or (with the prior written approval of the Trustee) terminate the appointment of the Principal Paying Agent and the Registrar or (with the prior written approval of the Trustee) appoint additional or other registrars or paying agents or approve any change in the office through which any registrar or paying agent acts; **provided**, **that** at all times any registrar for the Notes shall be located outside the United States and the United Kingdom. The Issuer will cause notice of any resignation, termination or

appointment of any paying agent or registrar and of any change in the office through which any such agent will act to be provided to the appropriate Noteholders.

Notices

Any notice to Noteholders shall be validly given if such notice is either:

(a) published in the Financial Times or, if such newspaper shall cease to be published or timely publication therein shall not be practicable, in such English language newspaper or newspapers as the Trustee shall approve having a general circulation in Europe; or

(b) prior to the issue of any Individual Notes and so long as the Global Notes are held on behalf of the relevant Clearing System, upon delivery of the relevant notice to the relevant Clearing System for communication by them to Noteholders.

Requests for Available Information may be made in writing to the Issuer. Upon receipt of the Request for Access to Information Form, Available Information may be made available by the Issuer to the Noteholder via a secured internet site, by mail or by e-mail.

Definitive Notes

Form of Notes

Physical certificates representing the Notes (each, a "**Definitive Note**") will be issued to Beneficial Owners only upon the following events:

(i) if DTC notifies the Issuer that it is no longer willing or able to discharge properly its responsibilities as depositary with respect to this Restricted Global Note Certificate or ceases to be a clearing agency (as defined in the United States Securities Exchange Act of 1934), or is at any time no longer eligible to act as such, and the Issuer is (in the case of DTC ceasing to be a depositary) unable to locate a qualified successor within 90 days of receiving notice of such ineligibility on the part of DTC;

(ii) in any case, if any of the circumstances described in Condition 13 (*Events of Default*) occurs.

Upon the occurrence of any of the events specified in the Trust Deed, the applicable Clearing System will be required to notify all of its Participants of the availability through such Clearing System of the applicable Definitive Notes. Upon surrender by such Clearing System of the applicable Global Notes and instruction for re-registration, the Issuer will issue certificates representing the applicable Notes in the form of Definitive Notes, and thereafter the Trustee and the Issuer will recognise the holders of such Definitive Notes as Noteholders. Thereafter, payments on the Notes will be made by the Issuer directly to the appropriate Noteholders in accordance with the procedures set forth in the Conditions and in the Trust Deed. Distributions on each Payment Date will be made to Noteholders in whose name the applicable Definitive Notes were registered on the related Record Date. Distributions will be made by wire transfer or by cheque mailed to the address of such Noteholder as it appears on the register maintained by the Registrar. The final distribution with respect to any Definitive Note, however, will be made only upon presentation and surrender of such Definitive Note to a Paying Agent on the Redemption Date, at the office specified against the name of such Paying Agent in the Trust Deed or at such other office as such Paying Agent may specify in accordance with the Agency Agreement.

Definitive Notes will be transferable and exchangeable at the offices of the Registrar. No service charge will be imposed for any registration or transfer or exchange, but the Registrar may require payment of a sum sufficient to cover any tax or other governmental charge imposed in connection therewith. The Registrar will not be required to register the transfer or exchange of Definitive Notes during any period of time from and excluding a Record Date through and including the related Payment Date.

Governing Law; Consent to Jurisdiction

The Trust Deed and the Notes will be governed by and construed in accordance with English law and the courts of England have exclusive jurisdiction, although the Trustee and the Noteholders may be able to take proceedings in other jurisdictions to the extent allowed by law.

PLAN OF DISTRIBUTION

The Notes will be sold and purchased subject to the terms and conditions set out in the purchase agreement (the "**Purchase Agreement**") to be entered into between the Issuer and the Initial Purchasers (as set out in such Purchase Agreement) dated 24 May 2019.

The purchase price paid to the Issuer for the Notes will be set out in this Circular. After the Notes are released for sale, the Offering Price and other selling terms may from time to time be varied by the Initial Purchasers.

Each Initial Purchaser may purchase Notes for its own account and for the accounts of its affiliates.

The Notes have not been and will not be registered under the Securities Act or any applicable U.S. state or foreign securities laws. Each Initial Purchaser agrees that it will offer or sell the Notes only to investors who are, among other things, (i) Qualified Investors pursuant to the Risk Transformation Regulations 2017; (ii) Qualified Institutional Buyers that, with respect to U.S. Persons, are also Qualified Purchasers; (iii) Qualified Eligible Persons; and (iv) residents of, and purchasing in, and who will hold the Notes in, a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction and otherwise agree to be bound by the transfer restrictions described under "*Notice to Investors*." The Notes may be reoffered and sold only to investors who are (i) Qualified Investors pursuant to the Risk Transformation Regulations 2017; (ii) Qualified Institutional Buyers that, with respect to U.S. Persons, are also Qualified Purchasers; (iii) Qualified Eligible Persons; and (iv) residents of, and purchasing in, and who will hold the Notes in, a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction and otherwise agree to be bound by the transfer restrictions described under "*Notice to Investors*."

In connection with the applicable Offering, the Initial Purchasers may purchase and sell the Notes in a non-public transaction in accordance with the requirements of Rule 144A. These transactions may include short sales and stabilising transactions and purchases to cover short positions created by the Initial Purchasers in connection with the Offering. Stabilising transactions consist of certain bids or purchases for the purpose of preventing or retarding a decline in the market price of the Notes, and short positions created by the Initial Purchasers involve the sale by such Initial Purchasers of a greater number of Notes than they are required to purchase from the Issuer in the applicable Offering. Each Initial Purchaser also may impose a penalty bid, whereby selling concessions allowed to broker-dealers in respect of the Notes sold in the applicable Offering may be reclaimed by such Initial Purchaser if the Notes are repurchased by such Initial Purchaser in stabilising or covering transactions. These activities may stabilise, maintain or otherwise affect the market price of the Notes, which may be higher than the price that might otherwise prevail in the open market; and these activities, if commenced, may be discontinued at any time. These transactions may be effected in the over-the-counter market or otherwise. The Notes are a new issue of securities with no established trading market. The Initial Purchasers have advised the Issuer and the Risk Transferor that they may make a market in the Notes but are not obligated to do so and may discontinue market-making at any time without notice. No assurance can be given as to the liquidity of the trading market for any of the Notes.

In connection with any Offering of the Notes, the Initial Purchasers (each, a "**Stabilising Manager**") (or persons acting on behalf of the Stabilising Manager) may over-allot the Notes or effect transactions with a view to supporting the market price of the Notes at a level higher than that which might otherwise prevail. However, there is no assurance that a Stabilising Manager (or persons acting on behalf of a Stabilising Manager) will undertake stabilisation action. Any stabilisation action may begin on or after the date on which adequate public disclosure of the terms of the offer of the Notes is made and, if begun, may be ended at any time, but it must end no later than the earlier of thirty (30) days after the Issuance Date and sixty (60) days after the date of the allotment of the Notes. Any stabilisation action or over-allotment must be conducted by the Stabilising Manager (or person(s) acting on behalf of any Stabilising Manager) in accordance with all applicable laws and rules.

Each Initial Purchaser agrees not to offer, sell or deliver any Notes in or from any jurisdiction except under circumstances that will result in compliance with the applicable laws thereof and will comply with the selling restrictions specified on pages iv to xx of this Circular.

The Issuer agrees that it will not, and will not permit any of its "affiliates" (as defined in Rule 144) to resell any Notes that constitute "restricted securities" under Rule 144 that may have been reacquired by any of them.

The Issuer and the Risk Transferor will agree to indemnify the Initial Purchasers and certain other persons against certain liabilities, including liabilities under the Securities Act.

Each Initial Purchaser and its affiliates are engaged in various activities, which may include insurance and reinsurance related brokerage, securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Each Initial Purchaser and its affiliates have, from time to time, performed, and may in the future perform, various financial advisory investment banking and insurance and reinsurance related brokerage services for the Issuer or the Risk Transferor, for which they received or will receive customary fees and expenses.

In the ordinary course of its various business activities, each Initial Purchaser and its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Issuer or the Risk Transferor.

In relation to each Member State of the European Economic Area that has implemented the Prospectus Directive (each, a "**Relevant Member State**"), each Initial Purchaser will be required to represent and agree, that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the "**Relevant Implementation Date**") it has not made and will not make an offer of Notes which are the subject of the offering contemplated by this Circular to the public in that Relevant Member State except that it may, with effect from and including the Relevant Implementation Date, make an offer of such Notes to the public in that Relevant Member State:

(a) at any time to any legal entity which is a qualified investor as defined in the Prospectus Directive;

(b) at any time to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the relevant dealer or dealers nominated by the Issuer for any such offer; or

(c) at any time in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of Notes referred to in (a) to (c) above shall require the Issuer or an Initial Purchaser to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression "**an offer of Notes to the public**" in relation to any Notes in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe the Notes, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "**Prospectus Directive**" means Directive 2003/71/EC (as amended or superseded), and includes any relevant implementing measure in the Relevant Member State.

Each Initial Purchaser has represented and agreed that: (A) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and (B) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the Notes in, from or otherwise involving the United Kingdom.

CERTAIN TAX CONSIDERATIONS

United Kingdom Taxation

The following is a summary of certain material United Kingdom Tax considerations relating to the Issuer. It is based on current law and the practice of Her Majesty's Revenue and Customs, which may be subject to change, sometimes with retrospective effect. The following is a general guide for information purposes and should be treated with appropriate caution. It is not intended as tax advice and it does not purport to describe all of the tax considerations that may be relevant to the Issuer or to an investor or to an investor in the Notes. Prospective investors should consult their own professional advisers on the tax implications under the laws of the countries in which they may be liable to taxation of making an investment in, holding or disposing of Notes and the receipt interest payments on the Notes.

Tax Residence

It is the intention of the directors of the Issuer that the affairs of the Issuer will be managed such that the Issuer is resident solely in the United Kingdom for United Kingdom Tax purposes.

Insurance linked securities regime

The Tax Regulations set out a special tax regime for qualifying transformer vehicles and it is the intention of the directors of the Issuer that the Issuer will constitute a qualifying transformer vehicle for these purposes.

A transformer vehicle will be a qualifying transformer vehicle if it is a company limited by shares that (i) carries out the activity of insurance risk transformation where substantially all of that activity relates to business other than basic life assurance and general annuity and (ii) is authorised under Part 4A of the Financial Services and Markets Act 2000 to carry out insurance risk transformation.

The Tax Regulations provide that no liability to corporation tax arises in respect of the profits arising from the activity of insurance risk transformation carried out by a qualifying transformer vehicle.

Any profits arising from administrative or management activities or where profits arise as a result of holding investments in excess of the minimum amount reasonably required to satisfy the fully funded requirement in relation to the Issuer, as applicable, are not treated as arising from an activity of insurance risk transformation and so cannot benefit from the special tax treatment mentioned above.

The special tax treatment referred to above will not apply in relation to profits in the accounting period in which either of two conditions is met, or treated as met, or in any subsequent accounting period. Broadly the first condition will be met if the qualifying transformer vehicle is liable to certain penalties in relation to certain tax administrative matters and the second condition will be met, if, having regard to all the circumstances, it would be reasonable to conclude that the main purpose, or one of the main purposes, of the insurance risk transformation or of arrangements which the insurance risk transformation forms part of, is to secure a tax advantage for any person.

Withholding Taxes

The Issuer should not be required to withhold Tax when paying interest on the Notes, **provided that** it falls within the special tax regime referred to above.

In the event that the special tax regime were not to apply, Notes which carry a right to interest will constitute "quoted Eurobonds" provided they are and continue to be listed on a recognised stock exchange. Whilst the Notes are and continue to be quoted Eurobonds, payments of interest on the Notes may be made without withholding or deduction for or on account of United Kingdom income tax.

Securities will be "listed on a recognised stock exchange" for this purpose if they are admitted to trading on an exchange designated as a recognised stock exchange by an order made by the Commissioners for HMRC and either they are included in the United Kingdom official list (within the meaning of Part 6 of the Financial Services and Markets Act 2000) or they are officially listed, in accordance with provisions corresponding to those generally applicable in European Economic Area states, in a country outside the United Kingdom in which there is a recognised stock exchange.

Euronext Dublin is a recognised stock exchange. The Issuer's understanding of current HMRC practice is that securities which are officially listed and admitted to trading on the Global Exchange Market of that exchange may be regarded as "listed on a recognised stock exchange" for these purposes.

In all cases falling outside the exemptions described above, interest on the Notes may fall to be paid under deduction of United Kingdom income tax at the basic rate (currently 20%) subject to such relief as may be available following a direction from HMRC pursuant to the provisions of any applicable double taxation treaty, or to any other exemption which may apply.

Stamp Taxes

The Issuer has been advised on the basis of a confirmation received from HMRC that the Notes should not be subject to stamp duty or stamp duty reserve tax.

United States Taxation

The following summary of the Issuer's taxation and the taxation of the Noteholders sets forth certain U.S. federal income tax considerations relating to the Issuer and the purchase, ownership and disposition of the Notes by the purchasers in this offering. This discussion (including and subject to the matters and qualifications set forth in such summary) of the tax considerations under "*Certain Tax Considerations—United States Taxation*" is based upon the advice of Clifford Chance US LLP. The advice of such firm does not include any factual or accounting matters, determinations or conclusions or facts relating to the Issuer's business or activities and relies upon and is premised on the accuracy of the assumptions contained herein and the factual statements and representations (both oral and written) made by the Issuer, its representatives, the Initial Purchasers and the Risk Transferor concerning the Issuer's business, properties, ownership, organisation, cash flows, source of income and manner of operations, including any forward looking statements, beliefs, intentions or expectations with respect to such. The discussion is based upon current law. Legislative, judicial or administrative changes or interpretations may be forthcoming that could be retroactive and could affect the tax consequences to the Issuer or the Noteholders. There can be no assurances that the Internal Revenue Service or other taxing authority will not challenge one or more of the consequences discussed herein. The tax treatment of a holder of Notes, or of a person treated as a holder of Notes for U.S. federal income, state, local or non-U.S. tax purposes, may vary depending on the holder's particular tax situation. Statements contained herein as to the Issuer's beliefs, expectations, intended treatment and conditions represent the view of the Issuer's management and do not represent the opinions of counsel. For purposes of this section, "Noteholders" refers to holders of Notes that beneficially own the Notes for U.S. federal income tax purposes.

PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE U.S. FEDERAL INCOME TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF THE NOTES IN LIGHT OF THEIR OWN PARTICULAR CIRCUMSTANCES, AS WELL AS THE EFFECT AND APPLICABILITY OF ANY STATE, LOCAL OR NON-U.S. TAX LAWS.

United States Taxation of the Issuer

A non-U.S. corporation that is engaged in the conduct of a trade or business in the United States will be subject to U.S. federal income tax as described below, unless entitled to the benefits of an applicable tax treaty. Whether a trade or business is being conducted in the United States is an inherently factual determination. The Issuer intends to conduct substantially all of its operations outside the United States and limit its U.S. contacts so that the Issuer is not treated as engaged in the conduct of a trade or business in the United States. In this regard, the Issuer will receive the opinion of Clifford Chance US LLP, which opinion is based on certain assumptions and representations regarding this offering, the transactions related thereto and the Issuer's ongoing operations, that, although the matter is not free from doubt, the Issuer will not be treated as engaged in a trade or business within the United States. Opinions of counsel are not binding on the IRS or the courts. Because definitive identification of activities which constitute being engaged in a trade or business in the United States is not provided by the Code, regulations or court decisions, there can be no assurance that the IRS will not contend successfully that the Issuer is engaged in a trade or business in the United States for U.S. federal income tax purposes.

Under the income tax treaty between the United Kingdom and the United States (the "**U.K. Treaty**"), the Issuer, if entitled to the benefits of the U.K. Treaty, will not be subject to U.S. federal income tax on any

income determined to be effectively connected with a U.S. trade or business unless that trade or business is conducted through a permanent establishment in the United States. A U.K. resident will generally be entitled to the benefits of the U.K. Treaty if, on at least half the days of the relevant taxable or chargeable period, certain qualified U.S. and U.K. persons own, directly or indirectly, shares or other beneficial interests representing at least 50 percent of the aggregate voting power and value of the resident and less than 50% of such company's gross income for the relevant taxable period is paid or accrued directly or indirectly to persons other than certain qualifying U.S. or U.K. residents in the form of payments that are deductible for U.K. income tax purposes, or if certain other tests are met. The Issuer does not expect to be eligible for U.K. Treaty benefits.

A non-U.S. corporation deemed to be engaged in a trade or business in the United States would be subject to U.S. federal income tax at regular corporate rates on its income which is treated as effectively connected with the conduct of that trade or business ("**ECI**") as well as to the branch profits tax on its dividend equivalent amount, generally, the ECI (with certain adjustments) deemed withdrawn from the United States, unless the corporation is entitled to relief under the permanent establishment provision of an applicable income tax treaty, as discussed above.

Such income tax, if imposed, would be based on ECI computed in a manner generally analogous to that applied to the income of a U.S. corporation. Under the Code and current case law, a non-U.S. corporation is generally entitled to deductions and credits only if it files a U.S. federal income tax return. The Issuer does not intend to file protective U.S. federal income tax returns. The federal income tax rates currently are 21% for a corporation's ECI and 30% for the additional "branch profits" tax.

Because the Code, regulations and court decisions fail to definitively identify activities that constitute being engaged in a trade or business in the United States, the Issuer cannot be certain that the "**IRS**" will not contend successfully that the Issuer is or will be engaged in a trade or business in the United States for U.S. federal income tax purposes. The imposition of a U.S. federal income tax liability on the Issuer would adversely affect its ability to make payments on the Notes and would substantially reduce the return to the Noteholders on their investment.

Non-U.S. corporations not engaged in a trade or business in the United States are nonetheless subject to a 30% U.S. federal income tax imposed by withholding (the "**Withholding Tax**") on certain "fixed or determinable annual or periodic gains, profits and income" ("**FDAP**") derived from sources within the United States (such as dividends and certain interest on investments), subject to exemption under the Code or reduction by applicable treaties. It is intended that the investments in the Collateral Account would not be subject to Withholding Tax, although no assurance can be provided in this regard.

Additionally, insurance and reinsurance premiums received by a non-U.S. insurer are generally subject to the U.S. federal insurance excise tax ("**FET**"). A recent court decision (and an IRS pronouncement acquiescing to the decision) held that the FET does not apply to reinsurance cessions or retrocession of risks between two non-U.S. reinsurers. Accordingly, the Issuer does not expect to be subject to FET. This decision and acquiescence has created some ambiguity in the law regarding whether Withholding Tax could apply to premiums paid to non-U.S. insurers with respect to risks of a U.S. entity or individual located wholly or partly within the U.S. and with respect to a non U.S. entity or individual engaged in trade or business in the U.S. risks located within the U.S. and on reinsurance premiums for any reinsurance policy covering any such risks ("**U.S. Situs Risks**"). Although the law is not entirely clear, the Issuer does not expect to be subject to Withholding Tax with respect to any amounts received as reinsurance premiums.

The U.S. Foreign Account Tax Compliance Act ("**FATCA**") provisions of the Hiring Incentives to Restore Employment Act of 2010, regulations issued thereunder and the intergovernmental agreement ("**IGA**") between the United Kingdom and the U.S. require certain FFIs (which may include the Issuer) to disclose to the Commissioners for Her Majesty's Revenue and Customs (for transmittal to the IRS) the name, address, tax identification number, and other specified information of certain U.S. and non-U.S. persons who own a direct or indirect interest in the FFI, or otherwise be subject to a 30% withholding tax with respect to certain U.S. source income (including interest and dividends) ("**withholdable payments**"). Additionally, beginning the second anniversary of the date on which final U.S. Treasury Regulations defining "**foreign passthru payments**" term are published in the U.S. Federal Register, if the Issuer is characterised as an FFI, a 30% withholding tax on such foreign passthru payments could be imposed on Noteholders that do not provide the required information (without any gross-up) or, if the Noteholders are, themselves, FFIs, certification that they (a) have entered into their own agreements with the U.S. Treasury Department, (b) establish that an exemption applies or (c) are required to comply with FATCA under an

applicable IGA. Further, if the Issuer is not characterised as an FFI, it may be characterised as a passive non-financial foreign entity, in which case it would appear to be subject to such 30% withholding tax on certain payments unless it either provides information to withholding agents with respect to its "substantial U.S. owners" or makes certain certifications. For the purposes of FATCA, an FFI is generally a non-U.S. entity that (i) accepts deposits in the ordinary course of a banking or similar business, (ii) holds financial assets for the accounts of others as a substantial portion of its business, (iii) is engaged primarily in the business of investing, reinvesting, or trading in securities, partnership interests, commodities, or any interest in such securities, partnership interests or commodities, (iv) is an insurance company that issues, or is obligated to make payments with respect to, a cash value insurance or annuity contract or (v) is an entity that is a holding company or treasury center that is part of an expanded affiliated group that includes a depository institution, custodial institution, insurance company, or certain other entities, or is formed in connection with or availed of by an investment vehicle established with an investment strategy of investing, reinvesting or trading in financial assets.

The Issuer may be subject to the requirements imposed on FFIs or passive non-financial foreign entities under FATCA and will use reasonable efforts to avoid the imposition of a withholding tax under FATCA, which may include reporting information to the Commissioners for Her Majesty's Revenue and Customs (for transmittal to the IRS). In this event, Noteholders will be required to provide any information, tax documentation and waivers that the Issuer determines are necessary to avoid the imposition of such withholding tax. The Issuer's ability to satisfy such obligations will depend on each Noteholder providing, or causing to be provided, any information, tax documentation and waivers, including information concerning the direct or indirect owners of such Noteholder, that the Issuer determines are necessary to satisfy such obligations. If the Issuer is unable to comply with FATCA, the Issuer intends to liquidate its money market fund assets, if any, and hold cash in its place.

Holding cash instead of money market funds will reduce the amount available for Noteholders. Moreover, if the Issuer initially complies or intends to comply with FATCA but is subsequently unable to comply, or fails to comply, distributions from, and proceeds from the disposition of, its money market funds may be subject to a 30% withholding tax, in which case the Issuer will not have sufficient funds to make payments due under the Notes.

In the event any Noteholder fails to timely provide any information or tax documentation that the Issuer determines is necessary to satisfy any obligations that it may have under FATCA, or to the extent that the Noteholder's ownership otherwise would cause the Issuer to be subject to withholding tax under FATCA, (A) the Issuer (or its agents on its behalf) is authorised to withhold amounts otherwise distributable to the Noteholder as compensation for any amount withheld from payments to the Issuer as a result of such failure or such Noteholder's ownership, and (B) to the extent necessary to avoid an adverse effect on the Issuer or any other Noteholder as a result of such failure or such Noteholder's ownership, the Issuer will have the right to compel the Noteholder to sell its Notes and, if the Noteholder does not sell its Notes within 10 days after notice from the Issuer, to sell the Notes at a public or private sale called and conducted in any manner permitted by law, and to remit the net proceeds of such sale (taking into account any taxes and expenses incurred by the Issuer in connection with such sale) to the Noteholder as payment in full for the Notes. The Issuer may also assign each such Note a separate CUSIP or ISIN number in the Issuer's sole discretion.

United States Taxation of Noteholders

General

Unless otherwise stated, this summary deals only with Noteholders that are U.S. Persons or U.S. Holders (each as defined below) who acquire their Notes pursuant to this offering at the initial offering price and who hold their Notes as capital assets within the meaning of section 1221 of the Code. The following discussion is only a discussion of the U.S. federal income tax matters as described herein and does not purport to address all of the U.S. federal income tax consequences that may be relevant to a particular Noteholder in light of such Noteholder's specific circumstances. In addition, the following summary does not address the U.S. federal income tax consequences that may be relevant to special classes of Noteholders, such as financial institutions, insurance companies, regulated investment companies, real estate investment trusts, dealers or traders in securities, tax exempt organisations, expatriates, investors in pass through entities, persons whose functional currency is not the U.S. Dollar, persons for whom interest on the Notes is "business interest income", or persons who hold their Notes as part of a hedging or conversion transaction or as part of a short-sale or straddle, who may be subject to special rules or treatment under the Code. This discussion is based upon the Code, the Treasury Regulations promulgated thereunder and any relevant

administrative rulings or pronouncements or judicial decisions, all as in effect on the date hereof and as currently interpreted, and does not take into account possible changes in such tax laws or interpretations thereof, which may apply retroactively. This discussion does not include any description of the tax laws of any state or local governments within the United States or of any non-U.S. government. Persons considering acquiring Notes should consult their own tax advisors concerning the application of the U.S. federal tax laws to their particular situations as well as any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction prior to making such investment.

If a partnership (or other entity treated as a partnership for U.S. federal income tax purposes) holds the Notes, the tax treatment of the partners will generally depend on the status of the partner and the activities of the partnership. If you are a partner of a partnership holding Notes, you should consult your tax advisor.

For purposes of this discussion, the term "**U.S. Person**" means: (i) a citizen or resident of the United States, (ii) a corporation created or organised in or under the laws of the United States or organised under the laws of any political subdivision thereof, (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source, (iv) a trust if either (x) a court within the United States is able to exercise primary supervision over the administration of such trust and one or more U.S. Persons have the authority to control all substantial decisions of such trust or (y) the trust has a valid election in effect to be treated as a U.S. person for U.S. federal income tax purposes or (v) any other person or entity that is treated for U.S. federal income tax purposes as if it were one of the foregoing. A U.S. Person, other than an entity treated as a partnership or other pass through entity for U.S. federal income tax purposes, that is the Beneficial Owner of a Note may be referred to herein as a "**U.S. Holder**."

Special Rules Applicable to Certain Accrual Method Taxpayers

Pursuant to recent legislation, an accrual method taxpayer that reports revenues on an "**applicable financial statement**" generally must recognize income for U.S. federal income tax purposes no later than the taxable year in which such income is taken into account as revenue in the applicable financial statements. This rule could potentially require such a taxpayer to recognize income for U.S. federal income tax purposes with respect to Notes prior to the time such income otherwise would be recognized pursuant to the rules described below. U.S. Persons should consult their tax advisors regarding the potential applicability of these rules to their investment in Notes.

Classification of the Notes

Although there are no relevant authorities that directly address the Issuer's characterisation or the characterisation of the Notes or an instrument substantially similar to the Notes for U.S. federal income tax purposes, and the matter is not free from doubt, the Issuer intends to take the position that the Notes should be treated as equity of the Issuer for U.S. federal, state and local income and franchise tax purposes. This summary assumes such treatment, except as otherwise indicated. The Trust Deed requires the Noteholders to agree to take the position that the Notes constitute equity interests in the Issuer for U.S. federal, state and local income and franchise tax purposes. Moreover, each Noteholder, by its purchase of Notes, will acknowledge and agree to treat the Notes as equity interests in the Issuer described above and will covenant to take no action inconsistent with such treatment, unless required by law. Such an agreement is not binding on the courts or the IRS.

U.S. Holders—Alternative Characterisations

As indicated above, there are no relevant authorities that directly address the characterisation of the Notes or instruments substantially similar to the Notes for U.S. federal income tax purposes. Accordingly, characterisations other than that described above are possible. For example, the Notes may not be treated as equity interests in the Issuer but as debt obligations of the Issuer, in which case the contingent payment debt regulations may apply to the Notes.

If the IRS were successful in asserting that the Notes are contingent payment debt instruments, the timing and character of income thereon would be significantly affected. For example, a U.S. Holder would be required to include in income in each year an amount equal to the "comparable yield" of the Notes computed as of the Issuance Date utilizing a "projected payment schedule," which is generally equal to the yield at which the Issuer would issue a non-contingent debt instrument with terms and conditions similar to the Notes. This amount may differ from amounts actually distributed on the Notes for a taxable year. The amount includible in income by a Noteholder for each Accrual Period is determined by multiplying the

"comparable yield" of the Notes (adjusted for the length of the Accrual Period) by the Notes' adjusted issue price at the beginning of the Accrual Period, determined in accordance with the rules, and subject to the adjustments, set forth in the contingent payment debt regulations. Furthermore, any gain realised on the maturity date or upon an earlier sale or exchange of the Notes would generally be treated as ordinary income, and any loss realised on the maturity date or upon a sale or other disposition of the Notes would generally be treated as ordinary loss to the extent of interest included as income in the current or previous taxable years by the U.S. Holder in respect of the Notes, and capital loss thereafter. Accordingly, U.S. Holders are urged to consult their tax advisors regarding the U.S. federal income tax consequences of an investment in the Notes.

Additionally, as noted above the characterisation of the Risk Transfer Agreement for U.S. federal income tax purposes is not entirely clear, although the Issuer intends to treat the Issuer's income from the Risk Transfer Agreement as insurance income. For example, the Risk Transfer Agreement could be treated as a notional principal contract or an option for U.S. federal income tax purposes, resulting in potentially different timing and character of income and loss with respect thereto.

U.S. Holders—Treatment of Noteholders

Passive Foreign Investment Companies

In general, a non-U.S. corporation will be a PFIC during a given year if (i) 75% or more of its gross income constitutes "passive income" (the "**75% test**") or (ii) 50% or more of its assets produce (or are held for the production of) passive income (the "**50% test**"). For the above purposes, passive income generally includes interest, dividends, annuities, certain royalties and rents, notional principal contract income and other investment income. The PFIC rules provide that income derived in the active conduct of an insurance business by a qualifying insurance corporation is not treated as passive income. However, the Issuer does not expect to be treated as a "qualifying insurance corporation" for purposes of this rule. As a result, the Issuer expects to meet the 75% test and the 50% test and that the Issuer will be characterised as a PFIC for U.S. federal income tax purposes. In addition, non-U.S. domiciled money market funds are generally characterised as PFICs for U.S. federal income tax purposes.

In general, if a non-U.S. corporation is characterised as a PFIC during a given year, each U.S. Holder holding its equity directly, or in certain cases indirectly, would be subject to a penalty tax at the time of the sale at a gain of, or receipt of an "excess distribution" with respect to, its equity, unless such person (i) is a 10% U.S. Shareholder and the non-U.S. corporation is a CFC or (ii) made a timely and valid "QEF election." In addition, if a non-U.S. corporation were considered a PFIC, upon the death of any U.S. individual owning shares, such individual's heirs or estate would not be entitled to a "step-up" in the basis of their shares that might otherwise be available under U.S. federal income tax laws. Further, because a U.S. Person that is a direct (and in certain cases indirect) shareholder of a PFIC is deemed to own its proportionate share of interests in any lower tier PFIC, U.S. Persons holding Notes generally will be treated as holding indirect interests in lower-tier PFICs if amounts in the Collateral Account are invested in non-U.S. domiciled money market funds or other entities treated as PFICs. As a result, U.S. Persons holding Notes will likely be subject to the PFIC rules with respect to distributions to the Issuer from such non-U.S. domiciled money market funds and certain dispositions by the Issuer of such non-U.S. domiciled money market funds. It is possible these results may be mitigated by a QEF election with respect to the non-U.S. domiciled money market fund. However, if a QEF election is made by a U.S. Person with respect to an indirectly owned PFIC, such person could experience phantom income with respect to such election. In general, a shareholder receives an "excess distribution" if the amount of the distribution is more than 125% of the average distribution with respect to the shares during the three preceding taxable years (or shorter period during which the taxpayer held the shares). In general, the penalty tax is equivalent to an interest charge on taxes that are deemed due during the period the shareholder owned the shares, computed by assuming that the excess distribution or gain (in the case of a sale) with respect to the shares was taken in equal portion at the highest applicable tax rate on ordinary income throughout the shareholder's period of ownership. For these purposes, gifts, exchanges pursuant to corporate reorganisations, and use of the Notes as security for a loan may be treated as a taxable disposition. In many cases, the U.S. federal income tax on any gain on disposition and/or receipt of excess distributions with respect to Notes held by a U.S. Person is likely to be substantially greater than the U.S. federal income tax imposed on such U.S. Person with respect to the Notes if such person timely makes a QEF election.

THE ISSUER STRONGLY URGES EACH U.S. PERSON HOLDING NOTES TO CONSULT WITH ITS OWN TAX ADVISOR AND TO CONSIDER MAKING A TIMELY AND VALID QEF ELECTION

WITH RESPECT TO THE ISSUER FOR THE FIRST YEAR IN WHICH SUCH HOLDER OWNS NOTES.

If a U.S. Person holding Notes elects to have the Issuer treated as a QEF for the first taxable year in which the Issuer is a PFIC and such person held Notes, the PFIC tax rules described above with respect to excess distributions and gains will not apply to such Noteholder. A U.S. Person that makes a timely and valid QEF election with respect to a PFIC is currently taxable on its *pro rata* share of the ordinary earnings and net capital gain of such company during the years it is a PFIC (at ordinary income and capital gain rates, respectively), regardless of whether or not distributions were received. Consequently, a U.S. Person's *pro rata* share of the Issuer's ordinary earnings and net capital gain may exceed the amount distributed to such U.S. Person on the Notes, in which case the U.S. Person may be required to report taxable income in excess of the distributions payable to them in respect of such taxable years. See "*—Phantom Income*." In addition, any of the Issuer's losses for a taxable year will not be available to U.S. Holders and may not be carried back or forward in computing the Issuer's ordinary earnings and net capital gain in other taxable years. In general, such a U.S. Person's *pro rata* share of the Issuer's ordinary earnings and net capital gain should be equivalent to the interest earned on its Notes for the taxable year. A U.S. Holder's basis in the Notes would be increased to reflect taxed but undistributed income. Distributions of income that had previously been taxed would result in a corresponding reduction of basis in the Notes and would not be taxed again as a distribution to the U.S. Holder.

A U.S. Person wishing to make a QEF election must make such election on a timely filed Form 8621 for the first taxable year for which the U.S. Person holds the Notes and the Issuer is treated as a PFIC. In general, a U.S. Person must annually file with its U.S. federal income tax return a separate Form 8621 for each PFIC in which the person is a direct or indirect owner during the year. In certain cases in which a QEF does not distribute all of its earnings in a taxable year, a U.S. Person that makes a QEF election may also be permitted to elect to defer payment of some or all of the taxes on the QEF income, subject to a non-deductible interest charge on the deferred amount. The Issuer will provide to holders of Notes, upon request, the information and documentation that a U.S. Person making a QEF election is required to obtain for U.S. federal income tax purposes to make this election. It is unclear whether the non-U.S. domiciled money market funds that may be held in the Collateral Account will provide the information necessary for a U.S. Person to make a QEF election with respect to the non-U.S. domiciled money market fund. To the extent that a holder of Notes makes a QEF election other than in respect of the first taxable year, the holder of Notes generally will be subject to a combination of the excess distribution and the QEF rules, unless a "deemed dividend" or "deemed sale" election is made with respect to the holder's Notes.

For U.S. Persons that are 10% U.S. Shareholders (as defined below) of a non-U.S. corporation treated as a CFC, the CFC rules generally override those pertaining to a PFIC or a QEF. The time period in which this is the case constitutes the "qualified portion" of the U.S. Person's holding period for purposes of the PFIC rules. However, if such non-U.S. corporation subsequently ceases to be a CFC or such person ceases to be a 10% U.S. Shareholder with respect to the corporation, the PFIC rules or QEF regime (if a QEF election is or had been timely made) would be applicable. In order for a U.S. Person that was at all prior times a 10% U.S. Shareholder of a CFC to make a timely QEF election, such election must be made on a timely filed Form 8621 for the first taxable year after the "qualified portion" of the U.S. Person's holding period or for a prior taxable year. If for any period of time prior to such "qualified portion" of a U.S. Person's holding period such person had held shares of the non-U.S. corporation while it was a PFIC and had not made a QEF election, the U.S. Person would generally not be able to make an election to treat the non-U.S. corporation as a QEF unless the U.S. Person makes a "deemed dividend" or "deemed sale" election to "purge" the PFIC taint. Such an election would require the U.S. Person to generally be currently subject to the PFIC taxation regime for the "non-qualified portion" of the U.S. Person's holding period.

Prospective investors in the Notes are urged to consult their tax advisors as to the application and effects of the PFIC rules, including the QEF regime.

Classification of the Issuer as a CFC

Each 10% U.S. Shareholder (as defined below) of a non-U.S. corporation that is a CFC at any time during a taxable year who owns shares in the non-U.S. corporation, directly or indirectly through non-U.S. entities, on the last day of the non-U.S. corporation's taxable year on which it is a CFC must include in its gross income for U.S. federal income tax purposes its *pro rata* share of the CFC's subpart F income, and global intangible low-taxed income, even if the subpart F income and global intangible low-taxed income is not distributed. For these purposes, subpart F income of a non-U.S. corporation typically includes foreign

personal holding company income (such as dividends, interest, notional principal contract income and other passive income), certain insurance income, as well as certain underwriting and investment income attributable to insurance operations, and global intangible low-taxed income applies broadly to certain income generated by a CFC and is intended to require 10% U.S. Shareholders to include income earned by a CFC from intangible assets, such as patents, trademarks and copyrights. It is expected that substantially all of the Issuer's income will be subpart F income or global intangible low-tax income. A "**10% U.S. Shareholder**" is a U.S. Person who owns (directly, indirectly through non-U.S. entities or by attribution by application of the constructive ownership rules of section 958(b) of the Code (i.e., "constructively")) at least 10% of the total combined voting power of all classes of stock entitled to vote of a non-U.S. corporation or 10% or more of the total value of all classes of stock. A non-U.S. corporation is considered a CFC if 10% U.S. Shareholders own (directly, indirectly through non-U.S. entities or constructively) more than 50% of the total combined voting power of all classes of voting stock of such non-U.S. corporation, or more than 50% of the total value of all stock of such corporation.

As noted above, although there are no relevant authorities that directly address the characterisation of the Notes for these purposes and the matter is not free from doubt, the Issuer intends to take the position that the Notes constitute equity interests for U.S. federal income purposes. Accordingly, if more than 50% (by vote or value) of the Issuer's equity is owned directly, indirectly through non-U.S. entities or constructively by 10% U.S. Shareholders, the Issuer will be characterised as a CFC and any 10% U.S. Shareholders with respect to the Issuer who own Notes directly or indirectly through non-U.S. entities on the last day of the Issuer's taxable year must include in their gross income for U.S. federal income tax purposes their *pro rata* share of the Issuer's subpart F income and global intangible low-tax income for the year, subject to certain limitations. The amount of the Issuer's subpart F income attributable to the Notes (in order to determine each person's *pro rata* share) is the amount which bears the same ratio to the total subpart F income as the earnings and profits that would be distributed with respect to the Notes if all of the Issuer's earnings and profits were distributed on the last day of the Issuer's taxable year bear to the total earnings and profits of the Issuer for that taxable year. The amount of the Issuer's global intangible low-tax income attributable to the Notes is determined in an analogous manner.

Recent U.S. federal income tax legislation has significantly expanded the circumstances under which a U.S. Person is treated as a 10% U.S. Shareholder of a non-U.S. corporation. Prospective investors should consult with their tax advisors regarding the impact of this recent legislation on the tax consequences of an investment in the Notes.

In addition, it is expected that some or all of the Issuer's income will be characterised as insurance income for purposes of section 953 of the Code, although the matter is not free from doubt. As a result, the Issuer will be characterised as a CFC for purposes of taking into account such income (including underwriting and investment income), which is a category of subpart F income, if more than 25% of the total combined voting power of all equity or more than 25% of the total value of such corporation is owned (directly, indirectly through non-U.S. entities or constructively) by 10% U.S. Shareholders on any day of its taxable year, if the gross amount of premiums or other consideration for the reinsurance or the issuing of insurance or annuity contracts (other than certain insurance or reinsurance related to same country risks written by certain insurance companies not applicable here) exceeds 75% of the gross amount of all premiums or other consideration in respect of all risks. As noted above, the Issuer intends to treat the Issuer's income with respect to the Risk Transfer Agreement as reinsurance premiums, although the issue is not free from doubt. Accordingly, if more than 25% (by vote or value) of the Issuer's equity is owned directly, indirectly through non-U.S. entities or constructively by 10% U.S. Shareholders, any 10% U.S. Shareholders with respect to the Issuer who own Notes directly or indirectly through non-U.S. entities on the last day of the Issuer's taxable year must include in their gross income for U.S. federal income tax purposes their *pro rata* share of the Issuer's subpart F insurance income, subject to certain limitations.

Persons considering acquiring Notes should consult their own tax advisors concerning the application of the CFC rules to their particular situations.

The RPII CFC Provisions

As noted above, the Issuer intends to treat the Issuer's income with respect to the Risk Transfer Agreement as reinsurance premiums for U.S. federal income tax purposes, although the issue is not free from doubt. As a result of such treatment, the special RPII CFC income inclusion rules could apply if (i) the Issuer's RPII, determined on a gross basis, is 20% or more of the Issuer's gross insurance income for a taxable year, (ii) direct and indirect insureds and persons related (as defined below) to such insureds, whether or not U.S.

Persons, are treated as owning (directly or indirectly through entities) 20% or more of the voting power or 20% or more of the value of the Issuer's equity and (iii) RPII shareholders (as defined below) are treated as owning (directly, indirectly through non-U.S. entities or constructively) 25% or more of the Issuer's equity by vote or value.

RPII is any insurance income attributable to policies of insurance or reinsurance with respect to which the person (directly or indirectly) insured is a RPII shareholder or a related person to such RPII shareholder. The term "**RPII shareholder**" means any U.S. Person who owns (directly or indirectly through non-U.S. entities) any amount of the Issuer's equity. Generally, the term "related person" for this purpose means someone who controls or is controlled by the RPII shareholder or someone who is controlled by the same person or persons which control the RPII shareholder. Control is measured by either more than 50% in value or more than 50% in voting power of stock applying certain constructive ownership principles.

If the special RPII CFC income inclusion rules apply to the Issuer, each U.S. Person owning directly or indirectly through non-U.S. entities, any Notes on the last day of the Issuer's taxable year on which it is a CFC under the RPII rules will be required to include in its gross income for U.S. federal income tax purposes its share of the Issuer's RPII for the portion of the taxable year during which the Issuer was a CFC under the RPII provisions, determined as if all such RPII were distributed proportionately only to such U.S. Persons at that date, but limited by each such U.S. Person's share of the Issuer's current-year earnings and profits as reduced by the U.S. Person's share, if any, of certain prior-year deficits in earnings and profits. Prospective investors are urged to consult their tax advisors concerning the application and effects of the RPII rules to their particular situation.

Information Reporting

Under certain circumstances, U.S. Persons that own (directly or indirectly) shares in a non-U.S. corporation are required to file IRS Form 5471 with their U.S. federal income tax returns. Generally, information reporting on IRS Form 5471 is required by (i) a 10% U.S. Shareholder of a non-U.S. corporation that is a CFC at any time during any tax year of the non-U.S. corporation if the 10% U.S. Shareholder owned (directly or indirectly through non-U.S. entities) any stock in the non-U.S. corporation on the last day of that year and (ii) under certain circumstances, a U.S. Person who acquires stock in a non-U.S. corporation and as a result thereof owns 10% or more of the voting power or value of such non-U.S. corporation, whether or not such non-U.S. corporation is a CFC. Additionally, information reporting on Form 5471 is generally required if the RPII CFC rules apply. A U.S. Holder of Notes will be required to file an IRS Form 8621 (which is a form that is required to be filed by holders of equity in a PFIC) for each tax year that it holds Notes and the Issuer is characterised as a PFIC.

A U.S. Holder of Notes that acquires Notes from the Issuer will be required to file a Form 926 or a similar form with the IRS if (i) such person owns immediately after the transfer at least 10% by vote or value of the Issuer or (ii) the transfer, when aggregated with all related transfers under applicable regulations, exceeds USD 100,000. In the event that a U.S. Holder that is required to file such form fails to do so, the U.S. Holder could be subject to a penalty of up to USD 100,000 (equal to 10% of the cash transferred).

U.S. Persons holding Notes should consider their possible obligation to file a FinCEN Form 114—Foreign Bank and Financial Accounts Report—with respect to the Notes. Additionally, such U.S. Persons should consider their possible obligations to annually report certain information with respect to the Issuer with their U.S. federal income tax returns. Noteholders should consult their tax advisors with respect to these or any other reporting requirements which may apply with respect to their purchase, holding and/or sale of the Notes.

Phantom Income

The Issuer may recognise taxable income and gain for U.S. federal income tax purposes that exceeds the distributions paid to U.S. Persons holding Notes. Accordingly, U.S. Holders of Notes that have made a QEF election, or are subject to tax under the CFC rules, could recognise and be required to pay tax on, their *pro rata* portion of the Issuer's net taxable income, even if this income exceeds amounts received in any taxable year (i.e., U.S. Noteholders may be subject to tax on "phantom income"). Prospective investors in the Notes should consult their tax advisors regarding phantom income with respect to the Notes.

Potential U.S. federal income inclusions with respect to the Collateral Contracts under the QEF or CFC rules

Each Collateral Contract could be treated for U.S. federal income tax purposes in a variety of ways, including as a loan, option, a notional principal contract characterised as including a contingent non-periodic payment or another financial instrument. U.S. Persons that have made a QEF election or are subject to the CFC rules may, accordingly, be required to accrue income in respect of the Collateral Contract prior to the receipt by the Issuer of payments on a Collateral Contract. Moreover, under certain proposed regulations, any gain at maturity would be treated as ordinary income to the Issuer. U.S. Persons should consult their advisors as to their federal income tax treatment in respect of the Collateral Contracts.

Taxation of Distributions

If (i) a U.S. Person has made a timely QEF election, (ii) a U.S. Holder is characterised as a 10% U.S. Shareholder with respect to the Issuer and the Issuer is characterised as a CFC or (iii) the Issuer is characterised as a RPII CFC and certain exceptions do not apply, distributions should be allocated first to amounts previously taxed pursuant to the QEF election or pursuant to the CFC rules and to this extent will not be taxable to U.S. Holders. If the Issuer does not compute its earnings and profits using U.S. federal income tax principles, all distributions in excess of previously taxed amounts should be treated as dividends.

If a U.S. Person has not made a timely QEF election, then, except to the extent that distributions may be attributable to amounts previously taxed pursuant to the CFC rules, some or all of any distributions with respect to the Notes may constitute excess distributions, taxable as described above under the heading "*Passive Foreign Investment Companies*." In that event, except to the extent that distributions may be attributable to amounts previously taxed to the U.S. Holder pursuant to the CFC rules or are treated as "excess distributions," distributions on the Notes generally would be treated as dividends to the extent paid out of the Issuer's current or accumulated earnings and profits not allocated to any "excess distributions," then as a nontaxable reduction to the U.S. Holder's tax basis for the Notes to the extent thereof and then as capital gain.

Distributions paid by the Issuer to non-corporate holders on the Notes will not be eligible for reduced rates of tax as qualified dividend income. In addition, distribution paid by the Issuer to corporate holders will not be eligible for the dividends received deduction. Distributions will be non-U.S. source income for purposes of the Code, unless the Issuer is determined to be engaged in a trade or business within the United States, in which case the distributions would be treated as arising from sources within the United States.

Dispositions of Notes

Subject to the discussion below relating to the potential application of the Code section 1248 rules and the discussion above relating to the application of the PFIC rules in circumstances in which a timely QEF election is not made, U.S. Holders of Notes generally should recognise capital gain or loss for U.S. federal income tax purposes on the sale, exchange or other disposition of Notes in the same manner as on the sale, exchange or other disposition of any other shares held as capital assets. In this regard, a U.S. Holder's tax basis will initially equal the amount paid for the Note. Such basis will be increased by amounts taxable to such U.S. Holder by reason of a QEF election, or by reason of the CFC rules, as applicable, and decreased by actual distributions from the Issuer that are deemed to consist of such previously taxed amounts or are treated as a nontaxable reduction to the U.S. Holder's tax basis for the Notes. Upon the sale, exchange or other disposition of a Note a U.S. Holder will recognise gain or loss equal to the difference between the amount received on the date of sale, exchange or other disposition and such U.S. Holder's adjusted tax basis. If the holding period for the Notes exceeds one year, any gain should be subject to tax at the marginal tax rate applicable to long term capital gains.

Code section 1248 provides that if a U.S. Person sells or exchanges equity in a non-U.S. corporation and such person owned, directly, indirectly through certain non-U.S. entities or constructively, 10% or more of the voting power of the corporation at any time during the five-year period ending on the date of disposition when the corporation was a CFC, any gain from the sale or exchange of the shares will be treated as a dividend to the extent of the CFC's earnings and profits (determined under U.S. federal income tax principles) during the period that the shareholder held the shares and while the corporation was a CFC (with certain adjustments). In this regard, earnings and profits should not include any amounts previously taxed pursuant to a timely QEF election or pursuant to the CFC rules. Potential investors are urged to consult their tax advisors. Additionally, if the Issuer is considered a CFC or a CFC for RPII purposes, a 10% U.S.

Shareholder may in certain circumstances be required to report a disposition of shares of a CFC by attaching IRS Form 5471 to the U.S. federal income tax or information return that it would normally file for the taxable year in which the disposition occurs. In the event this is determined necessary, the Issuer will provide the relevant information necessary to complete an IRS Form 5471.

Additionally, Code section 1248 in conjunction with the RPII rules provides that if a U.S. Person disposes of equity in a non-U.S. corporation that has insurance income (as determined for U.S. federal income tax purposes) in which U.S. Persons own 25% or more of the shares (even if the amount of gross RPII is less than 20% of the corporation's gross insurance income and the ownership of its shares by direct or indirect insureds and related persons is less than the 20% threshold), any gain from the disposition (excluding foreign currency gain) will generally be treated as a dividend to the extent of the holder's share of the corporation's undistributed earnings and profits that were accumulated during the period that the holder owned the shares (whether or not such earnings and profits are attributable to RPII). In addition, such a holder will be required to comply with certain reporting requirements, regardless of the amount of shares owned by the holder. The Issuer expects these RPII rules would apply to dispositions of Notes, because the Issuer expects U.S. Persons to own (directly, indirectly through non-U.S. entities or constructively) 25% or more of the Issuer's equity. If the RPII rules apply, gain from a disposition of Notes earned by U.S. Persons holding Notes directly should be characterised as a dividend to the extent of the Issuer's earnings and profits attributable to the disposed of Notes. In this regard, earnings and profits should not include any amounts previously taxed pursuant to a timely QEF election. Potential investors are urged to consult their tax advisors with respect to these rules.

Tax-exempt Noteholders

Tax-exempt entities will be required to treat certain subpart F insurance income, including RPII, that is includible in income by the tax-exempt entity as unrelated business taxable income. Prospective investors that are tax exempt entities are urged to consult their tax advisors as to the potential impact of the unrelated business taxable income provisions of the Code. A tax-exempt organisation that is treated as a 10% U.S. Shareholder or a RPII Shareholder also must file IRS Form 5471 in the circumstances described above. Recent U.S. federal income tax legislation has significantly expanded the circumstances under which a U.S. tax-exempt organisation may be treated as a 10% U.S. Shareholder of a non-U.S. corporation. Accordingly, U.S. tax-exempt organisations should be aware that they could recognise significant UBTI as a result of an investment in the Notes. Prospective investors that are tax exempt entities are urged to consult their tax advisors as to the potential impact of the unrelated business taxable income provisions of the Code.

Foreign Tax Credit

If U.S. Persons own a majority of the Notes, only a portion of the current income inclusions under the PFIC, CFC and RPII rules and of dividends (including for these purposes interest on the Notes) paid by the Issuer (including any gain from the sale of Notes that is treated as a dividend under section 1248 of the Code) will be treated as foreign source income for purposes of computing a U.S. Noteholder's U.S. foreign tax credit limitations. The Issuer will consider providing shareholders with information regarding the portion of such amounts constituting foreign source income to the extent such information is reasonably available. It is also likely that substantially all of the subpart F income, QEF inclusions and dividends that are foreign source income will constitute either "passive" or "general" income for foreign tax credit limitation purposes. Thus, it may not be possible for most shareholders to utilise excess foreign tax credits to reduce U.S. tax on such income. Each U.S. Holder is urged to consult its own tax advisor concerning whether a foreign tax credit will be available.

3.8% Medicare Tax On "Net Investment Income"

Certain U.S. Holders that are individuals, trusts and estates will be subject to an additional 3.8% Medicare tax on all or a portion of their "net investment income." Potential investors who are U.S. Holders should consult their advisors with respect to their consequences with respect to the 3.8% Medicare tax.

Receipt of Foreign Currency

Foreign currency received as payment on a Note or on a sale, exchange or other disposition of a Note will have a tax basis equal to its U.S. dollar value at the time such payment is received or at the time of such sale, exchange or other disposition, as the case may be. Any exchange gain or loss recognised on a sale or exchange of the foreign currency will generally be U.S. source ordinary income or loss.

Backup Withholding and Information Reporting on Distributions and Dispositions

Information returns may be filed with the IRS in connection with the receipt of Notes, distributions on the Notes and the proceeds from a sale or other disposition of the Notes unless the U.S. Holder of the Notes establishes an exemption from the information reporting rules. A U.S. Holder of Notes that does not establish such an exemption may be subject to U.S. backup withholding tax on these payments if the holder is not a corporation or fails to provide its taxpayer identification number or otherwise comply with the backup withholding rules. The amount of any backup withholding from a payment to a U.S. Holder should be allowed as a credit against the U.S. Holder's U.S. federal income tax liability and may entitle the U.S. Holder to a refund, provided, that the required information is furnished to the IRS in a timely manner.

Changes in U.S. Federal Income Tax Law

The United States Congress enacted the Tax Cuts and Jobs Act (H.R. 1, the "**TCJA**") in December 2017. The TCJA imposed significant changes on the U.S. federal income tax laws applicable to non-U.S. entities and entities engaged in insurance operations. Certain aspects of the TCJA are unclear, and it is expected that future guidance will clarify the application of the TCJA. Accordingly, it is possible that such future guidance could adversely impact the U.S. federal income taxation of the Issuer or Noteholders. Prospective investors should consult with their tax advisors regarding the potential impact of the TCJA on the tax consequences of investing in the Notes.

Furthermore, it is possible that additional legislation could be introduced and enacted by the current Congress or future Congresses that could have an adverse impact on the Issuer or the Noteholders. Additionally, the U.S. federal income tax laws and interpretations regarding whether a company is a PFIC, or whether U.S. Persons would be required to include in their gross income the subpart F income or RPII of a CFC, are subject to change, possibly on a retroactive basis. New regulations or pronouncements interpreting or clarifying such rules may be forthcoming. The Issuer cannot be certain if, when or in what form such regulations or pronouncements may be provided and whether such guidance will have a retroactive effect. Prospective investors are urged to consult with their tax advisors.

The foregoing U.S. federal income tax discussion (including and subject to the matters and qualifications set forth in such summary) is based upon current law and is for general information only. The tax treatment of the Issuer and the Noteholders for U.S. federal income, state, local or non-U.S. tax purposes may vary depending on the Issuer's and the holder's particular tax situation. Legislative, judicial or administrative changes or interpretations may be forthcoming that could be retroactive and could affect the tax consequences to the Issuer and the Noteholders. Persons considering acquiring the Notes are urged to consult their own tax advisors concerning the federal, state, local and non-U.S. tax consequences to you of the purchase, ownership or disposition of the Notes.

CERTAIN ERISA AND RELATED CONSIDERATIONS

The following is a summary of certain considerations associated with the purchase, holding and, to the extent relevant, disposition, of the Notes by (i) an "employee benefit plan" within the meaning of Section 3(3) of the U.S. Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), that is subject to Title I of ERISA (an "**ERISA Plan**"), including pension plans, profit-sharing plans, collective investment funds and separate accounts whose underlying assets include the assets of such employee benefit plans, (ii) a "plan" within the meaning of and subject to Section 4975 of the U.S. Internal Revenue Code of 1986, as amended (the "**Code**"), including an individual retirement account and a Keogh plan (together with ERISA Plans, "**Plans**"), (iii) a person or entity whose underlying assets include the assets of any such employee benefit plan or plan by reason of the U.S. Department of Labor (the "**DOL**") regulation at 29 C.F.R. § 2510.3-101, as modified by Section 3(42) of ERISA (the "**Plan Asset Regulation**"), or otherwise for purpose of Title I of ERISA or Section 4975 of the Code (each of (i)-(iii), a "**Benefit Plan Investor**") or (iv) a Similar Plan (as defined below) that is subject to provisions under any U.S. federal, state, local, non-U.S. or other law or regulation that are similar to the fiduciary responsibility and prohibited transaction provisions of Title I of ERISA or Section 4975 of the Code (any such law or regulation, a "**Similar Law**").

Fiduciary Duty of Investing ERISA Plans

Under ERISA, any person who exercises any discretionary authority or control over the administration of an ERISA Plan or the management or disposition of the ERISA Plan's assets, or who renders investment advice for a fee or other compensation to such an ERISA Plan, is generally considered to be a fiduciary of the ERISA Plan. Investments by ERISA Plans are subject to ERISA's general fiduciary requirements, which should be considered in the context of the ERISA Plan's particular facts and circumstances.

In considering the purchase, holding and, to the extent relevant, disposition of the Notes with a portion of the assets of an ERISA Plan, a fiduciary should determine, among other factors, (i) whether the investment is in accordance with the documents and instruments governing the ERISA Plan, (ii) whether the investment would satisfy the diversification requirements of Section 404 of ERISA, (iii) whether the investment is prudent with respect to the Note's structure and the investment's potential risks and lack of liquidity and (iv) whether the investment would involve a prohibited transaction under Section 406 of ERISA or Section 4975 of the Code (as discussed below). When evaluating the prudence of investing in any interest in the Notes, an ERISA Plan fiduciary should consider the DOL regulation on investment duties, which can be found at 29 C.F.R. § 2550.404a-1.

In addition, ERISA provides that an ERISA Plan fiduciary must maintain the indicia of ownership of "plan assets" within the jurisdiction of the district courts of the U.S. ("**U.S. Indicia Requirements**") unless, among other conditions, such assets are under the management and control of certain types of fiduciaries, including a fiduciary that is a U.S. bank that meets certain financial conditions. Each fiduciary considering a purchase of Notes for an ERISA Plan subject to the U.S. Indicia Requirements should note that the Issuer is an English public company. Copies of the Trust Deed, the Deed of Charge and the Risk Transfer Agreement will be available in accordance with pages xxx to xxxi of this Circular. Each fiduciary considering a purchase of Notes for an ERISA Plan subject to the U.S. Indicia Requirements must make its own determination as to whether such requirements will be met if it proceeds to make such a purchase.

Prohibited Transaction

Section 406 of ERISA and Section 4975 of the Code prohibit transactions involving the assets of Plans and certain persons and their affiliates having certain relationships to such Plans, including a Plan's fiduciaries and other service providers (referred to as "parties in interest" under ERISA or "disqualified persons" within the meaning of Section 4975 of the Code, and collectively, "**Parties in Interest**").

The Transaction Parties may be Parties in Interest with respect to many Plans. The applicability of any exemption to the prohibited transaction rules will depend, in part, on the type of the Plan fiduciary making the decision to invest in any interest in the Notes and the circumstances under which any such decision is made. Whether or not the underlying assets of the Issuer are deemed to include assets of a Plan, an investment in any interest in the Notes by a Plan with respect to which any of the Issuer, the Initial Purchasers, the Risk Transferor, the Share Trustee, the Trustee and their respective affiliates (each, a "**Transaction Party**") is considered a Party in Interest may constitute or result in a direct or indirect prohibited transaction under Section 406 of ERISA and/or Section 4975 of the Code (collectively, "**prohibited transactions**"), unless an exemption is available.

The Transaction Parties may be or become Parties in Interest with respect to one or more Plans. Included among the exemptions are the administrative exemptions of Prohibited Transaction Class Exemption ("**PTCE**") 90-1 (respecting certain transactions involving insurance company pooled separate accounts), PTCE 95-60 (respecting certain transactions involving insurance company general accounts), PTCE 91-38 (respecting certain transactions involving bank collective investment funds), PTCE 84-14 (respecting certain transactions entered into on behalf of a Plan by a "qualified professional asset manager") and PTCE 96-23 (respecting certain transactions entered into by or on behalf of a Plan by an "in-house" asset manager) and the statutory exemptions of Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code (the "**Service Provider Exemption**") (for certain transactions between a Plan and a person that is a Party in Interest (other than a fiduciary or an affiliate that, directly or indirectly, has or exercises any discretionary authority or control or renders any investment advice with respect to the assets of any Plan involved in the transaction) solely by reason of providing services to the Plan or by relationship to a service provider, **provided that** the Plan receives no less, or pays no more, than adequate consideration).

Any Plan fiduciary purchasing and holding Notes on behalf of a Plan in reliance on the Service Provider Exemption must make a determination that (x) the Plan is paying no more than, and is receiving no less than, adequate consideration in connection with the transaction and (y) none of the Transaction Parties directly or indirectly exercise any discretionary authority or control or renders investment advice with respect to the assets of the Plan which such fiduciary is using to purchase Notes, both of which are necessary preconditions to utilizing this exemption. There can be no assurance that all of the conditions of any such exemptions will be satisfied at the time that the Notes are acquired by a purchaser, or thereafter, if the facts relied upon for utilizing a prohibited transaction exemption change.

The fiduciary of a Plan that proposes to acquire any interest in the Notes should consider, among other things, whether any such acquisition may involve (i) a direct or indirect extension of credit to a Party in Interest, (ii) a sale or exchange of any property between a Plan and a Party in Interest or (iii) a transfer to, or use by or for the benefit of, a Party in Interest of a Plan's assets. In this regard, there can be no assurance that any of these administrative or statutory exemptions will be available with respect to any transaction involving any interest in the Notes. Most of these exemptions do not provide relief from some or all of the self-dealing prohibitions under Section 406 of ERISA or Section 4975 of the Code.

Plan Asset Regulation

The Plan Asset Regulation describes what constitutes the assets of a Plan. The Plan Asset Regulation generally provides that when a Plan acquires an equity interest in an entity that is neither a "publicly-offered security" nor a security issued by an investment company registered Investment Company Act, the Plan's assets include both the equity interest and an undivided interest in each of the underlying assets of the entity unless it is established either that less than 25% of the total value of each class of equity interest in the entity is held by "benefit plan investors" (the "**25% Test**") or that the entity is an "operating company," both terms being within the meaning of the Plan Asset Regulation.

It is not anticipated that (i) the Notes will constitute "publicly offered securities" within the meaning of the Plan Asset Regulation, (ii) the Issuer will be an investment company registered under the Investment Company Act or (iii) the Issuer will qualify as an operating company within the meaning of the Plan Asset Regulation. In addition, there is no intent to monitor or take any other measures to assure satisfaction of the 25% Test.

The Plan Asset Regulation defines an "equity interest" as any interest in an entity other than an instrument that is treated as indebtedness under applicable local law and which has no substantial equity features. The DOL has stated in the preamble to the Plan Asset Regulation (the "**Preamble**") that the reference to local law provides an initial frame of reference for determinations whether an interest is indebtedness and the question of which law applies for purposes of determining whether an instrument is treated as equity or indebtedness should be made under the law governing questions regarding interpretation of the instrument. Moreover, the DOL stated in the Preamble that the determination of whether any particular investment has substantial equity features is an inherently factual question that must be resolved on a case-by-case basis but that it would be appropriate, in the DOL's view, to take into account whether the equity features of an instrument are such that a Plan's investment in the instrument would be a practical vehicle for the indirect provision of investment management services. Although there are no relevant authorities that directly address the characterisation of the Notes for these purposes and the matter is not free from doubt, in part because the Issuer intends to take the position that the Notes should be treated as equity of the Issuer for U.S. federal, state and local income and franchise tax purposes, it is reasonable to expect that the Notes will

be treated as "equity interests" for purposes of the Plan Asset Regulation. In addition, there can be no assurance that any of the exceptions set forth in the Plan Asset Regulation will apply to the Notes.

Under the terms of the Plan Asset Regulation, if the Issuer were deemed to hold "plan assets" by reason of a Plan's investment in the Notes, such "plan assets" would include an undivided interest in the assets held by the Issuer, including the Issuer's interest in the respective Risk Transfer Agreement and Collateral Contract and the Permitted Investments (and, perhaps, the assets of Money Market Funds included in the Permitted Investments). In such event, the persons with discretionary authority, if any, with respect to such assets (including, perhaps, persons with discretionary authority, if any, over the assets of Money Market Funds included in the Permitted Investments) may be subject to the fiduciary responsibility and prohibited transaction provisions of Title I of ERISA and Section 4975 of the Code with respect to transactions involving such assets. Moreover, certain actions taken with respect to such assets could be deemed to constitute prohibited transactions under ERISA or the Code. In addition, ERISA generally provides that discretionary authority with respect to the management or disposition of a Plan's assets may be delegated only to certain "investment managers" who acknowledge in writing that they are fiduciaries of the Plan. The persons responsible for investing the assets of the Issuer in any Permitted Investments (and, perhaps, the assets of Money Market Funds included in the Permitted Investments, if any) might not be "investment managers" within the meaning of ERISA and the investment in the Issuer and/or Permitted Investments by a Plan could constitute an improper delegation of investment authority by the fiduciary of any such Plan, who would remain liable for such investment activities.

Potential investors are encouraged to consult with their own independent legal advisors concerning the effect of the possible application of the Plan Asset Regulation. In addition, Permitted Investments will be purchased with funds deposited in a Collateral Account pursuant to investment guidelines set forth in the Trust Deed. Such investment guidelines, to the maximum extent possible, are intended to eliminate discretion with respect to the choice of Permitted Investments. Investors are encouraged to consult with their independent legal advisors.

Special Considerations for Insurance Companies

An insurance company considering an investment in the Notes should consider whether its general account may be deemed to include assets of the ERISA Plans investing in the general account, for example, through the purchase of an annuity contract. In *John Hancock Mutual Life Insurance Co. v. Harris Trust and Savings Bank*, 510 U.S. 86 (1993), the U.S. Supreme Court held that assets held in an insurance company's general account may be deemed to be "plan assets" under certain circumstances. In that event, the insurance company might be treated as a fiduciary with respect to such ERISA Plans. However, PTCE 95-60 may exempt some or all of the transactions that could occur as the result of the acquisition and holding of the Notes by an insurance company general account. Therefore, insurance company investors should analyse whether *John Hancock* and PTCE 95-60 or any other exemption may have an impact with respect to their purchase of the Notes.

In addition, pursuant to Section 401(c) of ERISA, which relates to the status of the assets of insurance company general accounts for purposes of Title I of ERISA, the DOL issued general account regulations with respect to insurance policies issued on or before 31 December 1998 that are supported by an insurer's general account. As a result of these regulations, assets of an insurance company general account will not be treated as "plan assets" for purpose of the fiduciary responsibility provisions of Title I of ERISA to the extent such assets relate to contracts issued to ERISA Plans on or before 31 December 1998 and the insurer satisfies various conditions. The "plan asset" status of insurance company separate accounts is unaffected by Section 401(c) of ERISA, and separate account assets continue to be treated as the "plan assets" of any such ERISA Plan invested in a separate account.

Similar Plans

"Governmental plans" within the meaning of Section 3(32) of ERISA, "church plans" within the meaning of Section 3(33) of ERISA that have made no election under Section 410(d) of the Code and "non-U.S. plans" described in Section 4(b)(4) of ERISA, while not subject to the fiduciary responsibility and prohibited transaction requirements of Title I of ERISA or Section 4975 of the Code (any such plan, a "**Similar Plan**"), may nevertheless be subject to any Similar Law. Fiduciaries of such Similar Plans should consult with their counsel before purchasing any interest in the Notes.

Representations and Warranties

In order to avoid potential violations, each investing Benefit Plan Investor or Similar Plan that is subject to any Similar Law, by purchasing the Notes, will be deemed to have (i) directed that the applicable assets of the Issuer be invested in the Permitted Investments, including the EBRD Notes and the Money Market Fund Shares, as applicable, and directed the Issuer to enter into the respective Risk Transfer Agreement, the Trust Deed and the respective Deed of Charge, and (ii) represented and warranted that one or more statutory or administrative exceptions from the prohibited transaction rule of Section 406 of ERISA and Section 4975 of the Code applies such that the acquisition, holding and subsequent disposition of the Notes will not constitute or result in a non-exempt prohibited transaction or, in the case of a Similar Plan, a non-exempt violation of any applicable Similar Law. Each investing Benefit Plan Investor or Similar Plan that is subject to any Similar Law, by purchasing Notes, will be deemed to approve of the rights retained by the Risk Transferor, the Issuer and the Insurance Manager acting as agent of the Issuer with respect to the management or disposition of Permitted Investments. Each investing Benefit Plan Investor or Similar Plan that is subject to any Similar Law, by purchasing Notes, will also be deemed to have agreed with the Risk Transferor, the Issuer, or the Insurance Manager acting as agent of the Issuer that it does not consider the Risk Transferor, the Issuer and the Insurance Manager acting as agent of the Issuer or any other person with authority or control respecting the management or disposition of Permitted Investments, if any, as a fiduciary for purposes of Title I of ERISA, Section 4975 of the Code and any applicable Similar Law with respect to the assets of any such investing Benefit Plan Investors or Similar Plans. If the Purchaser is making the representations set forth in clause (ii), above and is relying on the Service Provider Exemption, the person making the decision to purchase such Notes is making such representations on behalf of such Purchaser both in their individual capacity as well as their fiduciary capacity, and further represents that in connection with such purchase, such person has determined that the Purchaser will receive no less, and pay no more, than adequate consideration as provided in Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code.

The sale of the Notes is in no respect a representation by the Transaction Parties that such an investment meets all relevant legal requirements with respect to investments by Benefit Plans Investors or Similar Plans that are subject to any Similar Law generally or that such an investment is appropriate for any particular Benefit Plan Investor or Similar Plan that is subject to any Similar Law. Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries or other persons considering purchasing the Notes on behalf of or with "plan assets" of any Benefit Plan Investor or Similar Plan that is subject to any Similar Law consult with their counsel regarding the potential consequences if the assets of the Issuer were deemed to be "plan assets" and the availability of exemptive relief under the PTCEs or statutory exemption mentioned above or any other applicable exemption.

General Investment Considerations

Any fiduciary of a Benefit Plan Investor or a Similar Plan that is subject to any Similar Law that proposes to cause such a Benefit Plan Investor or Similar Plan to purchase the Notes should consult with its counsel with respect to the potential applicability of Title I of ERISA, Section 4975 of the Code and any Similar Law to such investment.

The discussion herein of ERISA, the Code and relevant DOL regulations is general in nature and is not intended to be complete. Any fiduciary of a Benefit Plan Investor or Similar Plan considering an investment in the Notes should consult with its legal advisors regarding the consequences and advisability of such investment.

NOTICE TO INVESTORS

Because of the following restrictions, investors are advised to consult legal counsel before making any offer, resale, pledge or other transfer of the Notes.

The Notes have not been and will not be registered under the Securities Act or any applicable U.S. state or foreign securities laws and may not be sold or otherwise transferred unless an exemption from registration is available. Notwithstanding the availability of an exemption from the registration requirements under the Securities Act, the Notes are being offered and sold only to, and may be reoffered, sold or otherwise transferred only to, investors who (i) are Qualified Investors and Qualified Institutional Buyers that, with respect to U.S. Persons, are also Qualified Purchasers; (ii) are Qualified Eligible Persons; and (iii) are residents of, and purchasing in, and will hold the Notes in, a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction.

Each purchaser of the Notes must comply with all applicable laws and regulations in force in any jurisdiction in which it purchases, offers or sells Notes or possesses or distributes this Circular or any part thereof and must obtain any consent, approval or permission required by it for the purchase, offer or sale by it of Notes under the laws and regulations in force in any jurisdiction to which it is subject or in which it makes such purchases, offers or sales and none of the Issuer, the Risk Transferor, the Initial Purchasers, the Trustee or any of their respective agents or affiliates shall have any responsibility therefor.

Investment Company Act and Insurance Laws

In reliance on Section 3(c)(7) under the Investment Company Act, the Issuer has not registered as an investment company pursuant to the Investment Company Act. To rely on Section 3(c)(7), the Issuer must have a "reasonable belief" that all purchasers of the Notes which are U.S. Persons (including the Initial Purchasers and subsequent transferees) are Qualified Purchasers, at the time of their purchase of the related Notes. In addition, because the Notes may be categorised as risk-linked securities, it is possible that in some jurisdictions, purchasers of the Notes may become subject to regulation as providers of insurance or reinsurance. The Issuer will establish a reasonable belief for purposes of 3(c)(7) and ensure that purchasers are aware of the insurance-related risks involved in investing in the Notes based upon the representations deemed made by the purchasers of the Notes as set forth under "*—Representations of Purchasers*" and the covenants and undertakings of the Issuer referred to below.

Reminder Notices

Whenever the Issuer sends an annual report or other periodic report to the Noteholders, it will send a reminder notice (each, a "**Reminder Notice**") to the holder of the Notes. Each Reminder Notice will state that (1) each holder of a Note (or an interest in a Note) that is a U.S. Person must be able to make the representations set forth below in paragraph 3(ii) under "*Notice to Investors—Representations of Purchasers*" (the "**3(c)(7) Representations**"); (2) the Notes (or interests in the Notes) are transferable only to purchasers deemed to have made the 3(c)(7) Representations and satisfy the other transfer restrictions applicable to the Notes; (3) each holder of a Note (or an interest in a Note) must be able to make the representations set forth below in paragraph 3(iii) under "*Notice to Investors—Representations of Purchasers*" (the "**Rule 4.7 Representations**"); (4) the Notes (or interests in the Notes) are transferable only to purchasers deemed to have made the Rule 4.7 Representations and satisfy the other transfer restrictions applicable to the Notes; (5) each holder of a Note (or an interest in a Note) must be able to make the representations with respect to Permitted U.S. Jurisdictions or Permitted Non-U.S. Jurisdictions set forth below in paragraph 3(iii) under "*Notice to Investors—Representations of Purchasers*" (the "**Risk-Linked Notes Representations**"); (6) the Notes (or interests in the Notes) are transferable only to purchasers deemed to have made the Risk-Linked Notes Representations; and (7) if any holder of a Note (or an interest in a Note) is determined not to have been a Qualified Investor and a Qualified Institutional Buyer and, if a U.S. Person, also a Qualified Purchaser and a Qualified Eligible Person, at the time of acquisition thereof, then the transfer will be regarded as null and void and of no effect; (8) if any holder of a Note (or an interest in a Note) is determined not to be a resident of or not to have purchased in a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction or not to have been a Qualified Investor and a Qualified Institutional Buyer and, if a U.S. Person, also a Qualified Purchaser and a Qualified Eligible Person at the time of acquisition thereof, then the Issuer will have the right (exercisable in its sole discretion) to treat the transfer to such purchaser as null and void and require such purchaser to sell all of its Notes (and all interests therein) to a transferee designated by the Issuer.

The Issuer will send a copy of each annual or other periodic report (and each Reminder Notice) to the applicable Clearing System with a request that Participants pass them along to the Beneficial Owners.

DTC Actions with Respect to the Notes available through the book-entry system provided by DTC

In connection with the Notes available through the book-entry system provided by DTC, the Issuer will direct DTC to take the following steps in connection with the respective Global Note:

1. to include the "3c7" marker and, in lieu of the "GABS" marker or otherwise, the "GRLS" marker in the DTC 20-character security descriptors and the 48 character additional descriptor for the Global Note in order to indicate that sales are limited to (i) Qualified Investors pursuant to the Risk Transformation Regulations 2017; (ii) with respect to U.S. Persons, Qualified Institutional Buyers that are Qualified Purchasers (iii) Qualified Eligible Persons and (iv) purchasers who are residents of and purchasing in Permitted U.S. Jurisdictions and Permitted Non-U.S. Jurisdictions.

2. to cause (i) each physical DTC delivery order ticket delivered by DTC to purchasers to contain the 20- character security descriptors and (ii) each DTC delivery order ticket delivered by DTC to purchasers in electronic form to contain the "3c7" and "GRLS" indicators and the related user manual for DTC Participants which will contain a description of the relevant transfer restrictions.

3. to send on or prior to the Issuance Date an "Important Notice" to all DTC Participants in connection with the offering of the Notes. The "Important Notice" will be in substantially the form of an exhibit to the Trust Deed and will notify DTC's Participants that the Notes are Section 3(c)(7) securities and risk-linked securities. The Issuer may instruct DTC from time to time (but not less than annually) to reissue the Important Notice.

4. the Issuer will from time to time make a request to DTC to deliver to the Issuer a list of all DTC Participants holding an interest in the Notes.

Bloomberg Screens, Etc.

The Issuer will from time to time request all third-party vendors to include on screens maintained by such vendors appropriate legends regarding Rule 144A, Section 3(c)(7) and risk-linked securities restrictions on the Global Notes. Without limiting the foregoing, the Initial Purchasers will request that Bloomberg, L.P include the following on each Bloomberg screen containing information about the Notes:

1. The bottom of the "Security Display" page describing the Global Notes should state "Iss'd under 144A/3c7" and "GRLS"

2. The "Security Display" page should have a flashing red indicator stating "See Additional Note Pg."

3. Such indicator should link to an "Additional Security Information" page, which should state that the Global Notes are being offered in reliance on the exemption from registration under Rule 144A of the Securities Act of 1933, as amended (the "**Securities Act**") to persons that are (1) "qualified investors" as defined in Regulation 10 of Risk Transformation Regulations 2017; (2) with respect to U.S. Persons, "qualified purchasers" as defined under Section 3(c)(7) of the Investment Company Act of 1940, as amended; and (3) that are residents of, and purchasing in jurisdictions ("**Permitted U.S. Jurisdictions**" and "**Permitted Non-U.S. Jurisdictions**") that would not, as a result of such residence or purchase, result in the purchasers' being subject to regulation as insurers or reinsurers'. The page should also set forth those jurisdictions that the Issuer considers to be "Permitted U.S. Jurisdictions" and "Permitted Non-U.S. Jurisdictions".

CUSIPS

The Issuer will cause each "CUSIP" number obtained for a Global Note to have an attached "fixed field" that contains "3c7", "144A" and "GRLS" indicators.

Legends

The Issuer will not remove the legend set forth in "*Notice to Investors — Representations of Purchasers*" at any time.

Representations of Purchasers

Each purchaser (including subsequent transferees) of Notes (or a beneficial interest therein) will be deemed to have represented, warranted, acknowledged and covenanted to the Issuer as follows:

1. The purchaser is purchasing the Notes for its own account or for a Beneficial Owner for which such person is acting as fiduciary or agent with complete investment discretion and with authority to bind such other person (the purchaser, and each such Beneficial Owner, collectively, the "**Purchaser**"), and not with a view to any public resale or distribution thereof.

2. The Purchaser understands and acknowledges that the Notes have not been registered under the Securities Act or any other applicable securities law, and may not be offered, sold or otherwise transferred except pursuant to an exemption from registration. Notwithstanding the availability of an exemption from the registration requirements under the Securities Act, the Notes may not be resold or transferred except to "qualified investor" pursuant to the Risk Transformation Regulations 2017 ("Qualified Investor") and a "qualified institutional buyer" ("Qualified Institutional Buyer") (within the meaning of Rule 144A under the Securities Act) pursuant to Rule 144A that (i), in the case of a purchaser that is a U.S. Person (as defined in Rule 902(k) under the Securities Act), is also a "qualified purchaser" ("Qualified Purchaser") (as defined in Section 2(a)(51) of the Investment Company Act and the rules and regulations thereunder) in reliance on the exception from the registration thereunder provided by Section 3(c)(7), is a "qualified eligible person" as defined in U.S. Commodity Trading Futures Commission Rule 4.7 ("Qualified Eligible Person") and (ii) is a resident of, and purchasing in, and will hold the Notes in a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction.

3. The Purchaser is (i) a Qualified Investor and a Qualified Institutional Buyer and, (ii) if a U.S. Person, a Qualified Purchaser; (iii) a Qualified Eligible Person; and (iv) a resident of, and purchasing in, and will hold the Notes in, a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction, and is aware (and any other person for whom such purchaser is purchasing is aware) that any sale of the Notes to it will be made in reliance on Rule 144A and, if a U.S. Person, the exception from registration provided in Section 3(c)(7) of the Investment Company Act, and such acquisition will be for its own account or for the account of another Qualified Institutional Buyer, Qualified Eligible Person and Qualified Purchaser (if a U.S. Person) who is also aware that the sale to it is being made in reliance on Rule 144A and, if a U.S. Person, the exception from registration provided in Section 3(c)(7) of the Investment Company Act.

4. The Purchaser (if a U.S. Person) is not a broker-dealer which owns and invests on a discretionary basis less than USD 25,000,000 in securities of Issuers unaffiliated with such broker-dealer.

5. The Purchaser (if a U.S. Person) is not a participant-directed employee plan, such as a 401(k) plan, or a trust holding the assets of such plan, unless the investment decisions with respect to such plan are made solely by the fiduciary, trustee or sponsor of such plan.

6. The Purchaser and each account for which it is purchasing or otherwise acquiring the Notes (or beneficial interests therein), will purchase, hold or transfer at least USD 250,000 of the Notes (or beneficial interests therein).

7. The Purchaser (if a U.S. Person) was not formed, reformed or recapitalised for the specific purpose of investing in the Notes and/or other securities of the Issuer (unless all of the Beneficial Owners of such entity's securities are Qualified Investors, Qualified Institutional Buyers and Qualified Purchasers and Qualified Eligible Persons).

8. If the Purchaser is an investment company excepted from the Investment Company Act pursuant to Section 3(c)(1) or Section 3(c)(7) thereof (or a foreign investment company under Section 7(d) thereof relying on Section 3(c)(1) or 3(c)(7) with respect to its holders that are U.S. Persons) and was formed on or before 30 April 1996, it has received the consent of its Beneficial Owners who acquired their interests on or before 30 April 1996, with respect to its treatment as a Qualified Purchaser in the manner required by Section 2(a)(51)(C) of the Investment Company Act and the rules promulgated thereunder.

9. The Purchaser (if a U.S. Person) is not a partnership; common trust fund; or corporation, special trust, pension fund or retirement plan, or other entity, in which the partners, beneficiaries, Beneficial Owners, participants, shareholders or other equity owners, as the case may be, may designate the particular investment to be made, or the allocation thereof, unless all such partners, beneficiaries, Beneficial Owners, participants, shareholders or other equity owners are Qualified Investors, Qualified Institutional Buyers, Qualified Purchasers and Qualified Eligible Persons.

10. The Purchaser (if a U.S. Person) has not invested more than 40% of its assets in the Notes (or beneficial interests therein) and/or other securities of the Issuer after giving effect to the purchase of the Notes (or beneficial interests therein) (unless all of the Beneficial Owners of such entity's securities are Qualified Investors, Qualified Institutional Buyers, Qualified Purchasers and Qualified Eligible Persons).

11. The Purchaser (if a U.S. Person) agrees that the Issuer shall be entitled to require any holder of the Notes (or a beneficial interest therein) that is determined not to have been a Qualified Investors, Qualified Institutional Buyer, a Qualified Purchaser and a Qualified Eligible Person (and to have met the other requirements set forth in paragraphs 1 through 14) at the time of acquisition of the Notes (or such beneficial interest) to sell the Notes (or such beneficial interest) in accordance with the provisions described below.

12. The Purchaser understands that the Issuer may receive a list of the Participants from the applicable Clearing System or any other depositary holding beneficial interests in the Notes.

13. The Purchaser and each person for which it is acting understands that any sale or transfer of any Note (or beneficial interest therein) to a person that does not comply with the requirements set forth in paragraphs 1 through 14 relating to Qualified Investors, Qualified Institutional Buyers, Qualified Purchasers and Qualified Eligible Persons will be void and of no effect.

14. The Purchaser will provide notice of these transfer restrictions to any subsequent transferees and agrees not to act as a swap counterparty or other type of intermediary whereby any other party will acquire an economic or beneficial interest in the Notes acquired or reoffer, resell, pledge or otherwise transfer the Notes (or any beneficial interests therein), to any person except to a person that (x) meets all of the requirements in paragraphs 1 through this paragraph 14 and (y) agrees not to subsequently transfer the Notes or any beneficial interest therein except in accordance with these transfer restrictions.

    The Issuer may require a holder of the Notes (or any owner of a beneficial interest therein) to provide the Issuer with an opinion of counsel addressed to and satisfactory to the Issuer to the effect that such reoffer, resale, exchange, pledge or other transfer will not require the Issuer to register as an investment company under the Investment Company Act. If any person acquiring a Note (or a beneficial interest therein) is not, at the time of acquisition thereof, a Qualified Investors, a Qualified Institutional Buyer, in the case of a U.S. Person, is not a Qualified Purchaser (or fails to meet the other requirements) and is not a Qualified Eligible Person, the Issuer may regard the transaction as null and void and of no effect. If the Purchaser or any subsequent purchaser or transferee of a Note (or a beneficial interest therein) is determined not to reside or hold such interest in a Permitted U.S. Jurisdiction or Permitted Non-U.S. Jurisdiction or not to have been, at the time it acquired the Notes (or such beneficial interest), a Qualified Investors, a Qualified Institutional Buyer, if a U.S. Person, a Qualified Purchaser and a Qualified Eligible Person (and to have met the other requirements set forth in this section headed "*Notice to Investors—Representations of Purchasers*"), the Issuer may compel such person to sell the Notes (or such beneficial interest) (within 30 calendar days after notice of the sale requirement is given) to a person that is (i) a Qualified Investor, (ii) a Qualified Institutional Buyer, (iii) if a U.S. Person, a Qualified Purchaser (iv) a Qualified Eligible Person and (v) is a resident of, and purchasing in, and will hold the Notes in, a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction (and meets the other requirements set forth in this section headed "*Notice to Investors—Representations of Purchasers*"). If such holder (or Beneficial Owner) fails to effect the sale within such 30-day period, the Issuer has the right to sell the Notes (or such beneficial interest) to a purchaser selected by the Issuer who meets the requirements set forth in this section (headed "*Notice to Investors—Representations of Purchasers*") on such terms as the Issuer may choose. The Issuer may select the purchaser by soliciting one or more bids from one or more brokers or other market professionals that regularly deal in securities similar to the Notes, and selling the Notes to the highest such bidder.

However, the Issuer may select a purchaser by any other means determined by it in its sole discretion.

The Purchaser understands that the certificates representing the Notes will bear a legend substantially to the effect set forth below:

NEITHER THIS NOTE NOR ANY BENEFICIAL INTEREST IN THIS NOTE HAS BEEN OR WILL BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR UNDER ANY U.S. STATE OR FOREIGN SECURITIES LAWS AND THE ISSUER HAS NOT BEEN REGISTERED UNDER THE U.S. INVESTMENT COMPANY ACT OF 1940, AS AMENDED (THE "**INVESTMENT COMPANY ACT**"). INTERESTS IN THIS NOTE MAY BE OFFERED, REOFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED ONLY (1)(I) TO "QUALIFIED INVESTORS" PURSUANT TO REGULATION 10 OF THE RISK TRANSFORMATION REGULATIONS 2017; (II) TO "QUALIFIED INSTITUTIONAL BUYERS" ("**QUALIFIED INSTITUTIONAL BUYERS**") AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT, THAT IN EACH CASE (A) WITH RESPECT TO "U.S. PERSONS" AS DEFINED IN RULE 902(k) UNDER THE SECURITIES ACT ("**U.S. PERSONS**"), ARE "QUALIFIED PURCHASERS" ("**QUALIFIED PURCHASERS**") FOR PURPOSES OF SECTION 3(c)(7) OF THE INVESTMENT COMPANY ACT, (B) ARE "QUALIFIED ELIGIBLE PERSONS" AS DEFINED IN U.S. COMMODITY TRADING FUTURES COMMISSION RULE 4.7 ("**QUALIFIED ELIGIBLE PERSONS**"); AND (C) ARE A RESIDENT OF AND PURCHASING IN, AND WILL HOLD THE NOTES IN, A PERMITTED U.S. JURISDICTION OR A PERMITTED NON-U.S. JURISDICTION, AND (2) IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE UNITED STATES, ANY STATE OF THE UNITED STATES AND ANY OTHER APPLICABLE JURISDICTION. EACH PURCHASER OR HOLDER OF AN INTEREST IN THIS NOTE AND EACH SUBSEQUENT HOLDER OF AN INTEREST IN THIS NOTE IS REQUIRED TO NOTIFY ANY PURCHASER OF AN INTEREST IN THIS NOTE OF THE TRANSFER RESTRICTIONS SET FORTH IN THIS LEGEND.

THE PERMITTED U.S. JURISDICTIONS AND NON-U.S. JURISDICTIONS ARE REFERENCED IN THE ISSUER'S OFFERING CIRCULAR DATED 30 MAY 2019 APPLICABLE TO THE NOTES REPRESENTED BY THIS CERTIFICATE. ANY PERSON WHO HOLDS ANY INTEREST IN THE NOTES, WHO DOES NOT RESIDE AND HOLD SUCH INTEREST IN A PERMITTED U.S. JURISDICTION OR A PERMITTED NON-U.S. JURISDICTION, MAY BE FORCED TO TRANSFER SUCH INTEREST TO A PERSON IN A PERMITTED U.S. JURISDICTION OR PERMITTED NON-U.S. JURISDICTION.

EACH PURCHASER (INCLUDING SUBSEQUENT TRANSFEREES) OF THIS NOTE (OR A BENEFICIAL INTEREST HEREIN) WILL BE DEEMED TO HAVE REPRESENTED, WARRANTED, ACKNOWLEDGED AND AGREED THAT: (1) THE PURCHASER IS PURCHASING THIS NOTE (OR A BENEFICIAL INTEREST HEREIN) FOR ITS OWN ACCOUNT OR FOR A BENEFICIAL OWNER FOR WHICH SUCH PERSON IS ACTING AS FIDUCIARY OR AGENT WITH COMPLETE INVESTMENT DISCRETION AND WITH AUTHORITY TO BIND SUCH OTHER PERSON (THE PURCHASER, AND EACH SUCH BENEFICIAL OWNER, COLLECTIVELY, THE "**PURCHASER**"), AND NOT WITH A VIEW TO ANY PUBLIC RESALE OR DISTRIBUTION THEREOF; (2) THE PURCHASER UNDERSTANDS AND ACKNOWLEDGES THAT THIS NOTE AND ANY BENEFICIAL INTEREST HEREIN HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OR ANY OTHER APPLICABLE SECURITIES LAW, AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED EXCEPT PURSUANT TO AN EXEMPTION FROM REGISTRATION. NOTWITHSTANDING THE AVAILABILITY OF AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS UNDER THE SECURITIES ACT, THIS NOTE MAY NOT BE RESOLD OR TRANSFERRED EXCEPT TO A QUALIFIED INVESTOR (PURSUANT TO THE RISK TRANSFORMATION REGULATIONS 2017), AND A QUALIFIED INSTITUTIONAL BUYER (WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT) PURSUANT TO RULE 144A THAT, (I) IN THE CASE OF A PURCHASER THAT IS A U.S. PERSON (AS DEFINED IN RULE 902(k) UNDER THE SECURITIES ACT), IS ALSO A QUALIFIED PURCHASER (AS DEFINED IN SECTION 2(a)(51) OF THE INVESTMENT COMPANY ACT AND THE RULES AND REGULATIONS THEREUNDER) IN RELIANCE ON THE EXCEPTION FROM THE REGISTRATION

THEREUNDER PROVIDED BY SECTION 3(c)(7), (II) IS A QUALIFIED ELIGIBLE PERSON AS DEFINED IN U.S. COMMODITY TRADING FUTURES COMMISSION RULE 4.7 AND (III) IS A RESIDENT OF, AND PURCHASING IN, AND WILL HOLD THE NOTES IN, A PERMITTED U.S. JURISDICTION OR A PERMITTED NON-U.S. JURISDICTION; (3) THE PURCHASER IS (I) A QUALIFIED INVESTOR PURSUANT TO THE RISK TRANSFORMATION REGULATIONS 2017 (II) A QUALIFIED INSTITUTIONAL BUYER, (III) IF A U.S. PERSON, A QUALIFIED PURCHASER, (IV) A QUALIFIED ELIGIBLE PERSON, AND (V) A RESIDENT OF, AND PURCHASING IN, AND WILL HOLD THIS NOTE (OR A BENEFICIAL INTEREST HEREIN) IN, A PERMITTED U.S. JURISDICTION OR A PERMITTED NON-U.S. JURISDICTION, AND IS AWARE (AND ANY OTHER PERSON FOR WHOM SUCH PURCHASER IS PURCHASING IS AWARE) THAT ANY SALE OF THIS NOTE (OR BENEFICIAL INTEREST HEREIN) TO IT WILL BE MADE IN RELIANCE ON RULE 144A AND, IF A U.S. PERSON, THE EXCEPTION FROM REGISTRATION PROVIDED IN SECTION 3(c)(7) OF THE INVESTMENT COMPANY ACT, AND SUCH ACQUISITION WILL BE FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF ANOTHER QUALIFIED INVESTOR, QUALIFIED INSTITUTIONAL BUYER, QUALIFIED PURCHASER (IF A U.S. PERSON) AND QUALIFIED ELIGIBLE PERSON WHO IS ALSO AWARE THAT THE SALE TO IT IS BEING MADE IN RELIANCE ON RULE 144A AND, IF A U.S. PERSON, THE EXCEPTION FROM REGISTRATION PROVIDED IN SECTION 3(c)(7) OF THE INVESTMENT COMPANY ACT; (4) THE PURCHASER (IF A U.S. PERSON) IS NOT A BROKER-DEALER WHICH OWNS AND INVESTS ON A DISCRETIONARY BASIS LESS THAN USD 25,000,000 IN SECURITIES OF ISSUERS UNAFFILIATED WITH SUCH BROKER-DEALER; (5) THE PURCHASER (IF A U.S. PERSON) IS NOT A PARTICIPANT-DIRECTED EMPLOYEE PLAN, SUCH AS A 401(k) PLAN, OR A TRUST HOLDING THE ASSETS OF SUCH PLAN, UNLESS THE INVESTMENT DECISIONS WITH RESPECT TO SUCH PLAN ARE MADE SOLELY BY THE FIDUCIARY, TRUSTEE OR SPONSOR OF SUCH PLAN; (6) THE PURCHASER AND EACH ACCOUNT FOR WHICH IT IS PURCHASING OR OTHERWISE ACQUIRING THIS NOTE (OR BENEFICIAL INTERESTS HEREIN), WILL PURCHASE, HOLD OR TRANSFER AT LEAST THE MINIMUM DENOMINATION OF THE NOTES (OR BENEFICIAL INTERESTS THEREIN) SPECIFIED IN THE CONDITIONS; (7) THE PURCHASER (IF A U.S. PERSON) WAS NOT FORMED, REFORMED OR RECAPITALISED FOR THE SPECIFIC PURPOSE OF INVESTING IN THE NOTES AND/OR OTHER SECURITIES OF THE ISSUER (UNLESS ALL OF THE BENEFICIAL OWNERS OF SUCH ENTITY'S SECURITIES ARE QUALIFIED INVESTORS, QUALIFIED INSTITUTIONAL BUYERS, QUALIFIED PURCHASERS AND QUALIFIED ELIGIBLE PERSONS); (8) IF THE PURCHASER IS AN INVESTMENT COMPANY EXCEPTED FROM THE INVESTMENT COMPANY ACT PURSUANT TO SECTION 3(c)(1) OR SECTION 3(c)(7) THEREOF (OR A FOREIGN INVESTMENT COMPANY UNDER SECTION 7(d) THEREOF RELYING ON SECTION 3(c)(1) OR 3(c)(7) WITH RESPECT TO ITS HOLDERS THAT ARE U.S. PERSONS) AND WAS FORMED ON OR BEFORE APRIL 30, 1996, IT HAS RECEIVED THE CONSENT OF ITS BENEFICIAL OWNERS WHO ACQUIRED THEIR INTERESTS ON OR BEFORE APRIL 30, 1996, WITH RESPECT TO ITS TREATMENT AS A QUALIFIED PURCHASER IN THE MANNER REQUIRED BY SECTION 2(a)(51)(C) OF THE INVESTMENT COMPANY ACT AND THE RULES PROMULGATED THEREUNDER; (9) THE PURCHASER (IF A U.S. PERSON) IS NOT A PARTNERSHIP, COMMON TRUST FUND, OR CORPORATION, SPECIAL TRUST, PENSION FUND OR RETIREMENT PLAN, OR OTHER ENTITY, IN WHICH THE PARTNERS, BENEFICIARIES, BENEFICIAL OWNERS, PARTICIPANTS, SHAREHOLDERS OR OTHER EQUITY OWNERS, AS THE CASE MAY BE, MAY DESIGNATE THE PARTICULAR INVESTMENT TO BE MADE, OR THE ALLOCATION THEREOF, UNLESS ALL SUCH PARTNERS, BENEFICIARIES, BENEFICIAL OWNERS, PARTICIPANTS, SHAREHOLDERS OR OTHER EQUITY OWNERS ARE QUALIFIED INVESTORS, QUALIFIED INSTITUTIONAL BUYERS, QUALIFIED PURCHASERS AND QUALIFIED ELIGIBLE PERSONS; (10) THE PURCHASER (IF A U.S. PERSON) HAS NOT INVESTED MORE THAN 40% OF ITS ASSETS IN THE NOTES (OR BENEFICIAL INTERESTS THEREIN) AND/OR OTHER SECURITIES OF THE ISSUER AFTER GIVING EFFECT TO THE PURCHASE OF THE NOTES (OR BENEFICIAL INTERESTS THEREIN) (UNLESS ALL OF THE BENEFICIAL OWNERS OF SUCH ENTITY'S SECURITIES ARE QUALIFIED INVESTORS, QUALIFIED INSTITUTIONAL BUYERS, QUALIFIED PURCHASERS AND QUALIFIED ELIGIBLE PERSONS); (11) THE PURCHASER (IF A U.S.

PERSON) AGREES THAT THE ISSUER SHALL BE ENTITLED TO REQUIRE ANY HOLDER OF THIS NOTE (OR A BENEFICIAL INTEREST HEREIN) THAT IS DETERMINED NOT TO HAVE BEEN A QUALIFIED INVESTOR, A QUALIFIED INSTITUTIONAL BUYER, A QUALIFIED PURCHASER AND A QUALIFIED ELIGIBLE PERSON (AND TO HAVE MET THE OTHER REQUIREMENTS SET FORTH IN (1)-(14) AT THE TIME OF ACQUISITION OF SUCH NOTE (OR SUCH BENEFICIAL INTEREST)) TO SELL THE NOTES (OR SUCH BENEFICIAL INTEREST) IN ACCORDANCE WITH THE PROVISIONS DESCRIBED BELOW; (12) THE PURCHASER UNDERSTANDS THAT THE ISSUER MAY RECEIVE A LIST OF THE PARTICIPANTS FROM THE APPLICABLE CLEARING SYSTEM OR ANY OTHER DEPOSITARY HOLDING BENEFICIAL INTERESTS IN THE NOTES; (13) THE PURCHASER AND EACH PERSON FOR WHICH IT IS ACTING UNDERSTANDS THAT ANY SALE OR TRANSFER TO A PERSON THAT DOES NOT COMPLY WITH THE REQUIREMENTS SET FORTH IN (1)-(14) RELATING TO QUALIFIED INVESTORS, QUALIFIED INSTITUTIONAL BUYERS, QUALIFIED PURCHASERS AND QUALIFIED ELIGIBLE PERSONS WILL BE VOID AND OF NO EFFECT; (14) THE PURCHASER WILL PROVIDE NOTICE OF THESE TRANSFER RESTRICTIONS TO ANY SUBSEQUENT TRANSFEREES AND AGREES NOT TO ACT AS A SWAP COUNTERPARTY OR OTHER TYPE OF INTERMEDIARY WHEREBY ANY OTHER PARTY WILL ACQUIRE AN ECONOMIC OR BENEFICIAL INTEREST IN THE NOTES ACQUIRED OR REOFFER, RESELL, PLEDGE OR OTHERWISE TRANSFER THE NOTES (OR ANY BENEFICIAL INTERESTS THEREIN), TO ANY PERSON EXCEPT TO A PERSON THAT (X) MEETS ALL OF THE REQUIREMENTS IN (1)-(14) AND (Y) AGREES NOT TO SUBSEQUENTLY TRANSFER THE NOTES OR ANY BENEFICIAL INTEREST THEREIN EXCEPT IN ACCORDANCE WITH THESE TRANSFER RESTRICTIONS.

THE ISSUER MAY REQUIRE THE HOLDER OF THIS NOTE (OR ANY OWNER OF A BENEFICIAL INTEREST THEREIN) TO PROVIDE THE ISSUER WITH AN OPINION OF COUNSEL ADDRESSED TO AND SATISFACTORY TO THE ISSUER TO THE EFFECT THAT SUCH REOFFER, RESALE, EXCHANGE, PLEDGE OR OTHER TRANSFER WILL NOT REQUIRE THE ISSUER TO REGISTER AS AN INVESTMENT COMPANY UNDER THE INVESTMENT COMPANY ACT.

IF THE PURCHASER OR ANY SUBSEQUENT PURCHASER OR TRANSFEREE OF THIS NOTE (OR A BENEFICIAL INTEREST HEREIN) IS DETERMINED NOT TO HAVE BEEN, AT THE TIME IT ACQUIRED THIS NOTE (OR SUCH BENEFICIAL INTEREST), (I) A QUALIFIED INVESTOR, A QUALIFIED INSTITUTIONAL BUYER AND, IF A U.S. PERSON, A QUALIFIED PURCHASER AND (II) A QUALIFIED ELIGIBLE PERSON, SUCH ACQUISITION WILL BE REGARDED AS NULL AND VOID AND OF NO EFFECT. IF ANY PERSON WHO HOLDS ANY INTEREST IN THIS NOTE, DOES NOT RESIDE AND HOLD SUCH INTEREST IN A PERMITTED U.S. JURISDICTION OR PERMITTED NON-U.S. JURISDICTION OR WAS NOT, AT THE TIME IT ACQUIRED THIS NOTE (OR SUCH BENEFICIAL INTEREST), (I) A QUALIFIED INVESTOR, A QUALIFIED INSTITUTIONAL BUYER AND, IF A U.S. PERSON, A QUALIFIED PURCHASER AND (II) A QUALIFIED ELIGIBLE PERSON, THE ISSUER MAY COMPEL SUCH PERSON TO SELL THIS NOTE (OR SUCH BENEFICIAL INTEREST), WITHIN 30 CALENDAR DAYS AFTER NOTICE OF THE SALE REQUIREMENT IS GIVEN, TO A PERSON THAT MEETS THE FOREGOING REQUIREMENTS. IF SUCH HOLDER (OR BENEFICIAL OWNER) FAILS TO EFFECT THE SALE WITHIN SUCH 30-DAY PERIOD, THE ISSUER HAS THE RIGHT TO SELL THIS NOTE (OR SUCH BENEFICIAL INTEREST) TO A PURCHASER SELECTED BY THE ISSUER WHO MEETS THE REQUIREMENTS SET FORTH HEREIN ON SUCH TERMS AS THE ISSUER MAY CHOOSE AS PROVIDED IN THE TRUST DEED. THE ISSUER MAY SELECT THE PURCHASER BY SOLICITING ONE OR MORE BIDS FROM ONE OR MORE BROKERS OR OTHER MARKET PROFESSIONALS THAT REGULARLY DEAL IN SECURITIES SIMILAR TO THIS NOTE, AND SELLING THE NOTES TO THE HIGHEST SUCH BIDDER. HOWEVER, THE ISSUER MAY SELECT A PURCHASER BY ANY OTHER MEANS DETERMINED BY IT IN ITS SOLE DISCRETION.

THE PURCHASER, SUBSEQUENT TRANSFEREE OR OTHER HOLDER OF THIS NOTE OR ANY BENEFICIAL INTEREST HEREIN EITHER (A) IS NOT (I) AN "EMPLOYEE BENEFIT PLAN" WITHIN THE MEANING OF SECTION 3(3) OF THE U.S. EMPLOYEE RETIREMENT INCOME SECURITY ACT OF 1974, AS AMENDED ("**ERISA**"), THAT IS

SUBJECT TO TITLE I OF ERISA, (II) A "PLAN" WITHIN THE MEANING OF AND SUBJECT TO SECTION 4975 OF THE U.S. INTERNAL REVENUE CODE OF 1986, AS AMENDED (THE "**CODE**"), (III) A PERSON OR ENTITY WHOSE UNDERLYING ASSETS INCLUDE THE ASSETS OF ANY SUCH EMPLOYEE BENEFIT PLAN OR PLAN DESCRIBED IN (I) OR (II) BY REASON OF THE U.S. DEPARTMENT OF LABOUR REGULATION AT 29 C.F.R. § 2510.3-101. AS MODIFIED BY SECTION 3(42) OF ERISA, OR OTHERWISE FOR PURPOSE OF TITLE I OF ERISA OR SECTION 4975 OF THE CODE (EACH OF (I)-(III), A "**BENEFIT PLAN INVESTOR**") OR (IV) A "GOVERNMENTAL PLAN" WITHIN THE MEANING OF SECTION 3(32) OF ERISA, A "CHURCH PLAN" WITHIN THE MEANING OF SECTION 3(33) OF ERISA THAT HAS MADE NO ELECTION UNDER SECTION 410(D) OF THE CODE. A "NON-U.S. PLAN" DESCRIBED IN SECTION 4(B)(4) OF ERISA OR A BENEFIT PLAN THAT IS NOT A BENEFIT PLAN INVESTOR (ANY SUCH PLAN, A "**SIMILAR PLAN**") BUT IS SUBJECT TO ANY U.S. FEDERAL, STATE, LOCAL, NON-U.S. OR OTHER LAW OR REGULATION THAT IS SUBSTANTIALLY SIMILAR TO THE FIDUCIARY RESPONSIBILITY AND PROHIBITED TRANSACTION PROVISIONS OF TITLE I OF ERISA OR SECTION 4975 OF THE CODE (ANY SUCH LAW OR REGULATION, A "**SIMILAR LAW**"), AND IT IS NOT PURCHASING THIS NOTE OR ANY BENEFICIAL INTEREST HEREIN ON BEHALF OF, OR WITH "PLAN ASSETS" OF, ANY SUCH BENEFIT PLAN INVESTOR OR SIMILAR PLAN OR (B)(I) IS OR IS ACTING ON BEHALF OF OR PURCHASING THIS NOTE OR ANY BENEFICIAL INTEREST HEREIN WITH THE ASSETS OF A BENEFIT PLAN INVESTOR OR A SIMILAR PLAN THAT IS SUBJECT TO ANY SIMILAR LAW, AND SUCH PURCHASER'S OR OTHER HOLDER'S PURCHASE, HOLDING AND SUBSEQUENT DISPOSITION OF THE INTEREST IN THIS NOTE WILL NOT CONSTITUTE OR RESULT IN A NON-EXEMPT PROHIBITED TRANSACTION UNDER SECTION 406 OF ERISA AND SECTION 4975 OF THE CODE (OR, IN THE CASE OF A SIMILAR PLAN, A NON-EXEMPT VIOLATION OF ANY SIMILAR LAW) AND, (II) IF IT IS RELYING ON THE SERVICE PROVIDER EXEMPTION OF SECTION 408(B)(17) OF ERISA AND SECTION 4975(D)(20) OF THE CODE, REPRESENTS THAT, AS A PERSON MAKING THE DECISION TO PURCHASE SUCH AN INTEREST IN THIS NOTE, IT IS MAKING THE REPRESENTATIONS SET FORTH IN THIS CLAUSE (B) IN ITS INDIVIDUAL CAPACITY AS WELL AS ITS FIDUCIARY CAPACITY AND HAS DETERMINED THAT, IN CONNECTION WITH SUCH A TRANSACTION, THE PURCHASER WILL RECEIVE NO LESS, AND PAY NO MORE, THAN ADEQUATE CONSIDERATION AS PROVIDED IN SECTION 408(B)(17) OF ERISA AND SECTION 4975(D)(20) OF THE CODE.

IN ADDITION, EACH PURCHASER OR SUBSEQUENT TRANSFEREE THAT IS A BENEFIT PLAN INVESTOR OR A SIMILAR PLAN THAT IS SUBJECT TO ANY SIMILAR LAW ACKNOWLEDGES AND AGREES THAT, BY PURCHASING THIS NOTE OR ANY BENEFICIAL INTEREST HEREIN, (X) IT WILL BE DEEMED TO HAVE DIRECTED (I) THE APPLICABLE ASSETS OF THE ISSUER TO BE INVESTED IN THE PERMITTED INVESTMENTS AND (II) THE ISSUER TO ENTER INTO THE TRUST DEED, THE APPLICABLE RISK TRANSFER AGREEMENT, THE APPLICABLE COLLATERAL CONTRACT, IF ANY, AND THE APPLICABLE DEED OF CHARGE, AND (Y) IT DOES NOT CONSIDER THE RISK TRANSFER COUNTERPARTY OR ANY OTHER PARTY EXERCISING AUTHORITY OR CONTROL RESPECTING THE MANAGEMENT OR DISPOSITION OF PERMITTED INVESTMENTS, IF ANY, AS A FIDUCIARY FOR PURPOSES OF TITLE I OF ERISA, SECTION 4975 OF THE CODE AND ANY APPLICABLE SIMILAR LAW WITH RESPECT TO ANY ASSETS OF SUCH INVESTING BENEFIT PLAN INVESTORS OR SIMILAR PLANS. EVERY PURCHASER, SUBSEQUENT TRANSFEREE AND HOLDER OF A NOTE OR ANY BENEFICIAL INTEREST THEREIN WILL BE DEEMED TO HAVE MADE THE REPRESENTATIONS HEREIN.

EACH PURCHASER (INCLUDING SUBSEQUENT TRANSFEREES) OF THIS NOTE (OR A BENEFICIAL INTEREST HEREIN) WILL BE DEEMED TO HAVE REPRESENTED, WARRANTED, ACKNOWLEDGED AND AGREED THAT IT IS A QUALIFIED INVESTOR (AS DEFINED IN THE RISK TRANSFORMATION REGULATIONS 2017). ANY INFORMATION PROVIDED TO A PURCHASER OR A PROSPECTIVE TRANSFEREE SHALL BE FOR THE SOLE PURPOSE OF ASSESSING THE INVESTMENT. AS A CONDITION OF ACCESS TO SUCH INFORMATION, EACH PURCHASER AGREES THAT

NEITHER IT NOR ANY PROSPECTIVE TRANSFEREE MAY DISCLOSE ANY SUCH INFORMATION TO THIRD PARTIES OTHER THAN AS REQUIRED BY APPLICABLE LAW, INCLUDING FEDERAL AND STATE SECURITIES LAWS, NOR USE THE INFORMATION FOR ANY PURPOSE OTHER THAN INVESTMENT ANALYSIS.

15. The Purchaser has had access to such financial and other information concerning the Issuer and the Notes as it has deemed necessary in connection with its decision to purchase the Notes. The Purchaser (i) has been given the opportunity to ask questions of and receive answers from the Issuer concerning the terms and conditions of the Offering and other matters pertaining to an investment in the Notes, (ii) has been given the opportunity to request and review such additional information necessary to evaluate the merits and risks of a purchase of the Notes and to verify the accuracy of or to supplement the information contained in the Circular and (iii) has received all documents and information reasonably necessary to make an investment decision, subject to contractual restrictions on the Issuer's ability to disclose confidential information. The Purchaser understands the terms, conditions and risks of the Notes and that the Notes involve a high degree of risk as described in the Circular and this Circular including possible loss of the Purchaser's entire investment. The Purchaser has not relied upon any advice or recommendation of the Issuer, the Initial Purchasers or the applicable Risk Transferor or any of their affiliates, and is making its own investment decision based upon its own judgment and upon the advice of such professional advisors, either employed or independently retained by the Purchaser, as it has deemed necessary to consult. It has not relied on any other version of the Circular and this Circular other than the final version thereof in making its investment decision with respect to the Notes. The Purchaser acknowledges that no person has been authorised to give any information or to make any representations concerning the Issuer or the Notes other than those contained in the Circular and this Circular and, if given or made, such other information or representations have not been relied upon. The Purchaser acknowledges that it has reviewed this Circular, including the "*Risk Factors*" and the legends in the forward part of this Circular. The Purchaser has determined that it has the legal power, authority and right to purchase the Notes. The Purchaser understands that there is no assurance that a secondary market for the Notes will develop, the fair market value of the Notes may reflect a substantial discount from the Purchaser's initial investment and substantial volatility in light of certain events under the respective Risk Transfer Agreement, and that the Notes may trade at a value other than that which may be inferred from the current levels of interest rates, due to other factors including, but not limited to, expectations of the future levels of interest rates and the occurrence of certain Covered Events.

16. The Purchaser understands that the Issuer may require the Purchaser to provide certification or information acceptable to the Issuer which is necessary for the Issuer (i) to prevent withholding or qualify for a reduced rate of withholding or backup withholding in any jurisdiction from or through which the Issuer receives Periodic Payments or other payments on its assets, (ii) to make payments of principal and interest on the Notes without, or at a reduced rate of, withholding or backup withholding in any jurisdiction, or (iii) to enable the Issuer or its agents to satisfy reporting and other obligations under the Code and Treasury Regulations, and to update or replace such form or certification in accordance with its terms or its subsequent amendments. The Purchaser agrees to provide any such certification or information that is requested by the Issuer.

17. The Purchaser or other holder of the Notes or any beneficial interest therein either (A) is not (i) a Benefit Plan Investor or (ii) a Similar Plan that is subject to any Similar Law and it is not purchasing the Notes or any beneficial interest therein on behalf of, or with "plan assets" of, any such Benefit Plan Investor or Similar Plan or (B)(i) is or is acting on behalf of or purchasing the Notes or any beneficial interest therein with the assets of a Benefit Plan Investor or a Similar Plan that is subject to any Similar Law, and such Purchaser's or holder's purchase, holding and subsequent disposition of the interest in such Notes will not constitute or result in a non-exempt prohibited transaction (or, in the case of a Similar Plan, a nonexempt violation of any Similar Law) and, (ii) if it is relying on the Service Provider Exemption, represents that, as a person making the decision to purchase the interest in such Notes, it is making the representations set forth in this clause (B) in its individual capacity as well as its fiduciary capacity and has determined that, in connection with such a transaction, the Purchaser will receive no less, and pay no more, than adequate consideration as provided in Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code.

18. The Purchaser or other holder of the Notes or any beneficial interest therein that is a Benefit Plan Investor or a Similar Plan that is subject to any Similar Law acknowledges and agrees that, by

purchasing the Notes or any beneficial interest therein, (X) it will be deemed to have directed (i) the applicable assets of the Issuer to be invested in the Permitted Investments and (ii) the Issuer to enter into the Trust Deed, the applicable Risk Transfer Agreement, the applicable Collateral Contract, if any, and the applicable Deed of Charge, and (Y) it does not consider the Issuer or any other party exercising authority or control respecting the management or disposition of Permitted Investments, if any, as a fiduciary for purposes of Title I of ERISA, Section 4975 of the Code and any applicable Similar Law with respect to any assets of such investing Benefit Plan Investors or Similar Plans.

19. The Purchaser agrees, for federal income tax purposes, to treat the Notes as evidencing equity interests in the Issuer.

20. The Purchaser agrees, prior to the sale by such Purchaser of any Notes, to provide any potential purchaser that is a permitted transferee the opportunity to review any Available Information and Rule 144A Information received by the Purchaser prior to the date of such sale.

21. The Purchaser agrees, represents and warrants that it has not offered, sold, placed or underwritten and will not offer, sell, place or underwrite the issue of any Notes otherwise than in conformity with applicable law, including without limitation, applicable law in Ireland, the United Kingdom, and the U.S.

22. The Purchaser (if other than the Initial Purchasers) acknowledges that the Issuer, each Initial Purchaser and other persons will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements and agrees that if any of the acknowledgements, representations and agreements deemed to have been made by its purchase of an interest in Notes are no longer accurate, it will promptly notify the Issuer and each Initial Purchaser.

Investors are strongly urged to have these representations and agreements reviewed by their counsel prior to making any decision to invest in the Notes.

EXPERTS

The statistical data, risk modeling and explanations thereof included in the "AIR Expert Risk Analysis" report attached as Annex A, in the "AIR Expert Risk Analysis Results" report attached as Annex B and in the AIR Data File information referred to in Annex C and accompanying this Circular are included and made available in reliance upon AIR as an expert in modeling techniques and the analysis of risks associated with Named Storms in the Named Storm Covered Area, Earthquakes in the Earthquake Covered Area and Europe Windstorms in the Europe Windstorm Covered Area.

LEGAL MATTERS

Certain legal matters relating to the Notes will be passed upon for the Issuer by Clifford Chance LLP and by Clifford Chance US LLP. Clifford Chance LLP will rely, without independent investigation, on the opinions of in-house counsel of the Risk Transferor as to matters of French law. Clifford Chance LLP and Clifford Chance US LLP have advised the Issuer and the Risk Transferor as to various legal matters, including as to English law and certain matters to New York law and U.S. federal, tax and securities law matters. Mayer Brown LLP has advised the Initial Purchasers as to certain legal matters including securities law matters.

ANNEX A
AIR EXPERT RISK ANALYSIS

Introduction to AIR / Overview of Analysis

The Issuer has engaged AIR Worldwide Corporation ("**AIR**"), an independent consultant, as the modeling firm to perform certain risk assessment analyses with respect to Named Storm Events, Earthquake Events, and Europe Windstorm Events, and to estimate the probability of various levels of insured property loss arising therefrom. AIR's work has included (i) producing a modeled distribution of losses caused by Named Storms, Earthquakes, and Europe Windstorms affecting AIR's database of industry insured exposures in the Named Storm Covered Area, Earthquake Covered Area, and Europe Windstorm Covered Area as a proxy for PCS and PERILS reported industry insured losses; and (ii) determining the probabilities of attachment, exhaustion, and expected losses to the Notes; and the other modeled information included herein.

AIR, established in 1987, is an independent software and consulting firm that develops catastrophe risk assessment and management methodologies and techniques. AIR has provided catastrophe loss analysis services for numerous insurance and reinsurance companies. Many of them utilize AIR catastrophe risk assessment and management methodologies and software on an ongoing basis. In addition, AIR catastrophe models have been used in a number of previous insurance-linked capital markets transactions. AIR is a wholly-owned subsidiary of Insurance Services Office, Inc.

To estimate the probability distribution of losses from any Named Storms affecting the Named Storm Covered Area, Earthquakes affecting the Earthquake Covered Area, and Europe Windstorms affecting the Europe Windstorm Covered Area, AIR has developed probabilistic simulation models that generate potential events in accordance with their estimated relative probability of occurrence. The AIR Expert Risk Analysis was prepared using version 16.1 of the AIR Hurricane Model for the United States (the "**AIR Hurricane Model for the United States**"), version 3.1 of the AIR Tropical Cyclone Model for Hawaii (the "**AIR Tropical Cyclone Model for Hawaii**"), version 9.1 of the AIR Tropical Cyclone Model for the Caribbean (the "**AIR Tropical Cyclone Model for the Caribbean**", together with the AIR Hurricane Model for the United States and the AIR Tropical Cyclone Model for Hawaii, the "**AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models**"), version 10.2 of the AIR Earthquake Model for the United States and Canada (the "**AIR Earthquake Model for the United States and Canada**"), version 1.8 of the AIR Earthquake Model for Alaska (the "**AIR Earthquake Model for Alaska**"), version 1.7 of the AIR Earthquake Model for Hawaii (the "**AIR Earthquake Model for Hawaii**"), version 2.0 of the AIR Earthquake Model for the Caribbean ("**AIR Earthquake Model for the Caribbean**") (collectively, the "**AIR Earthquake Models**"), and version 6.0 of the AIR Extratropical Cyclone Model for Europe (the "**AIR Europe Windstorm Model**"), each as implemented in Touchstone 6.0.4 and CATRADER 20.2.0 (each, an "**AIR Model**" and collectively, the "**AIR Models**"). The AIR Models generate thousands of simulated events and apply the associated event characteristics to the industry insurable exposure in the Named Storm Covered Area, Earthquake Covered Area, and Europe Windstorm Covered Area in order to estimate the insured damages that would result from each of the simulated events.

For the avoidance of doubt, the AIR Models, other than with respect to Hawaii, do not model the probability of losses resulting from (i) tropical storms that at no point are classified as a hurricane or (ii) hurricanes that degrade to tropical storm force and subsequently make landfall in the United States as a tropical storm or (iii) storms that never make landfall in the United States, and that fail to cause winds of greater than or equal to 40 miles per hour ("**mph**") over any point in the United States while causing winds of greater than or equal to 74 mph offshore. In addition, the AIR Models do not model the probability of losses resulting from: tropical cyclones formed within the Pacific Basin (other than those affecting Hawaii) or affecting areas outside of Alabama, Arkansas, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, and West Virginia; fire following; storm surge in Hawaii; or the removal of debris following a Covered Event.

This AIR Expert Risk Analysis sets forth a description of the methods utilized by AIR on behalf of the Issuer in calculating the estimated distribution of losses. The modeled loss results and model methodology included herein as well as the Initial Data File provided with this Offering Circular have been prepared by AIR as experts in such matters. AIR will also serve as the Calculation Agent and Reset Agent for the Notes.

AIR Modeling Approach

Standard actuarial techniques utilized by insurers and reinsurers typically rely on past losses to project future losses. However, the scarcity of historical loss data resulting from the relative infrequency of catastrophe events makes exclusive reliance on standard actuarial techniques of loss estimation inappropriate for the estimation of potential catastrophe losses. Furthermore, the usefulness of the loss data that does exist is limited because of the constantly changing landscape of insured properties. Property values change, along with the costs of repair and replacement. Building materials and designs change, and new structures may be more or less vulnerable to catastrophe events than were the old ones. New properties continue to be built in areas of high hazard. Therefore, the limited loss information that is available is not suitable for directly estimating future losses.

Because of these limitations on the exclusive use of historical loss information to estimate future loss potential, AIR has developed an alternative loss-estimation methodology based on statistical simulation techniques. This approach involves the construction of computer programs that incorporate fundamental physical characteristics of catastrophic perils. The programs give mathematical representation to the physical phenomena of catastrophe events in order to evaluate the potential damage and insured losses that can occur. The modeling is performed on a "probabilistic" basis, meaning that the results of the modeling are expressed in terms of probabilities. A set of results is expressed in terms of a probability distribution, also known as a "loss distribution" which, given specific insurance exposures under policies in force, provides a distribution of possible losses and the relative likelihood of occurrence of various levels of loss. The loss distribution is not a prediction of future losses. It is solely intended to be illustrative of the range of possible losses from loss-causing events and the likelihood of occurrence of such losses. A loss of any particular magnitude could occur in any year.

As indicated below, the AIR Models and their modeling approach are subject to important limitations, uncertainties, and special considerations.

Limitations of AIR Expert Risk Analysis Included Herein

The results of AIR's analyses are not to be viewed as facts or forecasts of future Covered Events, and should not be relied upon as a representation of the future values of the Notes. Actual loss experience can materially differ from that generated by the AIR Models. No model of catastrophe events is, or can be, an exact representation of reality. The loss distributions and other analyses generated by AIR are based on assumptions relating to environmental, demographic, and cost factors, many of which represent subjective judgments, are inherently uncertain, and are beyond the control of AIR. Accordingly, the loss estimates produced by the AIR Models are subject to uncertainty. The assumptions and methodologies used by AIR may not constitute the exclusive set of reasonable assumptions and methodologies, and the use of alternative assumptions and/or methodologies could yield results materially different from those generated by AIR.

In its loss estimation models for hurricanes, earthquakes, and Europe windstorms, and in the development of the various risk parameters used in the AIR Models, AIR has relied on published technical papers, historical catalogs of past events, scientific theory published in refereed journals, and other data and analyses that it believes represent current and credible scientific opinion as of their respective release dates. AIR has not reviewed, however, the authenticity of all the data in the historical catalogs as to the dates, locations, or severities of the catastrophe events. Further uncertainties arise from insufficient data, limited scientific knowledge, alternative theories governing empirical relationships, and the random nature of hurricanes, earthquakes, and Europe windstorms.

AIR reviews its modeling assumptions from time to time in light of new meteorological, seismological, engineering, and other data and information, and refines the loss estimates as such information becomes available. Such refinements may materially alter, and have in the past materially altered, the loss estimates generated by the AIR Models.

AIR's modeling reflects the use of a function to account for the effects of temporary inflation that can result from increased demand for materials and services to repair and rebuild damaged property after a major catastrophe event ("**Demand Surge**"). The Demand Surge function is calculated based on very few historical data points, collected solely from historical events in the United States, and is also highly subjective. As a result, the loss estimates presented herein may understate the impact of Demand Surge on losses, possibly materially.

The loss probabilities generated by the AIR Models are not predictive of future catastrophic events, or of the magnitude of losses that may occur in the event of an actual catastrophic event. AIR has not made any effort, nor does it have the ability, to predict such catastrophes. Actual frequency of Named Storm Events, Earthquake Events, and Europe Windstorm Events and their attendant losses could materially differ from those estimated by AIR. Potential investors in the Notes should not view the loss probabilities generated by the AIR Models as, in any way, predicting the likelihood of the occurrence, during the Risk Period, of any sequence of events that will result in a loss under the Reinsurance Agreement relating the Notes and a corresponding reduction in the amount available to make distributions to the Holders of the Notes. See "*Risk Factors*" in the Offering Circular.

U.S. AND CARIBBEAN HURRICANES

Introduction to U.S. and Caribbean Hurricanes

Hurricanes, or more generally tropical cyclones, begin to form when warm ocean water evaporates, is further warmed by the sun, and rises to create a high, thick layer of humid air. This rising of warm, dense air creates an area of low pressure, technically known as a depression, near the ocean's surface. Surface winds converge and, due to the earth's Coriolis force, display a clear cyclonic circulation.

Air flows from areas of relative high pressure to relative low pressure. The greater the difference between peripheral and central pressures, the faster the inflow. The inward rush of peripheral surface winds toward the central area of low pressure, the rise of warm humid air in the center, and the subsequent outflow away from the system at high altitude, can combine to create a self-sustaining heat engine. The warmer the water temperature, the faster the air in the center of the system rises. The faster this air rises, the greater will be the difference between the surface air pressures inside and outside the vortex. When circulating wind speeds reach 40 mph, the depression reaches tropical storm status. When wind speeds reach 74 mph, the storm is designated a hurricane. For details, please refer to "*Measuring Hurricane Intensity*" below.

Hurricanes form where there is a convergence of the necessary conditions. Hurricane formation is precluded in areas in close proximity to the earth's equator because of the absence of the Coriolis force, which is required for the spiraling circulation of surface winds. Conversely, at great distances from the equator, water temperatures will not be sufficiently warm for cyclonic formation. Generally, water temperatures must be at least 80 degrees Fahrenheit for the process to begin. There must also be a relative absence of "vertical shear," or winds that change appreciably in either magnitude or direction over the water, thus "shearing off" the cyclonic outflow at high altitudes. As their name suggests, tropical cyclones, and therefore hurricanes, typically form in the tropical regions of the earth's ocean basins. The occurrence of tropical cyclones tends to be seasonal[1], with most activity occurring from July to October in the U.S. Gulf and East Coasts.

In addition to warm water temperature and the absence of vertical shear winds, various climate signals have been identified that may affect hurricane activity. Climate signals are measurements of the natural feedback systems of the earth in its effort to maintain ocean-atmosphere equilibrium and are typically presented as a measurement of anomalies. For example, the Atlantic multi-decadal oscillation is a climate signal measuring the long term change in the sea surface temperature. The El-Niño Southern Oscillation ("**ENSO**") measures sea surface temperature anomalies in the Pacific Ocean off the coast of Peru which alternate over an approximate three- to eight-year cycle with an opposite cold phase known as "La Niña." The Quasi-Biennial Oscillation ("**QBO**") is a signal tracking the direction of the equatorial winds in the stratosphere, and the North Atlantic Oscillation ("**NAO**") is a pressure system over the North Atlantic that scientists have observed to steer North Atlantic tropical cyclones in a characteristic pattern to the west and eventually to the north. The AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models includes the effects of these climate signals to the extent that they are embodied in the historical data on the frequency and intensity of hurricanes, which are used in AIR's modeling. However, the analysis results of the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models represents a long run view of the probabilities of losses of different sizes and not a forecast or prediction of loss for any specific year. There can be no assurance that modeling specifically for such factors would not materially affect the modeled results. (See "*Sensitivity Analysis on Hurricane Frequency*.")

Measuring Hurricane Intensity

The severity of a hurricane is often measured by the Saffir-Simpson ("**S.S.**") scale. This scale comprises five categories of hurricanes, with category five being the most severe. The table below summarizes the characteristics of storms in each of the five categories of the S.S. scale, adapted from information published by the National Hurricane Center ("**NHC**"). Wind measurements refer to 1-minute average sustained winds.

[1] For details please refer to Table 4: Modeled Frequency of Hurricanes in the Atlantic and Gulf by Month

Table 1: Saffir-Simpson Hurricane Wind Scale[1]

S.S. Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	**Very dangerous winds will produce some damage:** Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96-110 mph 83-95 kt 154-177 km/h	**Extremely dangerous winds will cause extensive damage:** Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3	111-129 mph 96-112 kt 178-208 km/h	**Devastating damage will occur:** Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4	130-156 mph 113-136 kt 209-251 km/h	**Catastrophic damage will occur:** Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5	157 mph or higher 137 kt or higher 252 km/h or higher	**Catastrophic damage will occur:** A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

[1] Source: NHC.

AIR categorizes storms based on the official Saffir-Simpson categories, which are assigned on the basis of peak 1-minute, 10-meter sustained wind speed, as reported by the NHC, a branch of the Tropical Prediction Center of the National Oceanic and Atmospheric Administration ("**NOAA**"). Formerly, central pressure and storm surge were also used as potential intensity measures. In some cases, the assigned Saffir-Simpson category could differ depending on which measurement is used. Also, if a hurricane's central barometric pressure falls on the boundary between two categories, the hurricane may be assigned to the higher category. This may account for differences between the tables herein and other published meteorological information. Since the Saffir-Simpson category is not used in the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models for loss estimation, the differences in categorization methods do not affect the loss estimates generated by the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models.

Overview of AIR's Hurricane Modeling Methodology

The loss estimation methodology employed by AIR is based on established scientific theory in meteorology and wind engineering. In order to estimate the probability distribution of hurricane losses (by region, state, or county), the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models simulate thousands of hypothetical hurricanes, both landfalling and bypassing, and estimates the property damage that would result from each such hurricane.

AIR employs Monte Carlo simulation, a well-known statistical technique, to generate simulated storms. Monte Carlo simulation involves an iterative process using, in each simulation, a set of values stochastically drawn from the probability distributions governing each of the random variables being analyzed. In the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models, the random variables being analyzed are landfall location and hurricane frequency (described below), as well as the primary meteorological parameters of each simulated storm. Theoretical probability distributions are fitted to the historical data using statistical estimation methods and validated using goodness-of-fit tests along with meteorological expertise. By repeating the simulation process, a sample of many thousands of storms is generated, each corresponding to a different set of random values assigned to the storm parameters. A sample from a Monte Carlo simulation can be analyzed in ways similar to the ways in which a sample of experimental observations can be analyzed. In particular, a sample from a Monte Carlo simulation can be analyzed statistically to generate probability distributions of simulated losses for individual buildings or portfolios of buildings, given the characteristics of each simulated event.

The modeled hurricane loss potential to the Named Storm Covered Area was simulated by generating 10,000 annual scenarios of potential hurricane experience. The first step of the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models is to generate the number of hurricanes estimated to affect properties in the Named Storm Covered Area in the simulated year. For each simulated hurricane, the model assigns values for each of the modeled meteorological characteristics. It then estimates the potential property damage on the basis of a time profile of wind speeds at each location affected by each simulated storm. The model estimates the wind field for each storm using the following meteorological parameters: central barometric pressure, radius of maximum winds, forward speed, and storm track, each of which is described more fully below. In addition, the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models take into account the estimated local site conditions in estimating wind speeds for specific geographical areas. AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models also estimate losses from storms that bypass the coast without making landfall.

The AIR Hurricane Model for the United States does not model the probability of losses resulting from (i) tropical storms that at no point are classified as a hurricane or (ii) hurricanes that degrade to tropical storm force and subsequently make landfall in the United States as a tropical storm or (iii), for storms that never make landfall in the United States, that fail to cause winds of greater than or equal to 40 mph over any point in the United States, while causing winds of greater than or equal to 74 mph offshore.

The AIR Tropical Cyclone Model for Hawaii models the probability of losses resulting from (i) hurricanes and (ii) tropical storms.

Data Sources and Data Analysis

The meteorological sources used to develop the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models include databases, information, and publications available from various agencies and departments of the U.S. government, including the NHC, National Weather Service ("**NWS**"), NOAA, the U.S. Army Corps of Engineers, and the U.S. Department of Commerce. Many of these agencies gather original data on historical hurricanes from such sources as barograph traces from land stations and ships, actual wind records from NWS stations, aircraft reconnaissance flight data, radar data, and other pressure and wind reports. This original data can be conflicting and is not necessarily consistent. NWS scientists analyze this raw data and use it, along with their professional judgment, to synthesize databases of the primary meteorological characteristics of each historical storm. It is this final synthesized data that AIR uses in the development of the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models. AIR makes no independent verification or analysis of the meteorological data.

AIR then uses statistical estimation techniques to fit various probability distributions to the available meteorological data on historical hurricanes. AIR uses standard goodness-of-fit tests to quantify the quality of the fitted distributions. The distributions employed by the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models are standard statistical distributions that are representative of the underlying historical distributions of meteorological data. It is not likely, however, that the fitted distributions will exactly duplicate the true underlying distribution of the meteorological data.

The AIR Hurricane Model for the United States – Gulf and East Coasts

The first step in the creation of the AIR Hurricane Model for the United States' Gulf and East coasts component is to generate the number of hurricanes estimated to make landfall or bypass sufficiently close

to cause hurricane force winds over land in the simulated year. A storm is deemed to have made landfall in the model when the simulated eye of the storm crosses land.

Storm Characteristics and Associated Probabilities

Annual Frequency. The number of hurricanes for each year of a simulation is generated from an annual frequency distribution. The parameters of this distribution are estimated using the actual hurricane occurrences for 115 years spanning the period 1900 to 2014 (HURDAT2). The historical catalog includes all landfalling and all relevant bypassing hurricanes during the stated period.

Table 2: Frequency of Hurricanes by Location of Landfall for 1900-2014[(1)(2)]

	S.S. Category[(4)]					
Landfall Location[(3)]	**1**	**2**	**3**	**4**	**5**	**Total**
Northeast						
Connecticut	0	0	0	0	0	0
Maine	1	0	1	0	0	2
Massachusetts	1	0	1	0	0	2
New Hampshire	0	0	0	0	0	0
Rhode Island	0	1	1	0	0	2
New York	2	2	1	0	0	5
Mid-Atlantic						
Delaware	0	0	0	0	0	0
Maryland	0	0	0	0	0	0
New Jersey	2	0	0	0	0	2
Virginia	0	0	0	0	0	0
Southeast						
Florida	31	17	15	5	3	71
Georgia	0	2	0	0	0	2
North Carolina	16	7	3	1	0	27
South Carolina	9	3	0	1	0	13
Gulf						
Alabama	2	1	2	0	0	5
Louisiana	15	4	7	5	1	32
Mississippi	3	1	2	0	0	6
Texas	18	7	7	5	0	37
Mexico	4	1	2	1	0	8
Total	**104**	**46**	**42**	**18**	**4**	**214**

(1) Source: AIR.

(2) Multiple landfalls for the same hurricane are counted as the same Named Storm for the purposes of the Reinsurance Agreement relating to the Notes. Similarly, a hurricane making multiple landfalls is treated as a single hurricane in the model. However, for the purpose of this table, a single hurricane with multiple landfalls appears multiple times. For example, Hurricane Andrew made two landfalls, one in Florida as a S.S. category 5 hurricane, and the second in Louisiana as a S.S. category 3 hurricane. In the table above, Hurricane Andrew would be represented both as a Florida and as a Louisiana event.

(3) The regions defined in this table do not necessarily correspond to the Named Storm Covered Area defined for the purpose of this transaction.

(4) The S.S. categories in this table are based on wind speed. They can be different if based on central barometric pressure. For example, Hurricane Katrina would be a category 5 hurricane if classified by central pressure in Louisiana. Since the Saffir-Simpson category is not used in the AIR Hurricane Model for the United States for loss estimation, the differences in categorization methods do not affect the loss estimates generated by the AIR Hurricane Model for the United States.

Table 3: Multiple U.S. Landfalling Storms for 1900-2014[(1)(2)]

Hurricane	**State**	**S.S. Category**
NoName4 (1901)	Louisiana	1
	Mississippi	1
NoName3 (1903)	Florida	1
	Florida	1
NoName2 (1904)	South Carolina	1
	Rhode Island	1
NoName4 (1925)	Florida	1
	North Carolina	1
NoName6 (1926)	Florida	4
	Alabama	2
NoName4 (1928)	Florida	4
	South Carolina	2
NoName2 (1929)	Florida	3
	Florida	1
NoName5 (1933)	Florida	1
	Mexico	2

Hurricane	State	S.S. Category
NoName2 (1935)	Florida	5
	Florida	1
NoName2 (1939)	Florida	1
	Florida	1
NoName5 (1941)	Florida	2
	Florida	1
NoName7 (1944)	North Carolina	3
	New York	1
NoName4 (1947)	Florida	4
	Louisiana	1
NoName8 (1947)	Florida	1
	Georgia	2
Carol (1954)	North Carolina	3
	New York	2
Edna (1954)	Massachusetts	3
	Maine	1
Flossy (1956)	Louisiana	2
	Florida	1
Donna (1960)	Florida	4
	North Carolina	2
	New York	2
Betsy (1965)	Florida	3
	Louisiana	3
David (1979)	Florida	2
	Georgia	1
Gloria (1985)	North Carolina	2
	New York	1
Andrew (1992)	Florida	5
	Louisiana	3
Erin (1995)	Florida	1
	Florida	2
Danny (1997)	Louisiana	1
	Alabama	1
Charley (2004)	Florida	4
	South Carolina	1
Katrina (2005)	Florida	1
	Louisiana	3

(1) Source: AIR.

(2) The S.S. categories in this table are based on wind speed. They can be different if based on central barometric pressure, as noted earlier. For example, Hurricane Andrew is a Category 4 hurricane if classified by central pressure in Florida. Since the S.S. category is not used in the AIR Hurricane Model for the United States for loss estimation, the differences in categorization methods do not affect the loss estimates generated by the AIR Hurricane Model for the United States.

Landfall Location. Because the values of property exposures vary along the coast, loss estimates can also vary greatly depending on where a hurricane makes landfall. The AIR Hurricane Model for the United States' Gulf and East coasts component identifies sixty-two 50 nautical mile segments of coastline in order to develop a cumulative probability distribution of landfall locations. After tabulating the actual number of historical hurricanes for each 50 nautical mile segment, the actual number of occurrences for each segment is smoothed using a statistical smoothing method derived from NOAA Technical Report NWS 23. The smoothing is needed because of the relative scarcity of historical data, which can result in discontinuities between adjacent segments that have no meteorological explanation. Meteorological judgment is then applied to adjust the smoothing because, in some locations, there may be legitimate geographic and climatological explanations for the discontinuities. For these segments, therefore, some modification to the smoothing algorithm is required to preserve legitimate discontinuities.

The figure below shows the number of hurricanes that have made landfall at each of the sixty-two 50 nautical mile segments along the Gulf and East coasts for the period 1900-2014. Note that the first three landfall segments are in northern Mexico, and half of the last segment is located in Canada. The smoothed frequency distribution ensures that each coastal segment has a non-zero probability of hurricane occurrence. Therefore, the fact that no hurricane has made landfall at a particular segment in the past does not mean that the AIR Hurricane Model for the United States will not simulate any hurricanes for such a segment.

Accordingly, the AIR Hurricane Model for the United States allows for the possibility of a hurricane making landfall anywhere along the U.S. Gulf and East coasts.

Figure 1: Number of Hurricanes Making Landfall along the U.S. Gulf and East Coasts, 1900-2014[1]

[1] Source: AIR.

Once a landfall location is generated for the simulated storm, values are generated for each of the storm's key meteorological characteristics at landfall. For purposes of estimating the probability distributions of these other variables, the coastline from Texas to Maine has been divided into thirty-one 100 nautical mile segments, and each geographic segment has a distinct distribution associated with each variable. The parameters associated with these probability distributions are estimated from the historical storm data corresponding to each of these segments (along with adjacent segments). These distributions are then used to generate values for each of the simulated storm's key meteorological characteristics, which are as follows:

Central Barometric Pressure. This variable is the lowest sea level barometric pressure at the center of the hurricane. It is the primary determinant of hurricane wind speed. Wind speeds typically increase as the central barometric pressure decreases or, more precisely, as the difference between central pressure and peripheral pressure increases.

Radius of Maximum Winds. The strongest winds in a hurricane are typically found at some distance from the center of the storm. This distance is known as the "radius of maximum winds," and it can range from 5 to over 50 nautical miles. Very intense storms typically have a small radius of maximum winds. A storm making landfall at higher latitudes will typically have a larger radius of maximum winds than one making landfall at lower latitudes.

Forward Speed. This is the rate at which a hurricane moves from point to point. Faster moving storms typically go further inland and are therefore likely to result in losses over a larger area. On the other hand, a faster moving storm will subject any given building to high wind speeds for a shorter duration. In some areas, particularly along the coast, this can lead to lower losses than might otherwise be the case. Both effects are taken into account in the AIR Hurricane Model for the United States.

Storm Track. This is the path the storm takes before and after landfall. The post-landfall track is important in determining the properties and structures that will be affected by a hurricane. AIR has developed a methodology to generate simulated storm tracks that involve the use of conditional probability matrices to model changes in track direction. The tracks generated using this procedure are realistic and closely resemble the curving and recurving tracks that have been observed historically.

Multiple Landfalling Hurricanes

The simulation process for the AIR Hurricane Model for the United States generates a sample of over 19,000 events, over a 10,000 year period, each one related to a single landfall and incorporating stochastic values for the meteorological parameters noted above. In order to accurately model the behavior and effects of hurricanes that make multiple landfalls, the AIR Hurricane Model for the United States selects a subset

of storm tracks based on relative values of certain storm parameters and joins them statistically. As a result, the total number of simulated hurricanes, counting multiple landfalling storms only once, is about 17,000 hurricanes.

Bypassing Hurricanes

In addition to landfalling hurricanes, the AIR Hurricane Model for the United States also accounts for bypassing hurricanes that may cause property damage even though they do not make landfall. Simulated bypassing hurricanes are generated in accordance with the location and frequency of bypassing storms in the historical record from 1900 to 2014.

Seasonality

The Atlantic hurricane season is typically described as lasting from 1st June through 30th November for a calendar year. The AIR Hurricane Model for the United States further captures the effect of seasonality within the season, as illustrated in the table below.

Table 4: Modeled Frequency of Hurricanes in the Atlantic and Gulf by Month[(1)]

Calendar Month	Frequency (%)
January	0.0
February	0.0
March	0.0
April	0.0
May	0.3
June	3.6
July	12.5
August	28.7
September	34.6
October	18.3
November	2.0
December	<0.1
Total[(2)]	**100.0**

(1) Source: AIR.
(2) Total may not add due to rounding.

Wind Speed Estimation

Once the AIR Hurricane Model for the United States generates the storm characteristics and point of landfall, it propagates the simulated storm along a path characterized by the track direction and forward speed. As the storm moves inland at the forward speed generated as described above, wind speeds begin to diminish due to filling (see "*Filling Equations*" below) and surface terrain effects. In order to estimate the property losses resulting from the simulated storms, the AIR Hurricane Model for the United States first generates a time profile of wind speeds at each location affected by the storm.

Wind field generation requires the following steps:

Maximum Wind Speed. The maximum 1-minute, 10-meter over-water sustained wind speed is calculated for each simulated hurricane.

Asymmetry Factor. An asymmetry factor, which results from the combined effects of the counter-clockwise motion of hurricane winds and the storm's forward speed, is added to the winds on the right of the hurricane track, and subtracted from the winds on the left of the track.

Filling Equations. After a hurricane makes landfall, the pressure in the eye of the storm begins to increase, or "fill," causing wind speeds to dissipate. The filling equations in the AIR Hurricane Model for the United States are a function of geographic region, distance from the coast, and time since landfall. The wind speed at the eye of the storm at any point in time is dependent upon the number of hours since landfall.

Adjustment of Wind Speeds for Surface Friction. Each location is assigned an adjustment factor, or friction coefficient, to account for the effects of the local terrain. The horizontal drag force of the earth's surface reduces wind speeds. The addition of obstacles such as buildings further degrades winds. Friction coefficients are based on digital land use/land cover data and directionality.

The AIR Tropical Cyclone Model for the Caribbean

The first component of the AIR Tropical Cyclone Model for the Caribbean governs the generation of simulated storms. The model simulates tropical cyclones ranging from tropical storms (40 to 73 mph) to hurricanes (74 mph and greater).

Many thousands of scenario years are generated to produce a range of potential annual experience of storm activity. For each scenario year, the model generates the fundamental characteristics of each simulated storm. The primary variables are listed below.

Storm Characteristics and Associated Probabilities

Annual Frequency. The modeled frequency is constructed based in part on meteorological and track information on more than 600 tropical cyclones available in the North Atlantic storm database (HURDAT2) for the period from 1950 to 2012.

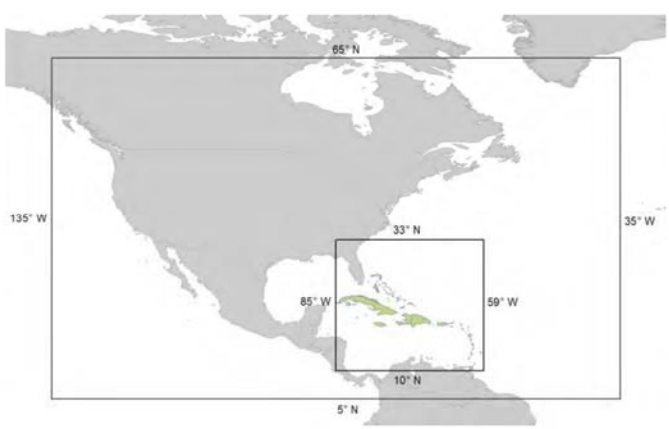
The risk of tropical cyclone formation varies geographically both from one basin to another and within basins. Looking at the North Atlantic on an intra-basin level, the Caribbean region has a higher potential exposure to tropical cyclones than the top of South America, all of Central America, and all of the United States, except for the state of Florida. Even within the Caribbean region, some island countries and territories are more at risk than others.

The islands located in the middle of the Caribbean Sea, a region nicknamed the "Caribbean belt," have a higher potential exposure to tropical cyclones than those outside of it. The following modeled islands are located within the belt: Anguilla, Antigua and Barbuda, Bahamas, Barbados, Bermuda, British Virgin Islands, Cayman Islands, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Montserrat, half of the Netherlands Antilles (Saba and St. Eustatius), Puerto Rico, St. Barthélemy, St. Kitts and Nevis, St. Lucia, St. Martin, St. Vincent and the Grenadines, St. Maarten, Turks and Caicos Islands, and the U.S. Virgin Islands.

Modeled frequency, and meteorological and track data are analyzed on a gridded geographical domain that extends from 35° to 135° West longitude and from 5° to 65° North latitude, as shown in the larger box in the figure below. Thus, tropical cyclones in this model may track into the United States, Mexico, Central America, and the northern tip of South America.

However, the AIR Tropical Cyclone Model for the Caribbean only determines losses for properties in the Caribbean region, which has a geographical domain that extends from 59° to 85° West longitude and from 10° to 33° North latitude. This domain is shown in the smaller box in the figure below.

Figure 2: Caribbean Model Domain[1]



[1] Source: AIR

Landfall Location. Storms in the Caribbean region can weave between islands and bypass sufficiently close to land to cause significant damage without making an actual landfall. Because the land masses involved

are small relative to the surrounding ocean waters, a significant proportion of damaging storms never make an actual landfall. Also, a single storm may affect multiple islands at different intensities. As such, landfall characteristics, such as landfall location and track angle at landfall, are not explicitly modeled in the Caribbean region and the concept of "landfall characteristics" is not used in the modeling of Caribbean hurricanes and tropical storms.

Forward Speed. Forward, or translational, speed is the rate at which a tropical cyclone moves from point to point along its track. In general, the higher the latitude of a tropical cyclone, the faster the forward speed. Forward speed varies along the storm path, and the values observed at each time step are again correlated with the values observed at previous time periods. An analysis of the auto-correlation function for historical storms shows that the dependence in forward speed can be represented by a first-order autoregressive model. To capture the spatial variation in forward speed, the model domain is divided into thirteen 5° latitude bands, with the parameters $\alpha 0$ and $\alpha 1$ being estimated for each latitude band.

Central Barometric Pressure. Central pressure is the primary determinant of tropical cyclone wind intensity. To develop a procedure for simulating central pressure along the storm path, AIR has performed a time-series analysis of all historical storms to determine the dependence structure present in the data between consecutive six-hour time intervals. This dependence was measured by computing the auto-correlation function for each storm. To capture the spatial variation in the coefficients, the parameters were estimated for each 2.5° x 2.5° grid cell in the model domain.

Radius of Maximum Winds. The radius of maximum winds (RMax) is the distance from the storm's center, or eye, to where the strongest winds are found. On average, the radius of maximum winds tends to be larger at latitudes farther from the equator and smaller for more intense storms. These relationships are explicitly accounted for in the model. While a smaller radius of maximum winds can correspond to greater storm intensity, it does not necessarily follow that losses will be greater. This is because a smaller radius usually results in a smaller affected area. In the AIR Tropical Cyclone Model for the Caribbean, RMax is calculated by a regression relationship dependent on central pressure and latitude, with serial correlation.

Wind Speed Estimation. Once the model probabilistically generates the tropical cyclone's meteorological characteristics, it propagates the simulated storm along its track and develops a complete time profile of wind speeds for each location affected by the storm.

Peak Rainfall Intensity. The computation of rainfall in the AIR Tropical Cyclone Model for the Caribbean is based on several variables. The peak rainfall rate for a given hour of the storm track is determined using an empirical relationship that is a function of the central pressure. This relationship is based on published studies of satellite-derived estimates of tropical cyclone rainfall distributions correlated to storm intensity.

For a given time step, the spatial precipitation pattern is computed by applying a radial decay function to the peak rainfall amount that results in the highest rainfall near the eye and decreases outward to a distance called the rainfall radius.

Lastly, the hourly rainfall pattern is adjusted to account for terrain influences. In locations where wind flows sharply upslope (such as in along a mountain range), the enhanced vertical motion causes higher rainfall amounts. Conversely, a reduction in rainfall results occurs where the wind is flowing down-slope. The slope information is determined in eight compass directions for each location based on high resolution digital elevation data, which is used to determine a rainfall adjustment based on the terrain-induced vertical motion.

The Atlantic Basinwide Hurricane Catalog

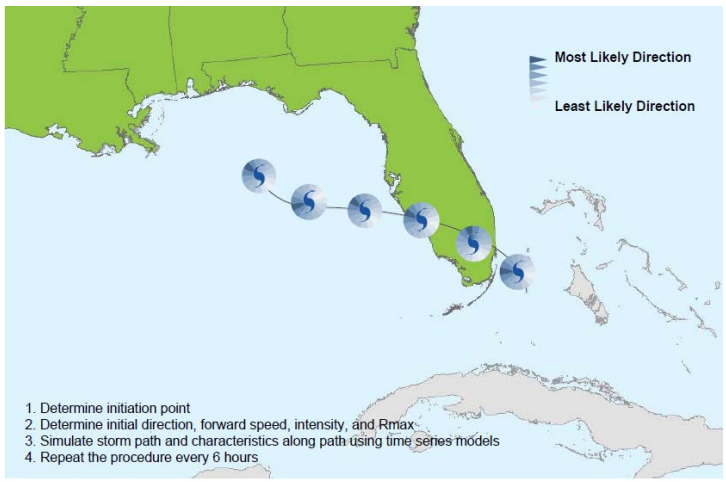
In order to capture the realistic path of hurricanes as they progress through the Caribbean Sea and into the Atlantic Ocean, the AIR Hurricane Model for the United States' Gulf and East coasts components and the AIR Caribbean tropical cyclone model share a basin-wide catalog in which a simulated hurricane event is able to potentially impact each of the models along its course. The key components of the storm's path are the storm genesis location and the storm track.

Storm Genesis Location. For each simulated storm, a corresponding historical event is drawn at random from a record of all Atlantic storms since 1950. All genesis aspects of the simulated storm, such as storm day, starting location, track angle, forward speed, and central pressure are determined by stochastically

perturbing the corresponding historical variables of the historical storm that was drawn. The perturbation is achieved by adding Gaussian "noise" to each historical value.

Storm Tracks. The storm track is the path the storm takes before and after landfall. The post-landfall track is important in determining the properties and structures that will be affected by a hurricane. AIR has developed a methodology to generate simulated storm tracks that involve the use of conditional probability matrices to model changes in track direction. The tracks generated using this procedure are realistic and closely resemble the curving and recurving tracks that have been observed historically. Track direction at any given point in time is a function of storm track direction at previous times. The dependence from one time period to the next can be measured by computing the auto-correlation function for historical storms. The analysis indicates that a random walk model describes the dependence well. That is, the next storm track direction equals the current storm track direction plus a random perturbation drawn from a probability distribution that is allowed to vary spatially over the model domain.

Figure 3: AIR Storm Track Generation[(1)]



(1) Source: AIR.

The AIR Tropical Cyclone Model for Hawaii

The AIR Tropical Cyclone Model for Hawaii simulates tropical cyclones ranging from tropical storms (40 to 73 mph) to hurricanes (74 mph and greater). Given the unique topography of the Hawaiian Islands, sustained winds of tropical storm strength can undergo amplification and result in damage to buildings. Accordingly, the AIR Tropical Cyclone Model for Hawaii models losses from tropical storms, as well as hurricanes.

Many thousands of scenario years are generated to produce a range of potential annual experience of storm activity. For each scenario year, the model generates the fundamental characteristics of each simulated storm. The primary variables are listed below.

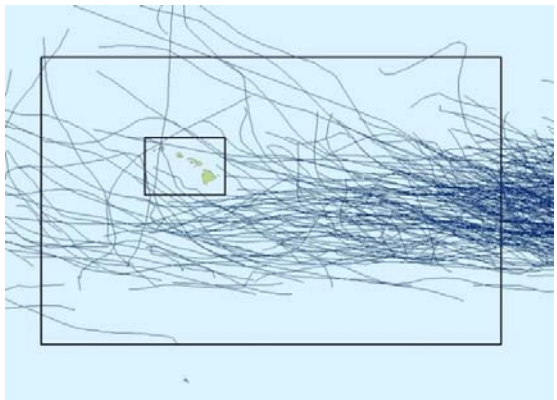
Storm Characteristics and Associated Probabilities

Annual Frequency. Most Central Pacific hurricanes originate off the southwest coast of Mexico or the northwest coast of Central America. Because of the direction of winds over the tropics, these storms usually travel from east to west or northwest. Most die off before they reach the Hawaii region, and many of those that do find their way to Hawaii lose much of their intensity by the time they arrive. Occasionally, storms form closer to the Hawaiian archipelago. Still others form to the southwest, begin a northwesterly track, and subsequently recurve to the north and east toward Hawaii.

The AIR Tropical Cyclone Model for Hawaii model domain is a region in the Central Pacific, between 7.5 degrees and 30 degrees North latitude and between 132.5 degrees and 170 degrees West longitude. The model domain is specified such that storms occurring within this region can cause losses to the Hawaiian

Islands. The figure below illustrates the extent of the model domain and the variety of storm paths that tropical cyclones in this region can take.

Figure 4: Historical Storm Tracks in the Hawaii Model Domain, 1949-2010[1]



(1) Source: AIR.

Since 1949, more than 190 tropical cyclones have formed in, or entered into, the model domain, and roughly 80 of those storms obtained hurricane intensity at some point within the model domain. Generally, the relatively cool waters surrounding the Hawaiian Islands, as well as the strong upper level winds common to this region of the Pacific Ocean, make the occurrence of devastating storms that have direct impact on Hawaii infrequent.

Table 5: Frequency of S.S. Category 1 to 5 Hurricanes Landfalling in or Bypassing Hawaii For the Period 1949-2010[1][2]

S.S. Category[3][4]					
Category 1	Category 2	Category 3	Category 4	Category 5	Total
2	0	1	1	0	4

(1) Source: AIR.
(2) Prior to 1949, there were no reliable measurements of the intensity of hurricanes in the Hawaii region.
(3) The S.S. categories in this table are based on minimum central barometric pressure. They can be different if based on wind speed, as noted earlier. Since the S.S. category is not used in the AIR Tropical Cyclone Model for Hawaii for loss estimation, the differences in categorization methods do not affect the loss estimates generated by the AIR Tropical Cyclone Model for Hawaii for the Notes.
(4) The S.S. category shown for each hurricane in the table above is the highest category during the time the hurricane caused losses to property in Hawaii.

AIR meteorologists evaluated the full historical data set for Hawaii storms and used the full catalog beginning in 1949 for estimating all storm parameters, except annual frequency of occurrence. For the purposes of estimating annual frequency of occurrence, the model uses historical data from 1980 to 2010. It has only been since the 1980s that full satellite coverage has been extended to the central Pacific. Data from earlier decades is less reliable due to underreporting and, therefore, is not used.

Table 6: Modeled Frequency of Tropical Cyclones by Month for Hawaii[1]

Calendar Month	Frequency (%)
January	0.0
February	0.0
March	0.0
April	0.0
May	0.1
June	2.8
July	13.8
August	58.1
September	16.1
October	5.8
November	2.2

Calendar Month	Frequency (%)
December	0.9
Total[2]	**100.0**

(1) Source: AIR
(2) Total may not add due to rounding.

Landfall Location. Landfall characteristics, such as landfall location and track angle at landfall, are not explicitly modeled in the Hawaii region. Storms here can weave between islands and bypass sufficiently close to land to cause significant damage without making an actual landfall. Because the land masses involved are small relative to the surrounding ocean waters, a significant proportion of damaging storms never make an actual landfall. Also, a single storm may affect multiple islands at different intensities. Therefore, the concept of "landfall characteristics" is not used in the modeling of Hawaiian hurricanes and tropical storms.

Storm Track. For purposes of initializing hurricane tracks, the AIR Tropical Cyclone Model for Hawaii domain is divided into 0.5 degree x 0.5 degree grid cells. The frequency with which simulated hurricanes are initiated in each grid cell is determined from the smoothed historical frequency distributions.

Once a track is initiated for a hypothetical simulated storm, values are generated for the remaining meteorological variables, including barometric pressure, radius of maximum winds and forward speed. The modeling of these variables is similar to the approach used for the AIR Hurricane Model for the United States' Gulf and East coasts with the following exceptions:

Central Barometric Pressure. The AIR Tropical Cyclone Model for Hawaii simulates events down to the intensity of a tropical depression and allows for changes in intensity along a storm's track. Just as with an actual storm, the simulated event may intensify, weaken and re-intensify before it has run its course, so that multiple islands can be affected with different intensities.

The remaining modeled meteorological variables, radius of maximum winds and forward speed, are modeled in the same manner as they are for the AIR Hurricane Model for the United States. Radius of maximum winds is a function of both central pressure and latitude; forward speed is a function of latitude.

Wind Speed Estimation. Estimating wind speeds at the local level begins with a calculation of maximum over-water wind speeds. Adjustments are then made for asymmetry effects, surface friction, and in the case of the AIR Tropical Cyclone Model for Hawaii, topographical effects. Since the concept of landfall characteristics is not used for Hawaiian tropical cyclones, the model does not make use of filling equations, as described in the AIR Hurricane Model for the United States.

Topographical Effects. In addition to the effects of storm asymmetry and surface friction on local intensity, the AIR Tropical Cyclone Model for Hawaii accounts for the unique volcanic topography of the Hawaiian Islands. Wind speeds increase on the windward slopes of mountains, hills and escarpments, and acceleration is accentuated on steeper hills. In the case of downhill winds, the leeward slope provides protection. To account for such topographical effects, the AIR Tropical Cyclone Model for Hawaii uses high-resolution elevation data. For each 1 km x 1 km grid cell, gust, friction, and elevation values are calculated. The slope angle is computed and a wind modification factor is assigned.

Calculation of Hurricane Damages before Storm Surge

Once the peak wind speeds and duration are estimated for each location, damages are estimated for various distinct construction, occupancy, and height classifications. Deductibles and other policy information are also factored into the damage calculation.

To estimate damages, mathematical relationships are utilized that incorporate the engineering relationships between wind speed, duration, and property damage. As wind speeds increase, the damage rate accelerates. Minor damage begins to occur when wind speeds exceed 40 mph. At wind speeds of 75 mph, damage is still typically relatively minor to most types of properties. As wind speeds approach 100 mph, damage becomes extensive, and as wind speeds exceed 150 mph, damage to most types of residential properties is likely severe.

The effects of duration are also relevant to the estimates of damages in that the longer a property experiences severe wind speeds, the greater the damage that is likely to result.

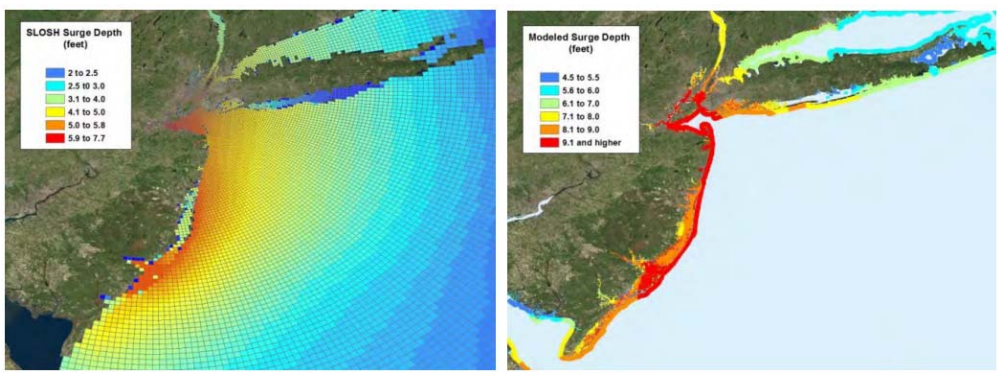
The hurricane damageability relationships contained in the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models are unique and have been derived and refined over a period of close to 20 years. Damageability relationships (also called vulnerability relationships) reflect construction types and practices unique to the respective regions. They incorporate engineering studies published by wind engineers and other experts both within and outside of AIR. These damageability relationships are validated and calibrated using the results of post-hurricane field surveys performed by AIR and other structural engineers as well as detailed analyses of actual loss data provided by AIR's client companies. AIR also attempts to account for the effectiveness of the local building codes in the damage estimation process.

Storm Surge of Hurricanes

Storm surges are rises in sea level that accompany low-pressure weather systems, including hurricanes. Virtually every hurricane is accompanied by storm surge of some magnitude and extreme storm surges are capable of causing catastrophic property damage. In the AIR Hurricane Model for the United States, storm surges are modeled hydrodynamically, at high-resolution at a regional level. Storm surge is not explicitly modeled in the AIR Tropical Cyclone Model for Hawaii.

The AIR storm surge module is a fully probabilistic component of the AIR Hurricane Model for the United States and incorporates many aspects of the Sea, Lake, and Overland Surges from Hurricanes ("**SLOSH**") model. The SLOSH model accounts for hurricane parameters, coastal geography, coastline features, inland rivers, and flood defenses. The data provided with SLOSH is customizable, and AIR researchers were able to greatly extend its capabilities to produce surge inundation estimates that are appropriate for high resolution catastrophe modeling. AIR researchers reduced the variations in the resolution of the SLOSH basins by mapping the SLOSH surge results to a 30m resolution topographic data set to obtain a high-resolution view of surge depth.

Figure 5: Storm surge generated by Post-Tropical Cyclone Sandy from NOAA's Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model (left) and the AIR model (right)[1]



[1] Source: AIR.

Hurricane Parameters that Affect Storm Surge

The AIR Hurricane Model for the United States considers relevant hurricane parameters when generating storm surge to include their effects on the surge inundation. These include the storm's central pressure, the radius of maximum winds, the forward speed of the storm, its wind speed, and the track angle at landfall.

As a hurricane moves over water, the rise in water elevation is caused by a combination of low barometric pressure and by winds interacting with the ocean's surface, generating currents. As the hurricane moves forward, its winds rotate counterclockwise (in the Northern Hemisphere), resulting in higher wind speeds, and thus higher storm surges, on the right-hand side of the storm track. The faster the forward speed of the storm, the more pronounced this effect will be.

Hurricanes that make landfall perpendicular to the coastline (coast-normal) cause greater inland surges than those that make landfall at more oblique angles or skirt along the coast. A coast-normal track brings this enormous volume of water onshore. A track parallel to the east coast exposes the coast to the weaker side of the storm system and the effects of storm surge are thus diminished.

Figure 6: A "coast-normal" track, subjects the coast to the full brunt of the stronger, right-hand side of the storm and its accompanying storm surge[1]

[1] Source: AIR.

Geographical Features that Affect Storm Surge

The physical geographic features of the land and ocean can significantly affect the potential for a destructive storm surge at a particular location along the coast. One of these features is the bathymetry of the ocean floor near the coastline. In general, shallow water enhances surge height, a phenomenon sometimes referred to as shoaling. As the surge enters shallow water, the friction along the ocean floor slows its forward velocity, causing the water to "pile up." Water depth in the model is obtained from bathymetry data obtained from the SLOSH model.

Storm surge simulation in the AIR Hurricane Model for the United States includes the effects of its high-resolution geographic and topographic features, which include bays and estuaries, on storm surge height. The model accounts for the effects of the asymmetry of the hurricane wind field; the amplification is larger when the bay lies to the right of the storm track and smaller when it is to the left.

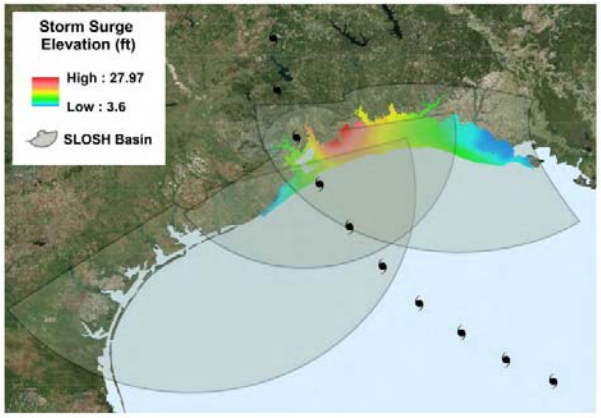
Tidal Effects

The surge elevation can be greatly exacerbated by the astronomical tide; the combination of the two is also known as storm tide. The higher the tide, the greater is the surge elevation. This is one reason why some relatively minor hurricanes have been accompanied by high storm surges. The AIR Hurricane Model for the United States incorporates the cyclical nature of tides.

Using Spatial Integration to Generate Storm Surge Footprints

The AIR Hurricane Model for the United States associates storm surges with specific events in accordance with those generated by the SLOSH model, using the same basins that are used for SLOSH. Once an event is associated with a surge, the surge's maximum surge height and maximum currents are determined using AIR hurricane parameters. For areas that are covered by multiple SLOSH basins, the results are blended using a smoothing algorithm to avoid discontinuities between the SLOSH basin boundaries.

Figure 7: The modeled storm surge footprint from Hurricane Ike incorporated simulations over three SLOSH basins[1]



[1] Source: AIR.

Storm Surge Attenuation

The AIR Hurricane Model for the United States accounts for variations in surge attenuation by incorporating the local terrain and land cover data in the SLOSH model. As a storm surge moves inland, its progress is impeded by the friction it experiences from the local terrain. The resistance of a smooth surface such as pavement, or even the sand or rock surface of a riverbed is much lower than the heavily-vegetated surface. The slope of the land also affects the rate of attenuation.

The variables above determine the modeled maximum storm surge height (elevation) and maximum currents generated from the hurricane. The variables below are used to calculate the local intensity, the parameter used in the damage calculation.

Effective Inundation Depth

After generating the surge footprint, the AIR Hurricane Model for the United States can determine the local intensity at given points within that footprint. AIR researchers accommodate the effect of the water on a building from both the water's depth (the hydrostatic force) and the additional force from the water's forward velocity (the hydrodynamic force). The combination of these forces, used as the local intensity parameter for storm surge, is the effective inundation depth, in feet, at a given location. Effective inundation depth is the amount of still water that would have the same amount of force as a lesser amount of water that is moving forward at some velocity.

It is important to note the difference between storm surge elevation and storm surge depth. Storm surge elevation is the level of the water above normal sea level while storm surge depth is the level of the water above the ground at a specific point inland from the coast. Storm surge depth is computed by subtracting the elevation of the ground at that point from the surge elevation.

Using Downscaling to Determine Local Intensity within the Surge Footprint

The water depth at a location depends on the land elevation. Therefore, it is critical to use highly detailed elevation data in order to determine local intensity with great accuracy, for any given location. While the AIR Hurricane Model for the United States uses a resolution of 240 meters for all areas affected by the storm surge, AIR researchers use a higher resolution for areas at higher risk to storm surge. Therefore, to model areas at risk to storm surge, AIR researchers used a downscaling technique to incorporate the 1 arc-second resolution (~30 meter) National Elevation Dataset (NED) from the United States Geological Survey (USGS) into the model. AIR researchers were thus able to generate a high-resolution footprint of the effective inundation depth, with detail at the 30-meter level for locations within five miles of the coastline.

Probabilistic Flood Defense Failure in New Orleans

The AIR Hurricane Model for the United States includes probabilistic flood defense failure for the levees that protect New Orleans, the only major U.S. city with polders, or areas that are fully enclosed by flood defenses. The failure of flood defenses is modeled probabilistically using fragility curves, which indicate the probability of failure given an intensity of loading. For each surge event in New Orleans, fragility curves are used to determine whether a flood defense fails along a coastal levee. Flood severity at a given point is indicated by the return period of the water elevation at that point. Within each area protected by a flood defense, the probability curves are used to determine if and when a defense fails, and if it does fail, then losses are calculated for the event, using the modeled depths.

Damage Calculation

The AIR Hurricane Model for the United States employs storm surge damage functions that vary by primary building characteristics such as occupancy, construction, and height, as well as year built and region. Also, individual risk features (secondary risk characteristics) can be used to further modify the surge damage functions. While the intensity parameter used in the storm surge component of the AIR Hurricane Model for the United States is effective surge depth, the nature of damage from storm surge is quite different from the damage caused by standing water due to both the forward velocity of the storm surge water and its salt content. Therefore, the AIR Hurricane Model for the United States damage functions take into account damage due to the momentum of the water, as well as damage due to the ponding of the water. Observation data available from the Federal Emergency Management Agency (FEMA) and the U.S. Army Corps of Engineers was used in the development of the model's surge damage functions. The damage functions have been validated through findings from AIR's post-disaster surveys and loss experience data.

AIR's estimates of industry insured losses in the United States (excluding Hawaii) include 5% of separately modeled storm surge losses for residential exposure, small commercial exposure, and industrial exposure (replacement value ≤ USD 10 million) to account for the potential for inclusion of surge damage during claim settlement for wind losses, 100% of separately modeled storm surge losses to large commercial and industrial exposure (replacement value ≥ USD 10 million) to account for an assumed take-up rate for flood coverage, and 100% of separately modeled storm surge for automobiles.

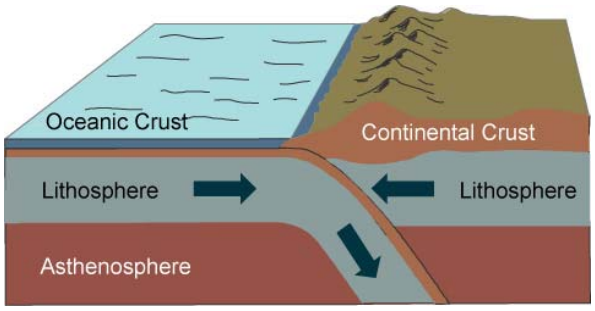
EARTHQUAKES

Introduction to Earthquakes

An earthquake is the rapid relative displacement of the rock on either side of a fracture, or fault, in the interior of the solid earth. The energy released by a sudden slip along a fault plane produces seismic waves that radiate outward in all directions from the initial point of rupture and that cause the ground to shake at the earth's surface. Surface ground motion can range from barely perceptible trembling to violent shaking.

The geological understanding of earthquakes was revolutionized in the second half of the twentieth century by the theory of plate tectonics. In broad terms, the theory describes the earth's lithosphere — which extends from the earth's surface down to approximately 100-200 kilometers — as consisting of several large and fairly stable slabs of rigid rock called plates. These plates are in motion relative to each other above the asthenosphere — the underlying region of hotter and less rigid materials. Over time the asthenosphere materials behave as a viscous fluid, transferring heat from the interior to the surface of the earth. This convection of materials in the asthenosphere causes the plates of the lithosphere to move. Plates come into contact with each other at their edges, leading to enormous tectonic forces that cause physical deformation of the earth's surface. Most of the earth's seismic energy is released at these plate boundaries.

Figure 8: The Earth's Layers at a Subduction Zone[1]



(1) Source: AIR.

There are three types of plate boundaries. The first is known as the convergent type, in which plates move toward one another. An example of a convergent plate boundary is the continent-continent collision zone between the Indian Subcontinent and Asia, which has resulted in the formation of the Himalayan Mountains. The most common manifestation of this type of boundary, however, is the subduction zone (see figure above), where oceanic and continental crusts collide and the oceanic plate is thrust under the continental plate, due to the oceanic plate's higher density. More than 90% of the earth's seismic energy is released along these zones.

The second type of plate boundary is known as the transform type. In this case, plates slide past one another through strike-slip faulting. A well-known example of this type of plate boundary is the San Andreas Fault in California.

The third type is known as the divergent plate boundary, along which plates move away from one another. Examples are the Mid-Atlantic Ridge and the East-Pacific Rise. In this type of plate boundary, volcanic processes create new oceanic crust, and the insertion of this new crust causes the plates to diverge, or move away from one another. These plate boundaries occur almost exclusively deep in the ocean, and therefore present a negligible seismic hazard with respect to earthquake damage.

While some faults rupture the surface of the earth creating visible scars such as the San Andreas Fault in California and the ones caused by the 1995 Southern Hyogo Prefecture earthquake in Japan, many do not rupture the surface and can only be identified through their seismic activity or by using subsurface sounding techniques. Still other faults are only inferred from historical seismicity and it is likely that other, as yet unknown, faults exist throughout the world.

While the majority of earthquakes occur where plate boundaries converge, they also can occur within the interior of plates. Geologists believe that such areas are characterized by traces of ancient geological deformations or by variations in temperature and strength of the lithosphere. Earthquakes that occur in such

areas are referred to as "intraplate" earthquakes. Examples of areas where intraplate earthquakes are a hazard in the United States include the New Madrid Seismic Zone in the central United States, the Intermountain Region of the western United States, and the Northeast.

Measuring Earthquake Severity

The severity of an earthquake can be measured in a variety of ways. An earthquake's *magnitude* represents earthquake strength in terms of maximum ground motion, energy released, or other measures of the amplitude of the seismic wave of the earthquake. Several measures of earthquake magnitude have been defined, among them: moment magnitude, or "M_w," Richter magnitude, or "ML," body wave magnitude, or "M_b," and surface wave magnitude, or "M_s." Moment magnitude is a widely used measure and is uniformly applicable to all sizes of earthquakes in all locations. The moment magnitude scale is based on seismic moment, which is equal to the product of the average relative displacement (slip), the rupture area and the stiffness of the surrounding material. Magnitude scales, in general, are logarithmic, which means that an increase of one point represents an approximately 10-fold increase in the amplitude of the seismic waves. That, in turn, corresponds to a more than 30-fold increase in the amount of energy released. The largest earthquake ever recorded occurred in Chile, in 1960, and was a 9.5 M_w event.

Earthquake intensity, on the other hand, represents the earthquake's potential for damaging the infrastructure, as well as residential, commercial, and industrial structures, at the location of such structures. An earthquake will have one unique magnitude of a particular type, but its intensity is dependent upon the location at which the observations are being made, and will vary according to distance from the rupture, local soil conditions, local construction and other factors.

Earthquake Modeling and Loss Estimation

The AIR earthquake modeling technology uses stochastic modeling techniques to estimate the probability distribution of losses resulting from earthquakes. The earthquake occurrence module uses simulation techniques to generate a synthetic catalog of earthquake events that is generally consistent with the historical record and other geological and paleoseismic information. The shake damage module uses numerical techniques to calculate the distribution of losses for typical buildings of different kinds and portfolios of buildings, given the characteristics of each simulated event. Together, these techniques allow AIR to estimate a wide range of information about potential earthquake losses in the United States.

Data from various sources were analyzed and synthesized in the development of the AIR Earthquake Models. What follows are brief discussions of modeling procedures and the data sources used for the analysis.

Data Sources

Data on historical earthquakes is relied upon for modeling the important earthquake characteristics. Historical earthquake catalogs may include events from hundreds or perhaps thousands of years ago. The consistency of reporting, however, varies by magnitude. Data on large magnitude events are usually complete for longer time periods because they are more likely to have been noticed and documented. On the other hand, the sensitivity to and recording of smaller earthquakes has improved significantly during the twentieth century through the introduction of better and more extensive instrumentation. The completeness of the historical catalogs, therefore, is a function of time and magnitude, since larger earthquakes are more likely to be included earlier in the historical record. One of the primary tasks of AIR seismologists is to test each of the available historical catalogs for statistical completeness. Only the complete portions of the catalog for each magnitude range is used for statistical modeling in order to prevent bias in parameter estimates.

For the U.S. component of the AIR U.S. and Canada Earthquake Model, the most important data source is the United States Geological Survey ("**USGS**"). Other sources include the Third California Earthquake Rupture Forecast model ("**UCERF3**") published by the Working Group on California Earthquake Probabilities, the National Geophysical Data Center ("**NGDC**"), the Southern California Earthquake Center ("**SCEC**"), the Multidisciplinary Center for Earthquake Engineering Research ("**MCEER**"), the California Department of Mines and Geology ("**CDMG**"), and the Seismological Society of America ("**SSA**"). For the Canada component of the AIR U.S. and Canada Earthquake Models, the primary data sources are the Geological Survey of Canada and the USGS. For the Caribbean component of the AIR U.S. and Canada Earthquake Models, the primary source is the Global Seismic Hazard Assessment Program (**GSHAP**), the

National Geophysical Data Center (**NGDC**) Regional Catalog for the Caribbean Sea, and USGS. For the region along the border between the U.S. and Canada, data from USGS was merged with data obtained from the Geological Survey of Canada ("**GSC**") to account for transboundary events that affect losses on both sides of the U.S.-Canada border. For induced seismicity, the most important data source is the 2016 USGS One-Year Seismic Hazard Model for the Central and Eastern United States from Induced and Natural Earthquakes, as described in the USGS Open-File Report 2016-1035.

Seismicity Components of the AIR Earthquake Models

The first step of the AIR Earthquake Models is to generate the frequency, magnitude, and spatial distribution of simulated earthquakes. This section provides a general description of these and other seismological components, or parameters, of the AIR Earthquake Models. A region-specific discussion of how seismicity is modeled in the continental United States, Canada, Alaska, Hawaii, and the Caribbean follows in a subsequent section.

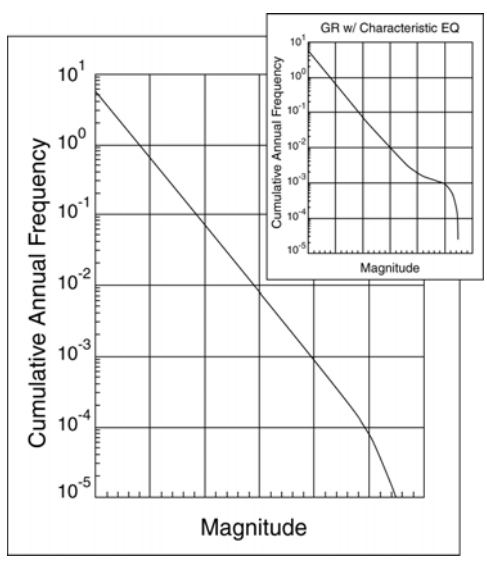
Depending on the region and the extent of scientific knowledge about the seismicity in the region, seismic sources are modeled as a combination of faults, area sources, and/or gridded background seismicity, all of which are described below.

Frequency-Magnitude Distribution. Seismologists typically fit historical data on the frequency and magnitude of earthquakes to an exponential distribution called the Gutenberg-Richter ("**GR**") relationship. The GR relationship applies globally and allows an extrapolation from the limited historical record to estimate a more complete picture of seismicity in an area.

The AIR Earthquake Models simulate earthquakes of magnitude 5.0 and greater because damage is very unlikely for smaller events. Even moment magnitude 5.0 earthquakes usually cause only minimal damage. However for model development purposes, particularly for fitting GR frequency-magnitude distributions, smaller magnitude events are used to provide more data for parameter estimation.

The GR relationship holds over a wide range of magnitudes and can be described by two parameters: an occurrence rate of earthquakes of magnitude greater than or equal to some reference magnitude, characterized by the so-called "a-value" (the y-intercept in the graph below); and a "b-value" representing the rate at which the log of the cumulative annual frequency of earthquakes decreases as the magnitude increases (the slope). Scientists usually truncate this relationship at a limiting magnitude above which the probability of occurrence is zero. Each of these three parameters depends upon the geology of the seismic zone under consideration.

Figure 9: A Sample Gutenberg-Richter Distribution[1]



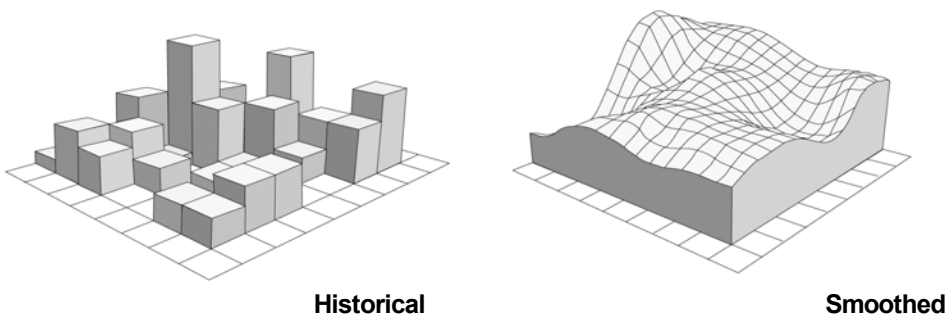
(1) Source: AIR.

Characteristic Earthquakes. While the GR relationship holds on a regional or global scale, it may not hold for individual faults. For some seismic zones, there exists evidence that earthquakes of a certain magnitude occur with a frequency that is not consistent with the rate predicted by the GR relationship. Scientists now believe that many faults tend to produce repeated earthquakes of a size that is "characteristic" of that particular fault or fault segment. It is from both the GR distribution and the estimated recurrence rate of characteristic earthquakes that the number of earthquakes that occur in each simulated year and their magnitudes are modeled.

Smoothed Gridded Seismicity. The AIR Earthquake Models combine a fault-based model with smoothed, gridded seismicity. In so doing, the model allows earthquakes to occur, with some probability, in locations other than on known faults and where they have occurred previously.

This smoothing begins by analyzing the historical earthquake catalog data on a grid (measuring 0.1-degree by 0.1-degree latitude/longitude in the U.S.). The corresponding event rates are spatially smoothed using two-dimensional Gaussian probability distributions. This formulation assumes a positive correlation between the spatial distribution of past and future earthquakes. That is, the spatial distribution of the gridded seismicity generally reflects the historical distribution of earthquake epicenters. However, by smoothing the historical distribution, the model allows future earthquakes to occur at locations where they have not been observed in the past. The result is a smoothed, but non-uniform distribution of seismicity based on the historical record. Parameters of the GR relationship are estimated for each grid cell based on this smoothed distribution.

Figure 10: Historical and Smoothed Gridded Distributions[1]



[1] Source: AIR.

Uniform Background Zones. In contrast to the smoothed gridded seismicity, which results in a non-uniform distribution of historically-based seismicity, background zones distribute seismicity uniformly across broad regions defined based on geological or geodetic criteria. Background zones provide a hazard "floor" and account for the possibility that future earthquakes will occur in areas with little or no historical seismicity.

It should be noted that depending on the extent of scientific knowledge about individual faults, the AIR Earthquake Models may incorporate time-dependent rupture probabilities. Time-independent models do not attempt to adjust annual earthquake occurrence probabilities on individual faults based on the time elapsed since the last such earthquake. That is, they only consider the annual probability of occurrence for a given seismic source, without adjustment for the timing of the last rupture on that fault. Conversely, time-dependent models assume that the annual probability of occurrence of an earthquake on a given fault or source zone increases with the time elapsed since the occurrence of the previous earthquake on that fault or zone.

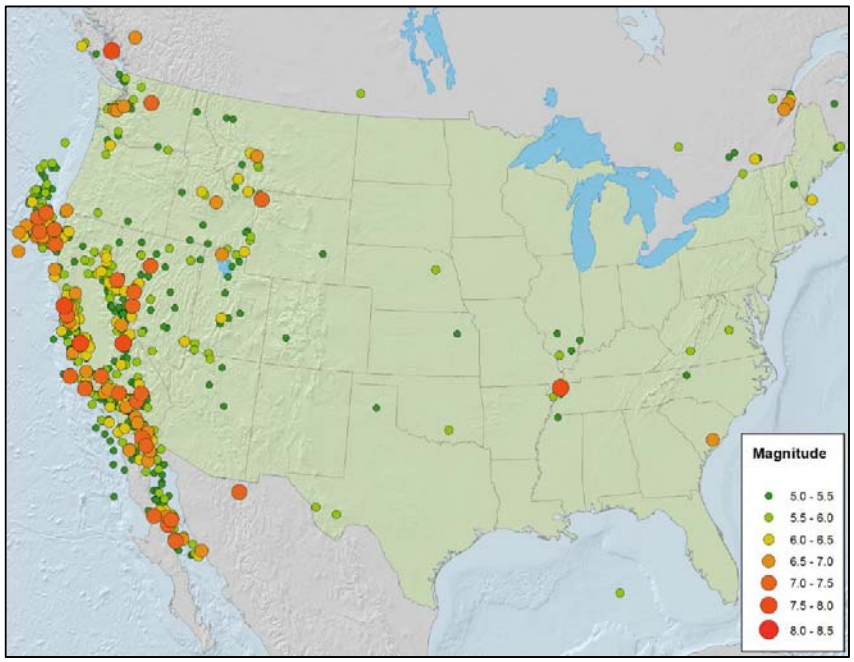
Estimating time-dependent rupture probabilities for individual faults requires good information on such things as the historical recurrence rates of characteristic earthquakes, and information on the specific fault, such as fault slip rate, the mean recurrence interval and its variance, and the elapsed time since the last occurrence.

For the analysis included herein, time-dependent rupture probabilities are incorporated in the AIR Earthquake Models for those faults in California, Washington, and Oregon for which such information is available. The probabilities are based on the UCERF3 model published in 2013 by the Working Group on California Earthquake Probabilities, a multidisciplinary group organized by the USGS and the SCEC. For all other states, no assumptions are made with respect to time dependence. That is, the AIR Earthquake Models estimate long-term probabilities of occurrence, irrespective of when previous earthquakes occurred.

Seismicity Components of the AIR Earthquake Model for the United States and Canada - Continental United States

The figure below shows the locations of earthquakes of moment magnitude greater than 5.0 in the continental United States from the USGS historical catalog. This catalog dates back to before the 1800s, and the map shows events of magnitude 5.0 and greater, as measured by the moment-magnitude scale discussed above. It should be noted that the USGS catalog is not complete for the entire historical record. Before the introduction of seismographic instruments, many earthquakes, particularly low-magnitude events, were not reported.

Figure 11: Historical Seismicity in the Continental United States, from 1769-2012 for the Western U.S. and 1568-2012 for the Central and Eastern U.S. ($M_w \geq 5.0$) [1]



[1] Source: USGS.

As the figure indicates, most of the seismicity occurs along the West Coast of the United States, at the transform and subduction-zone boundaries between the North American and Pacific plates. However, intraplate seismicity is also evident in the New Madrid Seismic Zone of the central United States, the region around Charleston, South Carolina, and the Northeast.

Table 7 lists the moment magnitude 5.0 and greater earthquakes that have occurred in the United States during the period from 1769 to 2012 for the Western United States and 1568 to 2012 for the Central and Eastern United States.

Table 7: Earthquakes of Moment Magnitude 5.0 or Greater Occurring in the Continental United States, from 1769 to 2012 for the Western United States and 1568 to 2012 for the Central and Eastern United States[1]

	Moment Magnitude (M_W) Range									
Region [2]	**5.0 to 5.5**	**5.6 to 6.0**	**6.1 to 6.5**	**6.6 to 7.0**	**7.1 to 7.5**	**7.6 to 8.0**	**8.1 to 8.5**	**8.6 to 9.0**	**9.1 to 9.5**	**Total**
Northern California	118	60	40	14	5	2	0	0	0	239
Southern California	104	51	24	10	8	1	0	0	0	198
Pacific Northwest...	59	24	4	6	2	0	0	0	0	95
Intermountain.....	125	41	18	12	8	0	0	0	0	204
New Madrid[3]	7	3	0	0	0	1	0	0	0	11
South Carolina	0	0	0	1	0	0	0	0	0	1
Other.....	13	11	4	2	0	0	0	0	0	30
Total.....	**426**	**190**	**90**	**45**	**23**	**4**	**0**	**0**	**0**	**778**

(1) Source: USGS 2014 Earthquake catalog.

(2) Regions: Northern California comprises the counties of Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Mono, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba.

Southern California comprises the counties of Imperial, Inyo, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura.

The Pacific Northwest region comprises the States of Oregon and Washington.

The Intermountain region comprises the States of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

New Madrid comprises the States of Arkansas, Illinois, Indiana, Kentucky, Louisiana, Missouri, Mississippi, and Tennessee.

The Other region comprises the remainder of the continental United States not listed in the previous regions, namely: Alabama, Connecticut, Delaware, Florida, Georgia, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Texas, Vermont, Virginia, West Virginia, Wisconsin, and the District of Columbia.

(3) The New Madrid Earthquake sequence of 1811-1812 consisted of three earthquakes, the magnitudes of which are a matter of scientific debate, ranging approximately from 7.1 to 8.0. In this table the 1811-1812 earthquake sequence is represented by a single earthquake with a moment magnitude corresponding to the estimated total energy released by the three. However, it should be noted that, in accordance with the USGS's 2008 update of the National Seismic Hazard Maps, the AIR Earthquake Model for the United States and Canada also considers future scenarios in which the New Madrid seismic zone ruptures in sequences of three earthquakes, as it did in 1811-1812.

For purposes of modeling seismic risk in the continental United States, the country is divided into two broad regions based on geological criteria. These two regions can be roughly categorized as corresponding to the plate boundary zone of the western United States (which, of the regions defined in the table above, includes northern and southern California, and the Pacific Northwest and Intermountain regions) and the intraplate zone of the central and eastern United States (which includes New Madrid and South Carolina). To determine the frequency-magnitude distributions for earthquakes in different seismic zones, AIR scientists use all available information for each specific region. This includes historical earthquake catalogs and auxiliary geological data such as fault slip rates, paleoseismic data, geophysically derived moment rates, and tsunami records.

Western United States

For the western United States, historical events of moment magnitude 3.5 and greater are used to parameterize the model, along with information on more than 550 faults. This fault data is available from the USGS's Documentation for the 2014 Update of the National Seismic Hazard Maps: USGS Open-File Report 2014-1091 and from the WGCEP. The extent of the fault data varies by fault, but may include slip rate and/or recurrence rates, fault length, dip angle, the expected magnitude of characteristic events, and the amount of displacement from characteristic events.

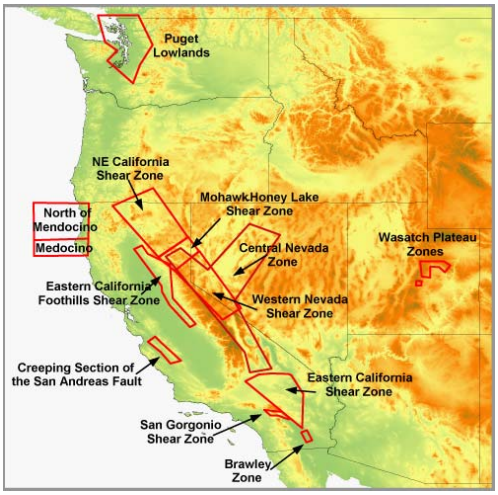
The modeling methodology implemented for the western United States generally follows the framework embodied by reports including the 2014 USGS Open-File Report referenced above, along with the WGCEP's report titled Uniform California Earthquake Rupture Forecast, Version 3 (UCERF 3): USGS Open-File Report 2015-3009. The USGS reports explicitly recognize that different interpretations of the available data can lead to different, but still reasonable views of how the earth's crust is deforming. These multiple views are accounted for by incorporating various possible scenarios that represent different combinations of characteristic magnitude and recurrence interval, but weighted according to their

probability of occurrence. The AIR Earthquake Model for the United States and Canada adopts this approach in accordance with USGS recommendations.

The AIR Earthquake Model for the United States and Canada also incorporates the most recent information from the USGS on the propensity of faults in California to rupture in "cascades." Faults cascade when two or more adjacent fault segments rupture as one unit, resulting in earthquakes with larger magnitudes and longer rupture lengths than would be expected from the rupture of single segments. The impact on loss estimates of allowing fault segments to rupture in cascades is to increase the frequency of larger-magnitude earthquakes and lower the overall frequency of earthquakes generated by the separate segments.

Apart from fault sources in the western United States, smoothed gridded seismicity is employed to account for the potential for earthquakes to occur in locations other than on known faults. In addition, several special source zones are defined based on variations in catalog completeness, maximum magnitude, and b-value. For each, simulated earthquakes are generated from truncated GR distributions, the parameters of which are zone-specific.

Figure 12: Special Seismic Zones in the Western United States[1]



[1] Source: USGS.

Finally, five uniform background zones are defined based on geologic and seismic characteristics to allow future earthquakes to occur where there has been little or no historical seismicity.

Central and Eastern United States

The source of seismicity in the intraplate regions of the central and eastern United States is less well understood. Scientists now believe that such areas are characterized by traces of ancient geological deformations. For example, scientists define the New Madrid Seismic Zone, an area of significant seismic activity in the central United States, as that region coincident with the Reelfoot Rift, a relic from the Precambrian Era representing the failed attempt, more than 600 million years ago, of the North American plate to split apart.

The modeling methodology implemented for the central and eastern United States generally follows the framework embodied in the Documentation for the 2014 Update of the National Seismic Hazard Maps: USGS Open-File Report 2014-1091.

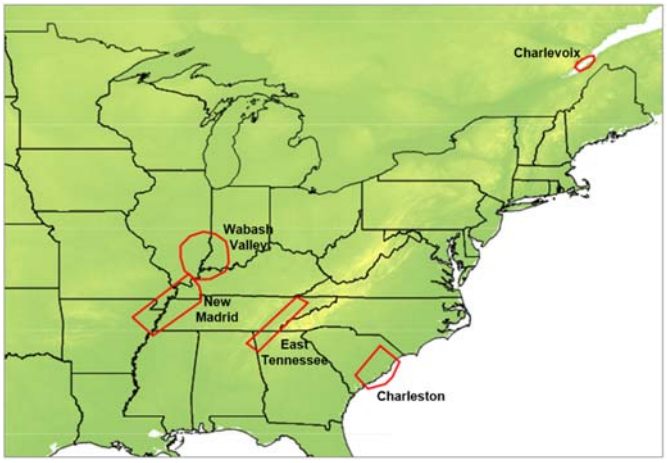
There is very little surface expression of causative faults in the region and the locations of faults can therefore only be inferred from recorded historical seismicity. The USGS identifies four fault sources in the central and eastern United States. In estimating the return times and magnitudes for characteristic events for fault sources in the central and eastern United States, scientists rely on auxiliary data including evidence from exhumed liquefaction sites left by prehistoric earthquakes ("**paleoliquefaction**"). See "*Local Intensity Estimation*" for a discussion of liquefaction. Assigning magnitudes to prehistoric events requires locating contemporaneous paleoliquefaction sites, estimating the total liquefied area, and converting this area to a

magnitude. USGS estimates of the magnitude of these events have been incorporated into the AIR Earthquake Model for the United States and Canada.

It should be noted that in the latest National Seismic Hazard Maps, the USGS conducted a major review of the fault sources within the New Madrid Seismic Zone and accordingly introduced important changes to the formulation of the seismicity for this zone based on the earthquakes of 1811-1812. The New Madrid Earthquake sequence of 1811-1812 consisted of three earthquakes, the magnitudes of which ranged approximately from 7.1 to 8.0. In the past, the USGS has treated these three earthquakes as a single event with a moment magnitude corresponding to the estimated total energy released by the three. Based on new research, however, which shows evidence that prehistoric earthquakes in this zone have also occurred in sequences of three as they did in 1811-1812, the USGS now considers scenarios in which clusters of three large earthquakes occur in close temporal proximity. In accordance with the USGS, the AIR Earthquake Model for the United States and Canada also includes such scenarios.

Apart from fault sources in the central and eastern United States, smoothed gridded seismicity is employed to account for the potential for earthquakes to occur in locations other than on known faults. In addition, several special source zones are defined based on variations in catalog completeness, maximum magnitude, and b-value. These include the New Madrid Seismic Zone surrounding the fault sources discussed above, the nearby Wabash Valley Seismic Zone; Charleston, South Carolina; eastern Tennessee; and the Charlevoix zone in eastern Canada. For each, simulated earthquakes are generated from truncated GR distributions, the parameters of which are zone-specific.

Figure 13: Special Seismic Zones in the Central and Eastern United States[1]



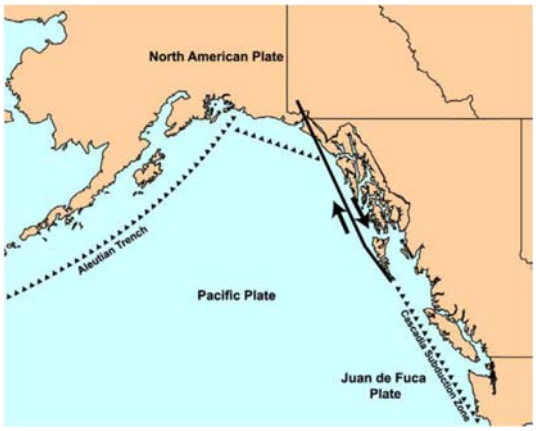
[1] Source: USGS.

Finally, four uniform background zones are defined based on geologic and seismic characteristics to allow future earthquakes to occur where there has been little or no historical seismicity.

Seismicity Components of the AIR Earthquake Model for the United States and Canada - Canada

Seismicity on the west coast of Canada is characterized by the actions of several tectonic plates and three different types of plate movements. Earthquakes in this region occur along faults in the offshore region, within the subducting ocean plate, and within the continental crust.

Figure 14: Tectonic Setting of Western Canada[1]

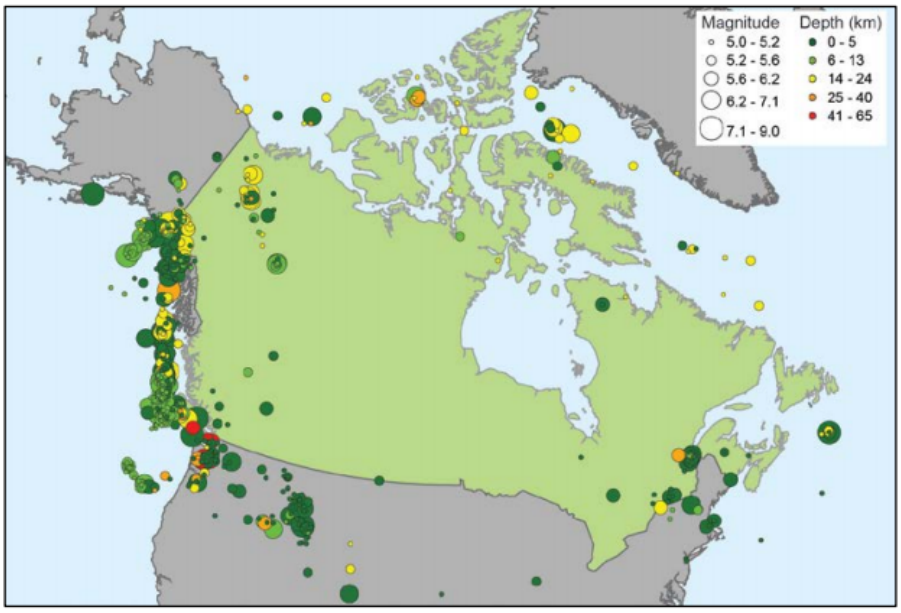


[1] Source: AIR

Off the west coast of Vancouver Island, the Juan de Fuca plate and the Pacific plate are diverging, or spreading apart, along the Juan de Fuca ridge. Further east, the Juan de Fuca plate is converging with and subducting beneath the North American plate creating the Cascadia subduction zone. There is paleoseismic evidence that the Juan de Fuca plate and the North American plates are currently locked, causing strain to build up within the earth's crust.

Seismicity in eastern Canada is very different than that in western Canada. Unlike plate boundary regions where the rate and size of seismic activity can be directly correlated with plate interaction, eastern Canada is located in a stable continental region within the North American Plate. As a consequence, Eastern Canada has a relatively low rate of earthquake activity, yet large and damaging earthquakes have occurred in this region in the past. Seismic activity in this region seems to be related to regional stress fields, with earthquakes concentrated in regions of crustal weakness.

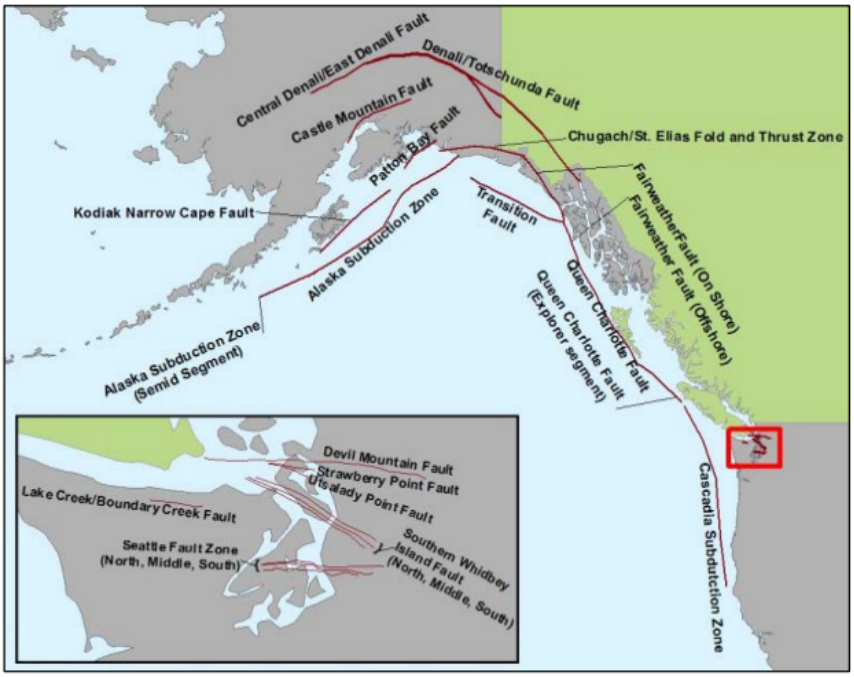
Figure 15: Historical Seismicity in Canada since 1700 (M ≥i5.0)[1]



[1] Source: AIR

The westernmost zones correspond to the boundary between the Pacific and North American plates. This region dominates seismicity for the whole of Canada. It is here for which the only detailed fault data is available. Information on fault slip rates, for faults such as those in the figure below, has been used to quantify a fault's potential for generating earthquakes.

Figure 16: Faults with Known Slip Rates Affecting Seismicity in Western Canada[1]



[1] Source: AIR

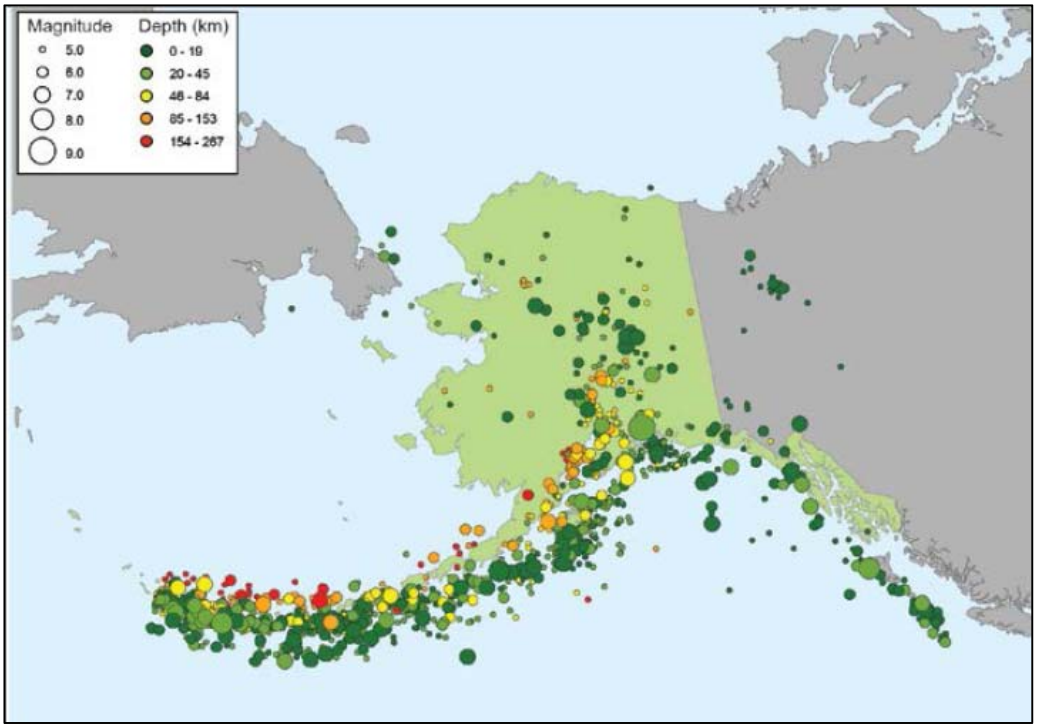
Seismicity Components of the AIR Earthquake Model for Alaska

Alaska is the most seismically active state in the United States. The Alaskan subduction zone represents an active segment of the circum-Pacific seismic zone. Two tectonic plates, the Pacific plate and the North American plate, contribute to the tectonic framework of the area. The Pacific plate is moving northwestward as it is subducted beneath the North American plate, creating the Aleutian Trench and giving rise to the Aleutian Islands.

The majority of earthquakes in Alaska are associated with the Alaska-Aleutian megathrust fault extending eastward along the Aleutian Islands arc and into southcentral Alaska. Significant seismicity also occurs along a system of right-lateral strike-slip faults extending southeastward and offshore through the panhandle of southeastern Alaska. Major earthquakes also occur throughout much of the interior of Alaska as a result of stresses generated at the Pacific and North American plate boundary.

The second largest earthquake ever recorded by instruments occurred in 1964 on the Alaska-Aleutian megathrust fault in the area of Prince William Sound. This subduction-zone earthquake had a moment magnitude of 9.2. It is also of note that since 1900 almost this entire plate boundary, from the westernmost Aleutian Islands to the Queen Charlotte Islands off the coast of British Columbia, has ruptured in large earthquakes. The exceptions are the gap areas in the vicinity of the Shumagin Islands and near Cape Yakataga (see figure below).

Figure 17: Historical Earthquakes in Alaska from 1900 to 2002 ($M_W \geq 5.0$), by Moment Magnitude and Depth[1]



(1) Source: AIR.

The table below lists the moment magnitude 6.0 and greater earthquakes that have occurred in Alaska during the period from 1880 to 2002.

Table 8: Frequency of Moment Magnitude 6.0 or Greater Earthquakes in Alaska, 1880-2002[1]

	Magnitude Ranges							
Region[2]	**6.0 to 6.4**	**6.5 to 6.9**	**7.0 to 7.4**	**7.5 to 7.9**	**8.0 to 8.4**	**8.5 to 8.9**	**9.0 to 9.5**	**Total**
Far North	1	2	0	0	0	0	0	3
Interior	8	1	4	0	0	0	0	13
Southcentral	23	12	6	0	0	1	1	43
Southeast	28	8	6	4	4	0	0	50
Southwest	114	85	37	11	1	2	0	250
Total	**174**	**108**	**53**	**15**	**5**	**3**	**1**	**359**

(1) Source: USGS.

(2) Regions: Far North comprises the boroughs (counties) of North Slope, Northwest Arctic, and Nome.
Interior comprises the boroughs of Yukon-Koyukuk, Fairbanks North Star, and Denali.
Southcentral comprises the boroughs of Kenai Peninsula, Matanuska-Susitna, Anchorage, and Valdez-Cordova.
Southeast comprises the boroughs of Yakutat, Haines, Skagway-Hoonah-Angoon, Sitka, Juneau, Wrangell-Petersburg, Prince of Wales—Outer Ketchikan, and Ketchikan Gateway.
Southwest comprises the boroughs of Wade-Hampton, Bethel, Dillingham, Kodiak Island, Lake and Peninsula, Bristol Bay, Aleutians East, and Aleutians West.

AIR seismologists model seismicity in Alaska according to three categories: plate-margin or subduction-zone earthquakes, crustal earthquakes, and depth-dependent smoothed background seismicity.

To determine the frequency-magnitude distributions for earthquakes in Alaska, AIR seismologists use data from the historical catalogs and auxiliary geological data on slip rates. The auxiliary data gives insight into the frequency and magnitude of earthquakes that occurred before the development of modern seismographic instruments and is particularly valuable for estimating recurrence intervals for large-magnitude events.

Plate-margin earthquakes associated with the subduction zone are modeled using a GR distribution, the parameters of which were calculated separately for different magnitude bins as recommended by the USGS, and characteristic earthquakes.

The frequency-magnitude distribution of active crustal faults in Alaska is modeled either as purely characteristic earthquakes in the case of faults for which sufficient data regarding fault segmentation is available, or as a weighted combination of characteristic earthquakes and a GR magnitude distribution. AIR seismologists have applied a Gaussian distribution around the characteristic magnitude in both cases.

In many areas of Alaska there is little or no surface expression of faults. While seismic activity suggests their presence, the exact location of many faults remains unknown. In light of this uncertainty, the AIR Earthquake Model for Alaska incorporates a smoothed, or gridded, background seismicity. For background seismicity in Alaska, the frequency-magnitude distribution was deduced from the earthquake catalog data. AIR seismologists analyzed the historical data for Alaska on a grid for each of three depth ranges, namely 0 to 50 km, 50 to 80 km, and 80 to 120 km. For each grid cell and depth range the event rates were spatially smoothed using two-dimensional Gaussian probability distributions.

The AIR Earthquake Model for Alaska does not simulate losses from fire following earthquakes in Alaska.

Seismicity Components of the AIR Earthquake Model for Hawaii

Unlike the western United States and Alaska where seismicity is the result of plate tectonics, the primary source of seismicity in Hawaii is related to volcanoes. The Hawaiian Islands are the southeastern-most end of a chain of volcanoes (the Emperor Seamounts) that began to form over 70 million years ago. The age trend of the volcanoes—older islands to the northwest and younger islands to the southeast—is indicative of the way in which the islands were formed on the moving sea floor.

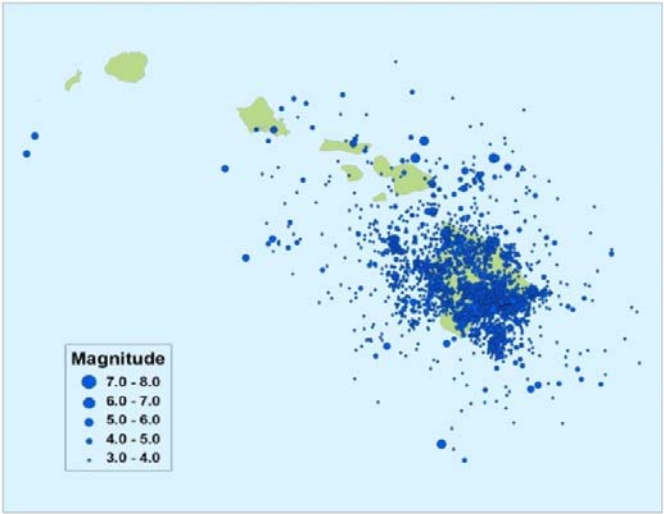
The central Pacific Ocean is primarily composed of a single tectonic plate, the Pacific plate, which is moving over the earth's asthenosphere. The islands are formed when hot solid rocks, with lower density, rise through the earth's upper mantle, melt due to lower pressure at shallower depths, and form magma. Driven by buoyancy and gas pressure, the molten rock, which is lighter than the surrounding solid rock, forces its way upward and ultimately breaks through a zone of weakness—or hot spot—in the plate. The result is an eruption.

The tectonic plate moves relative to the hot spot. The hot spot is presently located under the Island of Hawaii, the youngest and most seismically active. The older islands, once located above the hotspot, were carried away from it as the Pacific plate drifted northwest. A new island is already forming to the southeast of the main island.

Each Hawaiian Island is made up of at least one primary volcano, although some islands are composites of more than one. Hawaii Island is constructed of five major volcanoes, Kilauea, Mauna Loa, Mauna Kea, Hualalai, and Kohala. Mauna Loa is the largest volcano on the earth, measuring 30,000 feet from the seafloor. Along with Kilauea, it is also one of the most active volcanoes on the planet.

The highest rates of seismicity occur on the south side of the main island, under the flanks of Mauna Loa and Kilauea. Earthquakes directly associated with the movement of magma are concentrated beneath Kilauea and Mauna Loa. Very shallow earthquakes frequently precede or accompany an eruption. Swarms of these small earthquakes commonly occur over a period of several hours or days as magma forces its way into a new area. Once an eruption begins, the earthquakes diminish.

Figure 18: Historical Seismicity in the Hawaiian Islands, 1868-2010[1]



(1) Source: USGS.

The table below lists the moment magnitude 6.0 and greater earthquakes that have occurred in Hawaii during the period 1868 - 2010.

Table 9: Frequency of Moment Magnitude 6.0 or Greater Earthquakes in Hawaii, 1868-2010[1]

	Magnitude Ranges				
Region	**6.0 to 6.4**	**6.5 to 6.9**	**7.0 to 7.4**	**7.5 to 7.9**	**Total**
Island of Hawaii	6	8	2	1	17
Maui	2	0	0	0	2
Molokai	1	0	0	0	1
Hawaii Offshore	2	0	0	0	2
Pacific Ocean	3	2	0	0	5
Total	**14**	**10**	**2**	**1**	**27**

(1) Source: USGS.

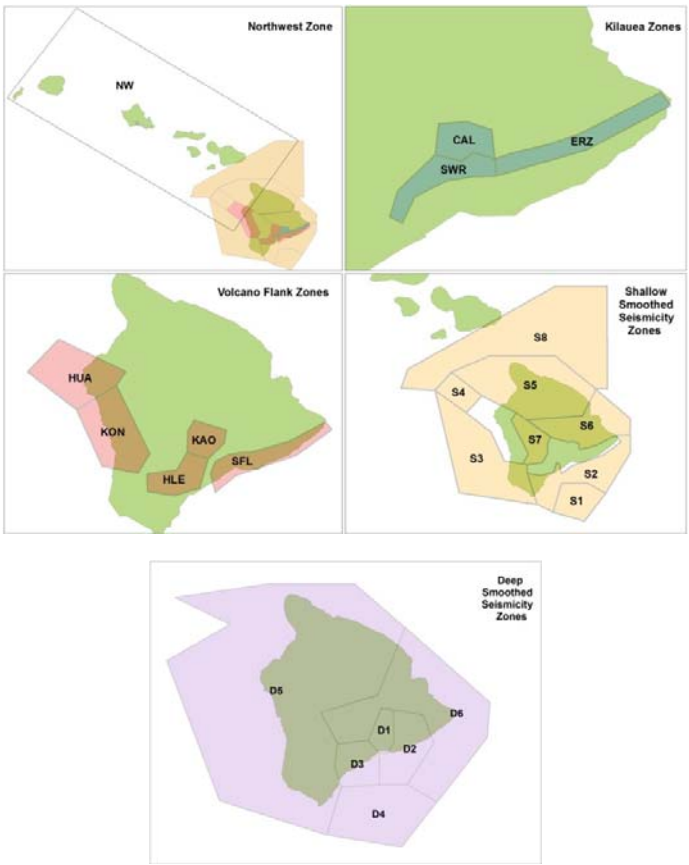
Other earthquakes beneath the active volcanoes are generated by the pressure exerted by magma that never reaches the surface. This is typical of Kilauea's east rift zone that is continually wedged apart by the injection of new magma. The northern flank of Kilauea is immobilized by Mauna Loa, while the southern flank, which faces the ocean, periodically shifts seaward to release the pressure, causing small to large earthquakes. This was the site, in 1975, of the moment magnitude 7.2 Kalapana earthquake, the largest earthquake in Hawaii in the twentieth century. The southwestern and southeastern flanks of Mauna Loa behave similarly.

The largest Hawaiian earthquake in recorded history occurred in 1868 on the southeastern flank of Mauna Loa. This earthquake had an estimated moment magnitude between 7.5 and 8.1 and caused damage across the entire island. Large earthquakes can also occur in the area between Kilauea and Mauna Loa. Other earthquakes on the main island are thought to be associated with the island's third most active (and third youngest) volcano, Hualalai, including the 1929, 1950, and 1951 earthquakes.

Following USGS, AIR seismologists model seismicity in Hawaii according to four types of seismic sources: the flanks of active volcanoes on the Island of Hawaii, the Kilauea caldera and rift zones, depth-dependent smoothed background seismicity, and a northwest source zone (from Maui to west of Kauai). To determine the frequency-magnitude distributions for earthquakes in Hawaii, AIR seismologists use data from the historical catalogs and auxiliary geological data.

These sources are captured by area source zones based on the 1998 USGS probabilistic hazard model, as illustrated below.

Figure 19: Seismic Source Zones as Defined by USGS and Implemented in the AIR Earthquake Model for Hawaii[1]



(1) Source: AIR.

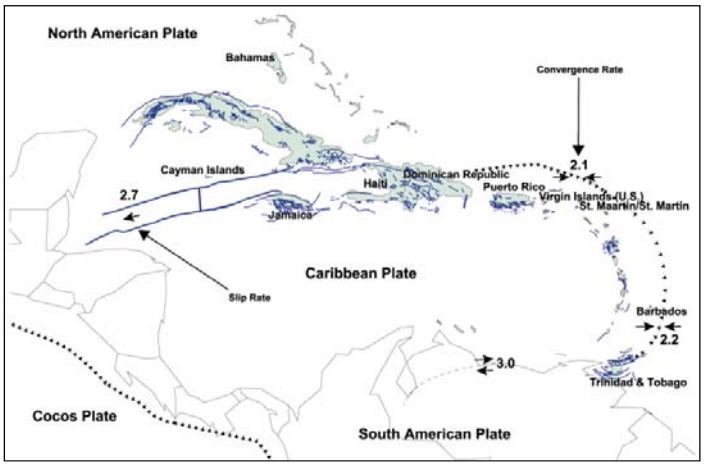
AIR scientists analyzed the historical data for Hawaii on a grid for each of two focal depth ranges, less than or equal to 20 km and greater than 20 km. For each grid cell and focal-depth range, the data was spatially smoothed using two-dimensional Gaussian probability distributions, the parameters of which partially depend on the spatial and temporal distribution of the historical events.

The AIR Earthquake Model for Hawaii does not simulate losses from fire following earthquakes in Hawaii.

Seismicity Components of the AIR Earthquake Model for the Caribbean

The tectonic setting of the Caribbean is shown in Figure 20. To the west, the Cocos Plate is subducting beneath the Caribbean Plate. The Caribbean Plate is moving to the east, while the South American Plate is moving westward. The dominant mechanism producing earthquakes in the Greater Antilles are transform faults and normal faults, which define the boundary between the Caribbean Plate and the North American Plate.

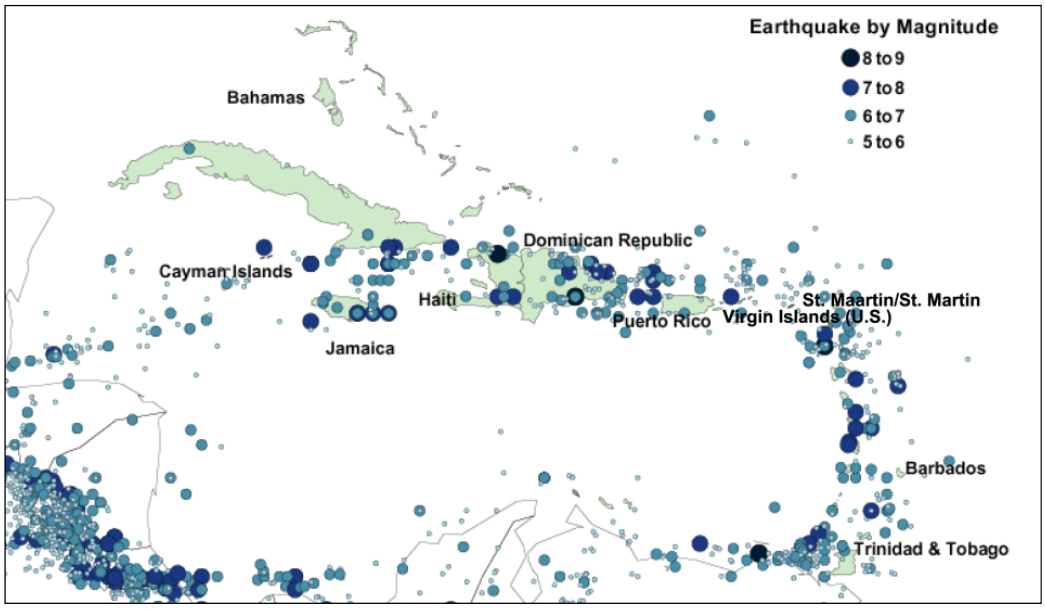
Figure 20: Tectonic Setting of the Dominican Republic and the Caribbean[1]



(1) Source: AIR.

In addition to the deep and intermediate depth events associated with these subduction zones, shallow crustal earthquakes occur throughout the region as well. The historical earthquakes of magnitude M_w 5.0 and greater that have been recorded in the region between 1690 and 1995 along with the 2003 event are displayed in Figure 23. Note that for certain magnitudes the historical record illustrated here is not complete. The larger the magnitude, the more complete the record because larger events are felt over a wider area and they are therefore more likely to have been reported than smaller magnitude events.

Figure 21: Historical Seismicity in the Dominican Republic and Caribbean[1]



(1) Source: AIR.

The historical catalog was created by merging several regional catalogs, including the CERESIS, GSHAP Latin America catalog, as well as the ISC, NOAA and Puerto Rico Seismic Network catalogs. The combined catalog was reviewed in order to remove foreshocks and aftershocks and to establish the completeness times for earthquakes of different magnitude ranges.

Other Parameters Used in the AIR Earthquake Models

Hypocenter. The place in the earth where rock first breaks or slips at the time of an earthquake. The hypocenter is a single point on the surface of a ruptured fault. The epicenter is the location on the surface of the earth directly above the hypocenter.

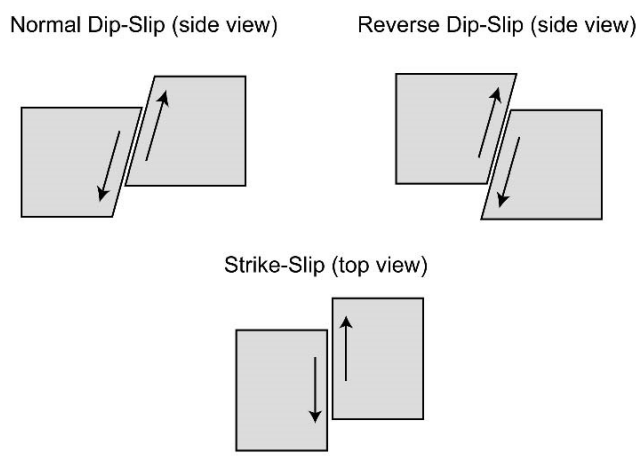
Focal Depth. This is the depth below the surface of the earth at which the rupture originates. It is generally measured relative to mean sea level. Because seismic waves are attenuated as they travel through the crust, deeper earthquakes typically cause less damage because there is more crust through which the waves must travel. Parameters of the distribution governing focal depth are functions of earthquake magnitude and the thickness of the seismogenic zone of the individual regions. The seismogenic zone is the brittle upper crust within which earthquakes occur, and can vary considerably in depth from one region to another.

Rupture Length. This is the length of the fault segment that ruptures during an earthquake. Rupture length is modeled as a function of the magnitude and type of the event. The relationship between rupture length and magnitude has been determined using empirical equations.

Azimuth and Dip Angle. These are parameters that define the geometry of a fault. The azimuth is the clockwise angle from true north to the line that represents the intersection between an extension of the rupture plane and the surface of the earth. The dip angle is the angle between the horizontal and the surface of the fault, or the rupture plane.

Fault Type. There are three types of faults, normal dip-slip, reverse dip-slip, and strike slip, as shown in the figure below. The type of fault affects the radiation of seismic waves and thus the amplitude of ground motion.

Figure 22: Three Types of Fault Mechanism[1]



[1] Source: AIR.

Local Intensity Estimation

After the model generates the source parameters of each simulated earthquake according to the seismic hazard module, it calculates the shaking intensity at each location affected by the event. This ground motion depends on the magnitude of the event, distance from the rupture, geological characteristics of the region, and local site conditions. The AIR Earthquake Models use relationships called attenuation functions to model shaking intensity. An attenuation equation describes earthquake ground motion in terms of magnitude, source-to-site distance, faulting mechanism and site condition. The attenuation characteristics of different regions can vary significantly, thereby having a significant effect on loss estimates.

Local Intensity Estimation in the AIR Earthquake Model for the United States and Canada – Continental United States

Attenuation in the western United States is much higher than in the central and eastern United States because of, among other things, the younger and more fractured rock in that region. Therefore, although

the western United States is more seismically active, the seismic energy from earthquakes dissipates more rapidly compared to the seismic energy from earthquakes in the central and eastern United States. An earthquake of a given magnitude will, accordingly, affect a smaller area in the western United States compared to an equivalent earthquake in the central and eastern United States. The model incorporates attenuation relationships that are appropriate for each region. Namely, in the western United States, the AIR Earthquake Model for the United States and Canada uses the NGA-West2 attenuation relationships database. In the central and eastern United States, the attenuation equations are based on stochastic numerical simulations that integrate observations with the latest scientific knowledge of the earthquake rupture process.

Local Intensity Estimation in the AIR Earthquake Model for the United States and Canada – Canada

The AIR U.S. and Canada Earthquake Models use a different suite of GMPEs for Eastern Canada, Western Canada, and the Cascadia subduction zone, in accordance with Atkinson and Boore's (2011) proposed interim updated seismic hazard model for Canada, and in accordance with the latest set of GMPEs recommended by the United States Geological Survey (USGS). Indeed, the GMPEs recommended for regions of Canada by Atkinson and Boore (2011) are very similar to those used in the USGS 2008 update to the United States seismic hazard map.

Calculations of local shaking intensity are modified to reflect local site conditions, which were developed from detailed geological data and geotechnical studies in metropolitan cities. Most of the geological data was collected from Natural Resources Canada. The geotechnical results were compiled from published literature and report, including the widely used soil classification scheme established by the National Earthquake Hazard Reduction Program of USGS.

Local Intensity Estimation in the AIR Earthquake Model for Alaska

The AIR Earthquake Model for Alaska calculates ground motion using a weighted combination of Ground Motion Prediction Equations ("**GMPE**s"). These GMPEs are appropriate for a variety of focal depths, magnitudes, rupture mechanisms, and rupture distances. For crustal earthquakes, the AIR Earthquake Model for Alaska uses a weighted combination of the GMPEs of Boore et al. (1997) and Sadigh et al. (1993), with each GMPE given equal weighting. For subduction zones, a weighted combination of the GMPEs of Youngs et al. (1997) and Sadigh et al. (1993) is used for events with a magnitude of less than 8.3, if the exposure site is less than 75 km from the rupture plane. For events that do not meet these criteria, ground motion is calculated using the Youngs et al. (1997) GMPE alone.

Local Intensity Estimation in the AIR Earthquake Model for Hawaii

The AIR Earthquake Model for Hawaii incorporates a weighted combination of GMPEs for shallow source-zone (depth < 20 km) and deep source-zone (depth ≥ 20 km) events. For shallow source-zone events, the model utilizes a weighted combination of Atkinson (2010), and the Next Generation of Ground Motion Attenuation Models (NGA) of Abrahamson and Silva (2008), Campbell and Bozorgnia (2008), and Chiou and Youngs (2008). For deep source-zone events, the model utilizes a weighted combination of Atkinson (2010), Atkinson and Boore (2003), and Youngs et al. (1997). The soil maps in the model are sourced from the USGS and the Hawaii Commission on Water Resource Management.

Local Intensity Estimation in the AIR Earthquake Model for the Caribbean

The AIR Earthquake Model for the Caribbean incorporates a weighted combination of attenuation relationships that are appropriate for different focal depths, distances, and rupture mechanisms. For Jamaica and the Dominican Republic the Abrahamson and Silva (1997) and Sadigh (1997) attenuation functions were used. The attenuation functions of Gregor, et al. (2001) and Youngs (1997) were used for the subduction zone segments of the Lesser Antilles.

Damage Estimation

Once the AIR Earthquake Models estimate the ground motion intensity at each location, it generates damage estimates for the exposed assets.

Shake Damage

Buildings are damaged when they undergo intense relative deformation caused by ground shaking. The response of a building to ground shaking varies dramatically, however, depending on its structural configuration and its natural period, or the time it takes the building to complete an entire cycle of motion.

The AIR Earthquake Models use nonlinear dynamic analysis to quantify the response of structural and nonstructural building components to the combined effects of the natural period of the building and the frequency content of seismic waves.

In nonlinear dynamic analysis, computer representations of buildings are subjected to large numbers of historical ground motion records of varying intensities that are input into the software. These computer representations, or "virtual" buildings, are then mathematically shaken just as under actual earthquake conditions. Building deformation at each story is computed.

For purposes of estimating building damage, the AIR Earthquake Models use spectral displacement as a measure of shaking intensity. Spectral displacement is a measure of the maximum horizontal displacement (relative to the ground) experienced by a building during an earthquake. When displacement occurs, that is, when a building begins to move, it and its component parts become deformed; it is this deformation that causes damage. The mean damage ratio of individual components is calculated and, around each mean, a complete probability distribution is estimated.

Damage functions for structural, nonstructural, and MEP (mechanical, electrical, plumbing) components are developed based on experimental data as documented in published reports. Using these damage functions, component damage ratios are estimated for each level of intensity.

Just as physical damage is estimated at the component level, so too are monetary damages. The AIR Earthquake Models employ cost models based on regional price indices, construction practices, and appropriate repair strategies to estimate the repair cost of each damaged component given its damage ratio. Estimates of the monetary damage to each individual component are probabilistically combined to achieve an estimate of the monetary damage, or cost of repair, to the building as a whole. The AIR damage functions have been calibrated to and validated against both experimental and actual loss data, and have been peer reviewed.

Contents damage is based on the spectral acceleration of each floor and on building damage as determined by spectral displacement. Contents damage is also a function of occupancy class. Different occupancy classes are associated with different kinds of typical contents with, in turn, different vulnerabilities to shake damage. Time-element damage is derived from building damage. Modeled business-interruption losses include both direct losses from building damage and indirect losses that may result from actions taken by civil authorities, loss of business income from dependent properties, utility service interruption or damage to transportation infrastructure.

The damage functions used in the AIR Earthquake Model for Alaska and the AIR Earthquake Model for Hawaii earthquake models are based on those in the earthquake model for the continental United States, then modified through an objective analysis of differences in building codes and construction practices.

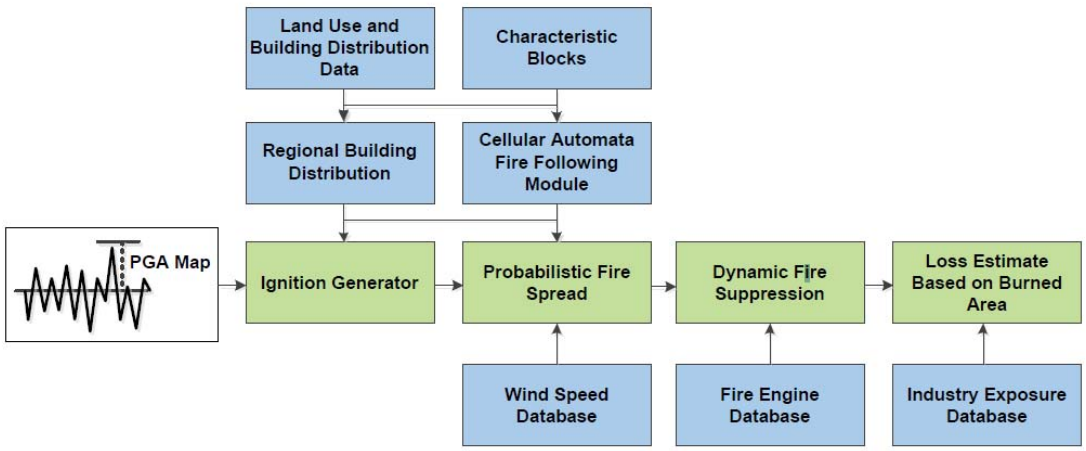
For the AIR Earthquake Model for the Caribbean, AIR engineers have developed damage functions to describe the relationship between buildings' damageability (or vulnerability) and the intensity to which they are exposed. In this model, the level of earthquake intensity is defined based on the Modified Mercalli Intensity scale ("**MMI**"), a well-known measure of earthquake intensity in which the scales are defined based on different stages of damage for various structures. Separate damage functions have been developed for 42 different construction types, and for different regions. For each region, each construction type and each MMI, the damage function calculates a damage ratio. Contents damage is then calculated as a function of the building damage ratio. Contents are assumed to undergo a certain level of damage given the level of damage to the building within which they are housed.

In order to take into account of each country's damageability in the Caribbean region, AIR engineers look carefully at each country's building design code. Historically, the Caribbean Building Code (CUBiC) was developed to provide appropriate building standards for the Caribbean region. It would be inadequate and inaccurate, however, to impose a uniform code in all countries, since each is faced with a different degree of hazard and therefore risk. Many countries are trying to develop their own design codes.

Fire Following Earthquake

A separate dynamic simulation is used to estimate losses from fires following earthquakes derived in the AIR Earthquake Model for the United States and Canada. AIR does not model fire following earthquake in the AIR Earthquake Model for Hawaii, the AIR Earthquake Model for Alaska, or the AIR Earthquake Model for the Caribbean. The components of this damage-estimation module are illustrated in the figure below.

Figure 23: Primary Model Components in Fire Damage Estimation[1]



Source: AIR.

Fire Ignition

The AIR Earthquake Model for the United States and Canada features a completely stochastic fire ignition algorithm, which has been developed based on historical fire-following ignition data from a variety of sources.

Fire ignitions are typically caused by the overturning and breakage of building contents (ignitions due to open flame or chemical reactions, for example), structural deflections resulting in damage and short-circuiting of electrical wiring, and ruptured gas lines. As such, there is a generally positive correlation between the number of ignitions and earthquake intensity. Higher levels of ground motion tend to produce higher ignition rates. Thus, the ignition rate, in ignitions per million square feet of building floor area, is a function of PGA.

Adjustments are made to account for the observation that different fire classes exhibit noticeably different ignition rates. For example, there is a lower probability of fire ignition in a million square feet of commercial high-rise property than there is in a million square feet of single-family residential property. Commercial high-rise buildings typically adhere to more stringent building codes.

To accurately simulate the built environment of any location in the United States, AIR researchers developed 21 characteristic city blocks based on actual city blocks in the United States. These 21 blocks represent different configurations of building density and occupancy classes that include single family homes, apartments, commercial buildings, and mobile homes. Each 1-km grid cell in the model contains 32 city blocks which are a combination of the 21 characteristic block types.

Fire Spread and Fire Suppression

Each post-earthquake ignition within a 1-km grid cell is assigned to a random city block within that grid cell. For each type of city block, the growth of a fire within the block is simulated using the results of the cellular automata model. This model calculates the fire behavior within a given block type based on the type and configuration of buildings on the block.

The cellular automata model uses a grid consisting of 3-m wide cells to model fire spread on each city block. The final resolution allows a realistic determination of the fire's spread rate, spread pattern, and duration. Fire spread in the cellular automata model can occur by direct flame contact, spontaneous ignition, spark-based piloted ignition, and branding. The probabilities of spark-based and flying brand ignition depend on the wind speed and direction, and building spacing. For each characteristic block type, the cellular automata model is run 1,000 times with varying ignition locations within the block. Wind speed and wind direction are also varied. The simulations capture the variability of the fire behavior within each block type resulting in functions which describe the fire behavior.

The AIR Earthquake Model for the United States and Canada accounts for fire spreading across streets or alleys to adjacent blocks of buildings. The probability of spread across firebreaks depends on wind speed, wind direction, fire suppression, and firebreak width.

Finally, fire response and suppression are simulated. The AIR Earthquake Model for the United States and Canada incorporates distributions of fire discovery and report times that are based on historical data. Discovery time in occupied buildings (which account for 85% of fire ignitions) is, on average, five minutes. In unoccupied buildings, the time it takes for a fire to be discovered ranges between three and 10 minutes. Forty percent of fires are reported within one minute of their discovery, 50 percent between one and five minutes, and 10 percent between five and 20 minutes. Report time generally increases as intensity increases, as a result of, among other things, interruptions in telephone service.

Fire suppression is modeled as a dynamic process. Each fire is probabilistically assigned a discovery and report time and one or more fire engines are assigned to the fire. The engine arrival time is also computed for each engine, taking into account reduced accessibility following larger earthquakes. The time it takes to suppress the fire is a function of the size of the fire and the number of engines undertaking suppression activities at the site. As fires are suppressed, engines are rerouted to other fires.

Fire Damage Estimation

Once all fires in the model have burned out completely, the final burned floor area in each fire class in each grid cell is obtained by summing the burned floor areas on the blocks within the grid cell. The total burned floor areas are then divided by the total floor areas in the grid cell to determine the mean damage ratios for each fire class in the grid cell. For a given earthquake, the fire following module is typically run 50 times, and the final mean damage ratios output by the module are obtained by averaging the results over multiple simulations. The resulting mean fire damage ratios can then be applied to exposure portfolios to get the corresponding fire following losses for each fire class within each grid cell. The losses from all grid cells are combined to obtain the total event loss.

In the Canada component, fire losses are computed for each event by dividing the total burned floor areas by the total floor areas in each grid cell of the cellular automata model to determine the mean damage ratios for each fire class in the grid cell. For a given earthquake, the fire following model is typically run 50 times, and the final mean damage ratios outputted by the model are obtained by averaging the results over the multiple simulations. The mean fire damage ratios can then be applied to exposure portfolios to get the corresponding fire following losses for each fire class within each grid cell. The loss from all grid cells is combined to calculate the total event loss.

Earthquake-triggered Landslide

The AIR Earthquake Model for the United States and Canada also includes a landslide module covering all of North America at a regional scale. Input data for the landslide module includes Digital Elevation Model ("**DEM**") data, surficial and bedrock geological maps, and seasonal precipitation data. DEM information is used to create slope maps, while surficial and bedrock geological maps are used to classify geological units based on their material strength. Precipitation data is used to estimate seasonal fluctuations in water saturation of soils which affects the stability of slopes. By combining the slope map with the geological maps, landslide susceptibility maps for wet and dry seasons were produced. Landslides are not explicitly modeled in the AIR Earthquake Model for Alaska, or the AIR Earthquake Model for Hawaii.

The earthquake-triggered landslide module relies upon the mechanics of slope failure and employs models of seismic slope stability to assess the deformation of the slope following an earthquake. The PGD due to landslides is be calculated using an empirical relationship between critical acceleration values related to landslide susceptibility and Arias intensity (a measure of total ground motion shaking intensity). To develop

the damage functions for landslide, AIR engineers incorporated a process published by HAZUS (FEMA 2012) to determine the probability of damage due to PGD. Landslide damage to buildings, contents, and automobiles is assessed.

EUROPE WINDSTORMS

Introduction to Europe Windstorms

Extratropical cyclones in Europe, also known as Europe Windstorms, are atmospheric disturbances, often severe, that form in the mid-northern latitudes when several different meteorological conditions interact. Extratropical cyclones originate in the jet stream through a process called cyclogenesis, which is fueled by the interaction between the cold air masses from the poles and the warmer air masses that are influenced by temperatures at the equator. When these two air masses come into contact, cold-center low-pressure disturbances are created along the fronts (gradients in temperature, pressure, and dew point) that form between them. The interaction between the cold and warm air masses pushes the lighter, warm air flow northwards where it comes into contact with even more cold air, thereby creating additional disturbances. The continuing reaction between the two air masses causes the pressure to decrease further, and the surrounding air flow is pulled more vigorously into the area of low pressure.

As the air continues to flow into the low-pressure area, the Coriolis force caused by the earth's rotation deflects this flow, establishing a counterclockwise (in the northern hemisphere) air movement around the low pressure disturbance. If the warm air flowing into this depression is moist, it condenses as it mixes with colder air, releasing a tremendous amount of energy that pushes the air masses higher and further decreases the pressure at the initial disturbance. As a result, air flows more rapidly towards the center of the low-pressure area, potentially developing into a powerful extratropical cyclone. As the storm continues to develop, the cold front moves faster than the warm front and eventually merges with it to create an occluded front. At this point, the warm air mass is lifted above the heavier cold air mass, and the extratropical cyclone reaches its maximum intensity due to the ensuing low-pressure center.

Extratropical cyclones typically do not achieve the high wind speeds of tropical cyclones; however, an extratropical cyclone can affect tens of thousands of square kilometers as it moves across a region. Individual locations can be struck by several extratropical cyclones in rapid succession and often experience relentless gale-force winds for several days. The wind footprint of an extratropical cyclone, which can extend over a large area, is affected by a number of factors. Downdrafts and the drag on airflow associated with rainfall can enhance wind speeds at lower elevations. The size of the footprint also depends heavily on the atmospheric conditions at the time the storm strikes land.

To capture the structural complexity of extratropical cyclones, AIR's modeling of Europe Windstorms incorporates Numerical Weather Prediction ("**NWP**") models with detailed wind observations. NWP models are at the regional scale, also known as mesoscale models, and utilize global four dimensional (three spatial and one temporal) environmental data including sea surface temperatures, air temperature, wind speed, water content and pressure. The AIR model incorporates a community-supported NWP model called the Weather Research and Forecasting Model ("**WRF**") for detailed storm structure, maintained by the National Center for Atmospheric Research ("**NCAR**"). The AIR configuration leverages the ERA-Interim Reanalysis data from the European Center for Medium Range Forecasting ("**ECMWF**") data for initial and boundary conditions. The final output of the WRF is a 4-D view of the atmosphere from 1979-2015 downscaled to a resolution of 16 km and archived hourly.

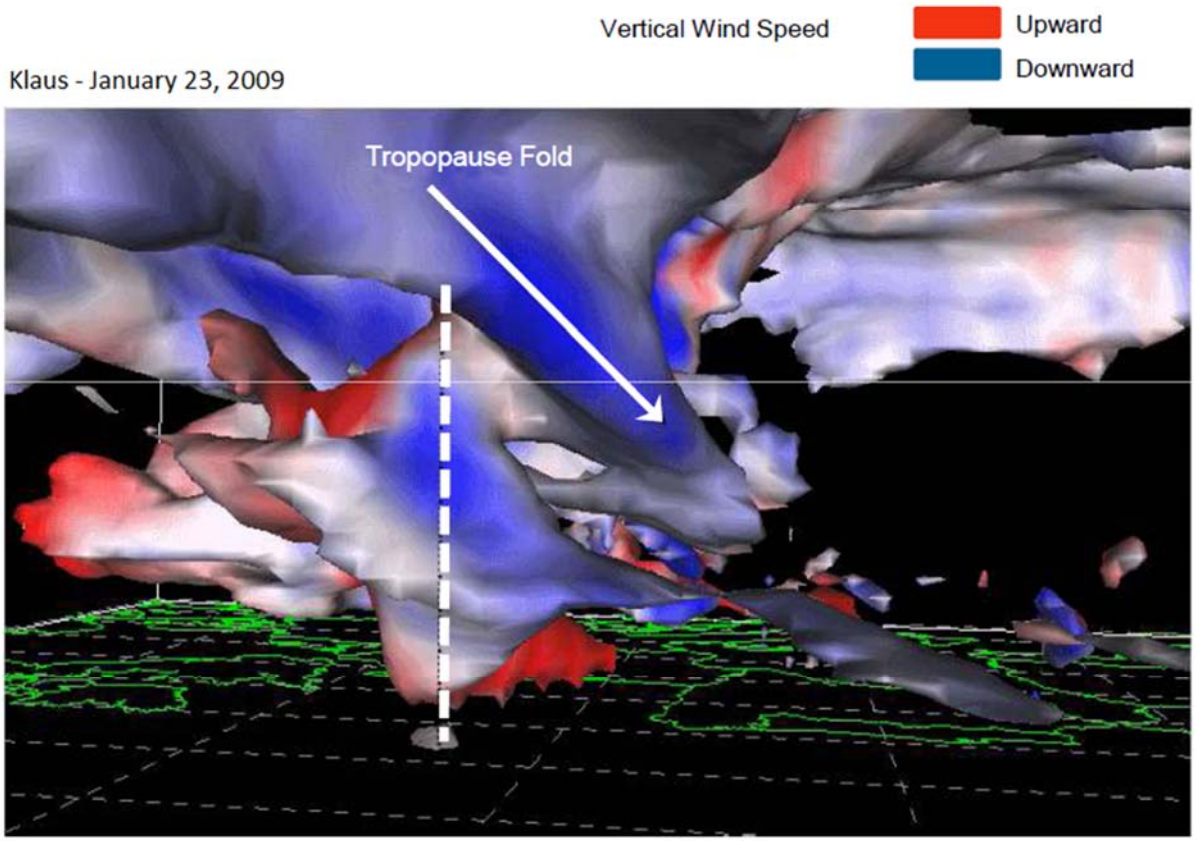
NWP techniques and models have been developed by government meteorological offices over the last 50 years. The equivalent of billions of U.S. dollars have been invested in this development, which has included satellites, radar facilities and other computational and research expenses, and the rate of investment is increasing. NWP has become the core operational forecasting technology for meteorological offices worldwide.

Tropical Cyclone and Extratropical Cyclone Comparison

Extratropical cyclones are more complex than tropical cyclones, which derive their energy from warm ocean water and are characterized by large but contained areas of relatively constant pressure displayed in a clear cyclonic circulation. In contrast, the conditions that cause extratropical cyclones are numerous and varied; again, there is an area of low pressure, but also a high-pressure ridge, a low-pressure trough, constantly interacting warm and cold fronts, and a strong upper-level jet stream. Within the storm, air flows both up and down, and surface winds can be enhanced by a number of substructures, including sting jets (damaging winds that are created when rapidly descending cool dry air comes into contact with warmer moist air) and gravity waves (disturbances that occur when gravity restores air that is vertically displaced

causing localized changes in weather conditions such as heavy precipitation and strong winds). The figure below shows an example of such complexity for Klaus.

Figure 24: Structural Complexity of Klaus[1]



[1] Source: www.ukweatherworld.co.uk

The table below illustrates some of the key differences between tropical cyclones and extratropical cyclones.

Table 10: Windstorm Comparisons[1]

Characteristic	Tropical Cyclones	Extratropical Cyclones
Genesis (initiation) Location	Over warm ocean water, tropical latitudes	Middle and high latitudes over land or water
Seasons	Late summer and autumn	All year (typically strongest between the late fall and early spring). Often called winterstorms for this reason.
Energy Source	Heat and moisture transfer from ocean water	Three-dimensional pole-to-equator atmospheric temperature contrast

Characteristic	Tropical Cyclones	Extratropical Cyclones
Intensity Over Land	Dissipates over land	Can maintain strength or even intensify over land
Footprint (Size)	250 to 1,000 square kilometers	2,500 to >10,000 square kilometers
Shape	Large, circular and contained system of damaging winds that forms a spiral shape around a central core known as the "eye." The system is somewhat symmetrical around a vertical line extending through the eye.	Complex pattern, where the most damaging winds usually occur to the right (south) of the track. The shape varies and shifts around the center of low pressure.
Observed Peak Gusts	Typically 350 kilometers/hour (217.5 miles/hour)	Typically 200 kilometers/hour ("**km/h**")
AIR Modeling Technique	Set of parameters varied statistically to produce stochastic catalog of potential storms	Numerical Weather Prediction (NWP) technology scientifically evolves each simulated storm in three-dimensional space over time

(1) Source: AIR.

Windstorms in Europe

On average about seventy or more storms affect Europe each year during the winter months, although most are too weak to cause widespread damage. Out of these storms, approximately five on average are powerful enough to retain enough force to pose a significant risk to property as they move across Europe. Storm clusters may also occur when two or more powerful storms ravage the area in close succession. During the winters of 1990 and 1999, several deadly storms of comparable intensity struck the same regions of Europe within days of each other, collectively causing enormous amounts of damage.

Notable Historical Storms

Capella (1976)

During 2–4 January 1976, winter storm Capella struck several countries in Europe, particularly those that border the North Sea. Capella was the result of a very strong temperature gradient that began to form during the last days of December, between the 20° and 50° northern latitudes. Temperatures were 16° C in the Azores and met air masses coming from the southeast of Greenland with temperatures of -24° C. Early on 2 January the central pressure of the disturbance was slightly below 1,000 millibars ("**mb**") and by evening of that day, when the system passed over Scotland, it had dropped to 972 mb and powerful winds began to sweep southwards along the east coast of Great Britain. The strongest wind gusts were seen at Birmingham Airport on 2 January and were reported as high as 133 km/h. In eastern England, at Wittering Airfield, winds were measured at nearly 170 km/h.

By 3 January, the storm had reached Denmark with a central pressure of 968 mb. In Højer, Denmark, the tide reached nearly 5 m above normal and at Vlissingen, Netherlands, waters were 4 m above normal levels. Later that day the storm reached Berlin where strong winds remained for over 17 hours, with gusts measured at about 97 km/h. Massive flooding occurred in many areas, including Germany where 10,000 people along the Bight coastland and Elbe River had to be evacuated from their homes.

The amount of damage from this storm is comparable to the storm clusters of 1990 and 1999. The entire eastern coastline of the North Sea was not put on alert again until 2007 when a series of storms struck Europe including Britta, Hanno (Per), Franz, and Kyrill.

The Great Storm of 1987

The Great Storm of 1987 (sometimes called 87J) impacted southern England, northern France, Norway, and Denmark from 15–16 October of that year. It originated in the Bay of Biscay and by noon on 15

October, the central pressure was at 970 mb. On 16 October, the storm reached the island of Ushant, France with a pressure of 948 mb, causing waves to reach as high as 16 meters. Wind speeds at Brest were recorded at 148 km/h and, as the storm crossed Brittany, gusts of 187 km/h were recorded at Quimper, 200 km/h at Ouessant, and 220 km/h at la pointe de Penmarch.

Shortly after it left the coast of northern France, the storm reached Cornwall where it made landfall with a central pressure of 953 mb. From there it moved along a northeasterly path towards the Midlands and went out to sea from England's east coast, at the Wash. It continued to move northeastward alongside the western coastal countries and up the entire length of Norway's coast.

As the storm traveled across England, wind gusts of 190 km/h were recorded in the Essex and Kent regions of southern England, and the highest recorded wind speed of 196 km/h was recorded at Gorleston in Norfolk.

By the evening of 16 October, the storm had reached southern Norway where it impacted the southern and western areas of the country, including Oslo, with violent winds and also drenched the area with 11 cm of rain, which fell in just 48 hours.

Daria (1990)

Daria, which hit Europe from 25–26 January, struck the area after a series of storms had already passed through, and was itself followed in February by storms Herta, Wiebke, and Vivian. By itself, Daria caused significant damage in six countries. Most of the damage was in the United Kingdom (where the storm is also known as the Burns' Day storm).

Daria formed out of a cold front over the northern Atlantic on 23 January and within 24 hours had a central pressure of 992 mb. After making landfall in Northern Ireland on 25 January, the storm moved towards Ayrshire, Scotland and by the time it reached Edinburgh, it had its lowest pressure of 949 mb.

As the storm moved across the Netherlands and Belgium towards Denmark, it caused major property damage, mostly due to strong winds, which reached 110–120 km/h, with gusts of 170 km/h. However severe flooding also occurred, particularly in England and western Germany.

Vivian and Wiebke (1990)

During 26-28 February 1990, Vivian and Wiebke both struck Europe as the last of the series of storms that affected Europe that year. These two storms alone, which arrived in Europe just four weeks after Daria, created an amount of damage that was greater than the damage seen by Lothar and Martin nearly a decade later. Homes, automobiles, and many forests in the Alpine regions of Germany, Switzerland, and Austria were particularly hard hit by Wiebke.

On 25 February 1990, Vivian formed over the Atlantic as a very deep low-pressure system. By the following day, the pressure was at 949 mb and Vivian was moving over Ireland, the United Kingdom, and was active in the North Sea, affecting much of the coastline. Meanwhile, Wiebke had developed off the southeastern coast of Iceland and on 28 February, reached Ireland with a central pressure of 984 mb. Wiebke continued to move across central England and the North Sea, and by 1 March had reached Germany where it continued through the following day.

Throughout these areas, and particularly in Germany, fallen trees damaged many transmission wires which disrupted electricity and communication. Due to its large footprint, Wiebke caused more damage in Germany than was seen nine years later when Lothar hit the region. Industrial properties and greenhouses in the Netherlands were also hit hard.

Anatol (1999)

Anatol hit northern Europe on 3 December, and was followed a few weeks later by Lothar and Martin. This storm cluster paralyzed much of Europe. Anatol (known in Denmark as Adam) had wind gusts of up to 185 km/h when it reached the German Bight and southern Denmark.

Anatol developed rapidly over the northeastern Atlantic on 3 December and, as it approached Great Britain, its pressure was measured at 990 mb. The pressure dropped steeply as extremely cold air between Greenland and Norway mixed with warmer air to the south. When the storm reached the North Sea the pressure was

at 957 mb, dropping to 955 mb as it moved towards Denmark. The lowest pressure was recorded in Jutland, Denmark, at 953 mb. The storm regained pressure (i.e., weakened) very slowly and was at 970 mb when it reached Latvia.

The storm was particularly damaging in Denmark, southern Sweden, and northern Germany, but strong winds were also felt throughout Ireland, northern England, Wales, and the coastal areas of southern England.

Lothar and Martin (1999)

On 26 December, the storm Lothar, which had formed over the northern Atlantic the day before, hit the Brittany coast and just nine hours later had created a path of destruction across northern France. The storm continued on to cause even more damage in southern Germany and Switzerland.

Lothar's winds attained their maximum velocities along the French coast and sustained their speed as the storm moved farther inland. Wind gusts at Orly airport and in Paris were recorded at 170-180 km/h, and gusts of 215 km/h were recorded at the top of the Eiffel Tower. The storm traveled in a semicircular path, moving across the English Channel, through Paris, and continued into Alsace, Germany's Black Forest, and northern Switzerland, before finally weakening as it moved into Austria. In Switzerland, gusts of 50–100 km/h were recorded in the flatlands, while they reached 200 km/h at the Jungfrau peak.

On 27 December, one day after Lothar tore through Europe, areas about 200 km south of Lothar's path were struck by Martin, which battered areas near Bordeaux, Biarritz, and Toulouse. Martin was larger and somewhat weaker than Lothar; however, Martin's wind speeds reached 140 km/h in Carcassonne, 160 km/h in Vichy, and 130 km/h in northern Spain. The damage caused by Lothar and Martin added to significant damage already sustained from Anatol. France in particular was hit very hard and heavy damage also occurred in northern Spain, northern Italy, parts of Switzerland, and Corsica.

Erwin (2005)

The storm Erwin (known in Norway as Gudrun) struck northern Europe during 7–9 January 2005, packing sustained wind speeds of 126 km/h. In Hanstholm, Denmark, wind gusts as high as 165 km/h were reported. From Ireland to Russia, severe flooding and damaging winds from this storm caused severe property damage, disrupted all modes of transportation, and disrupted power for more than 500,000 people.

Erwin formed in the Atlantic just west of Ireland and on 7 January, its central pressure was around 995 mb. Over the next twelve hours, as the storm moved across Ireland and the United Kingdom, the pressure dropped nearly 25 mb as the cold air mass from Greenland collided with the warmer and very moist air farther south. As a result, damaging winds accompanied by downpours swept across the entire British Isles.

When the storm reached Norway around noon on 8 January, the pressure had dropped to 960 mb and the dramatic fall in pressure formed a sting jet, which was responsible for much of the damage done to Denmark and southern Sweden. Particularly hard hit among the Scandinavian countries was the forest industry in southern Sweden, which lost over 75 million cubic meters of trees creating the world's largest stockpile of lumber.

Kyrill (2007)

The winter of 2006–2007 had an unusually large number of strong extratropical cyclones including Britta, Karla, Lotte, Hanno (also known as Per), and Franz. The worst storm during this season, in terms of wind speed and damage, was Kyrill, which made landfall on 18 January four (4) days after Hanno struck Sweden. Kyrill's minimum central pressure was 965 mb as it approached the United Kingdom. As the storm moved across England and the North Sea into Denmark it showed maximum wind gusts of 137 km/h, which were lower than Lothar's but affected an unusually large area for a single storm. Significant damage was sustained in Germany and the United Kingdom, while the Netherlands, Belgium, Austria, and the Republic of Ireland were also severely affected.

Flooding and wind damage was severe in many parts of Germany, including Berlin. Windows and walls were damaged due to flying debris, sometimes including tree limbs and billboards. Railway service throughout Germany was delayed or shut down altogether. Power was shut off to 100,000 homes in northern France, 15,000 in Austria, and to millions of homes in Germany and the United Kingdom. The German

states of Brandenburg and Saxony were especially hard hit and the Siegen-Wittgenstein district was put under a state of emergency due to blocked roads and power outages.

Klaus (2009)

Klaus made landfall on 24 January 2009, in the Bordeaux region in southwestern France, from where it proceeded across the southern part of the country. The storm formed two (2) days earlier in an area west of the Azores Islands and strengthened rapidly, exhibiting explosive cyclogenesis. Its central pressure was about 1,000 mb on the evening of 22 January and by 24 January, it had decreased to 967 mb.

Klaus caused a notable amount of damage in southwestern France and northern Spain. Winds at 161 km/h were recorded in Bordeaux when the storm made landfall, although damage in that area was minimal. A few buildings in the city center suffered some damage due to falling trees while in the residential areas the damage was mostly limited to roof tiles and chimneys.

Southwest of Bordeaux however, in Gujan-Mestras, and farther south at Saguinet, the damage to buildings was much worse due to falling trees, most of which were uprooted due to water-saturated soils; very few were snapped or broken from the wind. Along the Aquitaine coast, older buildings suffered more damage than newer ones. Churches in particular were vulnerable to wind damage due to their age, height, and slender structure.

Wind speeds up to 177 km/h were recorded at Saint-Paul de Fenouillet, which is on top of a hill in the Pyrenées. As a result, the damage in this area was higher with more severe roof damage, which occurred on several commercial buildings. High winds were also recorded near Perpignan; however, only minimal damage was incurred there due to well-maintained buildings in this popular tourist town.

Undine, Wera, and Xynthia (2010)

During February 2010, Europe was struck by a cluster of three storms, Undine, Wera, and Xynthia, which reached Europe within a few days of each other. Xynthia, which reached the northern areas of Spain and Portugal on 27 February, moved northeast over the Biscayan Sea into France, causing damage to parts of France, Belgium, and Germany, as well as to parts of Spain. Xynthia's track was farther south than those of Undine and Wera, and therefore made contact with warmer air and unseasonably warm sea surface temperatures of 14°C, enhancing the amount of moisture for the storm.

The hardest hit country was France, where a national catastrophe was declared. Xynthia's wind speeds, which were comparable to those of Herta (1990), were strong enough to cause considerable damage to buildings in the affected areas of France, many of which are unreinforced masonry. Damage to roofs, chimneys and windows was widespread and some buildings showed structural damage as well. The storm also uprooted trees and damaged roofs in Germany, particularly in Düsseldorf and Cologne as well as in large parts of Rheinland-Pfalz and Baden-Württemberg.

Xynthia struck during high tide and France's aging sea walls, including those near the Île de Ré, could not hold up against the sea level. The sea rose over a meter above normal, generating waves up to 8m in the Vendée and Charente-Maritime areas. At the coastal village of L'Aiguillon-sur-Mer, a sea wall that was several hundred years old collapsed and devastated a mobile home park that was situated nearby. The damage to sea walls caused many areas to remain vulnerable to sea surge even after the storm had subsided.

Mike-Niklas (2015)

ETC Niklas was one of the worst storms to affect Germany in recent years. High winds and heavy rains from Niklas caused serious building damage in Germany, and triggered flood warnings across central and southern Germany. In the UK, wind gusts of nearly 128 km/h on the Norfolk coast were reported on Monday, 30 March, as Niklas moved eastward from the North Sea into the Baltic.

On 28 March, a weak low-pressure system (Mike) formed west of Iceland, and then rapidly developed and moved into the UK on 29 March. Also on 29 March, another, more intense low-pressure system formed (Niklas). Mike continued to strengthen and migrated into the Baltic Sea, leading to steady rain and strong winds over western and central Europe, particularly Germany. Mike's highest wind speeds of 151 km/h were detected at the meteorological weather station on the Brocken located in Saxony-Anhalt.

On 30 March, strong winds from Niklas felled trees in parts of the UK, with the highest gusts of 128 km/h recorded along the Norfolk coast, bordering the North Sea.

On 31 March, Niklas developed into a strong storm centered over Denmark and the southern Baltic Sea, bringing high winds and heavy precipitation to Germany and parts of Great Britain. Wind measurements for Niklas across Germany ranged from 137 km/h in Stötten auf der Ostalb, up to the maximum reported measurement of 192 km/h in Zugspitze.

Winds in Munich were reportedly strong enough to knock pedestrians off their feet, and in some parts of Germany, gusts from Niklas overturned trucks. Severe building damage due to high winds was reported and fallen trees damaged roofs and cars. In some locations, the downpour washed away soil, undermining trees and buildings and causing them to collapse. Niklas also inflicted major delays to the country's domestic and international train service as well as flight cancellations. Mike-Niklas was the biggest insurance industry hit from a European windstorm in Germany since 2007. Losses totaled EUR 816 million, with most significant damage across western and central Europe, especially Germany.

The AIR Europe Windstorm Model

The AIR Europe Windstorm Model creates a catalog of simulated, stochastic events derived from historical seed storms, calculates the wind field produced by each event and determines damages at each affected location.

Data Sources for Event Generation

The AIR Europe Windstorm Model uses a physical model based on Numerical Weather Prediction ("**NWP**") in combination with detailed wind observations to establish a database of historical storms.

The primary sources of data for this model include:

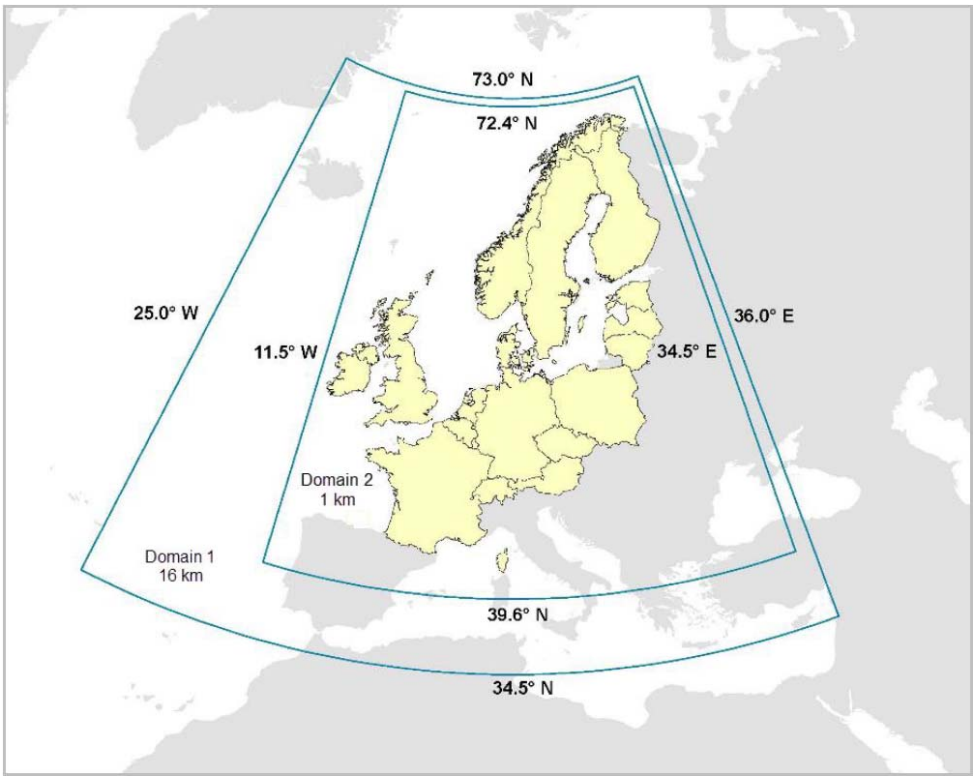
- World Meteorological Organization (WMO)
- National Climate Data Center (NCDC)
- U.S. National Center for Atmospheric Research (NCAR)
- U.S. National Centers for Environmental Prediction (NCEP)
- European Center for Medium Range Forecasting (ECMWF)
- UK Meteorological Office (UKMO)
- Risø Laboratory, Copenhagen, Denmark
- Building Research Establishment (BRE)
- Météo France
- Swiss Federal Office of Meteorology and Climatology (Meteo Swiss)
- MDA Federal, Incorporated
- Deutscher Wetterdienst (DWD) (German Weather Service)
- Danish Meteorological Institute (DMI)
- Royal Netherlands Meteorological Institute (KNMI)
- ERA-Interim Reanalysis dataset: https://www.mmm.ucar.edu/weather-research-and-forecasting-model
- Integrated Surface Hourly dataset: https://www.ncdc.noaa.gov/isd

- Singular Value Decomposition: http://www.ams.org/samplings/feature-column/fcarc-svd
- North Atlantic Oscillation (NAO): http://www.cpc.ncep.noaa.gov/products/precip/CWlink/pna/nao.shtml

Model Domain

The AIR Europe Windstorm Model is contained within two domains, shown in the figure below. Domain 1 is used for storm detection and is the WRF NWP model. It is on a 16 km grid and covers an area that extends well beyond the boundaries of the modeled countries. The domain contains several vertical layers, which extend from the earth's surface to the tropopause, about 14 km above the surface of the earth. Domain 2, the AIR modeled domain, defines the area where detailed analysis of individual storms and potential damage is conducted using a resolution of 1 km x 1 km to provide a more accurate analysis of potential damage.

Figure 25: Domains of the AIR Europe Windstorm Model[1]



[1] Source: AIR.

Identifying Historical Storms and Storm Clusters

As stated above, the AIR model incorporates a community-supported NWP model called WRF for detailed structure, maintained by NCAR. The AIR configuration leverages the ERA-Interim Reanalysis data from ECMWF for initial and boundary conditions. These data provide a complete four-dimensional representation of the atmosphere from 1979 to the present. The final output of the WRF model is a complete four-dimensional view of the atmosphere from 1979-2015 downscaled to a resolution of 16 km and archived hourly.

The definition of an individual storm can be somewhat ambiguous given that storms occur constantly, and often simultaneously, during the winter season in the northern Atlantic. The surface wind field associated with a storm is not symmetrical with respect to the storm's center of rotation; instead, the strongest surface winds usually form to the south of the lowest pressure and center of rotation. Due to the complex structure

of the wind field, separate storms occurring near one another may appear to function as one very large storm.

The refined output of the WRF model was used to identify storms by determining locations of each storm's vortex center. The paths of these vortex centers were tracked using a combination of techniques including feature tracking (Hodges, 1995). Using this tracking methodology, AIR scientists can locate any number of vortices that form within the model domain during any winter season between 1979 and 2015, and each vortex is treated as a separate storm. AIR scientists also added in three additional storms from 1953, 1973, and 1976. By using this tracking method, approximately 3,479 historical events, seed storms, were identified that occurred between 1979 and 2015, plus the three additional storms from 1953, 1973, and 1976. This set of historical storms varies in intensity and location, and therefore provides an excellent basis for generating stochastic catalog events. The set accurately reflects records of historical events including reported temporal storm clusters, which occur when multiple storms affect a given area within a short time period.

Stochastic Event Generation

To generate the stochastic storm set, AIR researchers sought the best way to generate unique, realistic storms from a meteorological and geographical standpoint while preserving properties of the original historical seed storms. To generate the stochastic event set, AIR researchers applied a perturbation technique to the wind field and track parameters of the seed storms. Using storm energy and track perturbation from historical data, AIR researchers could capture the complete range of potential annual extratropical cyclones for each area. This technique ensures full spatial coverage, ultimately producing realistic and accurate loss estimates. This perturbation technique involves a mathematical concept called Principal Component Analysis (PCA). In practice, it decomposes a wind field into a set of distinct, independent factors. By perturbing these components, AIR researchers created stochastic wind fields that have slightly different patterns but maintain much of their original spatial and temporal correlations.

Stochastic Wind Field Generation

Each storm that serves as the basis for the catalog is characterized by a set of variables (wind speed in the west to east direction, wind speed in the north to south direction, and mean sea level pressure) on a regular grid, with one value for each variable at each grid point at each time. Within these data, there exist significant correlations. For example, two adjacent grid points might have nearly identical values. Therefore, if the value of the variable at one point is known and the relationship between that point and the values of the variables at other points is known, generate the entire field of values can be generated with only that information. The relationships between the values of a variable at one location and the values of variables at other locations is varied and complex. Multiple effects and correlations may simultaneously combine to result in a final wind footprint and some relationships may be stronger than others. PCA is a mathematical way of identifying these statistical relationships and ranking them by importance.

To perform a PCA analysis for each seed, the zonal wind component (west to east), meridional wind component (south to north), and sea level pressure fields for each hour of the storm are arranged in a matrix. The variables are placed in sequential blocks that result in one matrix for each seed. The PCA analysis decomposes the matrix into a new set of independent components, each representing a different type of relationship across the set of variables over the entire domain. These principal components can be recombined to recreate the original storm or perturbed and recombined to create stochastic versions of that storm. All variations will have similar large-scale characteristics but may differ in the exact location and strength of wind maxima, depending on the amount of perturbation applied to each principle component.

Stochastic Storm Track Generation

Storm track perturbations account for storm drift and tendencies for storms to track northward or southward based on interactions of high- and low-pressure systems. These perturbations begin with a random perturbation at the origin followed by slight shifts of the track. Such perturbations are constrained so that storm tracks do not behave in physically unrealistic ways.

The final stochastic perturbations are combinations of the stochastic perturbations of each storm and the track perturbations. This results in a set of stochastic events that maintain similar characteristics to the parent seed storm, but with slight differences in the placement and magnitude of major wind features.

Storm Clustering

Storm clustering can be spatial, temporal, or intensity based. Spatial clustering is the occurrence of storms in close spatial proximity. Temporal clustering is the arrival of a series of storms in close temporal succession. Intensity clustering is the occurrence of storms of similar intensity, either spatially or temporally. Clustering is caused by a variety of atmospheric mechanisms, including the persistence of large-scale weather patterns over the domain. To properly treat insurance terms like "hours clauses" and to correctly model aggregate extratropical cyclone losses over a season, all types of clustering must be treated explicitly in the stochastic model. It is important to note, however, that AIR's stochastic events are defined meteorologically and do not employ any "hours" clauses.

The AIR model accomplishes storm clustering with conditional time-block bootstrapping. The model uses a resampling technique to select blocks of time from the historical record to serve as the basis for the stochastic catalog. This "bootstrapping" helps to preserve the implicit correlations of the spatial, temporal, and intensity clustering so that some of the signals discernible in the historical record are replicated in the stochastic model. The model uses a six-day time block for the resampling interval to preserve near-term clustering behavior and to account for a wide range of variability in the stochastic catalog. These blocks are selected from a 30-day window centered on the time period being simulated to preserve seasonality and selected conditionally on a North Atlantic Oscillation phase and frequency pattern assigned to each block. The evolution of these phases over the stochastic year follows a similar pattern to that of a randomly chosen historical year. In this way, the model preserves all three forms of clustering, explicitly accounts for the effects of the NAO, and preserves the distribution of high and low frequency time periods.

The temporal range of the catalog is year-round, and the following table shows the monthly distribution of simulated storms in the stochastic catalog.

Table 11: Modeled Frequency of Europe Windstorms by Month[1]

Calendar Month	Frequency (%)
January	36.2
February	17.0
March	6.7
April	0.9
May	<0.1
June	0.0
July	0.0
August	<0.1
September	0.2
October	4.8
November	10.2
December	23.8
TOTAL	**100.0**

(1) Source: AIR.

Local Wind Intensity Calculation

In the AIR Europe Windstorm Model, loss estimates are determined for property damage caused by wind. The AIR Europe Windstorm Model explicitly incorporates the effects of surface friction, land-use variation, and the flux of surface heat, moisture, and momentum of the storm's energy. AIR researchers use a two-pronged approach to ensure accurate modeling of wind speed without sacrificing performance: (i) physical downscaling accounts for the physical properties of the surface that affect wind speed (terrain, elevation, and built environment), and (ii) statistical bias correction corrects any potential model bias in the NWP output. In the AIR Europe Windstorm Model, the measure of wind intensity is the speed of 3-second wind gusts at 10 meters above the ground.

Physical Downscaling. The physical downscaling process starts with wind speeds derived from NWP, at a height above ground-level (about 150 to 180 meters). The process downscales the grid to 1km and includes the effects of elevation and terrain roughness on wind speed at a high-resolution, even though the native model output is at a 16km resolution. This is enabled by incorporating high-resolution (140m xs 140m) Coordinated Information on the Environment ("**CORINE**") land use and land cover ("**LULC**") data into the process.

Land use/Land cover. The AIR Europe Windstorm Model uses CORINE LULC data to incorporate the detailed effects of the land on wind flow, such as the transition from a rural to an urban environment or from sea to land. This includes ridging, which is the acceleration of wind speed produced by mountain ridges, typically beginning halfway up the slope; sheltering, which is the reduction of wind speed on the lee side of a mountain slope; and channeling, which is the acceleration of wind speed on entering a narrowing channel and deceleration of wind speed on entering a widening channel.

Gustiness Effects on Surface Winds. Modeling wind speeds must be adjusted for the effects of the local land surface. The downscaling approach used in the model follows the wind engineering literature for adjusting winds from one reference height to another and for adjusting between two different wind speed average times. The time averaging of the modeled wind speeds is adjusted to a 3-sec gust using the curve and assuming the wind speeds from the NWP model are approximately a 10-minute average wind measurement. While this assumption cannot necessarily be derived directly from model parameters, it should be noted that with a grid spacing of approximately 16km and a typical modeled wind speed of around 20-35 m/s, it takes approximately 500-800 seconds for a wind parcel to traverse one model grid cell. This lends itself well to a 600-second (10 minute) averaging assumption.

Statistical Bias Correction. To correct for the bias inherent to the NWP model, the AIR Europe Windstorm Model employs a statistical bias correction called quantile mapping to adjust the entire distribution of modeled wind speeds closer to the observed distribution.

Vulnerability

The vulnerability module of the AIR Europe Windstorm Model estimates damage caused by wind to residential, commercial, and industrial assets as well as automobiles, agricultural buildings, greenhouses (building and non-plant contents), small industrial assets, large industrial facilities, manufactured homes, forestry (trees), and marine assets (including inland transit/warehouse, cargo, hull, wind turbines, and builder's risk). Further, the model supports distinct combinations of building construction classes and occupancy types. Building height is also accounted for.

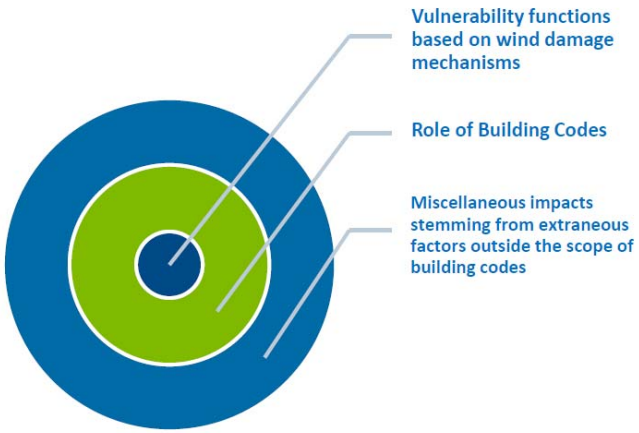
Throughout Europe, the types of construction materials used for buildings vary widely depending on the country, and often vary within different regions of one country. The construction class of a particular building also depends on its occupancy class, since the occupancy plays a major role in determining the materials used in construction, as well as the level of engineering that is required for the necessary resistance to wind damage. Socioeconomic conditions also vary between countries in Europe and play a significant role in determining the types of building materials used for different occupancy types.

Masonry is by far the most common construction material throughout Europe and is the primary construction type used for residential and commercial buildings. This varies regionally however; wood frame residential buildings are often found in areas where wood is readily available, such as Norway and Sweden. Steel and concrete construction is more commonly used for engineered buildings such as high-rise office buildings, large residential complexes, hospitals, and other structures that are also built to strict engineering codes. Light metal may be used for low rise, industrial or commercial buildings such as hangars and warehouses and do not provide much resistance to wind.

Damage Functions

When creating damage function for buildings, wind loads, occupancy and construction type, regional and temporal variations as well as building heights are considered and accounted for. It is important to understand the location and age factors that influence vulnerability, specifically, spatial and temporal variation at the location level. The following figure shows a breakdown of the factors that impact building vulnerability and the development of damage functions, the core factor being vulnerability functions based on wind damage mechanisms.

Figure 26: Breakdown of factors impacting building vulnerability at a given location and time[1]



(1) Source: AIR.

A wind damage function is a relationship between the intensity of the wind and mean damage ratio. The mean damage ratio is the ratio of the repair cost of the building or contents to its replacement value. Separate damage functions exist for buildings with different characteristics (construction class, occupancy type and height), as well as for different coverages, that is, building, contents and time element. The damage function for a given building type and coverage provide estimates of the mean, or expected, damage ratio; however, due to the uncertainty in the underlying hazard intensity as well as the uncertainty in a building's resistance based on factors such as workmanship, construction practices, aging, etc., the damage ratio is not, given the hazard intensity, a deterministic quantity. Accordingly, the AIR Europe Windstorm Model uses a probability distribution to fully characterize the damage ratio with the mean provided from the underlying damage function. This distribution changes by building characteristics as well as hazard intensity.

Damage to Buildings. Construction type is a primary feature that affects a building's vulnerability. Masonry buildings perform well when exposed to heavy wind loads and windborne debris, especially in comparison with wood frame buildings. However, for residential buildings, reinforced concrete generally performs better than masonry structures when exposed to heavy wind loads. Reinforced concrete also generally performs better than steel when used for commercial structures, while light metal is the least wind resistant of any of these materials. For any structure, the ability to withstand high winds is also affected greatly by other parameters such as building height, occupancy type, and design attributes such as roof slope, garages, wall sidings, doors, and windows. High-rise buildings tend to be built under more stringent engineering standards and adhere to stricter code guidelines.. For the same height and construction type, apartment buildings generally sustain more damage as compared to commercial buildings due to structural characteristics such as balconies, soffits and over-hangs.

Damage to Contents. In the AIR Europe Windstorm Model, contents damageability is modeled as a function of building damage and occupancy class. Higher building damage gives rise to higher content damage. The type of occupancy can be used to determine what contents are most likely to be present, and their potential vulnerability. Office buildings for instance usually have a large amount of electronic equipment and can incur heavy losses if window breakage allows rain to enter the interior.

Business Interruption. Similar to contents damage, the AIR Europe Windstorm Model estimates business interruption losses based on building damage and occupancy class. Downtime, or the number of days before a business can return to full operation, is the primary parameter for estimating business interruption (BI) losses. The methodology used for estimating BI losses utilizes an event tree approach, incorporating the latest research and findings from an extensive analysis of claims data. For each step, a probability is assigned to two possible outcomes: continued operations or cessation of operations at the location. If operations cannot continue at the location, a probability is assigned to whether the company will relocate. These probabilities vary by occupancy.

ANNEX B
AIR EXPERT RISK ANALYSIS RESULTS

This "AIR Expert Risk Analysis Results" is subject to the disclaimers and "Additional Risk Factors" section set forth in this Offering Circular, regarding the Principal At-Risk Variable Rate Notes issued by Atlas Capital UK 2019 PLC and the "**Risk Factors**" section set forth in the Offering Circular. For the purposes of this "AIR Expert Risk Analysis Results" section, all capitalized terms used herein shall have the same meaning as set forth in this Offering Circular, unless otherwise specified in this "AIR Expert Risk Analysis Results" section.

AIR loss files consist of estimates of the Named Storm State PCS Losses, Named Storm County PCS Losses, Earthquake State PCS Losses, Earthquake County PCS Losses, Earthquake Province PCS Losses, and Europe Windstorm Loss Amounts resulting from the events simulated within the AIR Models. To create the loss file for a given peril, the AIR Models estimate the impact of the peril by applying event characteristics to industry-wide exposure data (as opposed to data for a specific insurer). AIR's Industry Exposure Database in the United States, Puerto Rico, U.S. Virgin Islands, and Canada for residential, commercial, and auto lines in the respective Named Storm Covered Area and Earthquake Covered Area, and the Augmented PERILS Industry Exposure Database for residential, commercial, industrial, and agricultural lines in the Europe Windstorm Initial Covered Area, and thousands of years of potential event activity are simulated. For the analysis reflected herein, 10,000 such years were simulated. For each year of the simulation, a set of events is generated and an estimated Named Storm State PCS Loss, Named Storm County PCS Loss, Earthquake State PCS Loss, Earthquake County PCS Loss, Earthquake Province PCS Loss, and Europe Windstorm Loss Amounts as applicable, are modeled. These analyses produce loss files which consist of the modeled losses for each type of exposure, for each simulated event, and for each year of simulated events.

AIR's Industry Exposure Database

AIR has developed databases of estimated numbers, types and values of properties for various lines of business in all regions of the world for which it develops models. These databases have been constructed from a wide range of data sources and reflect the estimated total replacement cost of property exposures. They are used to estimate total insurable property losses. Industry insurable loss estimates are based on assumptions as to the level of deductibles and how many of the total properties are insurable. Assumptions specifically regarding insurance policies and trends are based on insurance industry sources, including clients, industry organizations, and government studies. Industry insured loss estimates are derived from the insurable industry exposures through the application of area and peril- specific insurance take-up rates. The property value databases are developed, maintained, and enhanced through an ongoing process of data collection, synthesis, and analysis.

The AIR Industry Exposure Database in the United States, Puerto Rico, U.S. Virgin Islands, and Canada is modeled as a proxy for the PCS lines of personal (made up of residential and mobile home exposure), commercial (made up of commercial and industrial exposure), and automobiles. Much of the information required to develop the estimated values is acquired each year from governmental statistical agencies and private firms that specialize in this type of information. For example, primary data sources in the United States include the U.S. Census Bureau, Nielsen, ISO, the Insurance Information Institute, and Xactware. Primary data sources in Canada include Geografx, Verisk- 360Value®, Colliers International, NASA, and the North American Land Change Monitoring System. The AIR Industry Exposure Database in the U.S., Puerto Rico, and U.S. Virgin Islands is as of 31 December 2017, and in Canada is as of 31 December 2015.

Many data sources supply updated information on a regular basis. While such data sources contain extensive information, AIR has developed internal procedures that select and transform collected data into the required exposure data estimates. These procedures include combining the data from multiple sources and performing appropriate allocations or aggregations of data. AIR, however, makes no representation as to the accuracy of these data sources and has not conducted any independent investigation as to their accuracy. These sources sometimes change their methodologies and these changes may materially impact the resulting estimates.

Tables 1 through 6 summarize the industry insured exposure in AIR's Initial Industry Exposure Database for the United States, Puerto Rico, U.S. Virgin Islands, and Canada, by AIR's definition of line of business, in the respective Named Storm Covered Area and Earthquake Covered Area. Note that values are rounded.

Table 1: Summary of the AIR Initial Industry Exposure Database for the United States, Puerto Rico, and U.S. Virgin Islands in the Named Storm Covered Area with Respect to Named Storm as of 31 December 2017 for the United States, Puerto Rico, and U.S. Virgin Islands (USD billions)

State[1]	Residential	Mobile Home	Commercial	Automobile	Total[2]
Alabama	533	20	503	49	1,105
Arkansas	292	11	305	30	638
Connecticut	604	<1	497	27	1,129
Delaware	131	3	120	9	263
District of Columbia	90	<1	269	3	363
Florida	2,296	59	1,989	179	4,523
Georgia	1,258	26	1,066	101	2,450
Hawaii	192	<1	184	11	387
Illinois	1,705	9	1,842	111	3,667
Indiana	947	10	712	67	1,735
Kentucky	451	16	434	47	947
Louisiana	412	18	504	45	979
Maine	192	4	148	13	358
Maryland	852	3	719	51	1,625
Massachusetts	1,018	2	903	54	1,977
Mississippi	258	13	275	29	575
Missouri	781	12	736	68	1,597
New Hampshire	202	2	153	13	371
New Jersey	1,364	2	1,236	67	2,669
New York	2,646	13	3,331	119	6,109
North Carolina	1,139	40	956	112	2,246
Ohio	1,672	14	1,392	104	3,181
Oklahoma	435	11	388	43	877
Pennsylvania	1,919	15	1,554	111	3,600
Puerto Rico	71	0	191	19	282
Rhode Island	135	<1	123	9	267
South Carolina	504	25	461	48	1,038
Tennessee	770	18	699	62	1,549
Texas	2,977	54	2,789	280	6,100
Vermont	106	1	79	7	193
Virgin Islands, U.S.	3	0	7	<1	11
Virginia	1,230	12	978	84	2,304
West Virginia	195	9	158	18	379
Total[2]	**27,378**	**423**	**25,700**	**1,992**	**55,494**

(1) States listed are those in the Named Storm Covered Area in the model domain of the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models.
(2) Totals may not add due to rounding.

Table 2: Summary of the AIR Initial Industry Exposure Database for the United States in the Earthquake Covered Area with Respect to Earthquake Shake as of 31 December 2017 for the United States, Puerto Rico, and U.S. Virgin Islands (USD billions)

State	Residential	Mobile Home	Commercial	Automobile	Total[1]
Alabama	51	2	47	49	148
Alaska	21	<1	14	7	42
Arizona	42	2	25	58	126
Arkansas	96	4	102	30	232
California	898	10	1,123	340	2,370
Colorado	29	<1	19	58	107
Connecticut	20	<1	17	27	64
Delaware	5	<1	4	9	18
Dist of Columbia	2	<1	6	3	11
Florida	76	3	57	179	315
Georgia	50	1	43	101	195
Hawaii	19	<1	18	11	49
Idaho	10	<1	7	22	40
Illinois	304	4	279	111	698
Indiana	339	4	262	67	672
Iowa	38	<1	38	42	118
Kansas	61	<1	47	38	147
Kentucky	260	8	248	47	563
Louisiana	10	<1	12	45	68
Maine	8	<1	6	13	28
Maryland	23	<1	19	51	94

State	Residential	Mobile Home	Commercial	Automobile	Total[1]
Massachusetts	117	<1	126	54	297
Michigan	28	<1	20	89	137
Minnesota	12	<1	9	59	80
Mississippi	105	5	109	29	248
Missouri	467	7	438	68	979
Montana	7	<1	6	17	30
Nebraska	16	<1	15	26	57
Nevada	30	<1	27	27	86
New Hampshire	10	<1	7	13	31
New Jersey	15	<1	14	67	96
New Mexico	15	<1	13	23	52
New York	67	<1	159	119	345
North Carolina	35	1	29	112	177
North Dakota	4	<1	5	15	24
Ohio	217	2	185	104	508
Oklahoma	22	<1	19	43	85
Oregon	202	3	188	41	433
Pennsylvania	76	<1	62	111	251
Puerto Rico	71	0	191	19	282
Rhode Island	6	<1	5	9	20
South Carolina	95	4	87	48	234
South Dakota	6	<1	6	14	26
Tennessee	232	5	212	62	510
Texas	79	2	74	280	435
Utah	52	<1	41	29	122
Vermont	4	<1	3	7	15
Virgin Islands, U.S.	3	0	7	<1	11
Virginia	33	<1	27	84	145
Washington	265	3	193	76	537
West Virginia	9	<1	7	18	34
Wisconsin	21	<1	19	59	99
Wyoming	8	<1	6	9	23
Total[1]	**4,689**	**79**	**4,702**	**3,043**	**12,513**

(1) Totals may not add due to rounding.

Table 3: Summary of the AIR Initial Industry Exposure Database for the United States in the Earthquake Covered Area with Respect to Fire Following Earthquake as of 31 December 2017 (USD billions)

State	Residential	Mobile Home	Commercial	Automobile	Total[1]
Alabama	533	20	503	49	1,105
Arizona	870	21	551	58	1,500
Arkansas	292	11	305	30	638
California	5,320	36	3,967	340	9,662
Colorado	924	7	638	58	1,626
Connecticut	604	<1	497	27	1,129
Delaware	131	3	120	9	263
District of Columbia	90	<1	269	3	363
Florida	2,296	59	1,989	179	4,523
Georgia	1,258	26	1,066	101	2,450
Idaho	210	4	164	22	400
Illinois	1,705	9	1,842	111	3,667
Indiana	947	10	712	67	1,735
Iowa	400	4	388	42	834
Kansas	398	4	346	38	787
Kentucky	451	16	434	47	947
Louisiana	412	18	504	45	979
Maine	192	4	148	13	358
Maryland	852	3	719	51	1,625
Massachusetts	1,018	2	903	54	1,977
Michigan	1,451	17	1,065	89	2,621
Minnesota	811	6	672	59	1,548
Mississippi	258	13	275	29	575
Missouri	781	12	736	68	1,597
Montana	143	4	124	17	287
Nebraska	262	2	230	26	520
Nevada	371	5	339	27	742
New Hampshire	202	2	153	13	371
New Jersey	1,364	2	1,236	67	2,669
New Mexico	252	10	227	23	512
New York	2,646	13	3,331	119	6,109

State	Residential	Mobile Home	Commercial	Automobile	Total[1]
North Carolina	1,139	40	956	112	2,246
North Dakota	94	2	118	15	228
Ohio	1,672	14	1,392	104	3,181
Oklahoma	435	11	388	43	877
Oregon	496	10	461	41	1,007
Pennsylvania	1,919	15	1,554	111	3,600
Rhode Island	135	<1	123	9	267
South Carolina	504	25	461	48	1,038
South Dakota	103	2	105	14	225
Tennessee	770	18	699	62	1,549
Texas	2,977	54	2,789	280	6,100
Utah	350	3	266	29	648
Vermont	106	1	79	7	193
Virginia	1,230	12	978	84	2,304
Washington	1,049	14	765	76	1,905
West Virginia	195	9	158	18	379
Wisconsin	760	7	704	59	1,530
Wyoming	72	2	69	9	152
Total[1]	**41,447**	**583**	**36,516**	**3,005**	**81,550**

(1) Totals may not add due to rounding.

Table 4: Summary of the AIR Initial Industry Exposure Database for Canada in the Earthquake Covered Area with Respect to Earthquake Shake as of 31 December 2015 (USD billions)[1]

Province	Residential	Mobile Home	Commercial	Automobile	Total[2]
Alberta	7	<1	449	44	500
British Columbia	372	2	621	42	1,037
Manitoba	2	<1	72	11	84
New Brunswick	1	<1	52	7	60
Newfoundland	<1	<1	35	5	41
North West Territories	<1	<1	4	<1	5
Nova Scotia	1	<1	65	8	75
Nunavut	<1	<1	2	<1	2
Ontario	56	<1	1,269	112	1,437
Prince Edward Island	<1	<1	9	1	11
Quebec	32	<1	827	71	930
Saskatchewan	2	<1	101	13	115
Yukon	<1	<1	4	<1	4
Total[2]	**474**	**2**	**3,510**	**315**	**4,301**

(1) The Canada FX Conversion Factor presented in Table 7 was applied to local currency amounts to calculate the US dollar equivalent.
(2) Totals may not add due to rounding.

Table 5: Summary of the AIR Initial Industry Exposure Database for Canada in the Earthquake Covered Area with Respect to Fire Following Earthquake as of 31 December 2015 (USD billions)[1]

Province	Residential	Mobile Home	Commercial	Automobile	Total[2]
Alberta	676	5	898	44	1,622
British Columbia	757	5	730	42	1,534
Manitoba	164	1	179	11	355
New Brunswick	103	1	104	7	216
Newfoundland	78	<1	64	5	147
North West Territories	8	<1	9	<1	18
Nova Scotia	126	2	130	8	267
Nunavut	5	<1	4	<1	9
Ontario	1,857	1	2,115	112	4,086
Prince Edward Island	18	<1	19	1	39
Quebec	983	2	1,379	71	2,435
Saskatchewan	174	<1	201	13	389
Yukon	6	<1	7	<1	14
Total[2]	**4,957**	**19**	**5,841**	**315**	**11,131**

(1) The Canadian FX Conversion Factor presented in Table 7 was applied to local currency amounts to calculate the US dollar equivalent.

(2) Totals may not add due to rounding.

Modeling the PERILS Industry Exposure Database

PERILS publishes total sums insured data by building value, contents value, and business interruption value, for each CRESTA and line of business in the following countries: Austria; Belgium; Denmark (including Jutland, Sjælland, Fyn, Lolland, and Bornholm, and the Faroe Islands); mainland metropolitan France and Corsica (excluding Départements d'Outre Mer and Territoires d'Outre Mer); Germany; the Republic of Ireland; Luxembourg; The Netherlands (excluding Aruba and The Netherlands Antilles); Sweden; Switzerland; and the United Kingdom (Great Britain and Northern Ireland, excluding overseas dependencies but including the Isle of Man and Channel Islands); In Norway (excluding Jan Mayen and Svalbard) PERILS publishes total sums insured data by building value, contents value, and business interruption value, for each fylke (called "**counties**") and line of business. Fylke are referenced by ISO 3166-2 codes. The sums insured for Norway are allocated to each CRESTA and line of business. Please refer to www.cresta.org[2] for more information on CRESTA zones.

Table 6 summarizes the Initial Augmented PERILS Industry Exposure Database by each country of the Europe Windstorm Initial Covered Area.

Table 6: Summary of the Initial Augmented PERILS Industry Exposure Database in the Europe Windstorm Initial Covered Area as of 1 January 2018[(1)]
(EUR billions)

Country	Total[(2)]
Austria	2,504
Belgium	2,017
Denmark	1,697
France	12,503
Germany	15,457
Ireland	765
Luxembourg	195
The Netherlands	2,942
Norway	1,983
Sweden	2,356
Switzerland	3,512
United Kingdom	9,367
Total[(2)]	**55,297**

(1) The Europe FX Conversion Factors presented in Table 7 were applied to local currency amounts to calculate the EUR equivalent.
(2) Totals may not add due to rounding.

In order to perform a detailed modeling of the PERILS Industry Exposure Database, the total insured values within each CRESTA Zone and line of business must be attributed to the specific mix of construction, occupancy, and height characteristic of that CRESTA Zone and line of business. Accounting for the specifics of the building stock and local construction practices allows for a better simulation of the vulnerability of the exposure within each CRESTA Zone. Because CRESTA Zones can cover large geographical areas with an uneven geographical distribution of built-up areas and, within each built-up area, an uneven distribution of exposure between lines of business, the exposure must also be distributed geographically within each CRESTA Zone, in line with the distribution of exposure specific to each line of business. Both the building stock (construction, occupancy, height) and geographical distributions of the PERILS exposure within each CRESTA Zone and line of business are performed by mirroring such distributions within AIR's industry exposure databases in Europe. For some countries, the PERILS exposure is broken out into residential, commercial, industrial, and agriculture lines of business, whereas in other countries the exposure may be aggregated into only two or three lines of business.

Loss distributions developed based on modeling catastrophic events are highly dependent on the environment in which the exposure is located and the exposure's physical characteristics. To accurately assess the risk from catastrophic events, it is important to model the most detailed exposure available. To create the Augmented PERILS Industry Exposure Database necessary to perform detailed modeling, AIR disaggregated the PERILS Industry Exposure Database using AIR's proprietary database of industry insured exposure in Europe. The paragraphs that follow detail the disaggregation methodology. **It is**

2 The contents of this website are not incorporated by reference into this Offering Circular and should not be relied upon in connection with any decision to invest in the Notes.

important to note that the disaggregation methodology did not alter the total CRESTA Zone sums insured originally provided by PERILS.

In some instances, PERILS grouped multiple lines of business together following the prevailing granularity of exposure information available from the data-providing insurance companies. In the case of Austria, United Kingdom, Ireland, and Luxembourg, the PERILS "Commercial" line of business grouped together commercial, industrial, and agriculture exposure. In Denmark, the "Commercial" line of business includes both commercial and industrial exposure. In Germany, the "Commercial" line of business includes both commercial and agriculture exposure. In these instances of grouped exposure, AIR used its industry exposure database in each respective CRESTA to distribute the exposure to each individual lines of business. For instance, if PERILS states that the combined "Commercial/Industrial/Agriculture" exposure in a given CRESTA has a value of €10 billion, and AIR's industry insured exposure database shows that the exposure is split 50% commercial, 30% industrial, and 20% agriculture in that CRESTA, €5 billion of exposure will be assigned to commercial, €3 billion to industrial, and €2 billion to agriculture.

Once the PERILS exposure was distributed to each of the residential, commercial, industrial, and agriculture lines of business in each CRESTA, AIR used its industry insured exposure database to distribute the exposure in each CRESTA and line of business by its relative distribution of construction/occupancy/height combination. For instance, if PERILS states that commercial buildings in a given CRESTA have a value of €5 billion and AIR's industry insured exposure database shows that commercial insured values in that CRESTA are split evenly between reinforced concrete and steel construction, then the PERILS data is split evenly, €2.5 billion in both reinforced concrete and steel for the purpose of modeling. This is then further split to reflect the mix of occupancies associated with each construction, and further by height within each construction/occupancy combination.

Once the PERILS exposure has been distributed to each construction/occupancy/height mix within each CRESTA and line of business, AIR used its industry insured exposure database to distribute the exposure to 1 km x 1 km gridpoints within each CRESTA, to respect the relative geographical distribution of each construction/occupancy/height mix within a CRESTA. For instance, if a given CRESTA has an area of heavy concentration of residential exposure (such as a city) and another area with heavy concentration of industrial exposure (such as an industrial park), this relative distribution will be respected, allowing for the exposure to be realistically distributed within each CRESTA. The AIR Europe Windstorm Model supports disaggregation of CRESTA-level exposure to 1 km x 1 km gridpoints and do not support the disaggregation of fylke exposure to 1 km x 1 km gridpoints. In Norway, allocating exposure from fylke to CRESTA enables disaggregation of exposure to 1 km x 1 km gridpoints.

There are two situations when PERILS provides sums insured data where AIR's database of industry insured exposure does not have exposure data. The first situation is residential additional living expense exposure. To determine the breakdown of residential business interruption exposure by construction/occupancy/height combination, AIR applied a breakdown based on the sum of buildings value and contents value. Second, PERILS provides agricultural data in three urban CRESTA Zones where AIR does not: Paris (France), 'S-Graven (The Netherlands), and Leeuwarde (The Netherlands). In each case, the countrywide agricultural breakdown by construction was used to disaggregate the PERILS value.

For Europe, PERILS data also includes a range of possible deductible percentage, as well as a "best estimate" deductible percentage of average total sums insured by CRESTA and line of business. AIR modeled the "best estimate" deductible as a site percentage, which covers all coverage types, including buildings value, contents value, and business interruption value.

For Europe Windstorm, AIR modeled losses to the Augmented PERILS Industry Exposure Database in excess of €200 million in all simulated lines of business are used as a proxy for potential Europe Windstorm Loss Amounts. See "*Risk Factors – Risks Related to the AIR Expert Risk Analysis Reports*."

Modeling Europe Windstorm Storm Surge

The Europe Windstorm Loss Amount is inclusive of all losses resulting from wind and ensuing perils, following the coverage of the underlying property policies. This can include losses caused by storm surge. AIR currently models storm surge losses in the United Kingdom only. AIR uses a hydrodynamic model to simulate fluid flow in time and space. The AIR Europe Windstorm model incorporates detailed offshore bathymetry (water depth) and coastal topography (land elevation) to estimate flood volumes over land.

The AIR United Kingdom storm surge model accepts CRESTA-level insured exposure values by line of business. Modeled loss estimates for United Kingdom storm surge were generated using CRESTA and line of business-specific insured exposure provided by PERILS, and deductible assumptions present in the AIR industry database for the United Kingdom.

The AIR United Kingdom storm surge model is distinct from the AIR Europe Windstorm model. In order to estimate the combined wind and surge damage from individual Europe Windstorm Events, AIR identified Europe Windstorms whose track and associated wind field were capable of forcing water against the eastern coast of the United Kingdom and causing storm surge damage (such events may or may not also cause substantial wind damage on land). AIR then identified United Kingdom storm surge events occurring within the same time period.

Storm surge losses were not modeled for historical storms.

Data Used For Analysis

The initial exposures modeled for this analysis consisted of personal (including mobile homes), commercial, and automobile values from the AIR Initial Industry Exposure Database for the United States, Puerto Rico, U.S. Virgin Islands, and Canada, as of 31 December 2017 for the United States, Puerto Rico, and U.S. Virgin Islands, and as of 31 December 2015 for Canada in the respective Named Storm Covered Area and Earthquake Covered Area, and residential, commercial (including industrial), and agriculture values from the Initial Augmented PERILS Industry Exposure Database in the Europe Windstorm Initial Covered Area as of 1 January 2018 (based on the PERILS Industry Exposure Database released by PERILS on 1 April 2018). After modeling the Initial Industry Exposure Database, the Initial Named Storm Payout Factors, the Initial Earthquake Payout Factors, and the Initial Europe Windstorm Payout Factors were then applied.

Table 7: Canada FX Conversion Factor and Europe FX Conversion Factors

Currency	Exchange Rate versus USD	Currency	Exchange Rate versus USD
CAD	0.75079	GBP	1.31706
CHF	1.00042	NOK	0.11553
DKK	0.15191	SEK	0.10700
EUR	1.13350		

Results of AIR's Modeling

The information presented below represents AIR's modeling results based on the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models, the AIR Earthquake Models and the AIR Europe Windstorm Model and input data regarding the Initial Industry Exposure Database as described above.

The Escrow Models generate large samples (10,000 annual scenarios of potential events), which provide an estimate of the underlying probability distribution of estimated losses. The results of AIR's modeling are subject to limitations and qualifications set forth under "Limitations of AIR Analysis Included Herein."

Table 8 provides the estimated annual loss to the Notes (Initial One Year Expected Loss), with corresponding probabilities of having a non-zero loss level (Initial One Year Attachment Probability) and having a full principal payout amount (Initial one year exhaustion probability) for the Notes.

Table 8: Modeled Annual Statistics for the Notes[1]

Initial One Year Attachment Probability	6.25%
Initial One Year Expected Loss	5.46%
Initial one year exhaustion probability	4.76%

[1] The initial modeled statistics are generated using AIR's standard hurricane catalog.

Tables 9 and 10 provide a summary of the loss analysis by region for the Notes, The statistics shown in Tables 9 and 10 were calculated independently for North America and Europe, and therefore attachment probabilities, expected losses and exhaustion points do not add up to the corresponding figures from Table 8 due to the combined limit used in Table 8's risk metric calculations.

Table 9: Modeled Annual Statistics for North America[1]

Initial North America Attachment Level	1,060 index points
Initial North America Exhaustion Level	1,310 index points
Modeled one year attachment probability	5.82%
Modeled one year expected loss	5.12%
Modeled one year exhaustion probability	4.45%

[1] The modeled statistics are generated using AIR's standard hurricane catalog.

Table 10: Modeled Annual Statistics for Europe

Initial European Attachment Level	1,200 index points
Initial European Exhaustion Level	1,420 index points
Modeled one year attachment probability	0.46%
Modeled one year expected loss	0.36%
Modeled one year exhaustion probability	0.31%

Table 11 details a sample of the annual aggregate loss distribution for the Notes. The losses presented in the table represent estimates for aggregate modeled Named Storm Index Values and Earthquake Index Values, as well as the associated modeled annual exceedance probability, the corresponding modeled Loss Period Index Value and modeled Principal Reduction to the Notes. The AIR Data File includes additional information relating to the annual aggregate loss distribution for the Notes. See Annex C and "AIR Data File Information".

Table 11: Aggregate Modeled Results for Illustrative Probabilistic Simulation Years for North America

	Modeled Annual Exceedance Probability[1] (%)	Peril[2]	Landfall(s) / Epicenter[3]	Saffir- Simpson Category / Moment Magnitude (Mw)	Modeled Total Industry Insured Loss in the Covered Area ($ billions)[4]	Modeled Event Index Value (index points)[5]	Modeled Loss Period Index Value (index points)[5]	Modeled Cumulative Principal Reduction of the Notes(%)
	4.22	EQ	Shelby, TN	6.1	56.7	1,354.2	1,354.2	100.0
	4.32	NS	PR, DE[6]	0, 2	22.2	300.2	300.2	0.0
		EQ	Ventura, CA	7.8	27.1	1,040.0	1,340.2	100.0
Initial North America Exhaustion Level.....	4.45	NS	FL	5	151.3	1,310.1	1,310.1	100.0
	4.46	NS	USVI, PR, FL[6]	0, 0, 3	43.6	279.7	279.7	0.0
		NS	NY	3	47.0	1,027.5	1,307.1	98.9
	4.57	NS	FL	4	174.6	1,281.4	1,281.4	88.6
	4.75	NS	USVI, PR[6]	3, 3	5.7	80.9	80.9	0.0
		NS	MS	3	7.7	30.6	111.5	0.0
		NS	LA	3	21.5	275.3	386.7	0.0
		NS	USVI, PR, FL[6]	0, 0, 2	7.1	20.2	406.9	0.0
		NS	TX	3	5.5	46.5	453.4	0.0
		EQ	Pierce, WA	7.0	31.4	801.6	1,255.0	78.0
	5.06	NS	HI	3	53.6	1,178.9	1,178.9	47.6
		NS	TX	2	4.1	13.2	1,192.1	52.8
	5.38	NS	USVI, PR, TX[6]	0, 0, 2	3.5	4.6	4.6	0.0
		NS	FL, NC[6]	5, 4	136.8	1,128.6	1,133.2	29.3
	5.73	NS	FL, FL[6]	5, 4	82.0	778.6	778.6	0.0
		EQ	Snohomish, WA	7.2	13.1	304.0	1,082.6	9.0
Initial North America Attachment Level.....	5.82	NS	PR, FL, NC, NY[6]	4, 5, 4, 2	76.2	1,060.7	1,060.7	0.3
	5.83	EQ	San Bernardino, CA	6.9	9.2	435.8	435.8	0.0
		EQ	Santa Clara, CA	6.9	18.0	623.4	1,059.2	0.0
	5.90	NS	NC, NY[6]	2, 1	9.3	127.3	127.3	0.0
		NS	RI	3	6.2	94.9	222.2	0.0
		NS	LA	4	39.7	531.0	753.2	0.0
		NS	HI	3	15.1	299.5	1,052.7	0.0

(1) The modeled annual exceedance probability is an estimate of the likelihood that the level of losses associated with a given event or aggregation of events will be exceeded in any given simulated year.
(2) Peril abbreviations: NS = Named Storm, EQ = Earthquake.

(3) "Landfall(s)" pertains to the perils of Named Storm. "Epicenter" pertains to the perils of Earthquake.
(4) Modeled total industry insured loss is provided prior to the application of the Initial Named Storm Payout Factors, Initial Earthquake Payout Factors, and the applicable Initial Index Event Deductible.
(5) Modeled Event Index Value is after application of the applicable Initial Index Event Deductible and after the application of the Initial Named Storm Payout Factors and Initial Earthquake Payout Factors. Modeled Loss Period Index Value is the sum of estimated losses for all events in any given simulated year.
(6) Multiple landfalling event.

Table 12 details a sample of the annual aggregate loss distribution for the Notes. The losses presented in the table represent estimates for aggregate modeled Europe Windstorm Index Value, as well as the associated modeled annual exceedance probability, the corresponding modeled Loss Period Index Value and modeled Principal Reduction to the Notes. The AIR Data File includes additional information relating to the annual aggregate loss distribution for the Notes. See Annex C and "AIR Data File Information".

Table 12: Aggregate Modeled Results for Illustrative Probabilistic Simulation Years for Europe

	Modeled Annual Exceedance Probability[1] (%)	Affected Countries[2]	Modeled Total Industry Insured Loss in the Covered Area (EUR billions)[3]	Modeled Event Index Value (index points)[4]	Modeled Loss Period Index Value (index points)[4]	Modeled Cumulative Principal Reduction of the Notes (%)
	0.25%	UK, NL, DE, BE, FR	4.1	117.6	117.6	0.0
		DE, BE, FR, LU, NL	24.7	1,045.6	1,163.3	0.0
		FR, IE, UK	6.1	432.6	1,595.8	100.0
	0.31%	DE, UK, NL, PL, FI	34.8	1,274.5	1,274.5	33.9
		BE, UK, NL, FR, DE	3.9	113.5	1,388.0	85.5
Initial European Exhaustion Level		FR	1.6	86.5	1,474.6	100.0
	0.32%	DK, DE, SE, NO, NL	30.5	1,364.5	1,364.5	74.8
	0.35%	UK, FR, BE, NO, CH	5.2	153.3	153.3	0.0
		FR, CH, DE, AT, SK	6.4	312.9	466.2	0.0
		UK, IE, NL, DK, FR	26.3	847.7	1,313.9	51.8
		CH, DE, FR, UK, AT	1.0	3.3	1,317.1	53.3
	0.39%	DK, NO, SE, DE, UK	1.6	40.7	40.7	0.0
		DE, AT, BE, FR, NL	28.4	1,208.7	1,249.3	22.4
	0.43%	NO, UK, FR, NL, BE	30.4	1,152.4	1,152.4	0.0
		FR, DE, BE, FI, CH	2.6	64.5	1,216.9	7.7
	0.46%	FR, DE, LU, BE, NL	12.2	319.7	319.7	0.0
		NL, DE, BE, UK, FR	21.6	796.5	1,116.2	0.0
Initial European Attachment Level.....		FR, DE, CH, PL, LU	2.2	86.2	1,202.4	1.1
	0.47%	UK, FR, NO, BE, CH	2.0	38.1	38.1	0.0
		DK, SE, UK, DE, NL	3.8	173.2	211.3	0.0
		DE, NL, BE, FR, UK	28.2	987.5	1,198.8	0.0
	0.52%	DK, NO, DE, PL, SE	6.6	267.4	267.4	0.0
		UK, FR, IE, BE, NL	24.2	910.0	1,177.4	0.0

(1) The modeled annual exceedance probability is an estimate of the likelihood that the level of losses associated with a given event or aggregation of events will be exceeded in any given simulated year.
(2) "Affected Countries" pertains to the peril of Europe Windstorm. Country abbreviations: AT = Austria, BE = Belgium, CH = Switzerland, DE = Germany, DK = Denmark, FI = Finland, FR = France, IE = Ireland, LU = Luxemborg, NL = The Netherlands, NO = Norway, PL = Poland, SE = Sweden, UK = United Kingdom. "Affected Countries" with largest impact based on AIR modeled industry insured losses.

(3) Modeled total industry insured loss is provided prior to the application of the Initial Europe Windstorm Payout Factors and applicable Initial Index Event Deductible.

(4) Modeled Event Index Value is after application of the applicable Initial Index Event Deductible and after the application of the Initial Europe Windstorm Payout Factors. Modeled Loss Period Index Value is the sum of estimated losses for all events in any given simulated year.

Contribution Analysis

Table 13 provides a detailed breakdown of the modeled one year expected loss for North America by peril, region (country, state or province) and line of business to the Notes from modeled Named Storm Events and Earthquake Events resulting in losses to the Notes arising in the 10,000 annual scenarios of potential Named Storm and Earthquake activity that were simulated. All contribution exhibits are based on a full calendar year.

Table 13: Modeled Contribution to Modeled One Year Expected Loss for North America by Peril, Region and Line of Business

Peril/State	Personal	Commercial	Auto	Total[1]
Named Storm	**35.2%**	**28.3%**	**2.4%**	**65.9%**
Florida	11.5%	8.2%	1.1%	20.8%
Puerto Rico	1.4%	6.4%	0.2%	7.9%
Texas	4.6%	2.9%	0.3%	7.8%
Hawaii	3.6%	2.1%	<0.1%	5.8%
New York	2.6%	1.9%	0.2%	4.7%
New Jersey	1.8%	1.3%	<0.1%	3.2%
Louisiana	1.2%	1.4%	0.2%	2.7%
Massachusetts	1.5%	0.7%	<0.1%	2.2%
Connecticut	1.4%	0.7%	<0.1%	2.1%
South Carolina	1.3%	0.6%	<0.1%	2.0%
North Carolina	1.3%	0.5%	<0.1%	1.9%
Rhode Island	0.5%	0.3%	<0.1%	0.8%
Georgia	0.4%	0.2%	<0.1%	0.6%
Virginia	0.4%	0.2%	<0.1%	0.6%
Alabama	0.3%	0.2%	<0.1%	0.6%
Other[2]	1.3%	0.8%	<0.1%	2.2%
Earthquake	**10.8%**	**22.7%**	**0.6%**	**34.1%**
California	6.0%	14.6%	0.5%	21.1%
British Columbia	1.5%	3.9%	<0.1%	5.4%
Washington	0.8%	1.1%	<0.1%	2.0%
Oregon	0.4%	0.7%	<0.1%	1.1%
Tennessee	0.5%	0.6%	<0.1%	1.1%
South Carolina	0.5%	0.5%	<0.1%	1.0%
Puerto Rico	0.2%	0.4%	<0.1%	0.6%
Missouri	0.2%	0.3%	<0.1%	0.5%
Arkansas	0.2%	0.2%	<0.1%	0.4%
Illinois	<0.1%	0.1%	<0.1%	0.2%
Kentucky	<0.1%	<0.1%	<0.1%	0.2%
Mississippi	<0.1%	<0.1%	<0.1%	0.2%
Utah	<0.1%	<0.1%	<0.1%	0.1%
Indiana	<0.1%	<0.1%	<0.1%	0.1%
Alabama	<0.1%	<0.1%	<0.1%	<0.1%
Other[2]	<0.1%	<0.1%	<0.1%	<0.1%
Total[1]	**46.0%**	**51.0%**	**3.0%**	**100.0%**

(1) Totals may not add due to rounding.
(2) Other includes the states, provinces, and countries in the applicable covered areas not explicitly mentioned here.

Table 14 provides a detailed breakdown of the contribution to modeled one year expected loss for Europe by country and line of business to the Notes from modeled Covered Events resulting in losses to the Notes arising in the 10,000 annual scenarios of potential Europe Windstorm activity that were simulated. All contribution exhibits are based on a full one year.

Table 14: Modeled Contribution to Modeled One Year Expected Loss for Europe by Country and Line of Business[1]

Country	Personal	Commercial	Auto	Total[2]
United Kingdom	12.6%	22.6%	0.0%	35.2%
France	13.5%	8.7%	0.0%	22.2%
Germany	8.7%	4.5%	0.0%	13.2%
Belgium	8.2%	2.9%	0.0%	11.1%
Netherlands	4.7%	2.2%	0.0%	6.8%
Denmark	1.9%	1.9%	0.0%	3.7%
Luxembourg	2.5%	0.7%	0.0%	3.2%
Austria	1.7%	1.3%	0.0%	3.0%
Switzerland	0.4%	0.2%	0.0%	0.6%
Norway	0.4%	0.1%	0.0%	0.5%

Country	Personal	Commercial	Auto	Total[2]
Ireland	<0.1%	0.1%	0.0%	0.2%
Sweden	0.1%	<0.1%	0.0%	0.2%
Total[2]	**54.7%**	**45.3%**	**0.0%**	**100.0%**

(1) The "Modeling the PERILS Industry Exposure Database" section contains information regarding lines of business in the Europe Windstorm Initial Covered Area. For the Europe Windstorm Initial Covered Area, Commercial includes commercial, industrial and agricultural losses as applicable.
(2) Totals may not add due to rounding.

Table 15 provides a detailed breakdown of the contribution to modeled one year expected loss to the Notes by Saffir-Simpson category arising in the 10,000 annual scenarios of potential Named Storm activity that were simulated.

Table 15: Modeled Contribution to the Named Storm Modeled One Year Expected Loss by Saffir-Simpson Category

Saffir-Simpson Category[1]	Named Storm Modeled One Year Expected Loss
Category 1	1.6%
Category 2	3.7%
Category 3	22.3%
Category 4	50.5%
Category 5	21.9%
Total[2]	**100.0%**

(1) Saffir-Simpson category is determined by the event's maximum Saffir-Simpson category at landfall over all landfalls in the Named Storm Covered Area. In case of events that do not make landfall in the Named Storm Covered Area, Saffir-Simpson category is determined by the Saffir-Simpson category at nearest bypass to the Named Storm Covered Area or the Saffir-Simpson category at the closest landfall to the Named Storm Covered Area.
(2) Totals may not add due to rounding.

Table 16 provides a detailed breakdown of the contribution to modeled one year expected loss to the Notes by earthquake moment magnitude from modeled Earthquake Events arising in the 10,000 annual scenarios of potential Earthquake activity that were simulated.

Table 16: Modeled Contribution to the Earthquake Modeled One Year Expected Loss by Earthquake Moment Magnitude (M_w)

Earthquake Moment Magnitude (M_w)	Earthquake Modeled One Year Expected Loss
$M_w < 6.0$	2.0%
$6.0 \leq M_w < 6.5$	5.7%
$6.5 \leq M_w < 7.0$	19.1%
$7.0 \leq M_w < 7.5$	27.5%
$7.5 \leq M_w < 8.0$	29.3%
$M_w \geq 8.0$	16.4%
Total[1]	**100.0%**

(1) Totals may not add due to rounding.

Table 17 provides information regarding which sequential Covered Event with a modeled Event Index Value in a simulated stochastic year contributes to the modeled one year expected loss for North America. Events are arranged as they occur during the simulated year. For example, the row with a value of "1st Event" in the "Number of Events" column indicates the modeled contribution to the modeled one year expected loss from the first simulated Covered Event with a modeled Event Index Value.

Table 17: Temporal Modeled Contribution to Modeled One Year Expected Loss for North America

Number of Events	Contribution to Modeled One Year Expected Loss
1st Event	59.9%
2nd Event	27.8%

Number of Events	Contribution to Modeled One Year Expected Loss
3rd Event	9.0%
4th and Subsequent Events	3.3%
Total[1]	**100.0%**

[1] Totals may not add due to rounding.

Table 18 provides information regarding which sequential Covered Event with a modeled Event Index Value in a simulated stochastic year contributes to the modeled one year expected loss for Europe. Events are arranged as they occur during the simulated year. For example, the row with a value of "1st Event" in the "Number of Events" column indicates the modeled contribution to the modeled one year expected loss from the first simulated Covered Event with a modeled Event Index Value.

Table 18: Temporal Modeled Contribution to Modeled One Year Expected Loss for Europe

Number of Events	Contribution to Modeled One Year Expected Loss
1st Event	48.0%
2nd Event	41.8%
3rd Event	9.4%
4th and Subsequent Events	0.8%
Total[1]	**100.0%**

[1] Totals may not add due to rounding.

Historical Analysis

The modeled loss figures shown in Table 19 represent the events in AIR's historical Named Storm and Earthquake catalogs that, based on AIR modeling results, would have resulted in the greatest amount of losses had the listed events impacted the relevant Initial Industry Exposure Database and their impact within the Notes.

The historical loss information set forth is either modeled on historical information or estimated information based, in part, on historical information, and is presented solely for illustrative purposes. It is not a prediction of the possibility of loss or the range of possible losses that may occur in the future. Larger losses are possible. For example, Named Storms and Earthquakes of similar or lesser force that affect more populated areas, or areas with higher value dwellings, could produce materially different losses than those shown below. No assurance can be given that Named Storms or Earthquakes will not occur during the Risk Period of sufficient force in the applicable Covered Area to result in a modeled Event Index Value in excess of the applicable Initial North America Attachment Level for such the Notes. See "Risk Factors" in the Offering Circular.

Table 19: Aggregate Modeled Results for the Top 10 Historical Years for the Notes

Year	Peril[1]	Event Name	Saffir-Simpson Category / Moment Magnitude (M_w)	Landfall / Epicenter[2]	Modeled Total Industry Insured Loss in the Covered Area ($ billions)[3]	Modeled Event Index Value (index points)[4]	Modeled Loss Period Index Value (index points)[4]	Modeled Cumulative Principal Reduction of the Notes (%)
1700	EQ	Cascadia Subduction Zone	9.0	OR	66.1	3,711.3	3,711.3	100.0
1906	EQ	San Francisco	7.8	CA	75.8	2,612.0	2,612.0	100.0
1886	EQ	Charleston	7.3	SC	30.9	1,701.6	1,701.57	100.0
1811	EQ	New Madrid - South Seg[5]	7.3	MO	17.2	350.0	350.0	0.0
1812	EQ	Wrightwood	7.5	CA	12.6	587.3	937.3	0.0
1812	EQ	New Madrid - North Seg[5]	7.1	MO	10.3	139.4	1,076.7	6.7
1812	EQ	New Madrid - Middle Seg[5]	7.5	MO	21.8	398.6	1,475.3	100.0
1938	NS	Great New England	3	NY	51.6	1,256.8	1,256.8	78.7
1926	NS	Great Miami	4, 2	FL, AL[6]	132.2	1,233.8	1,233.8	69.5
1838	EQ	San Andreas Fault	7.4	CA	32.5	1,116.8	1,116.8	22.7
1928	NS	Okeechobee	4, 2	FL, SC[6]	99.1	1,067.0	1,067.0	2.8
2005	NS	Katrina	1, 3	FL, LA[6]	65.3	781.6	781.6	0.0
2005	NS	Rita	3	LA	10.1	105.2	886.8	0.0
2005	NS	Wilma	3	FL	17.3	93.3	980.1	0.0
1900	NS	Galveston	4	TX	51.9	704.0	704.0	0.0

(1) Peril abbreviations: NS = Named Storm, EQ = Earthquake.
(2) "Landfall" pertains to the perils of Named Storm. "Epicenter" pertains to the perils of Earthquake.
(3) Modeled total industry insured loss is provided prior to the application of the Initial Named Payout Factors, the Initial Earthquake Payout Factors and applicable Initial Index Event Deductible.
(4) Modeled Event Index Value is after application of the applicable Initial Index Event Deductible and after the application of Initial Named Storm Payout Factors and the Initial Earthquake Payout Factors. Modeled Loss Period Index Value is the sum of estimated losses for all Named Storm and Earthquake Events in any given simulated year.
(5) The three New Madrid events have been aggregated and applied against the transaction structures as if they occurred in the same risk period. This has been done for illustrative purposes only.
(6) Multiple landfalling event.

The modeled loss figures shown in Table 20 represent the events in AIR's historical Europe Windstorm catalog that, based on AIR modeling results, would have resulted in the greatest amount of losses had the listed events impacted the relevant Initial Industry Exposure Database and their impact within the Notes.

The historical loss information set forth is either modeled on historical information or estimated information based, in part, on historical information, and is presented solely for illustrative purposes. It is not a prediction of the possibility of loss or the range of possible losses that may occur in the future. Larger losses are possible. For example, Europe Windstorms of similar or lesser force that affect more populated areas, or areas with higher value dwellings, could produce materially different losses than those shown below. No assurance can be given that Europe Windstorms will not occur during the Risk Period of sufficient force in the applicable Covered Area to result in a Modeled Event Index Value in excess of the applicable Initial Attachment Level for such the Notes. See "Risk Factors" in the Offering Circular.

Table 20: Aggregate Modeled Results for The Top 10 Historical Years for the Notes

Year	Event Name	Affected Countries[1]	Modeled Total Industry Insured Loss in the Covered Area (EUR billions)[2]	Modeled Event Index Value (index points)[3]	Modeled Loss Period Index Value (index points)[3]	Modeled Cumulative Principal Reduction of the Notes (%)
1990	Daria	UK, NL, BE, DE, FR	9.6	296.1	296.1	0.0
1990	Herta	FR, DE, BE, NL, LU	1.5	36.4	332.4	0.0
1990	Vivian	UK, DE, NL, BE, FR	4.6	122.2	454.7	0.0
1990	Wiebke	DE, FR, UK, BE, AT	2.0	37.9	492.6	0.0
1999	Anatol	DK, DE, UK, SE, NL	3.3	99.9	99.9	0.0
1999	Lothar	FR, DE, CH, AT, UK	8.8	267.5	367.4	0.0
1999	Martin	FR, CH, DE, AT, UK	2.2	96.2	463.6	0.0
1987	87J	UK, FR, NO, NL, BE	6.6	198.8	198.8	0.0
1976	Capella	DE, NL, UK, BE, FR	5.2	145.1	145.1	0.0
2007	Kyrill	DE, UK, NL, AT, PL	3.7	100.0	100.0	0.0
2002	Jeanette	DE, UK, NL, FR, BE	1.8	29.1	29.1	0.0
2009	Klaus	FR, DE, CH, BE, NL	1.1	23.0	23.0	0.0
2005	Erwin	SE, DK, UK, NO, DE	1.5	21.2	21.2	0.0
2008	Emma	DE, UK, NL, AT, FR	1.3	12.8	12.8	0.0
2013	Christian	DE, DK, NL, FR, GB	1.1	6.4	6.4	0.0

(1) Country abbreviations: AT = Austria, BE = Belgium, CH = Switzerland, CZ = Czech Republic, DE = Germany, DK = Denmark, FR = France, LU = Luxemborg, NL = The Netherlands, NO = Norway, PL = Poland, SE = Sweden, UK = United Kingdom. "Affected Countries" with largest impact based on AIR modeled industry insured losses

(2) Modeled total industry insured loss is provided prior to the application of the Initial Europe Windstorm Payout Factors and applicable Initial Index Event Deductible.

(3) Modeled Event Index Value is after application of the applicable Initial Index Event Deductible and after the application of the Initial Europe Windstorm Payout Factors. Modeled Loss Period Index Value is the sum of estimated losses for all Europe Windstorm Events in any given simulated year.

Sensitivity Analysis on Hurricane Frequency

Catastrophe models combine the latest scientific and engineering knowledge with computer simulation technology to develop probability distributions of long-run potential losses. They are not forecasting tools.

Forecasting hurricane activity on a short term time horizon, such as a year or a few years ahead, is very difficult because of the many climatological factors that influence hurricane activity—and landfall activity in particular—in the North Atlantic. There are several important mechanisms within the earth's environment that are reported to affect hurricane activity. These mechanisms are correlated with a variety of climate signals, which are measurements of the natural feedback systems of the earth in its effort to maintain equilibrium. Climate signals are typically presented as a measurement of anomalies.

For example, the energy source of the hurricane "engine" is heat and moisture from the ocean's surface. The warmer the ocean, the more heat energy is available to tropical storms. Scientists have observed that sea surface temperatures (SSTs) in the North Atlantic undergo fluctuations above and below their long run average values in phases that can last multiple decades. Their cause is the subject of considerable scientific debate.

Other climate signals that have an impact on hurricane activity include:

El Niño Southern Oscillation (ENSO), which measures sea surface temperature anomalies in the Pacific Ocean off the coast of Peru. These SSTs alternate over an approximate three- to eight-year cycle with an opposite cold phase known as "La Niña." Certain researchers have concluded that the presence of El Niño has a mitigating effect on the frequency of hurricane activity in the Atlantic and the opposite effect in the Pacific.

North Atlantic Oscillation (NAO)**,** a pressure pattern between the high pressure system near the Azores and the low pressure system near Iceland. Scientists have observed that the large-scale general circulation associated with the NAO steers North Atlantic tropical cyclones in a characteristic pattern to the west and eventually to the north. Informally known as the "Bermuda High," when it is in a more southwesterly position, hurricanes are more likely to make landfall than when it is further north and east, off the northern African Coast. The position and strength of the Bermuda High changes many times within a single hurricane season.

Quasi-Biennial Oscillation (QBO) is a signal tracking the direction of the equatorial winds in the stratosphere. One theory hypothesizes that when these winds blow from west to east, they have a positive impact on hurricane formation. The QBO has an approximate two-year cycle.

In addition to the large scale climate influences noted above, secondary factors can also play a role, such as particles from dust storms over the Sahara Desert that are transported over the Atlantic Ocean, blocking sunlight and cooling the ocean below. Dust from the Saharan windstorms can also inhibit the formation of clouds and precipitation in tropical cyclones.

ENSO has a period that is too short to make it very useful for estimating hurricane activity in upcoming seasons, while the periodicity of the NAO is too short and too irregular to be useful. The QBO has a regular period, but has the weakest correlation with hurricane activity in the Atlantic. The influence of Saharan dust storms cannot be forecast more than weeks ahead. For these reasons, of the signals identified above, many scientific researchers have focused on SSTs as the best predictor of hurricane risk.

Since 1995, SSTs in the North Atlantic have been in a warm phase characterized by elevated SSTs and above- normal hurricane activity. However, quantifying the time horizon and magnitude of this elevated risk and its impact on landfall frequency and insured losses is too uncertain to incorporate into the standard AIR U.S. Hurricane Model, which represents the long-term view of the probabilities of losses of different sizes. Therefore, AIR has performed a sensitivity analysis to provide a measure of uncertainty arising from the possible impact of SST anomalies on hurricane activity.

While recognizing the challenges of forecasting hurricane activity over a several year horizon based on limited data characterized by significant uncertainty, AIR has reviewed current scientific research and conducted extensive internal analyses. Based on this research, AIR has developed an alternative catalog of simulated hurricanes (Warm Sea Surface Temperature Conditioned Catalog) that incorporates the impact of elevated SSTs on hurricane activity. AIR has used this catalog to perform the sensitivity case analysis (Sensitivity Case).

Statistical analyses were performed to assess the impact of warm SST anomalies in the North Atlantic on hurricane landfall frequency and intensity. Although this analysis shows that the correlation between SST anomalies and landfall hurricane frequency is relatively weak, a ratio of mean frequency of hurricanes under warm SST anomalies relative to mean frequency of hurricanes in all years is defined. The ratio has been developed by hurricane intensity and for four regions along the U.S. coastline. The ratios are guided by statistical assessment of the impact of SSTs and a physical understanding of the varying regional impact warm SST anomalies have along the coastline.

The ratios developed by AIR were used to develop a revised landfall frequency distribution by coastal segment, which ultimately results in a warm sea surface temperature conditioned stochastic catalog. The Warm Sea Surface Temperature Conditioned Catalog assesses hurricane risk based on years in which SSTs were above the long term, or climatological, mean.

The tables below present sensitivity analysis results. They are provided as one view of the uncertainty in a warm sea surface temperature environment. However, the interaction of other shorter-term climate fluctuations, such as those listed above (ENSO, QBO and NAO), can affect the likelihood that hurricanes will make landfall in any given year. This sensitivity analysis is limited by a number of other additional factors, including but not limited to:

- Uncertainty in forecasting SST conditions.
- Fewer years of data from periods of warm SST conditions compared to more than 100 years of data used in creating the standard catalog.
- Random events that influence climate (for example, volcanic eruptions) and that cannot be predicted or accounted for.
- Warm SST conditions are not considered in the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models' Hawaii component. The warm SST conditions are only considered in the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models' East and Gulf coasts component and the AIR U.S. and Caribbean Tropical Cyclone and Hurricane Models' Caribbean component.

Tables 21 and 22 provide, for the Notes, the estimated annual expected loss (modeled one year expected loss), with corresponding annual probabilities of having a non-zero loss level (modeled one year attachment probability) and having a full principal payout amount (modeled one year exhaustion probability) for the base case and sensitivity case.

Table 21: Sensitivity Analysis - Annual Probabilities for the Notes

	Base Case[1]	Sensitivity Case[2]
Modeled one year attachment probability	6.25%	6.84%
Modeled one year expected loss	5.46%	5.96%
Modeled one year exhaustion probability	4.76%	5.13%

(1) Base case statistics are generated using AIR's standard hurricane catalog.
(2) Sensitivity case statistics are generated using AIR's Warm Sea Surface Temperature Conditioned Catalog.

Table 22: Sensitivity Analysis - Annual Probabilities for North America

	Base Case[1]	Sensitivity Case[2]
Modeled one year attachment probability	5.82%	6.41%
Modeled one year expected loss	5.12%	5.61%
Modeled one year exhaustion probability	4.45%	4.82%

(1) Base case statistics are generated using AIR's standard hurricane catalog.
(2) Sensitivity case statistics are generated using AIR's Warm Sea Surface Temperature Conditioned Catalog.

ANNEX C
AIR DATA FILE

DISCLAIMER:

The accompanying AIR Data File ("**AIR Data File**"), which forms part of this Circular contains information relating to the Notes. The information in the AIR Data File is a part of, and must be considered together with, the "AIR Expert Risk Analysis" and the "AIR Expert Risk Analysis Results" produced by AIR and attached as Annexes A and B, respectively, to this Circular. Accordingly, you should review the information in the AIR Data File together with this Circular. All of the information contained in the AIR Data File is subject to the same limitations and qualifications, including the disclaimers and risk factors, as any information set forth in this Circular. You should read this Circular in its entirety before reading the AIR Data File. To the extent there is any discrepancy between the information in the AIR Data File and this Circular, the information in this Circular shall control.

The AIR Data File sets forth (i) the modeled Loss Period Index Value exceedance probability curves, for both the base case and the sensitivity case, provided by AIR ranging from 80% of the Initial Attachment Level to 120% of the Initial Exhaustion Level (collectively, the "**AIR Data File Information**") and (ii) the Initial Named Storm Payout Factors, Initial Earthquake Payout Factors, and the Initial Europe Windstorm Payout Factors. Accordingly, in no event should the AIR Data File Information be relied on in making an investment decision.

Investors are advised that the AIR Data File Information is provided for illustrative purposes only, and you should make your own determination and calculations before making an investment decision. In particular, you should not rely on the AIR Data File Information as an indication of the likelihood of a Principal Reduction following the occurrence of one or more Covered Events or for any reason in connection with any decision to purchase or sell any security, including the Notes.

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The AIR Data File sets forth (i) the modeled Loss Period Index Value exceedance probability curves, for both the base case and the sensitivity case, provided by AIR ranging from 80% of the Initial Attachment Level to 120% of the Initial Exhaustion Level (collectively, the "**AIR Data File Information**") and (ii) the Initial Named Storm Payout Factors, Initial Earthquake Payout Factors, and the Initial Europe Windstorm Payout Factors. Accordingly, in no event should the AIR Data File Information be relied on in making an investment decision.

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State	County	Initial Named Storm Payout Factors
Alabama	Autauga	2.5634%
Alabama	Baldwin	1.2579%
Alabama	Barbour	0.8545%
Alabama	Bibb	0.8545%
Alabama	Blount	0.8545%
Alabama	Bullock	0.8545%
Alabama	Butler	2.5634%
Alabama	Calhoun	0.8545%
Alabama	Chambers	2.5634%
Alabama	Cherokee	0.8545%
Alabama	Chilton	0.8545%
Alabama	Choctaw	2.5634%
Alabama	Clarke	2.5634%
Alabama	Clay	0.8545%
Alabama	Cleburne	0.8545%
Alabama	Coffee	0.9255%
Alabama	Colbert	2.5634%
Alabama	Conecuh	2.5634%
Alabama	Coosa	2.5634%
Alabama	Covington	2.5634%
Alabama	Crenshaw	2.5634%
Alabama	Cullman	0.8545%
Alabama	Dale	0.8545%
Alabama	Dallas	0.8545%
Alabama	DeKalb	0.8545%
Alabama	Elmore	0.8545%
Alabama	Escambia	2.5634%
Alabama	Etowah	0.8545%
Alabama	Fayette	2.5634%
Alabama	Franklin	2.5634%
Alabama	Geneva	0.8545%
Alabama	Greene	2.5634%
Alabama	Hale	1.5445%
Alabama	Henry	0.8545%
Alabama	Houston	2.5634%
Alabama	Jackson	0.8545%
Alabama	Jefferson	2.5539%
Alabama	Lamar	2.5634%
Alabama	Lauderdale	2.5634%
Alabama	Lawrence	2.5634%
Alabama	Lee	0.8545%
Alabama	Limestone	2.5634%
Alabama	Lowndes	2.5634%
Alabama	Macon	0.8545%
Alabama	Madison	2.5634%
Alabama	Marengo	2.5634%
Alabama	Marion	2.5634%
Alabama	Marshall	0.8545%
Alabama	Mobile	1.6972%
Alabama	Monroe	2.5634%
Alabama	Montgomery	1.6748%
Alabama	Morgan	2.5634%
Alabama	Perry	0.8545%
Alabama	Pickens	2.5634%
Alabama	Pike	0.8545%
Alabama	Randolph	2.1055%
Alabama	Russell	0.8545%
Alabama	Shelby	0.8545%
Alabama	St.Clair	0.8545%
Alabama	Sumter	2.5634%
Alabama	Talladega	2.5634%
Alabama	Tallapoosa	0.8545%
Alabama	Tuscaloosa	2.5634%
Alabama	Walker	2.5634%
Alabama	Washington	2.5634%
Alabama	Wilcox	2.5634%
Alabama	Winston	2.5634%
Connecticut	Fairfield	1.6063%
Connecticut	Hartford	4.8190%
Connecticut	Litchfield	4.8190%
Connecticut	Middlesex	1.6063%
Connecticut	NewHaven	2.3773%
Connecticut	NewLondon	4.8190%
Connecticut	Tolland	2.4608%
Connecticut	Windham	3.4209%
Dist of Columbia	Dist of Columbia	0.3705%

(1) Each county in these States is subject to identical Initial Named Storm Payout Factors within each State

Florida	Alachua	1.1929%
Florida	Baker	1.1929%
Florida	Bay	1.1533%
Florida	Bradford	1.1929%
Florida	Brevard	0.8850%
Florida	Broward	0.7793%
Florida	Calhoun	1.1929%
Florida	Charlotte	0.4509%
Florida	Citrus	1.1929%
Florida	Clay	1.1929%
Florida	Collier	0.9512%
Florida	Columbia	1.1929%
Florida	Desoto	1.1929%
Florida	Dixie	1.1929%
Florida	Duval	1.1929%
Florida	Escambia	1.1929%
Florida	Flagler	1.1929%
Florida	Franklin	0.3976%
Florida	Gadsden	1.1929%
Florida	Gilchrist	1.1929%
Florida	Glades	1.1929%
Florida	Gulf	0.3976%
Florida	Hamilton	1.1929%
Florida	Hardee	1.1929%
Florida	Hendry	0.3976%
Florida	Hernando	1.1929%
Florida	Highlands	0.3976%
Florida	Hillsborough	1.1929%
Florida	Holmes	1.1929%
Florida	IndianRiver	0.4423%
Florida	Jackson	1.1929%
Florida	Jefferson	1.1929%
Florida	Lafayette	1.1929%
Florida	Lake	0.3976%
Florida	Lee	1.0009%
Florida	Leon	1.1929%
Florida	Levy	1.1929%
Florida	Liberty	1.1929%
Florida	Madison	1.1929%
Florida	Manatee	0.3976%
Florida	Marion	1.1929%
Florida	Martin	0.5022%
Florida	Miami-dade	1.0042%
Florida	Monroe	0.7612%
Florida	Nassau	1.1929%
Florida	Okaloosa	1.1929%
Florida	Okeechobee	0.3976%
Florida	Orange	1.1929%
Florida	Osceola	1.1929%
Florida	PalmBeach	0.6883%
Florida	Pasco	0.5705%
Florida	Pinellas	1.0038%
Florida	Polk	0.8070%
Florida	Putnam	1.1929%
Florida	SantaRosa	0.4808%
Florida	Sarasota	0.8017%
Florida	Seminole	1.1054%
Florida	St.Johns	1.1929%
Florida	St.Lucie	1.1929%
Florida	Sumter	0.9518%
Florida	Suwannee	1.1929%
Florida	Taylor	1.1929%
Florida	Union	1.1929%
Florida	Volusia	0.5844%
Florida	Wakulla	0.3976%
Florida	Walton	0.9702%
Florida	Washington	1.1929%
Georgia	Appling	2.5592%
Georgia	Atkinson	2.5592%
Georgia	Bacon	2.5592%
Georgia	Baker	1.4082%
Georgia	Baldwin	0.8531%
Georgia	Banks	0.8531%
Georgia	Barrow	0.8531%
Georgia	Bartow	1.6721%
Georgia	BenHill	2.5592%
Georgia	Berrien	2.5592%
Georgia	Bibb	2.0123%
Georgia	Bleckley	0.8531%

Georgia	Brantley	2.5592%
Georgia	Brooks	1.1577%
Georgia	Bryan	2.5592%
Georgia	Bulloch	2.5592%
Georgia	Burke	2.5592%
Georgia	Butts	0.8531%
Georgia	Calhoun	2.5592%
Georgia	Camden	2.5592%
Georgia	Candler	2.5592%
Georgia	Carroll	0.8531%
Georgia	Catoosa	0.8531%
Georgia	Charlton	2.5592%
Georgia	Chatham	1.0710%
Georgia	Chattahoochee	2.5592%
Georgia	Chattooga	0.8531%
Georgia	Cherokee	0.8531%
Georgia	Clarke	2.5592%
Georgia	Clay	0.8531%
Georgia	Clayton	2.5592%
Georgia	Clinch	2.5592%
Georgia	Cobb	0.8531%
Georgia	Coffee	2.5592%
Georgia	Colquitt	0.8531%
Georgia	Columbia	1.4514%
Georgia	Cook	2.5592%
Georgia	Coweta	2.5592%
Georgia	Crawford	0.8531%
Georgia	Crisp	0.8531%
Georgia	Dade	0.8531%
Georgia	Dawson	0.8531%
Georgia	Decatur	2.5592%
Georgia	Dekalb	0.8531%
Georgia	Dodge	0.8531%
Georgia	Dooly	0.8531%
Georgia	Dougherty	2.5592%
Georgia	Douglas	2.5592%
Georgia	Early	2.5592%
Georgia	Echols	2.5592%
Georgia	Effingham	2.5592%
Georgia	Elbert	0.8531%
Georgia	Emanuel	2.5592%
Georgia	Evans	2.5592%
Georgia	Fannin	0.8531%
Georgia	Fayette	2.5592%
Georgia	Floyd	0.8531%
Georgia	Forsyth	0.8531%
Georgia	Franklin	0.8531%
Georgia	Fulton	2.2022%
Georgia	Gilmer	0.8531%
Georgia	Glascock	0.8531%
Georgia	Glynn	0.8531%
Georgia	Gordon	0.8531%
Georgia	Grady	0.8531%
Georgia	Greene	0.8531%
Georgia	Gwinnett	0.8531%
Georgia	Habersham	2.5592%
Georgia	Hall	0.8531%
Georgia	Hancock	1.0894%
Georgia	Haralson	0.8531%
Georgia	Harris	2.5592%
Georgia	Hart	0.8531%
Georgia	Heard	2.5592%
Georgia	Henry	0.8531%
Georgia	Houston	2.5592%
Georgia	Irwin	2.5592%
Georgia	Jackson	0.8531%
Georgia	Jasper	0.8531%
Georgia	JeffDavis	2.5592%
Georgia	Jefferson	0.8531%
Georgia	Jenkins	2.0457%
Georgia	Johnson	2.5592%
Georgia	Jones	0.8531%
Georgia	Lamar	0.8531%
Georgia	Lanier	2.5592%
Georgia	Laurens	0.8531%
Georgia	Lee	0.8531%
Georgia	Liberty	2.5592%
Georgia	Lincoln	0.8531%
Georgia	Long	2.5592%

Georgia	Lowndes	2.5592%
Georgia	Lumpkin	0.8531%
Georgia	Macon	0.8531%
Georgia	Madison	0.8531%
Georgia	Marion	0.8753%
Georgia	Mcduffie	0.8531%
Georgia	Mcintosh	2.5592%
Georgia	Meriwether	0.8531%
Georgia	Miller	0.8531%
Georgia	Mitchell	2.5592%
Georgia	Monroe	2.5592%
Georgia	Montgomery	2.5592%
Georgia	Morgan	0.8531%
Georgia	Murray	0.8531%
Georgia	Muscogee	0.8531%
Georgia	Newton	0.8531%
Georgia	Oconee	0.8531%
Georgia	Oglethorpe	0.8531%
Georgia	Paulding	0.8531%
Georgia	Peach	0.8531%
Georgia	Pickens	0.8531%
Georgia	Pierce	2.5592%
Georgia	Pike	0.8531%
Georgia	Polk	0.8531%
Georgia	Pulaski	2.5592%
Georgia	Putnam	2.5592%
Georgia	Quitman	0.8531%
Georgia	Rabun	2.5592%
Georgia	Randolph	2.5592%
Georgia	Richmond	2.5592%
Georgia	Rockdale	1.4794%
Georgia	Schley	1.8559%
Georgia	Screven	2.5592%
Georgia	Seminole	0.8531%
Georgia	Spalding	0.8531%
Georgia	Stephens	2.5592%
Georgia	Stewart	2.5592%
Georgia	Sumter	0.8531%
Georgia	Talbot	0.8531%
Georgia	Taliaferro	1.8949%
Georgia	Tattnall	2.5592%
Georgia	Taylor	0.8531%
Georgia	Telfair	2.5592%
Georgia	Terrell	1.3239%
Georgia	Thomas	0.8531%
Georgia	Tift	0.8531%
Georgia	Toombs	2.5592%
Georgia	Towns	2.5592%
Georgia	Treutlen	2.5592%
Georgia	Troup	1.1063%
Georgia	Turner	2.5592%
Georgia	Twiggs	0.8531%
Georgia	Union	2.5592%
Georgia	Upson	0.8531%
Georgia	Walker	0.8531%
Georgia	Walton	0.8531%
Georgia	Ware	2.5592%
Georgia	Warren	2.5592%
Georgia	Washington	0.8531%
Georgia	Wayne	2.5592%
Georgia	Webster	1.6708%
Georgia	Wheeler	2.2517%
Georgia	White	2.2141%
Georgia	Whitfield	0.8531%
Georgia	Wilcox	2.5592%
Georgia	Wilkes	0.8531%
Georgia	Wilkinson	2.5592%
Georgia	Worth	0.8531%
Louisiana	Acadia	0.6619%
Louisiana	Allen	1.9856%
Louisiana	Ascension	1.9856%
Louisiana	Assumption	1.9856%
Louisiana	Avoyelles	0.6619%
Louisiana	Beauregard	0.6619%
Louisiana	Bienville	1.9856%
Louisiana	Bossier	1.4003%
Louisiana	Caddo	1.9856%
Louisiana	Calcasieu	1.5321%
Louisiana	Caldwell	1.9856%

Louisiana	Cameron	1.9856%
Louisiana	Catahoula	1.9856%
Louisiana	Claiborne	1.9856%
Louisiana	Concordia	1.9856%
Louisiana	DeSoto	1.9856%
Louisiana	EastBatonRouge	1.9856%
Louisiana	EastCarroll	1.9856%
Louisiana	EastFeliciana	1.9856%
Louisiana	Evangeline	1.9856%
Louisiana	Franklin	1.9856%
Louisiana	Grant	1.9856%
Louisiana	Iberia	0.6619%
Louisiana	Iberville	1.9856%
Louisiana	Jackson	1.9856%
Louisiana	Jefferson	1.2234%
Louisiana	JeffersonDavis	0.6619%
Louisiana	Lafayette	1.7943%
Louisiana	Lafourche	0.6619%
Louisiana	LaSalle	1.9856%
Louisiana	Lincoln	1.9856%
Louisiana	Livingston	0.6619%
Louisiana	Madison	1.9856%
Louisiana	Morehouse	1.9856%
Louisiana	Natchitoches	0.6619%
Louisiana	Orleans	1.8819%
Louisiana	Ouachita	1.9856%
Louisiana	Plaquemines	0.6619%
Louisiana	PointeCoupee	1.9856%
Louisiana	Rapides	1.9856%
Louisiana	RedRiver	1.9856%
Louisiana	Richland	1.9856%
Louisiana	Sabine	0.9879%
Louisiana	St.Bernard	1.9856%
Louisiana	St.Charles	1.9856%
Louisiana	St.Helena	1.9856%
Louisiana	St.James	1.9856%
Louisiana	St.JohnTheBaptist	1.9856%
Louisiana	St.Landry	0.6619%
Louisiana	St.Martin	1.9856%
Louisiana	St.Mary	0.6619%
Louisiana	St.Tammany	0.6619%
Louisiana	Tangipahoa	1.9856%
Louisiana	Tensas	1.9856%
Louisiana	Terrebonne	0.8170%
Louisiana	Union	1.9856%
Louisiana	Vermilion	0.6619%
Louisiana	Vernon	1.9856%
Louisiana	Washington	1.9856%
Louisiana	Webster	1.9856%
Louisiana	WestBatonRouge	1.9856%
Louisiana	WestCarroll	1.9856%
Louisiana	WestFeliciana	1.9856%
Louisiana	Winn	1.9856%
Maryland	Allegany	2.1025%
Maryland	AnneArundel	0.7008%
Maryland	Baltimore	1.5904%
Maryland	BaltimoreCity	2.1025%
Maryland	Calvert	0.7008%
Maryland	Caroline	0.7008%
Maryland	Carroll	0.7008%
Maryland	Cecil	0.7008%
Maryland	Charles	0.7008%
Maryland	Dorchester	0.7008%
Maryland	Frederick	0.7008%
Maryland	Garrett	0.7008%
Maryland	Harford	0.7008%
Maryland	Howard	2.1025%
Maryland	Kent	0.7008%
Maryland	Montgomery	1.0410%
Maryland	PrinceGeorges	2.1025%
Maryland	QueenAnnes	0.7008%
Maryland	Somerset	0.7008%
Maryland	St.Marys	0.7008%
Maryland	Talbot	0.7008%
Maryland	Washington	0.7008%
Maryland	Wicomico	2.1025%
Maryland	Worcester	2.1025%
Massachusetts	Barnstable	2.3260%
Massachusetts	Berkshire	2.9913%

Massachusetts	Bristol	0.9971%
Massachusetts	Dukes	0.9971%
Massachusetts	Essex	1.6957%
Massachusetts	Franklin	2.9913%
Massachusetts	Hampden	2.9913%
Massachusetts	Hampshire	2.9913%
Massachusetts	Middlesex	2.9913%
Massachusetts	Nantucket	0.9971%
Massachusetts	Norfolk	2.9913%
Massachusetts	Plymouth	2.9913%
Massachusetts	Suffolk	0.9971%
Massachusetts	Worcester	1.3384%
Mississippi	Adams	1.5564%
Mississippi	Alcorn	1.5564%
Mississippi	Amite	1.5564%
Mississippi	Attala	1.5564%
Mississippi	Benton	1.5564%
Mississippi	Bolivar	1.5564%
Mississippi	Calhoun	1.5564%
Mississippi	Carroll	1.5564%
Mississippi	Chickasaw	1.5564%
Mississippi	Choctaw	1.5564%
Mississippi	Claiborne	1.5564%
Mississippi	Clarke	1.5564%
Mississippi	Clay	1.5564%
Mississippi	Coahoma	1.5564%
Mississippi	Copiah	1.5564%
Mississippi	Covington	1.5564%
Mississippi	DeSoto	1.5564%
Mississippi	Forrest	1.5564%
Mississippi	Franklin	1.5564%
Mississippi	George	1.5564%
Mississippi	Greene	1.5564%
Mississippi	Grenada	1.5564%
Mississippi	Hancock	0.5188%
Mississippi	Harrison	0.6023%
Mississippi	Hinds	1.5564%
Mississippi	Holmes	1.5564%
Mississippi	Humphreys	1.5564%
Mississippi	Issaquena	1.5564%
Mississippi	Itawamba	1.5564%
Mississippi	Jackson	1.5564%
Mississippi	Jasper	1.5564%
Mississippi	Jefferson	1.5564%
Mississippi	JeffersonDavis	1.5564%
Mississippi	Jones	1.5564%
Mississippi	Kemper	1.5564%
Mississippi	Lafayette	1.5564%
Mississippi	Lamar	1.5564%
Mississippi	Lauderdale	1.5564%
Mississippi	Lawrence	1.5564%
Mississippi	Leake	1.5564%
Mississippi	Lee	1.5564%
Mississippi	Leflore	1.5564%
Mississippi	Lincoln	1.5564%
Mississippi	Lowndes	1.5564%
Mississippi	Madison	1.5564%
Mississippi	Marion	1.5564%
Mississippi	Marshall	1.5564%
Mississippi	Monroe	1.5564%
Mississippi	Montgomery	1.5564%
Mississippi	Neshoba	1.5564%
Mississippi	Newton	1.5564%
Mississippi	Noxubee	1.5564%
Mississippi	Oktibbeha	1.5564%
Mississippi	Panola	1.5564%
Mississippi	PearlRiver	1.5564%
Mississippi	Perry	1.5564%
Mississippi	Pike	1.5564%
Mississippi	Pontotoc	1.5564%
Mississippi	Prentiss	1.5564%
Mississippi	Quitman	1.5564%
Mississippi	Rankin	1.5564%
Mississippi	Scott	1.5564%
Mississippi	Sharkey	1.5564%
Mississippi	Simpson	1.5564%
Mississippi	Smith	1.5564%
Mississippi	Stone	1.5564%
Mississippi	Sunflower	1.5564%

Mississippi	Tallahatchie	1.5564%
Mississippi	Tate	1.5564%
Mississippi	Tippah	1.5564%
Mississippi	Tishomingo	1.5564%
Mississippi	Tunica	1.5564%
Mississippi	Union	1.5564%
Mississippi	Walthall	1.5564%
Mississippi	Warren	1.5564%
Mississippi	Washington	1.5564%
Mississippi	Wayne	1.5564%
Mississippi	Webster	1.5564%
Mississippi	Wilkinson	1.5564%
Mississippi	Winston	1.5564%
Mississippi	Yalobusha	1.5564%
Mississippi	Yazoo	1.5564%
New Jersey	Atlantic	1.8135%
New Jersey	Bergen	3.4627%
New Jersey	Burlington	2.0158%
New Jersey	Camden	2.6582%
New Jersey	CapeMay	2.4216%
New Jersey	Cumberland	1.1542%
New Jersey	Essex	3.4627%
New Jersey	Gloucester	1.1542%
New Jersey	Hudson	1.1542%
New Jersey	Hunterdon	1.1542%
New Jersey	Mercer	3.4627%
New Jersey	Middlesex	1.1542%
New Jersey	Monmouth	3.4627%
New Jersey	Morris	1.3897%
New Jersey	Ocean	1.5904%
New Jersey	Passaic	2.9223%
New Jersey	Salem	3.4627%
New Jersey	Somerset	3.4627%
New Jersey	Sussex	1.1542%
New Jersey	Union	3.4627%
New Jersey	Warren	3.3257%
New York	Albany	1.6758%
New York	Allegany	0.7945%
New York	Bronx	0.6807%
New York	Broome	0.6807%
New York	Cattaraugus	0.6807%
New York	Cayuga	0.6807%
New York	Chautauqua	0.6807%
New York	Chemung	0.6807%
New York	Chenango	0.6807%
New York	Clinton	0.6807%
New York	Columbia	0.6807%
New York	Cortland	0.6807%
New York	Delaware	0.6807%
New York	Dutchess	0.9323%
New York	Erie	0.6807%
New York	Essex	0.6807%
New York	Franklin	0.6807%
New York	Fulton	2.0421%
New York	Genesee	2.0421%
New York	Greene	2.0421%
New York	Hamilton	2.0421%
New York	Herkimer	2.0421%
New York	Jefferson	2.0421%
New York	Kings	2.0421%
New York	Lewis	2.0421%
New York	Livingston	0.6807%
New York	Madison	2.0421%
New York	Monroe	0.6807%
New York	Montgomery	2.0421%
New York	Nassau	1.5171%
New York	NewYork	2.0421%
New York	Niagara	0.6807%
New York	Oneida	2.0421%
New York	Onondaga	2.0421%
New York	Ontario	0.6807%
New York	Orange	0.6807%
New York	Orleans	1.0193%
New York	Oswego	2.0421%
New York	Otsego	0.6807%
New York	Putnam	2.0421%
New York	Queens	2.0421%
New York	Rensselaer	0.6807%
New York	Richmond	0.6807%

New York	Rockland	0.6807%
New York	Saratoga	0.6807%
New York	Schenectady	2.0421%
New York	Schoharie	2.0421%
New York	Schuyler	0.6807%
New York	Seneca	0.6807%
New York	St.Lawrence	0.6807%
New York	Steuben	0.6807%
New York	Suffolk	2.0439%
New York	Sullivan	0.6807%
New York	Tioga	0.6807%
New York	Tompkins	0.6807%
New York	Ulster	0.6807%
New York	Warren	0.6807%
New York	Washington	0.6807%
New York	Wayne	0.6807%
New York	Westchester	0.6807%
New York	Wyoming	2.0401%
New York	Yates	0.6807%
North Carolina	Alamance	0.7642%
North Carolina	Alexander	0.7642%
North Carolina	Alleghany	0.7642%
North Carolina	Anson	2.2927%
North Carolina	Ashe	0.7642%
North Carolina	Avery	0.7642%
North Carolina	Beaufort	0.7642%
North Carolina	Bertie	2.2927%
North Carolina	Bladen	2.2927%
North Carolina	Brunswick	2.2927%
North Carolina	Buncombe	0.7642%
North Carolina	Burke	0.7642%
North Carolina	Cabarrus	2.2927%
North Carolina	Caldwell	0.7642%
North Carolina	Camden	2.2927%
North Carolina	Carteret	0.9080%
North Carolina	Caswell	0.7642%
North Carolina	Catawba	2.2927%
North Carolina	Chatham	0.7642%
North Carolina	Cherokee	2.2927%
North Carolina	Chowan	2.2927%
North Carolina	Clay	2.2927%
North Carolina	Cleveland	0.7642%
North Carolina	Columbus	2.2927%
North Carolina	Craven	1.0630%
North Carolina	Cumberland	2.2927%
North Carolina	Currituck	0.7642%
North Carolina	Dare	1.6201%
North Carolina	Davidson	0.7642%
North Carolina	Davie	0.7642%
North Carolina	Duplin	2.2927%
North Carolina	Durham	2.2927%
North Carolina	Edgecombe	2.2927%
North Carolina	Forsyth	0.7642%
North Carolina	Franklin	0.7642%
North Carolina	Gaston	0.7642%
North Carolina	Gates	2.2927%
North Carolina	Graham	2.2927%
North Carolina	Granville	2.2927%
North Carolina	Greene	0.7642%
North Carolina	Guilford	1.1902%
North Carolina	Halifax	2.2927%
North Carolina	Harnett	0.7642%
North Carolina	Haywood	2.2927%
North Carolina	Henderson	0.7642%
North Carolina	Hertford	2.2927%
North Carolina	Hoke	0.7642%
North Carolina	Hyde	2.2927%
North Carolina	Iredell	0.7642%
North Carolina	Jackson	2.2927%
North Carolina	Johnston	1.0949%
North Carolina	Jones	2.2927%
North Carolina	Lee	2.2927%
North Carolina	Lenoir	1.5394%
North Carolina	Lincoln	0.7642%
North Carolina	Macon	2.2927%
North Carolina	Madison	1.2856%
North Carolina	Martin	2.2927%
North Carolina	McDowell	0.7642%
North Carolina	Mecklenburg	1.9820%

North Carolina	Mitchell	0.7642%
North Carolina	Montgomery	0.7642%
North Carolina	Moore	2.2927%
North Carolina	Nash	2.2927%
North Carolina	NewHanover	0.8057%
North Carolina	Northampton	2.2927%
North Carolina	Onslow	1.9185%
North Carolina	Orange	2.2927%
North Carolina	Pamlico	0.7642%
North Carolina	Pasquotank	2.2927%
North Carolina	Pender	0.7642%
North Carolina	Perquimans	2.2927%
North Carolina	Person	2.2927%
North Carolina	Pitt	2.2927%
North Carolina	Polk	1.4944%
North Carolina	Randolph	0.7642%
North Carolina	Richmond	2.2927%
North Carolina	Robeson	0.7642%
North Carolina	Rockingham	0.7642%
North Carolina	Rowan	0.7642%
North Carolina	Rutherford	0.7642%
North Carolina	Sampson	2.2927%
North Carolina	Scotland	2.2927%
North Carolina	Stanly	1.1083%
North Carolina	Stokes	2.2927%
North Carolina	Surry	0.7642%
North Carolina	Swain	2.2927%
North Carolina	Transylvania	2.2927%
North Carolina	Tyrrell	2.2927%
North Carolina	Union	0.7642%
North Carolina	Vance	0.7642%
North Carolina	Wake	2.2927%
North Carolina	Warren	0.7642%
North Carolina	Washington	2.2927%
North Carolina	Watauga	2.2927%
North Carolina	Wayne	0.7642%
North Carolina	Wilkes	0.7642%
North Carolina	Wilson	2.2927%
North Carolina	Yadkin	0.7642%
North Carolina	Yancey	0.7642%
South Carolina	Abbeville	2.1372%
South Carolina	Aiken	0.9327%
South Carolina	Allendale	2.7982%
South Carolina	Anderson	0.9327%
South Carolina	Bamberg	2.7982%
South Carolina	Barnwell	2.7982%
South Carolina	Beaufort	2.0946%
South Carolina	Berkeley	2.7982%
South Carolina	Calhoun	2.7982%
South Carolina	Charleston	1.4105%
South Carolina	Cherokee	0.9327%
South Carolina	Chester	2.2781%
South Carolina	Chesterfield	2.7982%
South Carolina	Clarendon	0.9327%
South Carolina	Colleton	2.7982%
South Carolina	Darlington	2.7982%
South Carolina	Dillon	2.7982%
South Carolina	Dorchester	2.7982%
South Carolina	Edgefield	0.9327%
South Carolina	Fairfield	2.7982%
South Carolina	Florence	2.7982%
South Carolina	Georgetown	1.3648%
South Carolina	Greenville	2.7982%
South Carolina	Greenwood	2.7982%
South Carolina	Hampton	2.7982%
South Carolina	Horry	1.6079%
South Carolina	Jasper	2.7982%
South Carolina	Kershaw	0.9327%
South Carolina	Lancaster	0.9980%
South Carolina	Laurens	2.7982%
South Carolina	Lee	2.7982%
South Carolina	Lexington	0.9327%
South Carolina	Marion	2.7982%
South Carolina	Marlboro	2.7982%
South Carolina	McCormick	0.9327%
South Carolina	Newberry	2.7982%
South Carolina	Oconee	2.7982%
South Carolina	Orangeburg	2.7982%
South Carolina	Pickens	2.7982%

South Carolina	Richland	2.7982%
South Carolina	Saluda	0.9327%
South Carolina	Spartanburg	2.7982%
South Carolina	Sumter	2.7982%
South Carolina	Union	2.7982%
South Carolina	Williamsburg	2.7982%
South Carolina	York	2.7982%
Texas	Anderson	2.0589%
Texas	Andrews	1.3136%
Texas	Angelina	2.0589%
Texas	Aransas	1.6835%
Texas	Archer	2.0589%
Texas	Armstrong	1.6835%
Texas	Atascosa	0.6863%
Texas	Austin	2.0589%
Texas	Bailey	1.7118%
Texas	Bandera	0.6863%
Texas	Bastrop	2.0589%
Texas	Baylor	0.6863%
Texas	Bee	0.9579%
Texas	Bell	2.0589%
Texas	Bexar	1.9585%
Texas	Blanco	2.0589%
Texas	Borden	1.6776%
Texas	Bosque	2.0589%
Texas	Bowie	0.9356%
Texas	Brazoria	2.0589%
Texas	Brazos	2.0589%
Texas	Brewster	1.1058%
Texas	Briscoe	1.6106%
Texas	Brooks	0.6863%
Texas	Brown	2.0589%
Texas	Burleson	2.0589%
Texas	Burnet	2.0589%
Texas	Caldwell	2.0589%
Texas	Calhoun	0.8785%
Texas	Callahan	0.6863%
Texas	Cameron	0.8420%
Texas	Camp	2.0589%
Texas	Carson	1.5761%
Texas	Cass	2.0589%
Texas	Castro	1.6004%
Texas	Chambers	0.6863%
Texas	Cherokee	2.0589%
Texas	Childress	0.6863%
Texas	Clay	2.0589%
Texas	Cochran	1.7032%
Texas	Coke	1.9454%
Texas	Coleman	2.0589%
Texas	Collin	2.0589%
Texas	Collingsworth	0.8268%
Texas	Colorado	2.0589%
Texas	Comal	2.0589%
Texas	Comanche	2.0589%
Texas	Concho	2.0589%
Texas	Cooke	0.6863%
Texas	Coryell	2.0589%
Texas	Cottle	1.4274%
Texas	Crane	2.0589%
Texas	Crockett	2.0589%
Texas	Crosby	1.3219%
Texas	Culberson	1.0064%
Texas	Dallam	1.7231%
Texas	Dallas	2.0589%
Texas	Dawson	1.0859%
Texas	DeafSmith	1.5994%
Texas	Delta	2.0589%
Texas	Denton	2.0374%
Texas	DeWitt	0.6863%
Texas	Dickens	1.4256%
Texas	Dimmit	2.0589%
Texas	Donley	1.4792%
Texas	Duval	2.0589%
Texas	Eastland	0.6863%
Texas	Ector	0.6863%
Texas	Edwards	2.0589%
Texas	Ellis	0.6863%
Texas	ElPaso	0.9633%
Texas	Erath	2.0589%

Texas	Falls	2.0589%
Texas	Fannin	0.6863%
Texas	Fayette	2.0589%
Texas	Fisher	1.4678%
Texas	Floyd	1.2541%
Texas	Foard	1.3908%
Texas	FortBend	1.2735%
Texas	Franklin	2.0589%
Texas	Freestone	2.0589%
Texas	Frio	2.0589%
Texas	Gaines	1.5583%
Texas	Galveston	1.3365%
Texas	Garza	1.3641%
Texas	Gillespie	2.0589%
Texas	Glasscock	1.9203%
Texas	Goliad	2.0589%
Texas	Gonzales	0.6863%
Texas	Gray	1.1922%
Texas	Grayson	0.6863%
Texas	Gregg	2.0589%
Texas	Grimes	2.0589%
Texas	Guadalupe	1.7706%
Texas	Hale	1.0005%
Texas	Hall	1.4652%
Texas	Hamilton	2.0589%
Texas	Hansford	1.7432%
Texas	Hardeman	1.0008%
Texas	Hardin	0.6863%
Texas	Harris	1.3699%
Texas	Harrison	2.0589%
Texas	Hartley	1.7225%
Texas	Haskell	0.6863%
Texas	Hays	2.0589%
Texas	Hemphill	1.6315%
Texas	Henderson	0.6863%
Texas	Hidalgo	1.7822%
Texas	Hill	2.0589%
Texas	Hockley	1.4076%
Texas	Hood	2.0589%
Texas	Hopkins	2.0589%
Texas	Houston	2.0589%
Texas	Howard	1.4296%
Texas	Hudspeth	1.3850%
Texas	Hunt	0.6863%
Texas	Hutchinson	1.6225%
Texas	Irion	2.0589%
Texas	Jack	2.0589%
Texas	Jackson	2.0589%
Texas	Jasper	2.0589%
Texas	JeffDavis	1.7241%
Texas	Jefferson	1.6831%
Texas	JimHogg	0.6863%
Texas	JimWells	2.0589%
Texas	Johnson	0.6863%
Texas	Jones	0.6863%
Texas	Karnes	0.6863%
Texas	Kaufman	0.6863%
Texas	Kendall	2.0589%
Texas	Kenedy	0.6863%
Texas	Kent	1.6694%
Texas	Kerr	2.0589%
Texas	Kimble	2.0589%
Texas	King	1.6640%
Texas	Kinney	2.0589%
Texas	Kleberg	0.6863%
Texas	Knox	0.6863%
Texas	Lamar	2.0589%
Texas	Lamb	1.5444%
Texas	Lampasas	2.0589%
Texas	LaSalle	2.0589%
Texas	Lavaca	2.0589%
Texas	Lee	2.0589%
Texas	Leon	2.0589%
Texas	Liberty	0.6863%
Texas	Limestone	2.0589%
Texas	Lipscomb	1.6803%
Texas	LiveOak	2.0589%
Texas	Llano	2.0589%
Texas	Loving	1.7200%

Texas	Lubbock	0.6863%
Texas	Lynn	1.3863%
Texas	Madison	2.0589%
Texas	Marion	2.0589%
Texas	Martin	1.8268%
Texas	Mason	2.0589%
Texas	Matagorda	2.0589%
Texas	Maverick	2.0589%
Texas	McCulloch	2.0589%
Texas	McLennan	2.0589%
Texas	McMullen	2.0589%
Texas	Medina	0.6863%
Texas	Menard	2.0589%
Texas	Midland	2.0589%
Texas	Milam	2.0589%
Texas	Mills	2.0589%
Texas	Mitchell	1.1965%
Texas	Montague	2.0589%
Texas	Montgomery	2.0589%
Texas	Moore	1.8085%
Texas	Morris	2.0589%
Texas	Motley	1.5724%
Texas	Nacogdoches	2.0589%
Texas	Navarro	0.6863%
Texas	Newton	2.0589%
Texas	Nolan	0.8150%
Texas	Nueces	1.6738%
Texas	Ochiltree	1.7194%
Texas	Oldham	1.5064%
Texas	Orange	0.6863%
Texas	PaloPinto	2.0589%
Texas	Panola	2.0589%
Texas	Parker	0.6863%
Texas	Parmer	1.6396%
Texas	Pecos	1.5389%
Texas	Polk	1.0062%
Texas	Potter	1.4289%
Texas	Presidio	1.6941%
Texas	Rains	2.0589%
Texas	Randall	0.9947%
Texas	Reagan	2.0589%
Texas	Real	2.0589%
Texas	RedRiver	2.0589%
Texas	Reeves	1.7404%
Texas	Refugio	2.0589%
Texas	Roberts	1.7009%
Texas	Robertson	2.0589%
Texas	Rockwall	1.1410%
Texas	Runnels	2.0589%
Texas	Rusk	2.0589%
Texas	Sabine	0.6863%
Texas	SanAugustine	2.0589%
Texas	SanJacinto	0.6863%
Texas	SanPatricio	2.3073%
Texas	SanSaba	2.0589%
Texas	Schleicher	2.0589%
Texas	Scurry	0.8682%
Texas	Shackelford	1.0843%
Texas	Shelby	2.0589%
Texas	Sherman	1.7312%
Texas	Smith	2.0589%
Texas	Somervell	2.0589%
Texas	Starr	1.7466%
Texas	Stephens	0.6863%
Texas	Sterling	2.0589%
Texas	Stonewall	1.5463%
Texas	Sutton	2.0589%
Texas	Swisher	1.6380%
Texas	Tarrant	2.0589%
Texas	Taylor	0.6863%
Texas	Terrell	1.5785%
Texas	Terry	1.6549%
Texas	Throckmorton	1.1442%
Texas	Titus	2.0589%
Texas	TomGreen	2.0589%
Texas	Travis	2.0589%
Texas	Trinity	0.6863%
Texas	Tyler	2.0589%
Texas	Upshur	2.0589%

Texas	Upton	2.0589%
Texas	Uvalde	2.0589%
Texas	ValVerde	2.0589%
Texas	VanZandt	1.1571%
Texas	Victoria	2.0589%
Texas	Walker	2.0589%
Texas	Waller	0.6863%
Texas	Ward	2.0589%
Texas	Washington	2.0589%
Texas	Webb	2.0589%
Texas	Wharton	2.0589%
Texas	Wheeler	0.6863%
Texas	Wichita	2.0589%
Texas	Wilbarger	0.6863%
Texas	Willacy	0.6863%
Texas	Williamson	2.0589%
Texas	Wilson	0.6863%
Texas	Winkler	1.5136%
Texas	Wise	0.6863%
Texas	Wood	2.0589%
Texas	Yoakum	1.7605%
Texas	Young	2.0589%
Texas	Zapata	0.6863%
Texas	Zavala	2.0589%
Virginia	Accomack	2.6568%
Virginia	Albemarle	0.8856%
Virginia	AlexandriaCity	0.8856%
Virginia	Alleghany	0.8856%
Virginia	Amelia	0.8856%
Virginia	Amherst	0.8856%
Virginia	Appomattox	0.8856%
Virginia	Arlington	2.6568%
Virginia	Augusta	0.8856%
Virginia	Bath	2.6568%
Virginia	Bedford	0.8856%
Virginia	Bland	2.1493%
Virginia	Botetourt	0.8856%
Virginia	BristolCity	2.6568%
Virginia	Brunswick	2.6568%
Virginia	Buchanan	2.6568%
Virginia	Buckingham	0.8856%
Virginia	BuenaVistaCity	1.6802%
Virginia	Campbell	0.8856%
Virginia	Caroline	1.3446%
Virginia	Carroll	0.8856%
Virginia	CharlesCity	2.6568%
Virginia	Charlotte	1.0160%
Virginia	CharlottesvilleCity	0.8856%
Virginia	ChesapeakeCity	2.6568%
Virginia	Chesterfield	2.6568%
Virginia	Clarke	0.8856%
Virginia	ColonialHeightsCity	2.6568%
Virginia	Craig	1.7494%
Virginia	Culpeper	0.8856%
Virginia	Cumberland	1.0972%
Virginia	DanvilleCity	2.6568%
Virginia	Dickenson	2.6568%
Virginia	Dinwiddie	2.6568%
Virginia	Essex	0.8856%
Virginia	Fairfax	2.6568%
Virginia	FallsChurchCity	2.6568%
Virginia	Fauquier	0.8856%
Virginia	Floyd	2.1639%
Virginia	Fluvanna	0.8856%
Virginia	Franklin	0.8856%
Virginia	FranklinCity	2.6568%
Virginia	Frederick	0.8856%
Virginia	FredericksburgCity	2.6568%
Virginia	GalaxCity	2.6568%
Virginia	Giles	2.6568%
Virginia	Gloucester	0.8856%
Virginia	Goochland	2.6568%
Virginia	Grayson	0.8856%
Virginia	Greene	0.8856%
Virginia	Greensville	2.6568%
Virginia	Halifax	0.8856%
Virginia	HamptonCity	0.8856%
Virginia	Hanover	2.6568%
Virginia	HarrisonburgCity	0.8856%

Virginia	Henrico	2.6568%
Virginia	Henry	2.6568%
Virginia	Highland	0.9076%
Virginia	HopewellCity	2.6568%
Virginia	IsleOfWight	2.6568%
Virginia	JamesCity	2.6568%
Virginia	KingAndQueen	2.6568%
Virginia	KingGeorge	0.8856%
Virginia	KingWilliam	2.6568%
Virginia	Lancaster	0.8856%
Virginia	Lee	2.6568%
Virginia	Loudoun	0.8856%
Virginia	Louisa	0.8856%
Virginia	Lunenburg	1.6151%
Virginia	LynchburgCity	0.8856%
Virginia	Madison	0.8856%
Virginia	ManassasCity	2.6568%
Virginia	Mathews	0.8856%
Virginia	Mecklenburg	0.8856%
Virginia	Middlesex	0.8856%
Virginia	Montgomery	0.8856%
Virginia	Nelson	0.8856%
Virginia	NewKent	2.6568%
Virginia	NewportNewsCity	0.8856%
Virginia	NorfolkCity	2.6568%
Virginia	Northampton	0.8856%
Virginia	Northumberland	0.8856%
Virginia	NortonCity	2.6568%
Virginia	Nottoway	2.6568%
Virginia	Orange	0.8856%
Virginia	Page	0.8856%
Virginia	Patrick	1.8422%
Virginia	PetersburgCity	2.6568%
Virginia	Pittsylvania	2.6568%
Virginia	PoquosonCity	0.8856%
Virginia	PortsmouthCity	0.8856%
Virginia	Powhatan	0.8856%
Virginia	PrinceEdward	0.8856%
Virginia	PrinceGeorge	2.6568%
Virginia	PrinceWilliam	0.8856%
Virginia	Pulaski	0.8856%
Virginia	RadfordCity	2.6568%
Virginia	Rappahannock	1.3812%
Virginia	Richmond	2.6568%
Virginia	RichmondCity	2.6568%
Virginia	Roanoke	0.8856%
Virginia	RoanokeCity	0.8856%
Virginia	Rockbridge	0.8856%
Virginia	Rockingham	0.8856%
Virginia	Russell	2.4148%
Virginia	SalemCity	0.8856%
Virginia	Scott	2.6027%
Virginia	Shenandoah	2.3557%
Virginia	Smyth	0.8856%
Virginia	Southampton	2.6568%
Virginia	Spotsylvania	0.8856%
Virginia	Stafford	0.8856%
Virginia	StauntonCity	0.8856%
Virginia	SuffolkCity	2.6568%
Virginia	Surry	2.6568%
Virginia	Sussex	2.6568%
Virginia	Tazewell	0.8856%
Virginia	VirginiaBeachCity	1.3352%
Virginia	Warren	0.8856%
Virginia	Washington	2.6568%
Virginia	WaynesboroCity	0.8856%
Virginia	Westmoreland	0.8856%
Virginia	WilliamsburgCity	2.6568%
Virginia	WinchesterCity	2.6568%
Virginia	Wise	2.6568%
Virginia	Wythe	0.8856%
Virginia	York	2.3961%
Arkansas	All(1)	1.0867%
Delaware	All(1)	0.6968%
Hawaii	All(1)	2.2814%
Illinois	All(1)	3.4217%
Indiana	All(1)	1.3505%
Kentucky	All(1)	1.7875%
Maine	All(1)	2.7485%

Missouri	All[1]	5.5866%
New Hampshire	All[1]	1.8839%
Ohio	All[1]	1.0867%
Oklahoma	All[1]	1.0867%
Pennsylvania	All[1]	1.3678%
Puerto Rico	All[1]	2.9201%
Rhode Island	All[1]	3.6388%
Tennessee	All[1]	1.0867%
US Virgin Islands	All[1]	1.2824%
Vermont	All[1]	6.5938%
West Virginia	All[1]	2.8775%

State	County	Initial Earthquake Payout Factors
Arkansas	Arkansas	1.0905%
Arkansas	Ashley	1.0905%
Arkansas	Baxter	3.2714%
Arkansas	Benton	2.1861%
Arkansas	Boone	3.0467%
Arkansas	Bradley	1.0905%
Arkansas	Calhoun	1.0905%
Arkansas	Carroll	2.6077%
Arkansas	Chicot	1.0905%
Arkansas	Clark	3.2714%
Arkansas	Clay	3.2714%
Arkansas	Cleburne	3.2714%
Arkansas	Cleveland	1.0905%
Arkansas	Columbia	3.2714%
Arkansas	Conway	1.0905%
Arkansas	Craighead	2.1285%
Arkansas	Crawford	2.9260%
Arkansas	Crittenden	1.0905%
Arkansas	Cross	1.0905%
Arkansas	Dallas	1.0905%
Arkansas	Desha	1.0905%
Arkansas	Drew	1.0905%
Arkansas	Faulkner	1.0905%
Arkansas	Franklin	3.2348%
Arkansas	Fulton	3.2714%
Arkansas	Garland	3.2714%
Arkansas	Grant	1.9216%
Arkansas	Greene	3.2714%
Arkansas	Hempstead	2.6452%
Arkansas	Hot Spring	1.5976%
Arkansas	Howard	3.0001%
Arkansas	Independence	3.2714%
Arkansas	Izard	3.2714%
Arkansas	Jackson	3.2714%
Arkansas	Jefferson	3.2714%
Arkansas	Johnson	3.2714%
Arkansas	Lafayette	1.8939%
Arkansas	Lawrence	3.2714%
Arkansas	Lee	1.0905%
Arkansas	Lincoln	1.0905%
Arkansas	Little River	3.2714%
Arkansas	Logan	3.2253%
Arkansas	Lonoke	1.0905%
Arkansas	Madison	2.7537%
Arkansas	Marion	3.2714%
Arkansas	Miller	3.2714%
Arkansas	Mississippi	2.9674%
Arkansas	Monroe	1.0905%
Arkansas	Montgomery	2.8967%
Arkansas	Nevada	3.1910%
Arkansas	Newton	3.2714%
Arkansas	Ouachita	1.0905%
Arkansas	Perry	1.0905%
Arkansas	Phillips	1.0905%
Arkansas	Pike	3.2413%
Arkansas	Poinsett	1.0905%
Arkansas	Polk	2.7144%
Arkansas	Pope	3.2714%
Arkansas	Prairie	3.2714%
Arkansas	Pulaski	1.8558%
Arkansas	Randolph	3.2714%
Arkansas	Saline	3.2714%
Arkansas	Scott	2.8815%
Arkansas	Searcy	3.2714%
Arkansas	Sebastian	3.0454%
Arkansas	Sevier	2.6569%
Arkansas	Sharp	3.2714%
Arkansas	St. Francis	1.0905%
Arkansas	Stone	3.2714%
Arkansas	Union	3.2215%
Arkansas	Van Buren	3.2714%
Arkansas	Washington	2.7251%
Arkansas	White	3.2714%
Arkansas	Woodruff	3.2714%
Arkansas	Yell	3.2714%
California	Alameda	3.4053%
California	Alpine	5.4203%
California	Amador	2.5613%
California	Butte	1.8068%
California	Calaveras	4.0805%
California	Colusa	5.4203%
California	Contra Costa	3.5667%
California	Del Norte	5.4203%
California	El Dorado	3.8000%
California	Fresno	4.9977%
California	Glenn	5.3302%
California	Humboldt	5.4203%
California	Imperial	2.1639%
California	Inyo	5.4203%
California	Kern	5.4203%
California	Kings	5.4203%
California	Lake	5.4203%
California	Lassen	3.9495%
California	Los Angeles	3.5915%
California	Madera	5.4203%
California	Marin	5.0686%
California	Mariposa	5.1240%
California	Mendocino	5.4203%
California	Merced	5.4203%
California	Modoc	2.4482%
California	Mono	5.4203%
California	Monterey	4.9799%
California	Napa	2.0152%
California	Nevada	5.4203%
California	Orange	3.4684%
California	Placer	5.4203%
California	Plumas	2.4457%
California	Riverside	4.7115%
California	Sacramento	4.8774%
California	San Benito	3.3515%
California	San Bernardino	5.4203%

Territory	Initial Earthquake Payout Factors
Alberta	12.1328%
British Columbia	12.1328%
Manitoba	0.0000%
New Brunswick	0.0000%
Newfoundland	0.0000%
North West Territories	0.0000%
Nova Scotia	0.0000%
Nunavut	0.0000%
Ontario	0.0000%
Prince Edward Island	0.0000%
Quebec	0.0000%
Saskatchewan	0.0000%
Yukon	0.0000%

[1] Each county in these States is subject to identical Initial Earthquake Payout Factors within each State

California	San Diego	4.7761%
California	San Francisco	3.2051%
California	San Joaquin	5.4203%
California	San Luis Obispo	5.0897%
California	San Mateo	3.7157%
California	Santa Barbara	3.7940%
California	Santa Clara	4.1036%
California	Santa Cruz	1.8068%
California	Shasta	1.8068%
California	Sierra	5.4203%
California	Siskiyou	1.8068%
California	Solano	5.0370%
California	Sonoma	1.8272%
California	Stanislaus	5.4203%
California	Sutter	5.4203%
California	Tehama	1.8068%
California	Trinity	1.8068%
California	Tulare	5.4203%
California	Tuolumne	4.5579%
California	Ventura	4.7297%
California	Yolo	5.4203%
California	Yuba	5.4203%
Illinois	Adams	1.7394%
Illinois	Alexander	0.7875%
Illinois	Bond	2.3625%
Illinois	Boone	1.8132%
Illinois	Brown	2.3026%
Illinois	Bureau	2.3625%
Illinois	Calhoun	2.3625%
Illinois	Carroll	1.1171%
Illinois	Cass	2.3625%
Illinois	Champaign	2.3625%
Illinois	Christian	0.7875%
Illinois	Clark	2.3625%
Illinois	Clay	2.3625%
Illinois	Clinton	2.3625%
Illinois	Coles	2.3625%
Illinois	Cook	2.2290%
Illinois	Crawford	2.3625%
Illinois	Cumberland	2.3625%
Illinois	De witt	2.3625%
Illinois	Dekalb	0.7875%
Illinois	Douglas	2.3625%
Illinois	Dupage	1.6616%
Illinois	Edgar	2.3625%
Illinois	Edwards	0.8944%
Illinois	Effingham	2.3625%
Illinois	Fayette	2.3625%
Illinois	Ford	2.3625%
Illinois	Franklin	2.3625%
Illinois	Fulton	2.3625%
Illinois	Gallatin	2.3625%
Illinois	Greene	2.3625%
Illinois	Grundy	2.3625%
Illinois	Hamilton	2.3625%
Illinois	Hancock	0.7875%
Illinois	Hardin	2.3625%
Illinois	Henderson	2.3625%
Illinois	Henry	2.3625%
Illinois	Iroquois	2.3625%
Illinois	Jackson	2.3625%
Illinois	Jasper	2.3625%
Illinois	Jefferson	2.3625%
Illinois	Jersey	2.3625%
Illinois	Jo Daviess	1.2046%
Illinois	Johnson	0.7875%
Illinois	Kane	2.3625%
Illinois	Kankakee	2.3625%
Illinois	Kendall	2.3625%
Illinois	Knox	2.3625%
Illinois	La salle	1.5589%
Illinois	Lake	2.3625%
Illinois	Lawrence	2.3625%
Illinois	Lee	2.3625%
Illinois	Livingston	2.3625%
Illinois	Logan	2.3625%
Illinois	Macon	2.3625%
Illinois	Macoupin	2.3625%
Illinois	Madison	2.3625%
Illinois	Marion	2.3625%
Illinois	Marshall	0.7875%
Illinois	Mason	2.3625%
Illinois	Massac	2.3625%
Illinois	Mcdonough	2.3625%
Illinois	Mchenry	2.3625%
Illinois	Mclean	2.3625%
Illinois	Menard	2.3625%
Illinois	Mercer	2.3625%
Illinois	Monroe	2.3625%
Illinois	Montgomery	2.3625%
Illinois	Morgan	2.3625%
Illinois	Moultrie	0.7875%
Illinois	Ogle	2.2620%
Illinois	Peoria	2.3625%
Illinois	Perry	2.3625%
Illinois	Piatt	2.3625%
Illinois	Pike	2.3625%
Illinois	Pope	2.3625%
Illinois	Pulaski	0.7875%
Illinois	Putnam	0.9514%
Illinois	Randolph	2.3625%
Illinois	Richland	0.7875%
Illinois	Rock Island	2.3625%
Illinois	Saline	2.3625%
Illinois	Sangamon	0.7875%
Illinois	Schuyler	2.3625%
Illinois	Scott	2.3625%
Illinois	Shelby	0.7875%
Illinois	St. Clair	2.3625%
Illinois	Stark	0.7875%
Illinois	Stephenson	1.3626%
Illinois	Tazewell	2.3625%
Illinois	Union	0.7875%
Illinois	Vermilion	2.3625%

Illinois	Wabash	0.7875%
Illinois	Warren	2.3625%
Illinois	Washington	2.3625%
Illinois	Wayne	2.3625%
Illinois	White	2.3625%
Illinois	Whiteside	2.3625%
Illinois	Will	2.0198%
Illinois	Williamson	2.3625%
Illinois	Winnebago	2.3625%
Illinois	Woodford	0.7875%
Indiana	Adams	3.6121%
Indiana	Allen	3.6121%
Indiana	Bartholomew	1.8619%
Indiana	Benton	3.6121%
Indiana	Blackford	3.1449%
Indiana	Boone	3.6121%
Indiana	Brown	3.6121%
Indiana	Carroll	3.6121%
Indiana	Cass	3.6121%
Indiana	Clark	3.6121%
Indiana	Clay	1.6854%
Indiana	Clinton	3.6121%
Indiana	Crawford	3.6121%
Indiana	Daviess	1.2040%
Indiana	Dearborn	1.2040%
Indiana	Decatur	3.6121%
Indiana	DeKalb	3.6121%
Indiana	Delaware	2.9169%
Indiana	Dubois	1.2040%
Indiana	Elkhart	3.6121%
Indiana	Fayette	1.2040%
Indiana	Floyd	3.6121%
Indiana	Fountain	3.6121%
Indiana	Franklin	1.2040%
Indiana	Fulton	3.6121%
Indiana	Gibson	3.6121%
Indiana	Grant	2.5644%
Indiana	Greene	3.6121%
Indiana	Hamilton	1.2040%
Indiana	Hancock	3.6121%
Indiana	Harrison	3.6121%
Indiana	Hendricks	3.6121%
Indiana	Henry	3.6121%
Indiana	Howard	3.6121%
Indiana	Huntington	3.6121%
Indiana	Jackson	3.6121%
Indiana	Jasper	3.6121%
Indiana	Jay	3.1647%
Indiana	Jefferson	3.6121%
Indiana	Jennings	3.6121%
Indiana	Johnson	1.2040%
Indiana	Knox	3.6121%
Indiana	Kosciusko	3.6121%
Indiana	Lagrange	1.2040%
Indiana	Lake	3.6121%
Indiana	Laporte	3.6121%
Indiana	Lawrence	3.6121%
Indiana	Madison	3.4987%
Indiana	Marion	2.6240%
Indiana	Marshall	3.6121%
Indiana	Martin	1.2040%
Indiana	Miami	3.6121%
Indiana	Monroe	3.6121%
Indiana	Montgomery	3.6121%
Indiana	Morgan	1.2040%
Indiana	Newton	3.6121%
Indiana	Noble	3.6121%
Indiana	Ohio	1.5623%
Indiana	Orange	3.6121%
Indiana	Owen	1.2040%
Indiana	Parke	3.6121%
Indiana	Perry	3.6121%
Indiana	Pike	3.6121%
Indiana	Porter	3.6121%
Indiana	Posey	3.6121%
Indiana	Pulaski	3.6121%
Indiana	Putnam	3.6121%
Indiana	Randolph	1.2040%
Indiana	Ripley	1.2040%
Indiana	Rush	3.6121%
Indiana	Scott	3.6121%
Indiana	Shelby	3.6121%
Indiana	Spencer	1.2040%
Indiana	St. Joseph	3.6121%
Indiana	Starke	3.6121%
Indiana	Steuben	2.0579%
Indiana	Sullivan	3.6121%
Indiana	Switzerland	3.6121%
Indiana	Tippecanoe	3.6121%
Indiana	Tipton	1.2040%
Indiana	Union	1.2040%
Indiana	Vanderburgh	1.2040%
Indiana	Vermillion	3.6121%
Indiana	Vigo	1.5024%
Indiana	Wabash	3.6121%
Indiana	Warren	3.6121%
Indiana	Warrick	2.4645%
Indiana	Washington	3.6121%
Indiana	Wayne	1.2040%
Indiana	Wells	3.6121%
Indiana	White	3.6121%
Indiana	Whitley	3.6121%
Mississippi	Adams	3.3069%
Mississippi	Alcorn	6.2152%
Mississippi	Amite	5.2348%
Mississippi	Attala	2.0717%
Mississippi	Benton	6.2152%
Mississippi	Bolivar	2.0717%
Mississippi	Calhoun	6.2152%
Mississippi	Carroll	6.2152%
Mississippi	Chickasaw	6.2152%
Mississippi	Choctaw	6.2152%
Mississippi	Claiborne	3.0297%
Mississippi	Clarke	6.2152%

Mississippi	Clay	6.2152%
Mississippi	Coahoma	6.2152%
Mississippi	Copiah	2.0717%
Mississippi	Covington	5.3977%
Mississippi	DeSoto	2.0717%
Mississippi	Forrest	6.2152%
Mississippi	Franklin	5.1595%
Mississippi	George	6.0451%
Mississippi	Greene	5.9216%
Mississippi	Grenada	6.2152%
Mississippi	Hancock	4.3901%
Mississippi	Harrison	4.4258%
Mississippi	Hinds	2.0717%
Mississippi	Holmes	4.4939%
Mississippi	Humphreys	2.6374%
Mississippi	Issaquena	2.8877%
Mississippi	Itawamba	4.3353%
Mississippi	Jackson	2.0717%
Mississippi	Jasper	5.8639%
Mississippi	Jefferson	3.1014%
Mississippi	Jefferson Davis	4.8049%
Mississippi	Jones	6.2152%
Mississippi	Kemper	6.0372%
Mississippi	Lafayette	6.2152%
Mississippi	Lamar	6.2152%
Mississippi	Lauderdale	6.2152%
Mississippi	Lawrence	5.1417%
Mississippi	Leake	2.0717%
Mississippi	Lee	2.0717%
Mississippi	Leflore	2.2509%
Mississippi	Lincoln	4.5100%
Mississippi	Lowndes	2.0717%
Mississippi	Madison	2.0717%
Mississippi	Marion	5.5390%
Mississippi	Marshall	6.2152%
Mississippi	Monroe	6.2152%
Mississippi	Montgomery	6.2152%
Mississippi	Neshoba	5.2709%
Mississippi	Newton	5.7395%
Mississippi	Noxubee	5.3615%
Mississippi	Oktibbeha	4.4795%
Mississippi	Panola	6.2152%
Mississippi	Pearl River	5.5168%
Mississippi	Perry	6.2152%
Mississippi	Pike	5.2200%
Mississippi	Pontotoc	6.2152%
Mississippi	Prentiss	2.0717%
Mississippi	Quitman	6.2152%
Mississippi	Rankin	2.0717%
Mississippi	Scott	2.0717%
Mississippi	Sharkey	2.0717%
Mississippi	Simpson	2.0717%
Mississippi	Smith	2.0717%
Mississippi	Stone	5.5995%
Mississippi	Sunflower	6.2152%
Mississippi	Tallahatchie	6.2152%
Mississippi	Tate	6.2152%
Mississippi	Tippah	6.2152%
Mississippi	Tishomingo	6.2152%
Mississippi	Tunica	5.1252%
Mississippi	Union	6.2152%
Mississippi	Walthall	5.2267%
Mississippi	Warren	2.0717%
Mississippi	Washington	2.0717%
Mississippi	Wayne	6.2152%
Mississippi	Webster	6.2152%
Mississippi	Wilkinson	5.1638%
Mississippi	Winston	4.4500%
Mississippi	Yalobusha	6.2152%
Mississippi	Yazoo	2.0717%
Missouri	Adair	2.5939%
Missouri	Andrew	2.5312%
Missouri	Atchison	2.0374%
Missouri	Audrain	1.8904%
Missouri	Barry	2.9071%
Missouri	Barton	3.5745%
Missouri	Bates	2.0841%
Missouri	Benton	2.5535%
Missouri	Bollinger	3.0561%
Missouri	Boone	3.0561%
Missouri	Buchanan	2.5310%
Missouri	Butler	3.0561%
Missouri	Caldwell	2.5317%
Missouri	Callaway	1.0187%
Missouri	Camden	3.0561%
Missouri	Cape Girardeau	3.0561%
Missouri	Carroll	2.5593%
Missouri	Carter	3.0561%
Missouri	Cass	2.5263%
Missouri	Cedar	2.0376%
Missouri	Chariton	2.5793%
Missouri	Christian	2.2729%
Missouri	Clark	1.3167%
Missouri	Clay	2.4030%
Missouri	Clinton	2.5311%
Missouri	Cole	1.0187%
Missouri	Cooper	2.5436%
Missouri	Crawford	1.0187%
Missouri	Dade	2.0374%
Missouri	Dallas	2.5348%
Missouri	Daviess	2.2393%
Missouri	De Kalb	2.5313%
Missouri	Dent	3.0561%
Missouri	Douglas	2.8185%
Missouri	Dunklin	1.0187%
Missouri	Franklin	1.0187%
Missouri	Gasconade	3.0561%
Missouri	Gentry	2.5313%
Missouri	Greene	2.0449%
Missouri	Grundy	2.5342%
Missouri	Harrison	2.0396%
Missouri	Henry	2.5360%
Missouri	Hickory	2.5340%
Missouri	Holt	2.5313%

Missouri	Howard	2.5904%
Missouri	Howell	3.0561%
Missouri	Iron	3.0561%
Missouri	Jackson	2.0755%
Missouri	Jasper	3.5745%
Missouri	Jefferson	3.0561%
Missouri	Johnson	2.5353%
Missouri	Knox	1.5457%
Missouri	Laclede	2.6150%
Missouri	Lafayette	2.5549%
Missouri	Lawrence	2.0374%
Missouri	Lewis	1.0280%
Missouri	Lincoln	1.0187%
Missouri	Linn	2.5685%
Missouri	Livingston	2.5477%
Missouri	Macon	2.5892%
Missouri	Madison	3.0561%
Missouri	Maries	1.0187%
Missouri	Marion	1.8410%
Missouri	Mcdonald	2.0649%
Missouri	Mercer	2.0597%
Missouri	Miller	2.6337%
Missouri	Mississippi	1.0187%
Missouri	Moniteau	2.6079%
Missouri	Monroe	2.6188%
Missouri	Montgomery	2.6484%
Missouri	Morgan	2.6577%
Missouri	New Madrid	2.1772%
Missouri	Newton	2.0374%
Missouri	Nodaway	2.5313%
Missouri	Oregon	3.0561%
Missouri	Osage	2.1029%
Missouri	Ozark	3.0561%
Missouri	Pemiscot	1.0187%
Missouri	Perry	3.0561%
Missouri	Pettis	2.5959%
Missouri	Phelps	1.0187%
Missouri	Pike	3.0561%
Missouri	Platte	2.4497%
Missouri	Polk	2.4228%
Missouri	Pulaski	1.6470%
Missouri	Putnam	2.5322%
Missouri	Ralls	2.6423%
Missouri	Randolph	2.6708%
Missouri	Ray	2.5623%
Missouri	Reynolds	3.0561%
Missouri	Ripley	3.0561%
Missouri	Saline	2.6331%
Missouri	Schuyler	2.5325%
Missouri	Scotland	1.5391%
Missouri	Scott	1.0187%
Missouri	Shannon	3.0561%
Missouri	Shelby	2.5707%
Missouri	St. Charles	1.8276%
Missouri	St. Clair	2.3644%
Missouri	St. Francois	3.0561%
Missouri	St. Louis	2.0431%
Missouri	St. Louis City	1.5322%
Missouri	Ste. Genevieve	3.0561%
Missouri	Stoddard	3.0561%
Missouri	Stone	2.6327%
Missouri	Sullivan	2.5371%
Missouri	Taney	2.6135%
Missouri	Texas	3.0561%
Missouri	Vernon	2.0374%
Missouri	Warren	1.1087%
Missouri	Washington	3.0561%
Missouri	Wayne	3.0561%
Missouri	Webster	2.5335%
Missouri	Worth	2.0374%
Missouri	Wright	2.6814%
Oregon	Baker	3.4309%
Oregon	Benton	2.1053%
Oregon	Clackamas	1.7155%
Oregon	Clatsop	5.1464%
Oregon	Columbia	5.1464%
Oregon	Coos	5.1464%
Oregon	Crook	4.5867%
Oregon	Curry	5.1464%
Oregon	Deschutes	1.7155%
Oregon	Douglas	5.1464%
Oregon	Gilliam	4.2725%
Oregon	Grant	3.4309%
Oregon	Harney	3.4309%
Oregon	Hood River	1.7155%
Oregon	Jackson	1.7155%
Oregon	Jefferson	5.1464%
Oregon	Josephine	1.7155%
Oregon	Klamath	1.7155%
Oregon	Lake	2.5275%
Oregon	Lane	5.1464%
Oregon	Lincoln	5.1464%
Oregon	Linn	1.7155%
Oregon	Malheur	4.5163%
Oregon	Marion	2.7264%
Oregon	Morrow	4.7670%
Oregon	Multnomah	2.7407%
Oregon	Polk	5.1464%
Oregon	Sherman	5.1464%
Oregon	Tillamook	5.1464%
Oregon	Umatilla	5.1464%
Oregon	Union	3.7109%
Oregon	Wallowa	13.0090%
Oregon	Wasco	5.1464%
Oregon	Washington	2.7880%
Oregon	Wheeler	3.4309%
Oregon	Yamhill	5.1464%
Tennessee	Anderson	0.7910%
Tennessee	Bedford	2.3731%
Tennessee	Benton	2.3731%
Tennessee	Bledsoe	2.3731%
Tennessee	Blount	2.3731%
Tennessee	Bradley	2.3731%
Tennessee	Campbell	2.3731%

Tennessee	Cannon	2.3731%
Tennessee	Carroll	2.3731%
Tennessee	Carter	2.3731%
Tennessee	Cheatham	2.3731%
Tennessee	Chester	2.3731%
Tennessee	Claiborne	2.3731%
Tennessee	Clay	2.3731%
Tennessee	Cocke	2.3731%
Tennessee	Coffee	2.3731%
Tennessee	Crockett	2.3731%
Tennessee	Cumberland	2.3731%
Tennessee	Davidson	2.3731%
Tennessee	Decatur	2.3731%
Tennessee	Dekalb	2.3731%
Tennessee	Dickson	2.3731%
Tennessee	Dyer	1.3847%
Tennessee	Fayette	2.3731%
Tennessee	Fentress	1.9901%
Tennessee	Franklin	2.3731%
Tennessee	Gibson	2.3731%
Tennessee	Giles	2.3731%
Tennessee	Grainger	2.3731%
Tennessee	Greene	2.3731%
Tennessee	Grundy	2.3731%
Tennessee	Hamblen	2.3731%
Tennessee	Hamilton	2.3731%
Tennessee	Hancock	2.3731%
Tennessee	Hardeman	2.3731%
Tennessee	Hardin	2.3731%
Tennessee	Hawkins	2.3731%
Tennessee	Haywood	2.3731%
Tennessee	Henderson	2.3731%
Tennessee	Henry	2.3731%
Tennessee	Hickman	2.3731%
Tennessee	Houston	2.3731%
Tennessee	Humphreys	2.3731%
Tennessee	Jackson	2.3731%
Tennessee	Jefferson	2.3731%
Tennessee	Johnson	1.3808%
Tennessee	Knox	2.0834%
Tennessee	Lake	0.7910%
Tennessee	Lauderdale	2.3731%
Tennessee	Lawrence	2.3731%
Tennessee	Lewis	2.3731%
Tennessee	Lincoln	2.3731%
Tennessee	Loudon	2.3731%
Tennessee	Macon	2.3731%
Tennessee	Madison	2.3731%
Tennessee	Marion	0.7910%
Tennessee	Marshall	2.3731%
Tennessee	Maury	2.3731%
Tennessee	Mcminn	2.3731%
Tennessee	Mcnairy	2.3731%
Tennessee	Meigs	2.3731%
Tennessee	Monroe	2.3731%
Tennessee	Montgomery	2.3731%
Tennessee	Moore	2.3731%
Tennessee	Morgan	2.3731%
Tennessee	Obion	0.7910%
Tennessee	Overton	2.1000%
Tennessee	Perry	2.3731%
Tennessee	Pickett	1.6249%
Tennessee	Polk	2.3731%
Tennessee	Putnam	2.3731%
Tennessee	Rhea	2.3731%
Tennessee	Roane	2.3731%
Tennessee	Robertson	2.3731%
Tennessee	Rutherford	2.3731%
Tennessee	Scott	2.0189%
Tennessee	Sequatchie	2.3731%
Tennessee	Sevier	2.3731%
Tennessee	Shelby	2.5105%
Tennessee	Smith	2.3731%
Tennessee	Stewart	2.3731%
Tennessee	Sullivan	2.3731%
Tennessee	Sumner	2.3731%
Tennessee	Tipton	0.7910%
Tennessee	Trousdale	2.3731%
Tennessee	Unicoi	1.1711%
Tennessee	Union	2.3731%
Tennessee	Van Buren	2.3731%
Tennessee	Warren	2.3731%
Tennessee	Washington	2.3731%
Tennessee	Wayne	2.3731%
Tennessee	Weakley	2.3731%
Tennessee	White	2.3731%
Tennessee	Williamson	2.3731%
Tennessee	Wilson	2.3731%
Washington	Adams	3.2193%
Washington	Asotin	2.8116%
Washington	Benton	4.1208%
Washington	Chelan	4.1208%
Washington	Clallam	4.1208%
Washington	Clark	4.1208%
Washington	Columbia	3.3997%
Washington	Cowlitz	4.1208%
Washington	Douglas	4.1208%
Washington	Ferry	2.7473%
Washington	Franklin	4.1208%
Washington	Garfield	2.8541%
Washington	Grant	3.4338%
Washington	Grays Harbor	4.1208%
Washington	Island	4.1208%
Washington	Jefferson	4.1208%
Washington	King	2.6843%
Washington	Kitsap	2.0621%
Washington	Kittitas	4.1208%
Washington	Klickitat	4.1208%
Washington	Lewis	4.1208%
Washington	Lincoln	3.9619%
Washington	Mason	4.1208%
Washington	Okanogan	4.1208%
Washington	Pacific	4.1208%
Washington	Pend Oreille	3.4533%

Washington	Pierce	2.3402%
Washington	San Juan	4.1208%
Washington	Skagit	4.1208%
Washington	Skamania	4.1208%
Washington	Snohomish	2.3512%
Washington	Spokane	4.1208%
Washington	Stevens	3.7813%
Washington	Thurston	4.1208%
Washington	Wahkiakum	4.1208%
Washington	Walla Walla	2.8717%
Washington	Whatcom	3.0142%
Washington	Whitman	3.4271%
Washington	Yakima	4.1208%
Alabama	All(1)	4.2294%
Alaska	All(1)	4.0659%
Arizona	All(1)	3.4751%
Colorado	All(1)	3.2595%
Connecticut	All(1)	4.6016%
Delaware	All(1)	5.0687%
Dist of Columbia	All(1)	8.6333%
Florida	All(1)	5.0678%
Georgia	All(1)	3.5958%
Hawaii	All(1)	2.2981%
Idaho	All(1)	1.9463%
Iowa	All(1)	5.9817%
Kansas	All(1)	2.7072%
Kentucky	All(1)	2.2371%
Louisiana	All(1)	6.1384%
Maine	All(1)	3.9600%
Maryland	All(1)	2.2328%
Massachusetts	All(1)	4.9706%
Michigan	All(1)	2.3866%
Minnesota	All(1)	3.6334%
Montana	All(1)	4.1524%
Nebraska	All(1)	4.7091%
Nevada	All(1)	2.1728%
New Hampshire	All(1)	4.6857%
New Jersey	All(1)	5.9611%
New Mexico	All(1)	1.4939%
New York	All(1)	3.2823%
North Carolina	All(1)	5.3863%
North Dakota	All(1)	4.1524%
Ohio	All(1)	2.4607%
Oklahoma	All(1)	2.5416%
Pennsylvania	All(1)	5.2394%
Puerto Rico	All(1)	2.7078%
Rhode Island	All(1)	5.0959%
South Carolina	All(1)	5.6568%
South Dakota	All(1)	21.4499%
Texas	All(1)	4.7022%
Utah	All(1)	2.5004%
Vermont	All(1)	7.5833%
Virginia	All(1)	2.8982%
West Virginia	All(1)	3.3141%
Wisconsin	All(1)	4.9084%
Wyoming	All(1)	17.6601%

Country	CRESTA Zone	Initial Europe Windstorm Payout Factors
Belgium	BE_1	9.3972%
Belgium	BE_2	7.5908%
Belgium	BE_3	0.3078%
Belgium	BE_4	0.3078%
Belgium	BE_5	0.9233%
Belgium	BE_6	0.9233%
Belgium	BE_7	0.9233%
Belgium	BE_8	0.9233%
Belgium	BE_9	0.9233%
Denmark	DK_1	7.5849%
Denmark	DK_10	2.5283%
Denmark	DK_11	7.5849%
Denmark	DK_2	2.5283%
Denmark	DK_3	8.2436%
Denmark	DK_4	2.5283%
Denmark	DK_5	2.5283%
Denmark	DK_6	7.5849%
Denmark	DK_7	2.5283%
Denmark	DK_8	7.5849%
Denmark	DK_9	2.5283%
France	FR_1	8.1769%
France	FR_10	2.7256%
France	FR_11	8.1769%
France	FR_12	8.1769%
France	FR_13	2.7256%
France	FR_14	2.7256%
France	FR_15	8.1769%
France	FR_16	2.7256%
France	FR_17	8.1769%
France	FR_18	8.1769%
France	FR_19	2.7256%
France	FR_2	2.7256%
France	FR_20	2.7256%
France	FR_21	2.7256%
France	FR_22	8.1769%
France	FR_23	2.7256%
France	FR_24	2.7256%
France	FR_25	7.2431%
France	FR_26	8.1769%
France	FR_27	2.7256%
France	FR_28	2.7256%
France	FR_29	8.1769%
France	FR_3	8.1769%
France	FR_30	2.7256%
France	FR_31	2.7256%
France	FR_32	8.1769%
France	FR_33	7.1604%
France	FR_34	8.1769%
France	FR_35	8.1769%
France	FR_36	8.1769%
France	FR_37	8.1769%
France	FR_38	8.1769%
France	FR_39	8.1769%
France	FR_4	2.7256%
France	FR_40	2.7256%
France	FR_41	2.7256%
France	FR_42	8.1769%
France	FR_43	8.1769%
France	FR_44	7.0988%
France	FR_45	2.7256%
France	FR_46	8.1769%
France	FR_47	8.1769%
France	FR_48	8.1769%
France	FR_49	8.1769%
France	FR_5	8.1769%
France	FR_50	2.7256%
France	FR_51	2.7256%
France	FR_52	2.7256%
France	FR_53	8.1769%
France	FR_54	2.7256%
France	FR_55	2.7256%
France	FR_56	8.1769%
France	FR_57	2.7256%
France	FR_58	8.1769%
France	FR_59	8.1769%
France	FR_6	2.7256%

(1) Each CRESTA zone in these Countries is subject to identical Initial Europe Windstorm Payout Factors within each Country

France	FR_60	2.7256%
France	FR_61	2.7256%
France	FR_62	8.1769%
France	FR_63	8.1769%
France	FR_64	8.1769%
France	FR_65	8.1769%
France	FR_66	5.7292%
France	FR_67	2.7256%
France	FR_68	8.1769%
France	FR_69	8.1769%
France	FR_7	8.1769%
France	FR_70	2.7256%
France	FR_71	8.1769%
France	FR_72	8.1769%
France	FR_73	2.7449%
France	FR_74	2.7256%
France	FR_75	2.7256%
France	FR_76	2.7256%
France	FR_77	2.7256%
France	FR_78	2.7256%
France	FR_79	2.7256%
France	FR_8	2.7256%
France	FR_80	2.7256%
France	FR_81	8.1769%
France	FR_82	2.7256%
France	FR_83	2.7256%
France	FR_84	3.4474%
France	FR_85	7.6721%
France	FR_86	2.7256%
France	FR_87	2.7256%
France	FR_88	8.1769%
France	FR_89	2.7256%
France	FR_9	8.1769%
France	FR_90	8.1769%
France	FR_91	2.7256%
France	FR_92	2.7256%
France	FR_93	2.7256%
France	FR_94	2.7256%
France	FR_95	2.7256%
Germany	DE_1	4.5877%
Germany	DE_10	1.5292%
Germany	DE_12	3.6534%
Germany	DE_13	1.5292%
Germany	DE_14	4.5877%
Germany	DE_15	4.5877%
Germany	DE_16	1.5292%
Germany	DE_17	3.8975%
Germany	DE_18	4.5877%
Germany	DE_19	1.5292%
Germany	DE_2	4.5877%
Germany	DE_20	4.5877%
Germany	DE_21	1.5292%
Germany	DE_22	1.5292%
Germany	DE_23	4.5877%
Germany	DE_24	4.5877%
Germany	DE_25	4.5877%
Germany	DE_26	1.5292%
Germany	DE_27	1.5292%
Germany	DE_28	1.5292%
Germany	DE_29	1.5292%
Germany	DE_3	4.5877%
Germany	DE_30	4.5877%
Germany	DE_31	4.5877%
Germany	DE_32	4.5877%
Germany	DE_33	3.3669%
Germany	DE_34	4.5877%
Germany	DE_35	4.5877%
Germany	DE_36	4.5877%
Germany	DE_37	4.5877%
Germany	DE_38	4.5877%
Germany	DE_39	4.5877%
Germany	DE_4	4.5877%
Germany	DE_40	1.5292%
Germany	DE_41	3.8218%
Germany	DE_42	1.5292%
Germany	DE_44	1.5292%
Germany	DE_45	3.6995%
Germany	DE_46	1.5292%
Germany	DE_47	3.4357%

Germany	DE_48	3.4682%
Germany	DE_49	1.5292%
Germany	DE_50	1.5292%
Germany	DE_51	1.5292%
Germany	DE_52	3.9928%
Germany	DE_53	4.0269%
Germany	DE_54	4.5877%
Germany	DE_55	4.5877%
Germany	DE_56	4.5877%
Germany	DE_57	4.5877%
Germany	DE_58	1.5292%
Germany	DE_59	3.7356%
Germany	DE_6	4.5877%
Germany	DE_60	4.5877%
Germany	DE_61	4.5877%
Germany	DE_63	4.5877%
Germany	DE_64	4.5877%
Germany	DE_65	4.5877%
Germany	DE_66	4.5877%
Germany	DE_67	4.5877%
Germany	DE_68	4.5877%
Germany	DE_69	4.5877%
Germany	DE_7	4.5877%
Germany	DE_70	1.5292%
Germany	DE_71	4.5877%
Germany	DE_72	1.5292%
Germany	DE_73	4.5877%
Germany	DE_74	4.5877%
Germany	DE_75	4.5877%
Germany	DE_76	4.5877%
Germany	DE_77	1.5292%
Germany	DE_78	1.5292%
Germany	DE_79	1.5292%
Germany	DE_8	4.5877%
Germany	DE_80	1.5292%
Germany	DE_81	1.5292%
Germany	DE_82	4.5877%
Germany	DE_83	1.5292%
Germany	DE_84	4.5877%
Germany	DE_85	4.5877%
Germany	DE_86	4.5877%
Germany	DE_87	4.5877%
Germany	DE_88	4.5877%
Germany	DE_89	4.5877%
Germany	DE_9	4.5877%
Germany	DE_90	4.5877%
Germany	DE_91	4.5877%
Germany	DE_92	4.5877%
Germany	DE_93	4.5877%
Germany	DE_94	1.5292%
Germany	DE_95	4.5877%
Germany	DE_96	4.5877%
Germany	DE_97	4.5877%
Germany	DE_98	4.5877%
Germany	DE_99	4.5877%
Ireland	IE_CE	2.3584%
Ireland	IE_CK	2.3584%
Ireland	IE_CN	2.3584%
Ireland	IE_CW	2.3584%
Ireland	IE_DL	2.3584%
Ireland	IE_DN	2.3584%
Ireland	IE_GY	2.3584%
Ireland	IE_KE	2.3584%
Ireland	IE_KK	2.3584%
Ireland	IE_KY	2.3584%
Ireland	IE_LD	2.3584%
Ireland	IE_LH	2.3584%
Ireland	IE_LK	2.3584%
Ireland	IE_LM	7.0752%
Ireland	IE_LS	2.3584%
Ireland	IE_MH	3.0319%
Ireland	IE_MN	2.3584%
Ireland	IE_MO	2.3584%
Ireland	IE_OY	2.3584%
Ireland	IE_RN	2.3584%
Ireland	IE_SO	2.3584%
Ireland	IE_TY	2.3584%
Ireland	IE_WD	2.3584%
Ireland	IE_WH	2.3584%

Ireland	IE_WW	7.0752%
Ireland	IE_WX	2.3584%
Luxembourg	LU_1	7.8857%
Netherlands	NL_10	1.3457%
Netherlands	NL_11	1.3457%
Netherlands	NL_12	1.3457%
Netherlands	NL_13	3.0599%
Netherlands	NL_14	1.3457%
Netherlands	NL_15	4.0370%
Netherlands	NL_16	1.3457%
Netherlands	NL_17	4.0370%
Netherlands	NL_18	4.0370%
Netherlands	NL_19	4.0370%
Netherlands	NL_20	4.0370%
Netherlands	NL_21	4.0370%
Netherlands	NL_22	4.0370%
Netherlands	NL_23	4.0370%
Netherlands	NL_24	4.0370%
Netherlands	NL_25	4.0370%
Netherlands	NL_26	4.0370%
Netherlands	NL_27	4.0370%
Netherlands	NL_28	4.0370%
Netherlands	NL_29	4.0370%
Netherlands	NL_30	4.0370%
Netherlands	NL_31	4.0370%
Netherlands	NL_32	4.0370%
Netherlands	NL_33	4.0370%
Netherlands	NL_34	1.3457%
Netherlands	NL_35	1.3457%
Netherlands	NL_36	4.0370%
Netherlands	NL_37	1.3457%
Netherlands	NL_38	1.3457%
Netherlands	NL_39	1.3457%
Netherlands	NL_40	1.3457%
Netherlands	NL_41	1.3457%
Netherlands	NL_42	4.0370%
Netherlands	NL_43	4.0370%
Netherlands	NL_44	4.0370%
Netherlands	NL_45	4.0370%
Netherlands	NL_46	4.0370%
Netherlands	NL_47	4.0370%
Netherlands	NL_48	4.0370%
Netherlands	NL_49	4.0370%
Netherlands	NL_50	4.0370%
Netherlands	NL_51	4.0370%
Netherlands	NL_52	4.0370%
Netherlands	NL_53	4.0370%
Netherlands	NL_54	4.0370%
Netherlands	NL_55	4.0370%
Netherlands	NL_56	4.0370%
Netherlands	NL_57	4.0370%
Netherlands	NL_58	4.0370%
Netherlands	NL_59	4.0370%
Netherlands	NL_60	4.0370%
Netherlands	NL_61	4.0370%
Netherlands	NL_62	4.0370%
Netherlands	NL_63	4.0370%
Netherlands	NL_64	4.0370%
Netherlands	NL_65	1.3457%
Netherlands	NL_66	1.3457%
Netherlands	NL_67	1.3457%
Netherlands	NL_68	1.3457%
Netherlands	NL_69	4.0370%
Netherlands	NL_70	1.3457%
Netherlands	NL_71	4.0370%
Netherlands	NL_72	1.3457%
Netherlands	NL_73	1.3457%
Netherlands	NL_74	1.3457%
Netherlands	NL_75	1.3457%
Netherlands	NL_76	1.3457%
Netherlands	NL_77	1.3457%
Netherlands	NL_78	1.3457%
Netherlands	NL_79	1.3457%
Netherlands	NL_80	1.3457%
Netherlands	NL_81	1.3457%
Netherlands	NL_82	1.3457%
Netherlands	NL_83	1.3457%
Netherlands	NL_84	1.3457%
Netherlands	NL_85	1.3457%

Netherlands	NL_86	4.0370%
Netherlands	NL_87	4.0370%
Netherlands	NL_88	4.0370%
Netherlands	NL_89	4.0370%
Netherlands	NL_90	4.0370%
Netherlands	NL_91	1.3457%
Netherlands	NL_92	4.0370%
Netherlands	NL_93	4.0370%
Netherlands	NL_94	1.3457%
Netherlands	NL_95	1.3457%
Netherlands	NL_96	4.0370%
Netherlands	NL_97	2.2028%
Netherlands	NL_98	4.0370%
Netherlands	NL_99	4.0370%
United Kingdom	GB_AB	3.7598%
United Kingdom	GB_AL	3.7598%
United Kingdom	GB_B	3.7598%
United Kingdom	GB_BA	3.7598%
United Kingdom	GB_BB	1.2533%
United Kingdom	GB_BD	1.2533%
United Kingdom	GB_BH	3.7598%
United Kingdom	GB_BL	3.7598%
United Kingdom	GB_BN	3.7598%
United Kingdom	GB_BR	3.7598%
United Kingdom	GB_BS	3.7598%
United Kingdom	GB_BT	2.3494%
United Kingdom	GB_CA	1.2533%
United Kingdom	GB_CB	3.7598%
United Kingdom	GB_CF	3.7598%
United Kingdom	GB_CH	3.7598%
United Kingdom	GB_CM	3.7598%
United Kingdom	GB_CO	3.7598%
United Kingdom	GB_CR	1.2533%
United Kingdom	GB_CT	3.7598%
United Kingdom	GB_CV	3.7598%
United Kingdom	GB_CW	3.7598%
United Kingdom	GB_DA	1.2533%
United Kingdom	GB_DD	3.7598%
United Kingdom	GB_DE	3.7598%
United Kingdom	GB_DG	1.2533%
United Kingdom	GB_DH	3.7598%
United Kingdom	GB_DL	3.7598%
United Kingdom	GB_DN	3.5268%
United Kingdom	GB_DT	3.7598%
United Kingdom	GB_DY	3.7598%
United Kingdom	GB_E	3.7598%
United Kingdom	GB_EC	1.2533%
United Kingdom	GB_EH	3.7598%
United Kingdom	GB_EN	3.7598%
United Kingdom	GB_EX	1.2533%
United Kingdom	GB_FK	1.2533%
United Kingdom	GB_FY	3.7598%
United Kingdom	GB_G	1.2533%
United Kingdom	GB_GL	3.7598%
United Kingdom	GB_GU	3.7598%
United Kingdom	GB_GY	1.2533%
United Kingdom	GB_HA	3.7598%
United Kingdom	GB_HD	1.2533%
United Kingdom	GB_HG	1.2533%
United Kingdom	GB_HP	3.7598%
United Kingdom	GB_HR	3.7598%
United Kingdom	GB_HS	1.2533%
United Kingdom	GB_HU	3.4947%
United Kingdom	GB_HX	1.2533%
United Kingdom	GB_IG	3.2689%
United Kingdom	GB_IM	3.7598%
United Kingdom	GB_IP	3.7598%
United Kingdom	GB_IV	1.2533%
United Kingdom	GB_JE	1.2533%
United Kingdom	GB_KA	1.2533%
United Kingdom	GB_KT	3.7598%
United Kingdom	GB_KW	1.2533%
United Kingdom	GB_KY	3.7598%
United Kingdom	GB_L	3.7598%
United Kingdom	GB_LA	3.7598%
United Kingdom	GB_LD	3.7598%
United Kingdom	GB_LE	3.7598%
United Kingdom	GB_LL	3.7598%
United Kingdom	GB_LN	1.2533%

United Kingdom	GB_LS	1.2533%
United Kingdom	GB_LU	3.7598%
United Kingdom	GB_M	3.7598%
United Kingdom	GB_ME	3.7598%
United Kingdom	GB_MK	3.7598%
United Kingdom	GB_ML	1.2533%
United Kingdom	GB_N	3.7598%
United Kingdom	GB_NE	3.7598%
United Kingdom	GB_NG	3.7598%
United Kingdom	GB_NN	3.7598%
United Kingdom	GB_NP	3.7598%
United Kingdom	GB_NR	3.4338%
United Kingdom	GB_NW	3.7598%
United Kingdom	GB_OL	3.7598%
United Kingdom	GB_OX	3.7598%
United Kingdom	GB_PA	1.2533%
United Kingdom	GB_PE	5.4452%
United Kingdom	GB_PH	3.7598%
United Kingdom	GB_PL	1.2533%
United Kingdom	GB_PO	3.7598%
United Kingdom	GB_PR	3.7598%
United Kingdom	GB_RG	3.7598%
United Kingdom	GB_RH	3.7598%
United Kingdom	GB_RM	1.2533%
United Kingdom	GB_S	3.7598%
United Kingdom	GB_SA	3.7598%
United Kingdom	GB_SE	3.2426%
United Kingdom	GB_SG	3.7598%
United Kingdom	GB_SK	3.7598%
United Kingdom	GB_SL	3.7598%
United Kingdom	GB_SM	1.2533%
United Kingdom	GB_SN	3.7598%
United Kingdom	GB_SO	3.7598%
United Kingdom	GB_SP	3.7598%
United Kingdom	GB_SR	3.7598%
United Kingdom	GB_SS	1.2533%
United Kingdom	GB_ST	3.7598%
United Kingdom	GB_SW	3.7598%
United Kingdom	GB_SY	3.7598%
United Kingdom	GB_TA	3.7598%
United Kingdom	GB_TD	1.2533%
United Kingdom	GB_TF	3.7598%
United Kingdom	GB_TN	3.7598%
United Kingdom	GB_TQ	1.2533%
United Kingdom	GB_TR	1.2533%
United Kingdom	GB_TS	3.7598%
United Kingdom	GB_TW	3.7598%
United Kingdom	GB_UB	3.7598%
United Kingdom	GB_W	1.2533%
United Kingdom	GB_WA	3.7598%
United Kingdom	GB_WC	3.7598%
United Kingdom	GB_WD	3.7598%
United Kingdom	GB_WF	1.2533%
United Kingdom	GB_WN	3.7598%
United Kingdom	GB_WR	3.7598%
United Kingdom	GB_WS	3.7598%
United Kingdom	GB_WV	3.7598%
United Kingdom	GB_YO	1.2533%
United Kingdom	GB_ZE	1.6057%
Austria	All(1)	6.4342%
Switzerland	All(1)	4.3990%
Czech Republic	All(1)	3.4017%
Norway	All(1)	6.4766%
Poland	All(1)	4.0821%
Sweden	All(1)	4.4520%
Slovakia	All(1)	3.4017%

Modeled Annual Exceedance Probability	Modeled Loss Period Index Value (index points) - Base Case[1][2]
3.33%	1,572.0
3.34%	1,569.4
3.35%	1,568.7
3.36%	1,567.7
3.37%	1,561.9
3.38%	1,559.1
3.39%	1,559.1
3.40%	1,557.6
3.41%	1,556.6
3.42%	1,555.8
3.43%	1,555.3
3.44%	1,552.8
3.45%	1,548.0
3.46%	1,542.6
3.47%	1,530.3
3.48%	1,526.8
3.49%	1,520.3
3.50%	1,518.6
3.51%	1,508.4
3.52%	1,508.1
3.53%	1,502.5
3.54%	1,493.5
3.55%	1,488.1
3.56%	1,488.0
3.57%	1,485.4
3.58%	1,482.2
3.59%	1,480.1
3.60%	1,479.5
3.61%	1,479.2
3.62%	1,477.1
3.63%	1,477.1
3.64%	1,475.7
3.65%	1,473.7
3.66%	1,472.7
3.67%	1,465.7
3.68%	1,462.2
3.69%	1,460.4
3.70%	1,454.7
3.71%	1,453.9
3.72%	1,447.2
3.73%	1,446.9
3.74%	1,445.5
3.75%	1,438.8
3.76%	1,436.8
3.77%	1,436.7
3.78%	1,435.7
3.79%	1,434.0
3.80%	1,430.6
3.81%	1,429.2
3.82%	1,425.7
3.83%	1,421.4
3.84%	1,421.0
3.85%	1,421.0
3.86%	1,418.5
3.87%	1,418.3
3.88%	1,414.0
3.89%	1,413.1
3.90%	1,412.6
3.91%	1,410.3
3.92%	1,402.4
3.93%	1,400.5
3.94%	1,400.4
3.95%	1,399.6
3.96%	1,399.4
3.97%	1,397.3
3.98%	1,395.9
3.99%	1,395.2
4.00%	1,394.3
4.01%	1,393.7
4.02%	1,392.5
4.03%	1,391.7
4.04%	1,390.6
4.05%	1,388.0
4.06%	1,382.1
4.07%	1,380.0
4.08%	1,374.5
4.09%	1,373.2
4.10%	1,373.1
4.11%	1,370.7
4.12%	1,370.7
4.13%	1,367.7
4.14%	1,365.6
4.15%	1,360.7
4.16%	1,359.5
4.17%	1,359.4
4.18%	1,359.0
4.19%	1,358.8
4.20%	1,357.2
4.21%	1,354.6

[1] Modeled Loss Period Index Value is the sum of the Modeled Event Index Value for all events in any given simulated year. Modeled Event Index Value is after application of the applicable Initial Index Event Deductible and after the application of the Initial Named Storm Payout Factors and Initial Earthquake Payout Factors.
[2] Base case statistics are generated using AIR's standard hurricane catalog.

4.22%	1,354.2
4.23%	1,353.9
4.24%	1,349.5
4.25%	1,349.4
4.26%	1,348.4
4.27%	1,347.6
4.28%	1,347.2
4.29%	1,346.0
4.30%	1,342.7
4.31%	1,342.0
4.32%	1,340.2
4.33%	1,338.1
4.34%	1,337.4
4.35%	1,337.2
4.36%	1,336.9
4.37%	1,330.5
4.38%	1,329.6
4.39%	1,327.3
4.40%	1,326.5
4.41%	1,324.5
4.42%	1,316.5
4.43%	1,313.9
4.44%	1,311.0
4.45%	1,310.1
4.46%	1,307.1
4.47%	1,305.1
4.48%	1,303.6
4.49%	1,297.3
4.50%	1,291.0
4.51%	1,290.7
4.52%	1,287.1
4.53%	1,287.0
4.54%	1,285.9
4.55%	1,283.7
4.56%	1,283.0
4.57%	1,281.4
4.58%	1,277.8
4.59%	1,276.8
4.60%	1,276.2
4.61%	1,273.6
4.62%	1,270.6
4.63%	1,270.0
4.64%	1,269.7
4.65%	1,266.5
4.66%	1,266.0
4.67%	1,263.0
4.68%	1,262.4
4.69%	1,261.7
4.70%	1,260.3
4.71%	1,257.6
4.72%	1,257.2
4.73%	1,257.0
4.74%	1,256.7
4.75%	1,255.0
4.76%	1,253.9
4.77%	1,248.3
4.78%	1,247.5
4.79%	1,245.7
4.80%	1,245.1
4.81%	1,243.8
4.82%	1,242.3
4.83%	1,241.8
4.84%	1,240.1
4.85%	1,239.4
4.86%	1,237.5
4.87%	1,237.3
4.88%	1,236.3
4.89%	1,233.3
4.90%	1,224.0
4.91%	1,223.3
4.92%	1,223.1
4.93%	1,219.9
4.94%	1,217.9
4.95%	1,213.5
4.96%	1,213.0
4.97%	1,211.7
4.98%	1,207.2
4.99%	1,198.8
5.00%	1,198.4
5.01%	1,197.2
5.02%	1,197.0
5.03%	1,196.0
5.04%	1,194.3
5.05%	1,192.9
5.06%	1,192.1
5.07%	1,190.6
5.08%	1,189.5
5.09%	1,188.9
5.10%	1,188.1
5.11%	1,183.4
5.12%	1,181.5
5.13%	1,180.2
5.14%	1,176.4

5.15%	1,175.9
5.16%	1,175.3
5.17%	1,171.9
5.18%	1,171.2
5.19%	1,170.5
5.20%	1,169.4
5.21%	1,166.4
5.22%	1,164.5
5.23%	1,161.2
5.24%	1,160.4
5.25%	1,157.8
5.26%	1,156.9
5.27%	1,156.4
5.28%	1,156.3
5.29%	1,154.3
5.30%	1,147.4
5.31%	1,147.2
5.32%	1,146.8
5.33%	1,146.2
5.34%	1,145.5
5.35%	1,138.4
5.36%	1,137.8
5.37%	1,134.5
5.38%	1,133.2
5.39%	1,132.3
5.40%	1,130.5
5.41%	1,129.8
5.42%	1,129.4
5.43%	1,129.3
5.44%	1,126.5
5.45%	1,126.0
5.46%	1,125.0
5.47%	1,123.9
5.48%	1,122.7
5.49%	1,119.9
5.50%	1,116.4
5.51%	1,116.3
5.52%	1,115.2
5.53%	1,114.1
5.54%	1,113.7
5.55%	1,108.6
5.56%	1,107.3
5.57%	1,106.1
5.58%	1,103.3
5.59%	1,102.4
5.60%	1,101.9
5.61%	1,101.8
5.62%	1,101.1
5.63%	1,100.4
5.64%	1,099.7
5.65%	1,095.1
5.66%	1,094.2
5.67%	1,093.5
5.68%	1,092.0
5.69%	1,091.3
5.70%	1,091.0
5.71%	1,090.6
5.72%	1,083.0
5.73%	1,082.6
5.74%	1,076.3
5.75%	1,074.9
5.76%	1,074.9
5.77%	1,066.9
5.78%	1,065.9
5.79%	1,065.8
5.80%	1,065.3
5.81%	1,063.1
5.82%	1,060.7
5.83%	1,059.2
5.84%	1,058.4
5.85%	1,058.0
5.86%	1,057.8
5.87%	1,056.9
5.88%	1,055.7
5.89%	1,055.5
5.90%	1,052.7
5.91%	1,050.0
5.92%	1,049.3
5.93%	1,048.3
5.94%	1,047.6
5.95%	1,046.4
5.96%	1,045.9
5.97%	1,045.8
5.98%	1,044.5
5.99%	1,043.7
6.00%	1,043.6
6.01%	1,043.3
6.02%	1,043.2
6.03%	1,042.8
6.04%	1,042.0
6.05%	1,041.3
6.06%	1,041.2
6.07%	1,037.1

6.08%	1,037.0
6.09%	1,035.6
6.10%	1,033.9
6.11%	1,029.8
6.12%	1,029.2
6.13%	1,029.0
6.14%	1,026.0
6.15%	1,025.6
6.16%	1,025.5
6.17%	1,024.7
6.18%	1,024.6
6.19%	1,022.6
6.20%	1,021.2
6.21%	1,019.5
6.22%	1,019.3
6.23%	1,017.8
6.24%	1,017.1
6.25%	1,016.8
6.26%	1,015.6
6.27%	1,015.4
6.28%	1,013.7
6.29%	1,012.4
6.30%	1,012.4
6.31%	1,012.2
6.32%	1,010.0
6.33%	1,009.3
6.34%	1,006.3
6.35%	1,002.4
6.36%	1,001.0
6.37%	1,000.3
6.38%	999.0
6.39%	998.4
6.40%	996.7
6.41%	996.1
6.42%	995.6
6.43%	995.0
6.44%	993.7
6.45%	992.3
6.46%	992.3
6.47%	991.3
6.48%	990.4
6.49%	990.1
6.50%	989.5
6.51%	989.3
6.52%	985.0
6.53%	985.0
6.54%	982.3
6.55%	982.2
6.56%	981.3
6.57%	980.3
6.58%	978.9
6.59%	976.0
6.60%	976.0
6.61%	974.2
6.62%	972.2
6.63%	970.9
6.64%	966.5
6.65%	963.1
6.66%	961.1
6.67%	957.3
6.68%	955.7
6.69%	953.6
6.70%	951.9
6.71%	951.9
6.72%	951.8
6.73%	951.7
6.74%	951.1
6.75%	948.8
6.76%	948.1
6.77%	946.8
6.78%	945.7
6.79%	943.6
6.80%	942.0
6.81%	941.4
6.82%	941.2
6.83%	940.5
6.84%	939.1
6.85%	938.4
6.86%	937.8
6.87%	935.9
6.88%	934.4
6.89%	933.8
6.90%	933.3
6.91%	932.5
6.92%	931.1
6.93%	929.6
6.94%	929.6
6.95%	927.9
6.96%	927.8
6.97%	926.4
6.98%	925.2
6.99%	924.6
7.00%	924.4

7.01%	924.2
7.02%	918.7
7.03%	917.9
7.04%	917.2
7.05%	917.1
7.06%	916.7
7.07%	916.7
7.08%	915.2
7.09%	914.2
7.10%	912.7
7.11%	911.1
7.12%	910.3
7.13%	909.5
7.14%	909.3
7.15%	909.2
7.16%	908.2
7.17%	907.6
7.18%	906.9
7.19%	906.7
7.20%	905.3
7.21%	904.7
7.22%	904.4
7.23%	901.5
7.24%	901.4
7.25%	901.3
7.26%	901.1
7.27%	900.0
7.28%	899.3
7.29%	897.5
7.30%	895.5
7.31%	895.3
7.32%	893.0
7.33%	890.1
7.34%	889.1
7.35%	886.1
7.36%	885.6
7.37%	885.2
7.38%	882.4
7.39%	881.0
7.40%	878.9
7.41%	878.8
7.42%	877.6
7.43%	876.2
7.44%	873.9
7.45%	873.3
7.46%	869.7
7.47%	868.0
7.48%	867.7
7.49%	866.7
7.50%	864.7
7.51%	864.3
7.52%	863.7
7.53%	863.0
7.54%	862.8
7.55%	862.0
7.56%	859.0
7.57%	859.0
7.58%	858.4
7.59%	858.3
7.60%	857.3
7.61%	854.6
7.62%	854.4
7.63%	853.6
7.64%	853.1
7.65%	850.5
7.66%	849.3
7.67%	848.7
7.68%	848.6

Modeled Annual Exceedance Probability	Modeled Loss Period Index Value (index points) - Sensitivity Case[1][2]
3.58%	1,572.0
3.59%	1,571.7
3.60%	1,569.4
3.61%	1,568.7
3.62%	1,567.7
3.63%	1,565.2
3.64%	1,561.9
3.65%	1,559.1
3.66%	1,559.1
3.67%	1,557.6
3.68%	1,556.6
3.69%	1,555.8
3.70%	1,555.3
3.71%	1,552.8
3.72%	1,548.6
3.73%	1,548.0
3.74%	1,542.6
3.75%	1,536.4
3.76%	1,530.3
3.77%	1,526.8
3.78%	1,520.3
3.79%	1,518.6
3.80%	1,508.4
3.81%	1,508.1
3.82%	1,502.5
3.83%	1,495.9
3.84%	1,493.5
3.85%	1,488.1
3.86%	1,488.0
3.87%	1,487.4
3.88%	1,485.4
3.89%	1,482.5
3.90%	1,480.1
3.91%	1,479.5
3.92%	1,479.2
3.93%	1,477.1
3.94%	1,477.1
3.95%	1,473.7
3.96%	1,472.7
3.97%	1,462.2
3.98%	1,460.6
3.99%	1,460.4
4.00%	1,454.7
4.01%	1,453.9
4.02%	1,447.2
4.03%	1,446.9
4.04%	1,445.5
4.05%	1,445.4
4.06%	1,438.8
4.07%	1,436.8
4.08%	1,436.7
4.09%	1,435.7
4.10%	1,434.0
4.11%	1,431.8
4.12%	1,430.6
4.13%	1,429.2
4.14%	1,428.8
4.15%	1,425.7
4.16%	1,422.2
4.17%	1,421.4
4.18%	1,421.0
4.19%	1,421.0
4.20%	1,418.3
4.21%	1,414.0
4.22%	1,412.6
4.23%	1,412.0
4.24%	1,410.3
4.25%	1,402.4
4.26%	1,400.5
4.27%	1,400.4
4.28%	1,399.6
4.29%	1,399.4
4.30%	1,397.3
4.31%	1,395.9
4.32%	1,395.2
4.33%	1,394.3
4.34%	1,393.7
4.35%	1,392.5
4.36%	1,391.7
4.37%	1,390.6
4.38%	1,388.0
4.39%	1,383.4
4.40%	1,382.1
4.41%	1,374.5
4.42%	1,373.2
4.43%	1,373.1
4.44%	1,370.7
4.45%	1,370.7
4.46%	1,367.7

[1] Modeled Loss Period Index Value is the sum of the Modeled Event Index Value for all events in any given simulated year. Modeled Event Index Value is after application of the applicable Initial Index Event Deductible and after the application of the Initial Named Storm Payout Factors and Initial Earthquake Payout Factors.
[2] Sensitivity case statistics are generated using AIR's Warm Sea Surface Temperature Conditioned Catalog.

4.47%	1,365.6
4.48%	1,361.8
4.49%	1,360.6
4.50%	1,360.4
4.51%	1,359.4
4.52%	1,359.0
4.53%	1,358.8
4.54%	1,357.2
4.55%	1,354.8
4.56%	1,354.6
4.57%	1,354.2
4.58%	1,353.9
4.59%	1,351.9
4.60%	1,350.6
4.61%	1,349.5
4.62%	1,349.4
4.63%	1,348.4
4.64%	1,347.2
4.65%	1,346.0
4.66%	1,344.5
4.67%	1,342.7
4.68%	1,342.0
4.69%	1,340.2
4.70%	1,338.1
4.71%	1,337.4
4.72%	1,337.2
4.73%	1,336.9
4.74%	1,330.5
4.75%	1,329.6
4.76%	1,327.3
4.77%	1,326.5
4.78%	1,324.5
4.79%	1,313.9
4.80%	1,312.2
4.81%	1,311.0
4.82%	1,310.1
4.83%	1,307.1
4.84%	1,305.1
4.85%	1,303.9
4.86%	1,303.6
4.87%	1,302.1
4.88%	1,297.3
4.89%	1,291.8
4.90%	1,291.3
4.91%	1,291.0
4.92%	1,290.7
4.93%	1,289.4
4.94%	1,287.1
4.95%	1,287.0
4.96%	1,286.8
4.97%	1,286.0
4.98%	1,283.7
4.99%	1,283.0
5.00%	1,281.4
5.01%	1,279.1
5.02%	1,277.8
5.03%	1,276.8
5.04%	1,276.6
5.05%	1,276.2
5.06%	1,273.6
5.07%	1,270.6
5.08%	1,270.0
5.09%	1,269.7
5.10%	1,266.5
5.11%	1,266.0
5.12%	1,263.0
5.13%	1,262.9
5.14%	1,262.4
5.15%	1,261.7
5.16%	1,260.3
5.17%	1,257.6
5.18%	1,256.7
5.19%	1,255.0
5.20%	1,253.9
5.21%	1,248.3
5.22%	1,247.5
5.23%	1,245.7
5.24%	1,245.1
5.25%	1,244.8
5.26%	1,243.8
5.27%	1,242.3
5.28%	1,241.8
5.29%	1,240.3
5.30%	1,240.2
5.31%	1,240.1
5.32%	1,239.4
5.33%	1,237.5
5.34%	1,237.3
5.35%	1,233.3
5.36%	1,229.1
5.37%	1,223.3
5.38%	1,223.1
5.39%	1,219.9

5.40%	1,217.9
5.41%	1,213.5
5.42%	1,213.0
5.43%	1,212.1
5.44%	1,211.7
5.45%	1,207.2
5.46%	1,207.1
5.47%	1,202.9
5.48%	1,201.8
5.49%	1,198.8
5.50%	1,197.2
5.51%	1,197.0
5.52%	1,194.3
5.53%	1,192.9
5.54%	1,192.1
5.55%	1,190.6
5.56%	1,189.5
5.57%	1,188.9
5.58%	1,188.1
5.59%	1,183.4
5.60%	1,181.5
5.61%	1,180.8
5.62%	1,180.2
5.63%	1,180.0
5.64%	1,176.4
5.65%	1,175.3
5.66%	1,171.9
5.67%	1,171.2
5.68%	1,170.5
5.69%	1,169.4
5.70%	1,166.4
5.71%	1,165.3
5.72%	1,164.5
5.73%	1,164.5
5.74%	1,163.6
5.75%	1,161.4
5.76%	1,161.2
5.77%	1,160.4
5.78%	1,159.1
5.79%	1,159.1
5.80%	1,157.8
5.81%	1,156.9
5.82%	1,156.4
5.83%	1,156.3
5.84%	1,154.3
5.85%	1,150.7
5.86%	1,147.4
5.87%	1,147.2
5.88%	1,146.2
5.89%	1,145.5
5.90%	1,139.2
5.91%	1,138.4
5.92%	1,138.4
5.93%	1,134.5
5.94%	1,133.2
5.95%	1,132.3
5.96%	1,129.8
5.97%	1,129.4
5.98%	1,129.3
5.99%	1,126.5
6.00%	1,126.0
6.01%	1,125.0
6.02%	1,123.9
6.03%	1,122.7
6.04%	1,119.9
6.05%	1,117.5
6.06%	1,116.4
6.07%	1,116.3
6.08%	1,115.2
6.09%	1,114.1
6.10%	1,113.7
6.11%	1,110.0
6.12%	1,107.3
6.13%	1,106.1
6.14%	1,103.3
6.15%	1,102.4
6.16%	1,102.0
6.17%	1,101.9
6.18%	1,101.1
6.19%	1,100.4
6.20%	1,100.4
6.21%	1,099.7
6.22%	1,095.1
6.23%	1,094.2
6.24%	1,093.5
6.25%	1,092.0
6.26%	1,091.3
6.27%	1,091.0
6.28%	1,090.6
6.29%	1,083.0
6.30%	1,082.6
6.31%	1,076.3
6.32%	1,074.9

6.33%	1,074.9
6.34%	1,073.3
6.35%	1,066.9
6.36%	1,065.9
6.37%	1,065.8
6.38%	1,065.3
6.39%	1,064.1
6.40%	1,063.1
6.41%	1,060.7
6.42%	1,059.9
6.43%	1,059.2
6.44%	1,058.0
6.45%	1,057.8
6.46%	1,056.9
6.47%	1,055.7
6.48%	1,055.5
6.49%	1,052.5
6.50%	1,049.3
6.51%	1,048.3
6.52%	1,047.6
6.53%	1,046.4
6.54%	1,045.9
6.55%	1,045.8
6.56%	1,044.5
6.57%	1,043.7
6.58%	1,043.6
6.59%	1,042.8
6.60%	1,042.8
6.61%	1,042.0
6.62%	1,041.3
6.63%	1,041.2
6.64%	1,037.1
6.65%	1,037.0
6.66%	1,035.6
6.67%	1,030.8
6.68%	1,029.8
6.69%	1,029.2
6.70%	1,029.0
6.71%	1,026.0
6.72%	1,025.6
6.73%	1,024.7
6.74%	1,024.6
6.75%	1,022.6
6.76%	1,021.2
6.77%	1,019.5
6.78%	1,019.3
6.79%	1,018.4
6.80%	1,017.8
6.81%	1,017.5
6.82%	1,017.1
6.83%	1,016.9
6.84%	1,016.8
6.85%	1,015.6
6.86%	1,015.4
6.87%	1,015.3
6.88%	1,013.7
6.89%	1,012.4
6.90%	1,012.4
6.91%	1,012.2
6.92%	1,010.0
6.93%	1,009.9
6.94%	1,009.3
6.95%	1,006.3
6.96%	1,005.8
6.97%	1,001.0
6.98%	999.2
6.99%	999.0
7.00%	998.4
7.01%	996.7
7.02%	996.1
7.03%	995.6
7.04%	995.0
7.05%	993.7
7.06%	993.3
7.07%	992.3
7.08%	992.3
7.09%	991.3
7.10%	990.4
7.11%	990.1
7.12%	989.3
7.13%	985.0
7.14%	985.0
7.15%	982.3
7.16%	982.2
7.17%	981.3
7.18%	981.0
7.19%	980.3
7.20%	979.5
7.21%	978.9
7.22%	978.3
7.23%	977.7
7.24%	976.9
7.25%	976.0

7.26%	974.2
7.27%	972.3
7.28%	972.2
7.29%	970.9
7.30%	969.4
7.31%	968.7
7.32%	966.5
7.33%	966.5
7.34%	965.5
7.35%	964.0
7.36%	963.1
7.37%	961.1
7.38%	957.3
7.39%	955.7
7.40%	955.2
7.41%	953.6
7.42%	952.3
7.43%	951.9
7.44%	951.8
7.45%	951.7
7.46%	951.1
7.47%	948.8
7.48%	948.1
7.49%	945.7
7.50%	943.6
7.51%	942.0
7.52%	941.2
7.53%	940.5
7.54%	939.1
7.55%	938.4
7.56%	937.8
7.57%	935.9
7.58%	934.4
7.59%	933.3
7.60%	932.5
7.61%	932.2
7.62%	931.1
7.63%	929.6
7.64%	928.7
7.65%	927.9
7.66%	927.8
7.67%	925.4
7.68%	925.2
7.69%	924.6
7.70%	924.4
7.71%	924.2
7.72%	923.8
7.73%	918.7
7.74%	917.9
7.75%	917.2
7.76%	916.7
7.77%	916.7
7.78%	916.3
7.79%	915.8
7.80%	915.0
7.81%	914.2
7.82%	912.7
7.83%	911.5
7.84%	911.1
7.85%	910.3
7.86%	909.5
7.87%	909.3
7.88%	909.2
7.89%	909.2
7.90%	908.3
7.91%	908.2
7.92%	906.9
7.93%	906.7
7.94%	904.7
7.95%	904.4
7.96%	901.5
7.97%	901.4
7.98%	901.3
7.99%	901.1
8.00%	900.2
8.01%	900.0
8.02%	899.4
8.03%	899.3
8.04%	897.5
8.05%	895.5
8.06%	895.3
8.07%	893.0
8.08%	890.1
8.09%	889.1
8.10%	887.3
8.11%	886.1
8.12%	885.6
8.13%	882.4
8.14%	881.0
8.15%	878.9
8.16%	878.8
8.17%	877.6
8.18%	876.2

8.19%	873.9
8.20%	873.3
8.21%	869.7
8.22%	869.6
8.23%	868.0
8.24%	867.7
8.25%	864.7
8.26%	864.4
8.27%	864.3
8.28%	863.8
8.29%	863.8
8.30%	863.7
8.31%	863.0
8.32%	862.8
8.33%	862.0
8.34%	859.0
8.35%	859.0
8.36%	858.4
8.37%	858.3
8.38%	857.3
8.39%	856.8
8.40%	854.6
8.41%	853.8
8.42%	853.6
8.43%	852.4
8.44%	849.7
8.45%	849.3
8.46%	848.7
8.47%	848.6

Modeled Annual Exceedance Probability	Modeled Loss Period Index Value (index points)[1]
0.18%	1,703.9
0.19%	1,665.7
0.20%	1,644.5
0.21%	1,637.4
0.22%	1,606.8
0.23%	1,602.9
0.24%	1,600.1
0.25%	1,595.8
0.26%	1,558.6
0.27%	1,528.0
0.28%	1,524.8
0.29%	1,500.3
0.30%	1,482.5
0.31%	1,474.6
0.32%	1,364.5
0.33%	1,363.0
0.34%	1,329.6
0.35%	1,317.1
0.36%	1,316.3
0.37%	1,309.5
0.38%	1,267.4
0.39%	1,249.3
0.40%	1,247.6
0.41%	1,234.4
0.42%	1,232.4
0.43%	1,216.9
0.44%	1,213.9
0.45%	1,208.9
0.46%	1,202.4
0.47%	1,198.8
0.48%	1,193.5
0.49%	1,187.2
0.50%	1,178.5
0.51%	1,178.3
0.52%	1,177.4
0.53%	1,176.5
0.54%	1,169.1
0.55%	1,168.1
0.56%	1,168.0
0.57%	1,153.4
0.58%	1,136.2
0.59%	1,132.1
0.60%	1,121.6
0.61%	1,119.7
0.62%	1,118.5
0.63%	1,113.6
0.64%	1,109.3
0.65%	1,089.2
0.66%	1,080.9
0.67%	1,078.3
0.68%	1,073.1
0.69%	1,067.2
0.70%	1,064.2
0.71%	1,059.6
0.72%	1,057.9
0.73%	1,053.1
0.74%	1,051.2
0.75%	1,043.9
0.76%	1,040.9
0.77%	1,032.2
0.78%	1,030.6
0.79%	1,030.1
0.80%	1,021.1
0.81%	1,010.6
0.82%	1,008.1
0.83%	1,005.9
0.84%	1,005.2
0.85%	995.0
0.86%	994.6
0.87%	979.4
0.88%	970.3

[1] Modeled Loss Period Index Value is the sum of the Modeled Event Index Value for all events in any given simulated year. Modeled Event Index Value is after application of the applicable Initial Index Event Deductible and after the application of the Initial Europe Windstorm Payout Factors.

ANNEX D
DESCRIPTION OF ISO, PCS AND THE LICENSED PROPERTY

PCS DATA[3]

Background of PCS and ISO

The following sets forth general information regarding the PCS division ("**PCS**") of ISO Services, Inc. ("**ISO**") and certain historical insured property loss estimates made by PCS or its predecessors. This information has been provided by ISO at the request of the Issuer.

ISO is a Delaware stock corporation organised on 25 September 1997. On 1 October 1997, ISO purchased the assets of American Insurance Services Group, Inc. ("**AISG**"), which was a not-for-profit Delaware corporation providing services to the property/casualty insurance industry since 1984. PCS, formerly a division of AISG, is a division of ISO. ISO is a wholly-owned subsidiary of Insurance Services Office, Inc., a for profit Delaware stock corporation that is the leading provider of information about property/casualty insurance, including statistical information, actuarial analyses, standardised policy language, and a variety of insurance rating and underwriting services. In October 2009, Insurance Services Office, Inc. became a wholly owned subsidiary of Verisk Analytics, Inc. ("**Verisk**"). Verisk completed its initial public offering on 7 October 2009 and is now publicly traded on NASDAQ under the ticker symbol "VRSK."

General

PCS performs a variety of services of interest to the property/casualty industry, principally relating to catastrophes affecting the industry. PCS services include weather monitoring, catastrophe identification, monitoring judicial decisions relating to property insurance issues, and monitoring proposed and actual regulations relating to property claims handling. PCS provides a series of bulletins, monthly previews, reports and news to its subscribers concerning the foregoing information and other issues of interest to the property/casualty industry.

From its inception in 1965 and continuing under the auspices of ISO, PCS has maintained a program under which it designates and numbers sequentially as catastrophes various natural or man-made events and prepares estimates of total insured property damage believed to have been caused by each such event. A similar program was carried out by predecessor organisations, the National Board of Fire Underwriters and American Insurance Association, from 1949 until the establishment of AISG. In 2010, PCS launched the PCS Canada® service for the dissemination of estimates and other catastrophe information pertaining to Canada. In 2015, PCS launched the PCS TurkeyTM service for the dissemination of estimates and other catastrophe information pertaining to the Republic of Turkey. In 2017, PCS launched the PCS Energy & Marine™ service for the dissemination of estimates and other information pertaining to man-made, non-catastrophic loss events relating to the offshore energy and ocean marine sectors, the PCS Cyber™ service for the dissemination of estimates and other information pertaining to man-made, non-catastrophic affirmative cyber loss event, and the PCS Global Terror™ Service for the dissemination of estimates and other information pertaining to terror loss events. PCS has a staff of eight professionals with experience of up to 20 years and one support person. The loss of any of these professionals could have an adverse impact on PCS' ability to develop such estimates.

Catastrophe Identification

When PCS, in its sole judgment, estimates that a natural or man made event within the United States, the U.S. Virgin Islands, or Puerto Rico (the "**US Service Area**") is likely to cause USD 25,000,000 or more in total insured property losses, within Canada (the "**Canada Service Area**") is likely to cause CAD 25,000,000 or more in total insured property losses and, in each case, determines that such event is likely to affect a significant number of policyholders and property/casualty insurance companies, PCS identifies the event as a catastrophe and assigns it a catastrophe serial number ("**PCS Identified Catastrophe**"). The types of insured "perils" that have caused insured losses deemed catastrophic by PCS and its predecessors include, without limitation, tornadoes, tropical storms, hurricanes, storms, floods, ice and snow, freezing, wind, water damage, hail, earthquakes, fires, explosions, volcanic eruptions and civil disorders. For the US Service Area only, ISO applies a threshold of USD 5,000,000 for evaluating whether a specific terrorism event or possible related set of events is a PCS Identified Catastrophe. For the US Service Area only, there

[3] The following description has been provided to the Issuer by PCS. None of the Issuer, the Risk Transferor or the Initial Purchaser has undertaken any investigation to confirm its accuracy or completeness.

may also be occasions where ISO will assign a specific serial number to an extreme loss event involving only losses insured under workers' compensation insurance coverages, and not involving insured property.

For the US Service Area, prior to 1 January 2016, PCS designated PCS Identified Catastrophes using a two-digit catastrophe serial number from 11 through 99. Beginning on 1 January 2016, PCS implemented a four-digit catastrophe serial number for PCS Identified Catastrophes occurring in the US Service Area. The four-digit catastrophe serial number consists of the two-digit year followed by the two-digit catastrophe number (from 11 to 99 each year). This new coding format does not apply to PCS Identified Catastrophes that occurred prior to 1 January 2016. PCS also uses the new coding format for the Turkey Service Area, while continuing to use a two digit serial number format for the Canada Service Area.

The assigned serial number is generally released to subscribers within 24 48 hours after the occurrence of a PCS Identified Catastrophe.

The designation of an official date(s) of occurrence of a PCS Identified Catastrophe is also a matter within PCS' judgment and sole discretion. In making these judgments, PCS may consider factors such as meteorological, seismological and/or other scientific data, as well as information provided by national and local authorities as it deems appropriate in the particular circumstances.

Geographic Areas

In defining PCS Identified Catastrophes, PCS includes only those events judged to have occurred within the US Service Area and the Canada Service Area. Those states or territories for the US Service Area, provinces or territories for the Canada Service Area, that, in PCS' judgment, were affected by a PCS Identified Catastrophe are identified in the Catastrophe Bulletin released to subscribers.

Additional states, provinces or territories, as applicable may be added to the defined PCS Identified Catastrophe in subsequent releases to subscribers if PCS determines that events, such as weather fronts, have continued to affect additional areas.

The designation of a geographic area or territories affected by a PCS Identified Catastrophe is also a matter within PCS' judgment and sole discretion. In making these judgments, PCS may consider factors such as meteorological, seismological and/or other scientific data, as well as information provided by national, provincial and local authorities or insurance industry sources, as it deems appropriate in the particular circumstances.

Insured Loss Estimates

In fashioning its estimates, PCS generally seeks to include losses covered under personal and commercial property insurance policies covering real property, contents, time element losses (so called "business interruption" and "additional living expense"), vehicles, boats and property insured under certain inland marine and specialty coverages. PCS' estimates also typically include amounts paid to insureds by state wind pools, joint underwriting associations and certain other residual market mechanisms (for instance, payments made by the California Earthquake Authority ("**CEA**") would be included). PCS loss estimates will include, as applicable, estimates of each line of business separately: personal property, commercial property, vehicle and, for the US Service Area only, workers' compensation. For the Canada Service Area, PCS provides estimates denominated in Canadian dollars.

In determining its estimate of insured property losses, PCS generally takes into account coverage limits, coinsurance, deductible clauses and other factors that may result in certain property losses not being eligible for insurance coverage. PCS' estimates also do not include damage to uninsured property, including uninsured publicly owned property and utilities; loss involving agriculture or aircraft; property in the US Service Area insured under the National Flood Insurance Program (NFIP[4]), write-your-own program or certain specialty lines (such as ocean marine); or loss adjustment expenses.

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[4] For US Service Area only, for events that PCS has identified as a PCS Identified Catastrophes, PCS has commenced reporting certain NFIP loss information reported to PCS by the NFIP comprising NFIP incurred losses and submitted claims. PCS reports the NFIP loss information as a separate category from the line of business estimates (auto, personal, commercial and workers compensation), but may include the NFIP loss information in the overall estimates of insured property damage believed to have been caused by a PCS Identified Catastrophe. PCS does not currently plan to designate events as PCS Identified Catastrophes on the basis of the NFIP loss information (whether

Because the scope of property/casualty coverage varies by insurance carrier, policy type, line of insurance, claims adjustment variation and also changes over time, there is a significant measure of imprecision and variability in determining whether any particular loss will be covered and thus should be included in overall estimations of insured industry property loss.

As a result of such imprecision, variability and the exclusions described above, as well as the inherently judgmental nature of the estimating process, PCS' estimates may be materially different from the actual insured property losses experienced by the industry.

Multiple Events

PCS also determines in its sole discretion whether various insured property losses occurring close in time to one another are to be considered the result of a single or multiple and separate PCS Identified Catastrophes.

In making this judgment with respect to hurricanes and tropical storms, PCS typically consolidates insured property loss estimates by reference to the names assigned to such storms by the U.S. National Hurricane Center for the US Service Area and the Canada Service Area and equivalent bodies and Canada Service Area, considering all resultant insured property losses to have been caused by a single PCS Identified Catastrophe.

In other cases, for instance when two separate weather fronts may cause insured property losses at or near the same time in the same geographic area, PCS' judgment may be more complex.

In determining whether one or more PCS Identified Catastrophes have occurred, PCS staff may, in the exercise of their judgment, analyze the geographic and temporal proximity of the events; review meteorological, seismological and other scientific data concerning the events; and/or consider factors such as an inability on the part of field adjusters to distinguish the damage caused by the various events.

Preliminary Loss Estimates

Typically, within 10 to 14 calendar days after the occurrence of a PCS Identified Catastrophe, PCS compiles the loss estimates reported by participating insurers, and calculates and releases to subscribers a preliminary estimate ("**Preliminary Estimate**") of anticipated industry wide insured losses. In certain relatively rare circumstances, PCS may prepare and release in advance of the Preliminary Estimate certain aggregate components of such Preliminary Estimate. For instance, it released the estimated total losses for Hurricane Andrew in the state of Florida some days before the overall Preliminary Estimate for that particular PCS Identified Catastrophe (which also included the state of Louisiana) was released.

Resurvey Loss Estimates

If PCS considers it appropriate it may conduct additional surveys of property/casualty insurance companies from time to time concerning insured property losses resulting from a PCS Identified Catastrophe and, if PCS deems it appropriate in the exercise of its judgment, it may issue adjusted estimates (each, a "**Resurvey Estimate**"). PCS generally resurveys PCS Identified Catastrophes that, based upon its Preliminary Estimate, appear to have caused more than USD 250 million of insured damage in the US Service Area, or if PCS considers appropriate, or for every event in the Canada Service Area and the Turkey Service Area, or that because of their infrequency or other unusual characteristics appear to PCS to warrant additional inquiry. PCS usually releases the initial Resurvey Estimate to subscribers approximately 60 calendar days after the Preliminary Estimate is issued. PCS may continue the resurvey process and publish additional Resurvey Estimates approximately every 60 calendar days after the then previous Preliminary Estimate or Resurvey Estimate until it believes that the industry insured loss has been reasonably approximated.

Generally, PCS completes such Resurvey Estimates and releases a final Resurvey Estimate to subscribers within six months of the occurrence of a PCS Identified Catastrophe. However, the resurvey process could last for a longer period in connection with certain PCS Identified Catastrophes where the amount and type of insured losses may be relatively more difficult to estimate or become known more slowly than usual. For example, PCS did not disseminate its final insured property loss estimate for the 1994 Northridge, California earthquake until approximately 20 months after the event. Resurvey Estimates may result (and

alone or in combination with information from other sources) even if such NFIP loss information may be included in the overall estimates of insured property damage.

have resulted historically) in the then previous Preliminary Estimate or Resurvey Estimate being adjusted upward or downward. However, for severe events, like Hurricane Katrina, the time periods between Resurvey Estimates may be extended for 120 calendar days.

Loss Estimate Reporting

Preliminary Estimates and Resurvey Estimates are officially disseminated by PCS to PCS subscribers via ISOnet PCS for the US Service Area and PCS Canada® for the Canada Service Area with limited distribution by electronic mail or facsimile transmission. In addition to publishing Preliminary Estimates and Resurvey Estimates, PCS also may release to subscribers via ISOnet for the US Service Area and PCS Canada® for the Canada Service Area a variety of textual reports, bulletins and updates regarding PCS Identified Catastrophes. ISO makes subscriptions to ISOnet PCS and PCS Canada® available to any organisation or individual seeking such subscription for permitted purposes at then current subscription rates. Certain of PCS' other electronic services are available only to insurance companies and certain other organisations and are not available to individuals or other non insurance industry organisations.

Methodology

PCS' methodology for estimating the insured property losses resulting from a PCS Identified Catastrophe is highly dependent on the exercise of the professional judgment of PCS' staff and varies significantly depending on the nature of the PCS Identified Catastrophe under consideration. PCS staff typically undertakes one or more of the following steps as they deem appropriate in the exercise of their judgment in preparing an insured property loss estimate with respect to a PCS Identified Catastrophe for the property/casualty industry as a whole:

- survey of a number of insurers, agents and adjusters to ascertain actual and projected loss and claim experiences for individual reporting property/casualty insurers (PCS endeavors to preserve the confidentiality of information reported by individual insurers, releasing only industry wide or other aggregated estimates to subscribers or others);

- review of market share data from various sources for each affected state to identify the position of one insurance company relative to another in an effort to evaluate and extrapolate from reported data in light of possible variations in insurer coverage within a specific state and by type of coverage (for example, homeowner versus commercial writings);

- limited inspection, on the ground or occasionally by means of a fly over, of the geographic areas where a PCS Identified Catastrophe has occurred to develop information regarding the types and estimated rate of damage and average size loss for various types of buildings in the affected geographic area;

- informal interview of a small number of selected affected homeowners, local agents and Federal Emergency Management Agency personnel and other authorities; and

- comparison of certain data gathered through insurer, agent, adjuster and on site surveys with data in ISO's proprietary database for the US Service Area, the National Insurance Risk Profile, which contains an estimated inventory of buildings and insured vehicles in counties and zip code areas throughout the United States, derived in part from U.S. census data and state motor vehicle data. The database is used to evaluate data gathered through insurer, agent, adjuster and on site surveys. This database is not used for estimates of insured loss in the Canada Service Area.

All insurance companies and individual agents and adjusters that participate in PCS' surveys do so voluntarily. There is no industry, legal or contractual requirement that insurers, agents or adjusters participate in PCS data collection efforts. Moreover, PCS does not independently verify or audit the accuracy of reported loss data as part of its estimation methodology. Thus, there can be no assurance that the data provided to PCS has been, is or will be accurate, timely or complete. Moreover, since PCS does not simply sum up the loss data reported by those it surveys, but instead applies subjective judgments to and makes extrapolations from the data it has gathered and considered in the exercise of its judgment, ISO and PCS do not guarantee that the PCS estimates have accurately reflected actual industry insured property losses in the past or will do so in the future.

In order to preserve its flexibility to adjust to external circumstances and enhance the quality of its estimates, PCS may, in its sole discretion, change its general loss estimation methodology at any time and modify application of its methodology in connection with any particular catastrophe.

Named Storms

FULL LIST OF NAMED STORMS CAUSING INSURED PROPERTY LOSSES IN THE COVERED AREA (EXCLUDING CANADA) IDENTIFIED BY PCS AND ITS PREDECESSORS 1950-2019 (UP TO March 6, 2019)

Catastrophe (by PCS catastrophe serial number, date and hurricane name)				PCS Estimated Insured Total Property Losses[2] ($ in millions)[1]	PCS Estimated Insured Personal Property Losses ($ in millions)	PCS Estimated Insured Automobile Property Losses ($ in millions)	PCS Estimated Insured Commercial Property Losses ($ in millions)
#14	Oct 17-18	1950	Hurricane	10.45	na	na	na
#53	Aug 30-31	1954	Hurricane Carol	136	na	na	na
#54	Sep 11	1954	Hurricane Edna	11.5	na	na	na
#56	Oct 15-16	1954	Hurricane Hazel	122	na	na	na
#62	Aug 11-13	1955	Hurricane Connie	25.2	na	na	na
#64	Sep 18-19	1955	Hurricane Ione	4.5	na	na	na
#76	Aug 11-12	1956	Hurricane Betsy	10	na	na	na
#78	Sep 23-24	1956	Hurricane Flossy	3.7	na	na	na
#86	Jun 27	1957	Hurricane Audrey	32	na	na	na
#97	Sep 27	1958	Hurricane Helene	5	na	na	na
#1	Jul 24-25	1959	Hurricane Debra	7.9	na	na	na
#3	Sep 29	1959	Hurricane Gracie	13	na	na	na
#14	Sep 9-11	1960	Hurricane Donna	91	na	na	na
#27	Sep 9-12	1961	Hurricane Carla	100	na	na	na
#28	Sep 20-21	1961	Hurricane Esther	4.25	na	na	na
#76	Aug 26-27	1964	Hurricane Cleo	67.2	na	na	na
#77	Sep 9-10	1964	Hurricane Dora	12	na	na	na
#78	Oct 3-4	1964	Hurricane Hilda	23	na	na	na
#79	Oct 14	1964	Hurricane Isabel	2	na	na	na
#90	Sep 7-10	1965	Hurricane Betsey	515	na	na	na
#13	Jun 8-9	1966	Hurricane Alma	5.4	na	na	na
#52	Sep 19	1967	Hurricane Beulah	34.8	na	na	na
#81	Oct 18-19	1968	Hurricane Gladys	2.58	na	na	na
#16	Aug 17-18	1969	Hurricane Camille	166	na	na	na
#34	Aug 3-4	1970	Hurricane Celia	309.95	na	na	na
#69	Aug 27-28	1971	Tropical Storm Doria	16.09	na	na	na
#72	Sep 9	1971	Hurricane Fern	1.38	na	na	na
#73	Sep 16	1971	Hurricane Edith	5.73	na	na	na
#74	Sep 30	1971	Hurricane Ginger	2	na	na	na
#97	Jun 17-25	1972	Hurricane Agnes	102.55	na	na	na
#49	Sept 4-5	1973	Tropical Storm Delia	3.23	na	na	na
#92	Sep 7-8	1974	Hurricane Carmen	14.72	na	na	na
#37	Sep 16-26	1975	Hurricane Eloise	125.19	na	na	na
#68	Aug 8-10	1976	Hurricane Belle	22.7	na	na	na
#18	Sep 5-6	1977	Hurricane Babe	2	na	na	na
#26	Aug 30–Sep 6	1979	Hurricane David	122.89	na	na	na
#27	Sep 12-14	1979	Hurricane Frederic	752.51	na	na	na
#84	Aug 4-11	1980	Hurricane Allen	57.91	na	na	na
#73	Nov 23-24	1982	Hurricane Iwa	137	na	na	na

Catastrophe (by PCS catastrophe serial number, date and hurricane name)				PCS Estimated Insured Total Property Losses[2] ($ in millions)[1]	PCS Estimated Insured Personal Property Losses ($ in millions)	PCS Estimated Insured Automobile Property Losses ($ in millions)	PCS Estimated Insured Commercial Property Losses ($ in millions)
#15	Aug 17-20	1983	Hurricane Alicia	675.52	na	na	na
#48	Sep 11-14	1984	Hurricane Diana.....	36	na	na	na
#76	Jul 22-25	1985	Hurricane Bob	13	na	na	na
#78	Aug 15-18	1985	Hurricane Danny	37.1	na	na	na
#81	Aug 30-Sep 3	1985	Hurricane Elena.....	543	na	na	na
#82	Sep 26	1985	Hurricane Gloria.....	418.75	na	na	na
#83	Oct 27-31	1985	Hurricane Juan.....	44	na	na	na
#86	Nov 19-22	1985	Hurricane Kate.....	77.6	na	na	na
#14	Jun 26	1986	Hurricane Bonnie.....	21.27	na	na	na
#18	Aug 17-18	1986	Hurricane Charley	7	na	na	na
#68	Sep 9-10	1988	Hurricane Florence.....	10	na	na	na
#70	Sep 16-17	1988	Hurricane Gilbert.....	40	na	na	na
#75	Nov 22-23	1988	Tropical Storm Keith.....	30	na	na	na
#12	Jun 25-27	1989	Tropical Storm Allison....	45	na	na	na
#15	Aug 1-2	1989	Hurricane Chantal.....	40	na	na	na
#18	Sep 17-22	1989	Hurricane Hugo	4,195	na	na	na
#19	Oct 15-16	1989	Hurricane Jerry	35	na	na	na
#51	Oct 11-13	1990	Tropical Storm Marco	15	na	na	na
#85	Aug 18-20	1991	Hurricane Bob	620	na	na	na
#27	Aug 24-26	1992	Hurricane Andrew	15,500	na	na	na
#30	Sep 11-12	1992	Hurricane Iniki.....	1,600	na	na	na
#68	Aug 31-Sep 1	1993	Hurricane Emily	30	na	na	na
#95	Jul 3-8	1994	Tropical Storm Alberto ...	95	na	na	na
#11	Aug 15-17	1994	Tropical Storm Beryl.....	80	na	na	na
#22	Nov 14-16	1994	Tropical Storm Gordon ...	60	na	na	na
#50	Aug 1-4	1995	Hurricane Erin	375	na	na	na
#52	Sep 15-16	1995	Hurricane Marilyn	875	na	na	na
#54	Oct 4-5	1995	Hurricane Opal	2,100	na	na	na
#82	Jul 12-13	1996	Hurricane Bertha	135	na	na	na
#87	Sep 2	1996	Hurricane Edouard	10	na	na	na
#88	Sep 5-8	1996	Hurricane Fran.....	1,600	na	na	na
#89	Sep 9-10	1996	Hurricane Hortense.....	150	na	na	na
#90	Oct 7-8	1996	Tropical Storm Josephine	65	na	na	na
#29	Jul 18-24	1997	Hurricane Danny	60	na	na	na
#64	Aug 21-24	1998	Tropical Storm Charley...	65	35	8	2
#66	Aug 26-28	1998	Hurricane Bonnie.....	360	269.5	14	76.5
#68	Sep 10-13	1998	Tropical Storm Frances ...	110	74.2	7.4	28.4
#69	Sep 21-28	1998	Hurricane Georges.....	2,950	887	164	1,899
#95	Aug 22-23	1999	Hurricane Bert	30	12.5	2	15.5
#96	Aug 29-Sep 7	1999	Hurricane Dennis.....	60	29	4.5	26.5
#97	Sep 14-17	1999	Hurricane Floyd.....	1,960	729	70	1,160
#98	Oct 15-16	1999	Hurricane Irene.....	100	51.5	15	33.5
#99	Nov 17-18	1999	Hurricane Lenny.....	165	89	24	52
#44	Jun 5-17	2001	Tropical Storm Allison....	2,500	152	538	1,810
#49	Sep 13-15	2001	Tropical Storm Gabrielle.	115	60	15	40
#73	Sep 13-15	2002	Tropical Storm Isidore.....	205	115	49	41
#74	Oct 3	2002	Hurricane Lili	430	286	29	115

Catastrophe (by PCS catastrophe serial number, date and hurricane name)				PCS Estimated Insured Total Property Losses[2] ($ in millions)[1]	PCS Estimated Insured Personal Property Losses ($ in millions)	PCS Estimated Insured Automobile Property Losses ($ in millions)	PCS Estimated Insured Commercial Property Losses ($ in millions)
#90	Jul 15-16	2003	Hurricane Claudette	90	30	5	55
#95	Sep 18-19	2003	Hurricane Isabel	1,685	1,300	192	193
#26	Aug 13-14	2004	Hurricane Charley[4]	7,475	4,425	288	2,762
#27	Aug 29-30	2004	Hurricane Gaston	65	23	14	28
#28	Sep 3-9	2004	Hurricane Frances[5]	4,595	3,062	158	1,375
#29	Sep 15-29	2004	Hurricane Jeanne[5]	3,655	2,439	282	934
#30	Sep 15-21	2004	Hurricane Ivan[5]	7,110	5,107	315	1,688
#46	Jul 5-7	2005	Hurricane Cindy	160	66	13	81
#47	Jul 9-11	2005	Hurricane Dennis[5]	1,115	700	80	335
#49	Aug 25-30	2005	Hurricane Katrina[5]	41,100	17,864	2,168	21,068
#50	Sep 14-16	2005	Hurricane Ophelia	35	27	3	5
#51	Sep 20-26	2005	Hurricane Rita[5]	5,627	3,045	216	2,366
#54	Oct 24	2005	Hurricane Wilma[5]	10,300	7,350	750	2,200
#82	Aug 29-Sep 3	2006	Tropical Storm Ernesto	245	172	38.5	34.5
#53	Jul 23-27	2008	Hurricane Dolly	525	185	22.5	317.5
#57	Aug 18-25	2008	Tropical Storm Fay	245	176	25.5	43.5
#58	Aug 31-Sep 3	2008	Hurricane Gustav	2,150	1,450	128	572
#59	Sep 6	2008	Tropical Storm Hanna	80	68	4	8
#60	Sep 12-14	2008	Hurricane Ike	12,500	7,443	476	4,582
#26	Sep 6-9	2010	Tropical Storm Hermine	120	80	10	30
#59	Aug 26-28	2011	Hurricane Irene	4,300	3,047	357	896
#61	Sep 3-9	2011	Tropical Storm Lee	535	350	70	115
#81	Jun 23-27	2012	Tropical Storm Debby	105	80	17	8
#87	Aug 26-31	2012	Hurricane Isaac	930	559	190	142
#90	Oct 28-31	2012	Hurricane Sandy	18,750	7,017	2,716	8,927
#85	Jun 16-18	2015	Tropical Storm Bill	57.58	45.8	5.39	6.39
#1646	Aug 31-Sep 4	2016	Hurricane Hermine	206	134	55	17
#1650	Oct 6-9	2016	Hurricane Matthew	2,655	1,934	312	409
#1743	Aug 25-Sep 1	2017	Hurricane Harvey[6]	18,672	3,322	3,321	12,029
#1744	Sep 6-12	2017	Hurricane Irma[6]	23,092	13,733	657	8,702
#1745	Sep 19-22	2017	Hurricane Maria[6]	26,673	2,447	371	23,855
#1746	Oct 7-9	2017	Hurricane Nate	108	64	24	20
#1828		2018	Subtropical Storm Alberto	65	49	11	5
#1849		2018	Hurricane Lane	50	42	3	5
#1851		2018	Tropical Storm Gordon	102	42	18	42
#1852		2018	Hurricane Florence[6]	4,377	2,734	189	1,454
#1857		2018	Hurricane Michael[6]	8,573	5,180	467	2,926

(1) The threshold aggregate insured property loss required for classification as a PCS Identified Catastrophe was increased in 1982 from $1 million to $5 million, and in 1997 from $5 million to $25 million. Historical figures have not been adjusted to reflect inflation or other changes over time. See the discussion following the next table for further information.

(2) PCS data relating to events occurring prior to 1998 are aggregated for all lines of business (personal, auto and commercial). PCS Estimated Insured Total Property Losses include PCS Estimated Insured Personal Property Losses, PCS Estimated Insured Automobile Property Losses and PCS Estimated Insured Commercial Property Losses. PCS Estimated Insured Total Property Losses may not add due to rounding.

(3) The Florida Department of Insurance ("**FL DOI**") issued a data call after Hurricane Andrew, which struck southern Florida in August 1992. Based on information available to the department in late 1992, the FL DOI estimated the insured loss from the storm to be $15.018 billion.

(4) The FL DOI did conduct data calls in the aftermath of each Hurricanes Charley, Frances, Ivan and Jeanne, which were completed in the latter part of 2005, and also Dennis, Katrina and Wilma.

(5) The Texas Department of Insurance reported in March 2007 that the cost of claims from Hurricane Rita in both Louisiana and Texas came to $5.8 billion.

(6) The estimates for 2017 Hurricanes Harvey, Irma and Maria and 2018 Hurricanes Florence and Michael are not final and are pending further resurveys as of March 6, 2019.

Earthquakes

U.S. EARTHQUAKES CAUSING INSURED PROPERTY LOSSES IDENTIFIED BY PCS AND ITS PREDECESSORS 1950 – MARCH 6, 2019

	Catastrophe (by PCS catastrophe serial number, location and date)	Estimated Insured Property Losses ($ in millions)[1]PCS[2]
#78	(Northridge) January 17, 1994	12,500
#20	(Loma Prieta) October 17, 1989	960
#37	Oregon/Washington February 28, 2001	298
#1862	Anchorage, AK November 30, 2018[2][3]	94
#40	(Whittier) October 1, 1987	71
#22	(Yucca Valley/Big Bear) June 28, 1992	40
#43	(San Fernando) February 9, 1971	32
#83	(Sierra Madre) June 28, 1991	25
#92	(Coalinga) May 2, 1983	10
#36	(San Jose) April 24, 1984	10
#54	(American Canyon – EQ (Napa)) August 24, 2014[2]	9.3
#17	Hawaii Nov 16, 1983	5
#33	(Calexico) October 15, 1979	2.5
#29	(Bakersfield) August 22, 1952	1
#27	(Tehachapi) July 21, 1952	1
#25	(Ventura County) February 21, 1973	1
#61	Alaska March 27 – 28, 1964	1

(1) The threshold aggregate insured property loss required for classification as a PCS Identified Catastrophe was increased in 1982 from $1 million to $5 million, and in 1997 from $5 million to $25 million.

(2) PCS data relating to events occurring prior to 1998 are aggregated for all lines of business (personal, auto and commercial). PCS data relating to events #54 (2014), #37 (2001) and #1862 (2018) in this table are for personal lines of business only.

(3) The estimates for 2018 Anchorage, AK earthquake is not final and is pending further resurveys as of March 6, 2019.

ANNEX E
DESCRIPTION OF PERILS[5]

Background of PERILS

PERILS AG ("**PERILS**") was incorporated on January 26, 2009 in Zurich, Switzerland as a joint stock company. The company registration number is CH-020.3.033.447-4. The principal office of the company is located in Zurich, Canton of Zurich, Switzerland. PERILS was established to prepare and make available aggregated anonymous insurance data, to develop business-relevant catastrophe insurance industry loss estimates and to provide related services to interested parties.

PERILS operates as an independent company. Its shareholders, with equal interests in PERILS, are Allianz SE, Assicurazioni Generali S.p.A., AXA, Groupama Investissements, Guy Carpenter & Company LLC, Insurance Australia Group, Munich Re, Partner Reinsurance Company Ltd., Swiss Reinsurance Company Ltd. and Zurich Insurance Company. The independent nature of PERILS is supported by, among other things, its governance structure reflected in its organizational documents, employment contracts with PERILS personnel, PERILS license agreements with its subscribers (including shareholders), and a purpose-built IT system with highly restrictive access used to carry out data processing, quality control and industry event loss estimation. For more information regarding restrictions on access to data received by PERILS, see "*Company Data Processing*" below.

Mission of PERILS

PERILS' principal aim is to grant access to catastrophe insurance data to all interested parties, thereby contributing to the transparency and understanding of catastrophe insurance risk.

Human Resources

PERILS currently has a staff of internationally experienced (re)insurance professionals with educational backgrounds in geo-sciences, mathematics, civil engineering, finance and business administration. The combined industry experience is over 100 years. Currently, PERILS currently employs five professionals and one support staff. Non-core administrative activities such as office IT management, IT system development, accounting and human resources services are outsourced to third parties.

Transparency

PERILS always strives for full transparency while always respecting the confidentiality agreements with its data providers as well as competition and antitrust regulations.

Business Continuity Planning

The PERILS system and data are stored on secure servers located at high security hosting locations with multiple internet connections. The hosting provider is approved by the Swiss Federal Banking Commission SFBC and is certified by ISO 27001. It operates multiple locations at distances greater than 50 km. Data and server backups are created daily and are stored in different secure locations. A recovery system can be up and running within 24 hours.

Source of Data

PERILS receives data, including industry exposure information (insured values) and ultimate gross event loss data (i.e., the total of paid, outstanding and incurred-but-not-reported losses) regarding natural catastrophe insurance losses, from certain insurance companies underwriting business in the territories covered by PERILS. PERILS has entered into data provider agreements with these companies, which represent a broad set of insurance companies from small, local operations to large, multinational organizations. These data provider agreements govern, among other things, the scope of data to be provided to PERILS, the reporting schedule, the data processing within PERILS, and the highly confidential treatment of the data provided to PERILS. Due to applicable competition and antitrust laws and regulations and pursuant to contractual agreements with the data providing companies, PERILS cannot make public

[5] The following description has been provided to the Issuer by PERILS. Neither the Issuer nor the Risk Transferor has undertaken any investigation to confirm its accuracy or completeness and accepts no responsibility for the information contained within this Annex E.

the identity of the insurance companies providing data or any other information that might lead to the disclosure of the identity of such companies such as the total coverage by market of such companies. PERILS believes, however, that it has sufficient total market coverage in order to be able to produce reliable industry exposures and loss estimates reflecting the market position.

Each data providing insurance company, or their authorized intermediary, has an on-line account with PERILS, which has been created specifically for the purpose of delivering exposure and loss data to PERILS. Access is password protected with the site using SecurID technology. After receiving a request from PERILS to provide data, data providing insurance companies log into their user account and upload the requested data in a pre-defined format. This step is followed by a standardized data format validation procedure allowing the data providing company to validate their uploaded data. After successful validation, the data providing company confirms the data submission and delivers it to PERILS for further data processing and aggregation.

Type of Collected Data

PERILS prepares and makes available, among other products and services, ultimate gross industry event loss data and industry exposure data (sums insured) regarding natural catastrophe perils.

Ultimate gross event loss data and exposure data is provided to PERILS on a per covered territory basis and on a per covered Line of Business basis. The geographical aggregation units used to collect the data are, where feasible, CRESTA zones (for a definition of CRESTA zone, see www.cresta.org). The occupancy aggregation units used to collect the data are, where feasible, Residential Property, Commercial Property, Industrial Property and Agricultural Property (excl. crop, livestock and forestry).

In case of a natural catastrophe, event loss data provided to PERILS includes losses resulting from the main peril causing the catastrophe and losses caused by ensuing perils as well as other additional loss costs (such as for example allocated loss adjustment expenses), as they are recorded in the data providing companies' claims system under the catastrophe-affected policies.

Exposure data provided to PERILS represents the best estimate of the monetary replacement value of the insured risks. Where the monetary replacement value is not recorded in the original policies, PERILS relies on the conversion of data-providing insurance companies of non-monetary exposure measures (e.g. sqm) into monetary replacement values. Likewise, PERILS does not give any guidance for occupancy-type classification and hence the provided data to PERILS is fully based on the occupancy classification by the data-providing insurance companies.

Deductibles and Loss Limits are the only primary insurance condition which are provided to PERILS on a quantitative basis. Other primary insurance conditions are provided to PERILS on a qualitative basis.

Catastrophe Event Identification

PERILS identifies a natural catastrophe event start date and end date entirely based upon its own professional judgment and at its sole discretion. Each such natural catastrophe event is given a unique PERILS event identification number. In making its judgments, PERILS may consider several factors, including objective scientific data, event identification by governmental or scientific authorities, the event definition as, according to PERILS's understanding, applied by the insurance and reinsurance markets, and information received from data providing insurance companies. PERILS may also determine, at its sole discretion, whether various insured losses should be considered as resulting from a single event or multiple events. PERILS typically aggregates insured loss data by reference to the names assigned to such events by a competent national or local authority. If PERILS considers that insufficient data or information exists, so as to be able to distinguish the insured losses resulting from various events, or that there is an inability on the part of the insurers to do so, it may designate multiple events as one event. As result, the PERILS event identification, including the start and end dates and the loss amount, may differ from the event identification given by other sources.

In order to preserve its flexibility to adjust to external circumstances and enhance the quality of its estimates, PERILS may also, at its sole discretion, change its catastrophe event identification methodology at any time and modify the application of its methodology in connection with any particular catastrophe.

Company Data Processing

Data provided by insurance companies includes exposure data (sums insured) by property sub-lines, CRESTA zone and by country, property premium data by country, and ultimate gross event loss data by property sub-lines, CRESTA zone and by country. This company data is made anonymous upon receipt by PERILS and is tested for quality and completeness using standardized data quality and completeness checks. If the quality and/or completeness of company data is deemed unsatisfactory by PERILS, PERILS will reject the data submission and make a new request for data to the data providing company. If company data quality and completeness is deemed adequate, the provided data is accepted by PERILS and is added to the data which has been already accepted within the identical aggregation units (per country, CRESTA zone and property sub-line) in the PERILS database. The original raw company data is deleted by PERILS at this stage in compliance with applicable antitrust and competition laws. None of the shareholders of PERILS have access to the data that is reported to PERILS by the data providing companies, and, within PERILS, only two employees have access to such data prior to its deletion as described above.

Although PERILS performs a series of standardized data quality control tests in the course of company data processing and industry event loss estimation, PERILS does not independently verify or audit the accuracy of provided loss data as part of its methodology. As a result, there can be no assurance that the data provided to PERILS has been, is or will be accurate or complete.

Industry Exposure Estimation

Aggregated company data within the identical aggregation units is extrapolated to industry-level (i.e. market-level) using market property premium information. The latter is broken down into individual aggregation units using population data and other proxy data such as land use or census data. Aggregated company property premium data is broken down into individual aggregation units using average rates as derived from provided sums insured and premium data. The relationship between aggregated company premium and market premium then gives the market coverage per aggregation unit. The latter is used to extrapolate the aggregated exposure data per aggregation unit to industry-level (i.e. market-level). If the in-force date of the industry exposure information received by data providers is preceding the date of the PERILS exposure estimates ("Date as of", e.g. 1 Jan 2018), the market exposure is adjusted on a pro rata time basis based generally on the latest available nominal GDP change for each country under consideration.

If market coverage is insufficient to calculate a reliable industry exposure, professional judgment is applied by PERILS in its sole discretion to adjust the calculated industry exposure. In making these judgments, PERILS may consider factors such as information provided by national and local authorities or insurance industry sources, as well as census, land use and/or other statistical data, as it deems appropriate in the particular circumstances.

In order to preserve its flexibility to adjust to external circumstances and enhance the quality of its estimates, PERILS may, in its sole discretion, change its general exposure estimation methodology at any time and modify the application of its methodology.

Industry Event Loss Estimation

Aggregated company data within the identical aggregation units is extrapolated to industry-level (i.e. market-level) using market coverage information derived from aggregated company exposure and PERILS Industry exposure data. For the first two loss declarations, aggregated company event loss data per country is extrapolated to industry-level. For all subsequent loss declarations, aggregated company event loss data per CRESTA Zone is extrapolated to industry-level.

If market coverage is insufficient to calculate a reliable Industry Event Loss estimate, professional judgment is applied by PERILS, in its sole discretion, to adjust the calculated industry event loss data. In making these judgments, PERILS may consider factors such as meteorological and/or other scientific data, as well as information provided by national and local authorities or insurance industry sources, as it deems appropriate in the particular circumstances.

In order to preserve its flexibility to adjust to external circumstances and enhance the quality of its estimates, PERILS may, in its sole discretion, change its general loss estimation methodology at any time and modify the application of its methodology in connection with any particular catastrophe.

Covered Perils, Territories and Business Lines

PERILS currently collects exposure and loss data for the lines of business, natural perils and jurisdictions ("**PERILS Covered Territories**") listed in the below table. PERILS may collect data for other perils, territories and business lines in the future.

Territory	Line of Business	Natural Peril
Australia	Property	All Natural Perils
Austria	Property	Extratropical Cyclone
Belgium	Property	Extratropical Cyclone
Canada (event loss only)	Property, Motor Hull	All Natural Perils
Denmark	Property	Extratropical Cyclone
France	Property	Extratropical Cyclone
Germany	Property	Extratropical Cyclone
Italy	Property	Earthquake, Flood
Ireland	Property	Extratropical Cyclone
Luxembourg	Property	Extratropical Cyclone
Netherlands	Property	Extratropical Cyclone
Norway	Property	Extratropical Cyclone
Sweden	Property	Extratropical Cyclone
Switzerland	Property	Extratropical Cyclone
Turkey	Property	Earthquake, Flood
United Kingdom	Property	Extratropical Cyclone, Flood

Event Loss Reporting Threshold

PERILS will only make available loss information if PERILS determines, in its sole discretion, that a particular event has resulted in total insured losses from the LOBs covered by PERILS above a certain threshold in the PERILS Covered Territories. For Extratropical Cyclones in Europe, Floods and Earthquakes in Italy, and Floods in the UK, this threshold is EUR 200m. For Earthquakes and Floods in Turkey, this threshold is TRY 500m. For natural catastrophe events in Australia, this threshold is AUD 500m. For loss events below these reporting threshold, PERILS will generally not report any loss information.

Reporting Schedule

PERILS makes industry event loss data available in accordance with the following schedule:

(1) First PERILS event loss declaration (loss information at country level only): expected no later than six weeks after the event start date.

(2) Second PERILS event loss declaration (loss information at country level only): resurvey of industry event loss, expected no later than three months after the event start date.

(3) Third PERILS event loss declaration (loss information at CRESTA zone and line of business level): resurvey of industry event loss, expected no later than six months after the event start date.

(4) Fourth PERILS event loss declaration (loss information at CRESTA zone and line of business level): resurvey of industry event loss, expected no later than twelve months after the event start date.

After the twelve-month update, PERILS generally declares the event loss reporting period closed and declares its final estimate, unless there are substantial grounds to provide additional updates, which would occur at subsequent six month intervals. Event loss reporting shall be closed, in any case, thirty-six (36) months after the event start date.

PERILS makes updated industry exposure data available once a year.

Reporting Currency

Industry loss data are made available in local currencies, Euros and US Dollars. Exchange rates used are daily mid-market rates by OANDA as at the event start date.

Industry exposure data are made available in national currencies, Euros and US Dollars. Exchange rates used are daily mid-market rates by OANDA as at the exposure in-force date.

In the case that one of the countries covered by PERILS that is currently using the Euro should abandon the Euro monetary union and no longer use the Euro, but another currency, market exchange rates for the newly adopted currency to the EUR and USD will be applied, using identical data sources and conversion dates as described above. If these are not available for the dates described above, exit exchange rates as made available by independent sources, such as relevant Central Banks or Oanda, will be applied. For outstanding transactions using PERILS data in Euro, in the event the Euro ceases to exist and is not traded anymore, PERILS would continue to report data in Euro, using exit exchange rates as made available by independent sources, such as relevant Central Banks or Oanda.

Access to PERILS Data

PERILS delivers its industry exposure and loss estimates via the PERILS Portal and on a transaction-specific basis. Access to the PERILS Portal is via annual subscription in accordance with a PERILS database license. Transaction-specific delivery of PERILS data is in accordance with a transaction-specific license term sheet.

PERILS European Windstorm Industry Exposure Insured Values as of January 1, 2018

Country	Property Total Sum Insured (in EUR)
AUT	2,504,427,913,570
BEL	2,016,875,745,655
CHE	3,512,150,317,779
DEU	15,456,668,480,783
DNK	1,696,629,166,416
FRA	12,502,603,905,197
GBR	9,367,228,628,328
IRL	764,947,293,118
LUX	194,664,374,965
NLD	2,941,944,760,462
NOR	1,982,531,052,075
SWE	2,356,267,995,747
Total WS	**55,296,939,634,095**

Exchange rates are based on OANDA FXDaily® as of the dates, as set forth below. Exchanges rates differ from the FX conversion factors which are used to calculate the Event Index Values for the Notes:

01 January 2018	EUR/1 Unit	USD/1 Unit
AUD	0.650144	0.780482
CHF	0.855167	1.026170
DKK	0.134297	0.161178
EUR	1.000000	1.200323
GBP	1.125448	1.350656
NOK	0.101526	0.121879
SEK	0.101793	0.122198
TRY	0.219692	0.263702
USD	0.833110	1.000000

Source: FXDaily © 1997-2018 by OANDA Corporation, 1 January 2018

Historical Information for qualifying Europe Windstorm events captured by PERILS (as of 6 March 2019)

Windstorm Klaus, Jan. 24, 2009 Report Date	Estimate Type	Estimate Amount (EUR in millions)
March 7, 2009	1st PERILS Event Loss Declaration	1,650
April 24, 2009	2nd PERILS Event Loss Declaration	1,550
July 24, 2009	3rd PERILS Event Loss Declaration	1,487
January 24, 2010	Final PERILS Event Loss Declaration	1,574

Windstorm Xynthia, Feb. 28, 2010		
Report Date	**Estimate Type**	**Estimate Amount (EUR in millions)**
April 12, 2010	1st PERILS Event Loss Declaration	1,281
May 28, 2010	2nd PERILS Event Loss Declaration	1,266
August 28, 2010	3rd PERILS Event Loss Declaration	1,303
February 28, 2011	Final PERILS Event Loss Declaration	1,320

Windstorm Joachim, Dec. 15, 2011		
Report Date	**Estimate Type**	**Estimate Amount (EUR in millions)**
January 26, 2012	1st PERILS Event Loss Declaration	300
March 15, 2012	2nd PERILS Event Loss Declaration	289
June 15, 2012	3rd PERILS Event Loss Declaration	285
December 15, 2012	Final PERILS Event Loss Declaration	252

Windstorm Andrea, Jan 4, 2012		
Report Date	**Estimate Type**	**Estimate Amount (EUR in millions)**
February 15, 2012	1st PERILS Event Loss Declaration	267
April 4, 2012	2nd PERILS Event Loss Declaration	309
July 4, 2012	3rd PERILS Event Loss Declaration	337
January 4, 2013	Final PERILS Event Loss Declaration	336

Windstorm Christian, Oct 27, 2013		
Report Date	**Estimate Type**	**Estimate Amount (EUR in millions)**
December 6, 2013	1st PERILS Event Loss Declaration	994
January 27, 2014	2nd PERILS Event Loss Declaration	1,068
April 27, 2014	3rd PERILS Event Loss Declaration	1,091
October 27, 2014	Final PERILS Event Loss Declaration	1,144

Windstorm Xaver, Dec 5, 2013		
Report Date	**Estimate Type**	**Estimate Amount (EUR in millions)**
January 16, 2014	1st PERILS Event Loss Declaration	680
March 5, 2014	2nd PERILS Event Loss Declaration	727
June 5, 2014	3rd PERILS Event Loss Declaration	759
December 5, 2014	Final PERILS Event Loss Declaration	763

Windstorm Dirk, Dec 23, 2013		
Report Date	**Estimate Type**	**Estimate Amount (EUR in millions)**
February 3, 2014	1st PERILS Event Loss Declaration	275
March 23, 2014	2nd PERILS Event Loss Declaration	352
June 23, 2014	3rd PERILS Event Loss Declaration	370
December 23, 2014	Final PERILS Event Loss Declaration	420

Windstorm Tini, Feb 12, 2014		
Report Date	**Estimate Type**	**Estimate Amount (EUR in millions)**
March 26, 2014	1st PERILS Event Loss Declaration	245
May 12, 2014	2nd PERILS Event Loss Declaration	253
August 12, 2014	3rd PERILS Event Loss Declaration	281
February 12, 2015	Final PERILS Event Loss Declaration	286

Windstorm Elon-Felix, Jan 8, 2015		
Report Date	**Estimate Type**	**Estimate Amount (EUR in millions)**
February 19, 2015	1st PERILS Event Loss Declaration	328
April 8, 2015	2nd PERILS Event Loss Declaration	335
July 8, 2015	3rd PERILS Event Loss Declaration	328
January 8, 2016	Final PERILS Event Loss Declaration	329

Windstorm Mike-Niklas, Mar 29, 2015

Report Date	Estimate Type	Estimate Amount (EUR in millions)
May 11, 2015	1st PERILS Event Loss Declaration	853
June 29, 2015	2nd PERILS Event Loss Declaration	895
September 29, 2015	3rd PERILS Event Loss Declaration	826
March 29, 2016	Final PERILS Event Loss Declaration	816

Windstorm Egon, Jan 12, 2017

Report Date	Estimate Type	Estimate Amount (EUR in millions)
February 23, 2017	1st PERILS Event Loss Declaration	212
April 12, 2017	2nd PERILS Event Loss Declaration	234
July 12, 2017	3rd PERILS Event Loss Declaration	275
January 12, 2018	Final PERILS Event Loss Declaration	275

Windstorm Thomas (Doris), Feb 23, 2017

Report Date	Estimate Type	Estimate Amount (EUR in millions)
April 6, 2017	1st PERILS Event Loss Declaration	213
May 23, 2017	2nd PERILS Event Loss Declaration	249
August 23, 2017	3rd PERILS Event Loss Declaration	249
February 23, 2018	Final PERILS Event Loss Declaration	248

Windstorm Zeus, Mar 6, 2017

Report Date	Estimate Type	Estimate Amount (EUR in millions)
April 13, 2017	1st PERILS Event Loss Declaration	192
June 6, 2017	2nd PERILS Event Loss Declaration	269
September 6, 2017	3rd PERILS Event Loss Declaration	284
March 6, 2018	Final PERILS Event Loss Declaration	272

Windstorm Xavier, Oct 5, 2017

Report Date	Estimate Type	Estimate Amount (EUR in millions)
November 16, 2017	1st PERILS Event Loss Declaration	291
January 5, 2018	2nd PERILS Event Loss Declaration	325
April 5, 2018	3rd PERILS Event Loss Declaration	325
October 5, 2018	Final PERILS Event Loss Declaration	324

Windstorm Herwart, Oct 29, 2017

Report Date	Estimate Type	Estimate Amount (EUR in millions)
December 11, 2017	1st PERILS Event Loss Declaration	252
January 29, 2018	2nd PERILS Event Loss Declaration	255
April 27, 2018	3rd PERILS Event Loss Declaration	255
October 29, 2018	Final PERILS Event Loss Declaration	264

Windstorm Burglind (Eleanor), Jan 2, 2018

Report Date	Estimate Type	Estimate Amount (EUR in millions)
February 13, 2018	1st PERILS Event Loss Declaration	643
April 3, 2018	2nd PERILS Event Loss Declaration	680
July 2, 2018	3rd PERILS Event Loss Declaration	724
January 3, 2019	Final PERILS Event Loss Declaration	756

Windstorm Friederike (David), Jan 17, 2018

Report Date	Estimate Type	Estimate Amount (EUR in millions)
February 28, 2018	1st PERILS Event Loss Declaration	1,465
April 17, 2018	2nd PERILS Event Loss Declaration	1,629
July 17, 2018	3rd PERILS Event Loss Declaration	1,675
January 17, 2019	Final PERILS Event Loss Declaration	1,672

ANNEX F
REQUEST FOR ACCESS TO INFORMATION FORM

Atlas Capital UK 2019 PLC
c/o Horseshoe ILS Services UK Ltd
Collingham House,
6-12 Gladstone Road,
London, SW19 1QT

[*Date*]

Pursuant to the Offering Circular dated 30 May 2019 (the "**Circular**") of Atlas Capital UK 2019 PLC (the "**Issuer**"), requests for Available Information by a Noteholder or prospective Noteholder (who is a permitted transferee) may be made in writing by submitting this Request for Access to Information Form to the Issuer. Capitalised terms used and not defined herein shall have the respective meanings set forth in the Circular.

The undersigned hereby requests the Issuer to grant access to all Available Information currently being provided to holders and prospective purchasers of the Notes via a secure internet site maintained by the Insurance Manager.

In order to access the Issuer's secure password-protected online workspace established for Noteholders, please provide:

- Name of Noteholder/prospective purchaser (entity): _____
- First Name of contact person: _____
- Last Name of contact person: _____
- Email address of contact person: _____
- Telephone number of contact person: _____

The undersigned hereby certifies that it is: a holder, or a prospective purchaser, of the Issuer's Notes and is; (i) a Qualified Investor and a Qualified Institutional Buyer, (ii) if a U.S. Person, is also a Qualified Purchaser; and (iii) a Qualified Eligible Person, and (iv) a resident of, and purchasing in, a Permitted U.S. Jurisdiction or a Permitted Non-U.S. Jurisdiction.

As a condition to access Available Information on the Issuer's secure password-protected online workspace, the undersigned agrees that it shall not (i) disclose any such information to third parties other than as required by applicable law and regulations, including U.S. federal and state securities laws and regulations, or, in connection with the potential *bona fide* resale of its Notes, to a prospective purchaser that is a permitted transferee, or. use the information for any purpose other than investment analysis of the Notes

[*NOTEHOLDER/PROSPECTIVE HOLDER*]

By: _____

ANNEX G
INDEX OF DEFINED TERMS

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