BASE LISTING DOCUMENT

Non-collateralised Structured Products

Base Listing Document relating to Hong Kong Listed Structured Products

to be issued by

HSBC

The Hongkong and Shanghai Banking Corporation Limited

(incorporated in Hong Kong with limited liability under the Companies Ordinance of Hong Kong)

The Hongkong and Shanghai Banking Corporation Limited (the "**Bank**", "**Issuer**", "**we**" or "**us**") has published this document in respect of call/put warrants on single equities ("**Equity Warrants**"), call/put warrants on indices ("**Index Warrants**") and call/put warrants on unit funds ("**Unit Fund Warrants**") (together the "**Warrants**"), callable bull/bear contracts on single equities ("**Equity Callable Bull/Bear Contracts**"), callable bull/bear contracts on indices ("**Index Callable Bull/Bear Contracts**") and callable bull/bear contracts on unit funds ("**Unit Fund Callable Bull/Bear Contracts**") (together the "**CBBCs**" and, together with the Warrants and any other structured products approved by The Stock Exchange of Hong Kong Limited (the "**stock exchange**") from time to time, the "**structured products**") to be issued by us in series (each a "**series**") from time to time and listed on the stock exchange.

Hong Kong Exchanges and Clearing Limited ("**HKEX**") and the stock exchange and Hong Kong Securities Clearing Company Limited ("**HKSCC**") take no responsibility for the contents of this document, make no representation as to its accuracy or completeness and expressly disclaim any liability whatsoever for any loss howsoever arising from or in reliance upon the whole or any part of the contents of this document.

This document, for which we accept full responsibility, includes particulars given in compliance with the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "**rules**") for the purpose of giving information with regard to us and the structured products. We, having made all reasonable enquiries, confirm that to the best of our knowledge and belief the information contained in this document is accurate and complete in all material respects and not misleading or deceptive, and there are no other matters the omission of which would make any statement herein or this document misleading. Additional terms relating to each series of our structured products will be set out in a launch announcement and supplemental listing document (each a "**launch announcement and supplemental listing document**") which will be supplemental to, and should be read in conjunction with, this document.

The structured products involve derivatives. You should not invest in the structured products unless you fully understand and are willing to assume the risks associated with the structured products. The structured products are complex products. You should exercise caution in relation to them. You are warned that the price of our structured products may fall in value as rapidly as it may rise and you may sustain a total loss of your investment. Prospective purchasers should therefore ensure that they understand the nature of our structured products and carefully study the risk factors set out in this base listing document and the relevant launch announcement and supplemental listing document and, where necessary, seek professional advice, before they invest in any of our structured products. The Issuer is part of a large global financial institution and has many financial products and contracts outstanding at any given time.

The structured products constitute general unsecured contractual obligations of the Issuer and of no other person and will rank equally among themselves and with all of the Issuer's other unsecured obligations (save for those obligations preferred by law) upon liquidation. If you purchase the structured products, you are relying upon the Issuer's creditworthiness and have no rights under the structured products against (a) any company which has issued the underlying asset, (b) the trustee or the manager of the underlying fund, or (c) the index compiler of any underlying index or any other person. If the Issuer becomes insolvent or defaults on its obligations under the structured products, you may not be able to recover all or even part of the amount due under the structured products (if any).

Dated 4 April 2019

IMPORTANT

If you are in any doubt as to any of the contents of this document, you should consult your stockbroker or other registered dealer in securities, bank manager, solicitor, professional accountant or other professional adviser.

If at the time of issue of the structured products, any information in this base listing document needs to be updated, we will either include the updated information in the relevant launch announcement and supplemental listing document or publish an addendum to this base listing document.

You should read this document, together with any addendum to it and the relevant launch announcement and supplemental listing document, before deciding whether to invest in the structured products.

We cannot give you investment advice. You must decide for yourself whether our structured products meet your investment needs, and obtain independent professional advice if appropriate. This document is not intended to be, and should not be considered as, a recommendation or advice by us or any of our affiliates that you should purchase any of our structured products, and you must make your own independent investigation of our financial condition and affairs and your own appraisal of our creditworthiness.

We undertake during the period in which our structured products are listed on the stock exchange to make the following documents available to you for inspection at the office of The Hongkong and Shanghai Banking Corporation Limited, which is presently at HSBC Main Building, 1 Queen's Road Central, Hong Kong:

(a) a copy of this document and any addendum to this document (both the English version and the Chinese translation);

(b) a copy of our latest publicly available annual report (both the English version and the Chinese translation) and interim report (if any); and

(c) a copy of the consent letter of our auditor referred to in this document.

本公司保證下列文件可於結構性產品在聯交所上市的期間內在香港上海滙豐銀行有限公司辦事處(地址為香港皇后大道中1號滙豐總行大廈)查閱:

(a) 本文件及本文件的任何增編(英文版本及中文譯本)

(b) 本公司最近期可供查閱的年報(英文版本及中文譯本)及中期報告(如有)及

(c) 本文件所述本公司核數師的同意函件。

Our structured products are not available to any person that is (a) a U.S. person, as defined in Regulation S under the U.S. Securities Act of 1933, as amended (for purposes of this document, an "**SEC U.S. Person**") or (b) a "U.S. person" for purposes of the *Interpretive Guidance and Policy Statement Regarding Compliance with Certain Swap Regulations*, published by the CFTC and available at 78 Fed. Reg. 45292 (July 26, 2013), or any subsequent guidance issued by the CFTC (for purposes of this document a "**CFTC U.S. Person**").

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OVERVIEW OF OUR PROGRAMME

We have set up this **programme** for the purpose of offering from time to time to the public in Hong Kong **structured products** listed on the stock exchange. The following is an overview of the main features of the programme.

Who issues the structured products?	The Hongkong and Shanghai Banking Corporation Limited is the **Issuer** of the structured products. References in this base listing document to "**we**", "**our**" and "**us**" are to the Issuer.
Will the structured products be guaranteed?	No.
What types of structured products may we issue under the programme?	We may issue Warrants and CBBCs under the programme, each as described below. We may also issue from time to time under the programme other structured products approved by the stock exchange.
What types of Warrants may be issued under the programme?	The **Warrants** which we may issue under the programme are: (a) call/put warrants on single equities ("**Equity Warrants**"); (b) call/put warrants on a single index ("**Index Warrants**"); and (c) call/put warrants on a single unit fund ("**Unit Fund Warrants**").
What types of CBBCs may be issued under the programme?	The callable bull/bear contracts (the "**CBBCs**") which we may issue under the programme are: (a) callable bull/bear contracts on single equities ("**Equity Callable Bull/Bear Contracts**"); (b) callable bull/bear contracts on a single index ("**Index Callable Bull/Bear Contracts**"); and (c) callable bull/bear contracts on a single unit fund ("**Unit fund Callable Bull/Bear Contracts**").
How are the structured products issued?	Our structured products will be issued in one or more **series**. Structured products within a series will have the same terms, but the terms of one series of structured products may be different from another.
What is the legal status of the structured products?	The structured products are our direct, unconditional, unsubordinated and unsecured obligations, ranking equally *(pari passu)* among themselves and with all our other present and future direct, unconditional, unsecured and unsubordinated obligations (save for those obligations preferred by law).

Will the structured products be listed?

Yes. We will apply to the stock exchange to list each series of the structured products which we issue under the programme. This base listing document has been published for the purposes of obtaining a listing of each series of structured products which we issue under the programme.

Will the structured products be admitted to CCASS?

Yes. We will make arrangements to ensure that each series of structured products will be accepted by HKSCC as eligible securities for deposit, clearance and settlement in the Central Clearing and Settlement System ("**CCASS**"). All activities under CCASS are subject to the General Rules of CCASS and CCASS Operational Procedures in effect from time to time (the "**CCASS Rules**").

What are the listing documents for the structured products?

We have published this base listing document to permit the listing of our structured products on the stock exchange. This base listing document sets out the terms and conditions of the structured products, common features of the structured products, the legal terms relating to the programme and information about us. This base listing document includes particulars given in compliance with the rules for the purpose of giving information with regard to us and the structured products.

When we apply to list one or more series of structured products, we will publish a **launch announcement and supplemental listing document**, which will include information on the particular structured products to be listed. The launch announcement and supplemental listing document will be available in English and Chinese versions (which may be printed together in the same document).

If any information in this base listing document needs to be updated at the time we issue a launch announcement and supplemental listing document, we will either include the updated information in the relevant launch announcement and supplemental listing document or publish an addendum to this base listing document.

What will a launch announcement and supplemental listing document specify?

The launch announcement and supplemental listing document will, amongst other things, set out the terms of the series of structured products being offered to supplement the applicable set of master terms and conditions in this base listing document, which will include the following:

Type of structured product

The launch announcement and supplemental listing document will specify the type of the series of structured products offered.

Exercise

The launch announcement and supplemental listing document will specify the date on which the structured products may be exercised. The structured products which we issue under the programme may be exercised only upon the specified expiry date.

Settlement Basis

The holder of the structured products will be entitled to a cash payment upon exercise (assuming that the cash payment is greater than zero).

Issue price

The launch announcement and supplemental listing document will specify the issue price of the structured product.

Underlying

The launch announcement and supplemental listing document will specify the **underlying** for the structured product, which may be a share, an index or a fund.

Expiry Date

The launch announcement and supplemental listing document will specify the expiry date for the series of structured products offered.

Liquidity Provider

The launch announcement and supplemental listing document will specify the name and contact details of the liquidity provider appointed for the series of structured products offered, and the basis on which the appointed liquidity provider will provide liquidity in the relevant structured products.

How will the structured products be represented?

The structured products of each series will be issued in registered form and represented by a global certificate which will be registered in the name of HKSCC Nominees Limited (or such other nominee company as HKSCC may specify from time to time) and will be deposited with CCASS in accordance with the CCASS Rules.

Will you get any individual certificate representing an investment in a series of our structured products?

No, you will not receive any individual certificates.

In the Terms and Conditions for the structured products, there are references to "holders". Who are they?

The Issuer will maintain a register showing the details of each person who is entitled to a particular number of structured products of a series. The person registered will be treated by us as the absolute owner and **holder** of that number of structured products.

The register for each series of structured products will record at all times that HKSCC Nominees Limited (or such other nominee company as HKSCC may specify for that series) is the holder of 100 per cent. of the structured products of that series.

Accordingly you will not be recognised by us as the holder of the structured products in which you invest, and you must refer to the records of CCASS and/or your custodian/broker, and the statements that you receive, to determine your beneficial interest in the structured products.

How do we give notices and make payments under our structured products?

We will give any necessary notices by publishing such notices in English and in Chinese on the website of HKEX, or otherwise in accordance with the terms and conditions of the relevant structured products.

We will make all payments that are due under our structured products to the registered holder of the structured products. The registered holder will be HKSCC Nominees Limited (or such other nominee company as HKSCC may specify for that series). In this situation, the payments to which you are entitled will be made to you or to your custodian/broker through CCASS in accordance with the CCASS Rules.

Can we repurchase our structured products?

Yes, we or our affiliates may repurchase our structured products at any time. We may offer for sale any structured products which we repurchase, and may do so at prevailing market prices or in negotiated transactions at our discretion (acting in good faith and in a commercially reasonable manner). You should not therefore make any assumptions as to the number of structured products of any series which may be in issue from time to time.

RISK FACTORS

You should carefully consider the following information together with the other information contained in this base listing document (and any applicable addendum) and in the applicable launch announcement and supplemental listing document before purchasing our structured products.

This section highlights only some of the risks of dealing in the structured products but their inclusion in this document does not mean these are the only significant or relevant risks of dealing in our structured products. If you have any concerns or doubts about our structured products, you should obtain independent professional advice.

General Risk Factors relating to us and our Structured Products

(1) Non-collateralised structured products

Our structured products are not secured on any of our assets or any collateral.

(2) You must rely on our creditworthiness

If you purchase our structured products, you rely on our creditworthiness and of no other person and you have no rights under the structured products against any company which has issued the shares (in respect of equity-linked structured products), any company constituting the index or the index compiler (in respect of index-linked structured products), or any manager or trustee of the fund (in respect of unit fund-linked structured products). There is no assurance of protection against a default by us in respect of our obligations under our structured products. If we become insolvent or default on our obligations under the structured products, you can only claim as our unsecured creditor regardless of the performance of the underlying and you may not be able to recover all or even part of the amount due under the structured products (if any).

You should note that rating agencies usually receive a fee from the issuers that they rate. When evaluating our creditworthiness, you should not solely rely on our credit ratings (which are set out in the section headed "General Information" on page 96 of this base listing document and the section headed "Important information" of the relevant launch announcement and supplemental listing document) because:

(a) a credit rating is not a recommendation to buy, sell or hold our structured products;

(b) ratings of companies may involve difficult-to-quantify factors such as market competition, the success or failure of new products and markets and managerial competence;

(c) a high credit rating is not necessarily indicative of low risk. Our credit ratings as set out in this base listing document and the relevant launch announcement and supplemental listing document are for reference only. Any downgrading of our ratings could result in a reduction in the value of the structured products;

(d) a credit rating is not an indication of the liquidity or volatility of the structured products; and

(e) a credit rating may be downgraded if the credit quality of the Issuer declines.

(3) The Financial Institutions (Resolution) Ordinance may adversely affect the structured products

On 7 July 2017, the Financial Institutions (Resolution) Ordinance (Cap. 628) of Hong Kong (the "**FIRO**") came into operation. The FIRO provides for, among other things, the establishment of a resolution regime for authorised institutions and other within scope financial institutions in Hong Kong which may be designated by the relevant resolution authorities, which includes us as the issuer of the structured products. The resolution regime seeks to provide the relevant resolution authorities with administrative powers to bring about timely and orderly resolution in order to stabilise and secure continuity for a failing authorised institution or within scope financial institution in Hong Kong. In particular, the relevant resolution authority is provided with powers to affect contractual and property rights as well as payments (including in respect of any priority of payment) that creditors would receive in resolution. These may include, but are not limited to, powers to cancel, write off, modify, convert or replace all or a part of the structured products or cash payment under the structured products, and powers to amend or alter the contractual provisions of the structured products, all of which may adversely affect the value of the structured products, and the holders thereof may suffer a loss of some or all of their investment as a result. Holders of the structured products may become subject to and bound by the FIRO. The implementation of FIRO remains untested and certain detail relating to FIRO will be set out through secondary legislation and supporting rules. Therefore, we are unable to assess the full impact of FIRO on the financial system generally, our counterparties, us, any of our consolidated subsidiaries, our operations and/or our financial position. **In the worst case scenario, you may get nothing back and the maximum loss could be 100% of your initial investment amount.**

(4) The structured products are not principal protected and may become worthless

Although the cost of a structured product may cost a fraction of the value of the underlying, the structured product's price may change more rapidly than the price or level of the underlying. Given the gearing feature inherent in the structured products, a small change in the price or level of the underlying may lead to a substantial price movement in the structured products. You may suffer higher losses in percentage terms if you expect the price or level of the underlying to move one way but it moves in the opposite direction. In the worst case, the structured products may become worthless and you will lose all of your investment. The structured products may only be suitable for experienced investors who are willing to accept the risk that they may lose all their investment.

(5) The price of our structured products may fluctuate to a great extent

The price of our structured products may fall or rise rapidly in value and our structured products may expire or become worthless, resulting in a total loss of your investment. Before dealing in our structured products, you should carefully consider, among other things, (i) the prevailing trading price of the structured products; (ii) the value or level and volatility of the underlying; (iii) the time remaining to expiration; (iv) any change(s) in interim interest rates and dividend yields; (v) any change(s) in currency exchange rates; (vi) the demand and supply of the structured products; (vii) any related transaction costs; and (viii) our creditworthiness.

(6) The secondary market for our structured products may be limited

We cannot predict if and to what extent a secondary market may develop for the structured products or whether that market will be liquid or illiquid. Whilst we intend to apply to list each series of our structured products on the stock exchange, the fact that a particular series of structured products is listed does not necessarily lead to greater liquidity. In addition, even if a series of structured products is listed on the stock exchange, there can be no assurance that any such listing can be maintained. Our appointed liquidity provider may be the only person quoting prices on the stock exchange for the structured products. Therefore, the secondary market may be limited. The more limited the secondary market, the more difficult it may be for you to realise the value in the structured products prior to expiry.

(7) The liquidity provider may not be able to provide liquidity for the structured products

You should also be aware that the appointed liquidity provider may not be able to provide liquidity when there are operational and technical problem hindering its ability to do so. Even if the appointed liquidity provider is able to provide liquidity in such circumstances, its performance of liquidity provision may be adversely affected. For example: (i) the spread between bid and ask prices quoted by the appointed liquidity provider may be significantly wider than its normal standard; (ii) the quantity for which liquidity will be provided by the appointed liquidity provider may be significantly smaller than its normal standard; and/or (iii) the appointed liquidity provider's response time for a quote may be significantly longer than its normal standard.

(8) The structured products constitute our unsecured and unsubordinated contractual obligations

The structured products constitute our general unsecured contractual obligations and of no other person and shall rank equally *(pari passu)* among themselves and with all our other unsecured obligations (save for certain obligations required to be preferred by law). We issue a large number of financial instruments on a global basis. We have no obligation to you other than to pay amounts in accordance with the terms set out in the applicable launch announcement and supplemental listing document. We do not in any respect underwrite or guarantee the performance of any structured product. We shall have the absolute discretion (acting in good faith and in a commercially reasonable manner) to put in place any hedging transaction or arrangement appropriate in connection with any structured product or the applicable underlying.

(9) Trading in the structured products may be affected by suspension of trading in the underlying

If trading in the underlying is suspended on the stock exchange, trading in the structured products may be suspended for a similar period. If trading in the underlying is suspended for a prolonged period, trading in the structured products will be suspended for a similar prolonged period. The "time value" of the structured products will be adversely affected during the prolonged suspension period.

(10) There is a time lag between exercise of the structured products and payment to you

Any delay between exercise of the structured products and payment to you will be specified in the applicable launch announcement and supplemental listing document or in the relevant terms and conditions. We will not compensate you for any loss you suffer as a result of any such time lag.

(11) Time decay

All other factors being equal, the value of a structured product is likely to decrease over time. Therefore, the structured product should not be viewed as a product for long term investments.

(12) The value of the underlying may fluctuate

An investment in our structured products involves risks relating to changes in the value of the underlying. The value of the underlying will vary over time, including as a result of corporate actions (where the underlying is a share) or changes in computation (where the underlying is an index). Certain of such events which affect the value of the underlying may require an adjustment to the structured products. However, even if such event does not require an adjustment to the structured products, the price of our structured products or the return on an investment in our structured products may be affected.

(13) Investments in the structured products are not the same as investments in the underlying

The value of our structured products may not correlate directly with the movements of the underlying and may be affected by the time remaining to expiry. Also, where the underlying is a share, as holder of our structured products you will not have the same rights (including voting rights and rights to dividends) as if you were a direct holder of the underlying.

(14) Gearing effects

Since the structured products are leveraged, the percentage change in the price of a structured product is greater compared with that of the underlying. You may suffer higher losses in percentage terms if you expect the price or level of the underlying to move one way but it moves in the opposite direction.

(15) There could be conflicts of interests which may affect our structured products

Various potential and actual conflicts of interest may arise from our overall activities or activities of our subsidiaries and affiliates. Such actions and conflicts may include, without limitation, the exercise of voting power, the purchase and sale of securities, financial advisory relationships and exercise of creditor rights. Such activities, information and/or research reports may involve or affect the company which has issued the underlying asset and/or the underlying asset and may cause consequences adverse to you or otherwise create conflicts of interests in connection with the issue of the structured products. We have no obligation to disclose such information and may issue research reports and engage in any such activities without regard to the issue of the structured products. In the ordinary course of our business, we and our subsidiaries and affiliates may effect transactions on our own account or for the account of our customers and may enter into one or more transactions with respect to the company which has issued the underlying asset and/or the underlying asset or related derivatives this may indirectly affect your interests. Any such activities in the ordinary course of our business may also affect the price of the underlying asset and could potentially lead to a negative impact on the value and/or market price of our structured products as well as the cash settlement amount (if any). In respect of CBBCs, such activities may also lead to a mandatory call event.

(16) Our structured products will be issued in global registered form

Our structured products are issued in global registered form and are held within CCASS. This means that evidence of your interest in the structured products, and the efficiency of the ultimate payment of any cash settlement amount will be governed by the CCASS Rules.

Our structured products in global registered form will be registered in the name of a nominee for HKSCC (currently HKSCC Nominees Limited), who will be treated by us as the holder of the structured products. You are not entitled to any definitive certificates representing your beneficial interests in the structured products. You will have to rely on CCASS and/or your custodian/broker to (a) determine your beneficial interest in the structured products, (b) receive announcements and/or information relating to the structured products and (c) receive any payments under the structured products. Our obligation to you will be duly performed by the delivery of the cash settlement amount (less any exercise expenses) (if any) to HKSCC Nominees Limited as the registered holder of the structured products in accordance with the relevant terms and conditions of the structured products. The amounts will be delivered to you or your custodian/broker through CCASS in accordance with the CCASS Rules.

(17) There may be exchange rate risks and interest rate risks

You should note that there may be exchange rate risks. For example, the underlying may be denominated in a currency other than that of our structured products, our structured products may be denominated in a currency other than the currency of your home jurisdiction and our structured products may settle in a currency other than the currency in which you wishes to receive funds.

Changes in the exchange rate(s) between the currency of the underlying, the currency in which the structured products settle and/or the currency of your home jurisdiction may adversely affect the return of your investment in the structured products. We cannot assure that current exchange rates at the issue date of the structured products will be representative of the future exchange rates used in computing the value of our structured products. Fluctuations in exchange rates may therefore affect the value of the structured products.

In addition, you should be aware that an investment in the structured products may involve interest rate risks in that the intrinsic value of a structured product may be sensitive to fluctuations in interest rates. Interest rates are determined by factors of supply and demand in the international money markets which are affected by macroeconomic factors, speculation and central bank and government intervention. Fluctuations in interest rates (whether short term or long term, and whether of the currency in which the structured products are settled or of the currency in which the underlying is denominated) may affect the value of the structured products.

(18) There may be certain events relating to an index underlying that affect index linked structured products

In the case of index-linked structured products, the level of the index may vary over time and may increase or decrease due to various factors including changes in the formula for or the method of calculating the index. In addition, a level for the index may be published by the index compiler (as defined in the relevant terms and conditions) at a time when one or more shares comprised in the relevant index are not trading. If this occurs on a valuation date (as defined in the relevant terms and conditions) and there is no market disruption event (as defined in the relevant terms and conditions) under the terms of the relevant index-linked structured products, then the closing level of the index will be calculated by reference to the remaining shares comprised in the relevant index. Certain events relating to the index permit us to determine the level of the index on the basis of the formula or method last in effect prior to the changes to such change or formula.

(19) Two or more risk factors may simultaneously affect the structured products

Two or more risk factors may simultaneously have an effect on the value of a structured product such that the effect of any individual risk factor may not be predicted. No assurance can be given as to the effect any combination of risk factors may have on the value of a structured product.

(20) We are not the holding company of the group to which we belong

We are not the ultimate holding company of the group to which we belong and with which our name is identified. The ultimate holding company of the group to which we belong is HSBC Holdings plc.

(21) U.S. Foreign Account Tax Compliance Withholding

We and other financial institutions through which payments on the structured products are made may be required to withhold U.S. tax at a rate of 30 per cent. on all, or a portion of, payments made after the second anniversary of the date on which final U.S. Treasury Regulations defining the term "foreign passthru payments" are published with the U.S. Federal Register in respect of (i) any structured products characterised as obligations for U.S. federal tax purposes that are issued after (or are materially modified after) the date that is six months after the date on which final U.S. Treasury Regulations defining the term "foreign passthru payments" are filed with the U.S. Federal Register and (ii) any structured products not characterised as obligations for U.S. federal tax purposes, whenever issued, pursuant to Sections 1471 through 1474 of the U.S. Internal Revenue Code ("**FATCA**") or similar law implementing an intergovernmental approach to FATCA.

In addition, we and other financial institutions through which payments on the structured products are made may be required to withhold U.S. tax pursuant to FATCA at a rate of 30 per cent. on payments made in respect of any structured products characterised as obligations for U.S. federal tax purposes that are issued after (or are materially modified after) the date that is six months after the date on which such products are treated as giving rise to "dividend equivalent" payments as described under "Legislation Affecting Dividend Equivalent Payments." under the section headed "Taxation".

FATCA withholding tax may apply to an investor or to any non-U.S. financial institution through which payment on the structured products is made if the investor or non-U.S. financial institution does not fulfill its obligations under FATCA, including if (i) that investor (unless otherwise exempt from FATCA) does not provide information or consent to determine whether the investor is a U.S. person or should otherwise be treated as holding a "United States account" of the Issuer or (ii) that non-U.S. financial institution does not become a Participating Foreign Financial Institution (as defined by FATCA) by entering into an agreement with the U.S. Internal Revenue Service ("**IRS**") to provide the IRS with certain information in respect of its account holders and investors or is not otherwise deemed FATCA compliant or exempt from FATCA withholding tax. Structured product holders therefore may receive less settlement amount than expected. We are not required to pay any additional amounts with respect to amounts so withheld.

Each holder of structured products should consult its own tax advisor as to the application of FATCA to an investment in the structured products.

Further information on FATCA may be found at *https://www.irs.gov/corporations* under the section headed "Foreign Account Tax Compliance Act FATCA". Any information appearing on such website does not form part of this base listing document.

(22) Changes in the landscape of financial sector regulation

The global landscape of financial sector regulation is undergoing significant change. The extensive programme of regulatory change carries significant implementation risks for authorities and industry participants. Many official measures are proposals in development and negotiation, and have yet to be enacted into regional and national legislation. These processes could result in differing, fragmented and overlapping implementation around the world, leading to risks of regulatory arbitrage, a far from level competitive playing field and increased compliance costs. Any regulatory changes may affect our ability to perform our obligations under the structured products or to continue to issue structured products under the programme.

(23) We may early terminate the structured products on the grounds of illegality or impracticability

We are entitled to terminate the structured products if we determine in good faith and in a commercially reasonable manner that, for reasons beyond our control, it has become or it will become illegal or impracticable for us to perform our obligations under the structured products, in whole or in part, as a result of a change in law event (as defined in the relevant terms and conditions), or for us or any of our affiliates to maintain our hedging arrangements with respect to the structured products due to a change in law event.

Upon the occurrence of a change in law event, we will, if and to the extent permitted by applicable law or regulation, pay to you a cash amount that we determine in good faith and in a commercially reasonable manner to be the fair market value in respect of each structured product held by you immediately prior to such termination (ignoring such illegality or impracticability) less the cost to us of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as we determine in our sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Such amount could be substantially less than the amount you invested and can be as low as zero.

(24) We may adjust the terms and conditions of our structured products upon the occurrence of certain corporate events or extraordinary events affecting the underlying

We may determine that certain corporate events or extraordinary events affecting the underlying have occurred and may make corresponding adjustments to the terms and conditions of our structured products, including adjustments to the value or level of the underlying or changing the composition of the underlying. Such events and/or adjustments (if any) may have an adverse impact on the value and/ or market price of our structured products. We may also in our sole discretion adjust the entitlement of our structured products for dilution events such as stock splits and stock dividends.

However, we have no obligation to make an adjustment for every event that can affect the underlying. The value and/or market price of our structured products may be adversely affected by such events in the absence of an adjustment by us. If adjustments were made, we do not assure that such adjustments can negate any adverse impact of such events on the value and/or market price of our structured products.

(25) Modification to the terms and conditions

Under the terms and conditions of the structured products, we may, without the consent of the holder of the structured products, modify the terms and conditions applicable to the structured products if such modification, in our opinion, is (a) not materially prejudicial to the interests of any holder of the structured products generally (without considering circumstances of any individual holder of the structured products or the tax or other consequences of such modification in any particular jurisdiction), (b) of a formal, minor or technical nature, (c) made to correct a manifest error, or (d) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

(26) Risks in using our structured products for hedging

If you intend to purchase our structured products to hedge against the market risk associated with investing in or having an exposure to any underlying, you should recognise the risks of utilising the structured products in this manner. There is no assurance that the value of the structured products will correlate with movements of the relevant underlying. You may therefore incur substantial losses in the structured products, notwithstanding any losses already incurred with respect to investments in or exposures to the relevant underlying.

(27) Liquidation of the underlying company

In the case of structured products linked to shares, in the event of liquidation or dissolution of the company that issues the underlying shares or the appointment of a liquidator, receiver or administrator or analogous person under Hong Kong law in respect of the whole or substantially the whole of its undertaking, property or assets, the relevant structured products shall lapse.

(28) Liquidation or termination of the underlying trust or fund

In the case of structured products linked to fund units, in the event of (i) a liquidation, dissolution or termination of the fund or (ii) the appointment of a liquidator, receiver or administrator or analogous person under Hong Kong law in respect of the whole or substantially the whole of its undertaking, property or assets or (iii) the withdrawal of the Securities and Futures Commission's authorisation of the fund under the Securities and Futures Ordinance, the relevant structured products shall lapse.

(29) Risks relating to structured products linked to synthetic exchange-traded funds

Some of our structured products may be linked to an exchange-traded fund ("**ETF**"). An ETF is exposed to the political, economic, currency and other risks related to the underlying equity(ies), assets or index that the ETF is designed to track. An ETF is designed to replicate the performance of an underlying index (or in some cases, a group of assets such as commodities). Some ETFs gain exposure to the underlying index by investing in shares, bonds or other assets that make up the index. An increasing number of ETFs, however, adopt a synthetic replication investment strategy to achieve its investment objectives by investing in financial derivative instruments linked to the performance of an underlying asset pool or index that the ETF is designed to track ("**synthetic ETF**"). You should note that:

(a) investments in financial derivative instruments will expose the synthetic ETF to the credit, potential contagion and concentration risks of the counterparties who issued such financial derivative instruments. As such counterparties are predominantly international financial institutions, the failure of one such counterparty may have a negative effect on other counterparties of the synthetic ETF. Even if the synthetic ETF has collateral to reduce the counterparty risk, there may still be a risk that the market value of the collateral has fallen substantially when the synthetic ETF seeks to realise the collateral; and

(b) the synthetic ETF may be exposed to higher liquidity risk if the synthetic ETF invests in financial derivative instruments which do not have an active secondary market.

Accordingly, investing in the structured products is also exposed to the credit risk of the counterparties who issued the derivatives in addition to the risks associated with the underlying index the performance of which the synthetic ETF is designed to replicate. The above risks may have a significant impact on the performance of the synthetic ETF and hence the market price of our structured products.

(30) Risks relating to structured products linked to real estate investment trust

Some of our structured products may be linked to a real estate investment trust ("**REIT**"). The primary investment objective of REIT is to invest in a real estate portfolio. A REIT is exposed to risks relating to investments in real estate, including but not limited to (a) adverse changes in political or economic conditions; (b) changes in interest rates and the availability of debt or equity financing, which may result in an inability by the REIT to maintain or improve the real estate portfolio and finance future acquisitions; (c) changes in environmental, zoning and other governmental rules; (d) changes in market rents; (e) any required repair and maintenance of the portfolio properties; (f) breach of any property laws or regulations; (g) the relative illiquidity of real estate investment; (h) real estate taxes; (i) any hidden interests in the portfolio properties; (j) any increase in insurance premiums and (k) any uninsurable losses.

There may also be disparity between the market price of the units of a REIT and the net asset value per unit. This is because the market price of the units of a REIT also depends on many factors, including but not limited to (a) the market value and perceived prospects of the real estate portfolio; (b) changes in economic or market conditions; (c) changes in market valuations of similar companies; (d) changes in interest rates; (e) the perceived attractiveness of the units of the REIT against those of other equity securities; (f) the future size and liquidity of the market for the units and the REIT market generally; (g) any future changes to the regulatory system, including the tax system and (h) the ability of the REIT to implement its investment and growth strategies and to retain its key personnel.

The above risks may have a significant impact on the performance of the units and the price of our structured products.

(31) Risks relating to structured products linked to ETF investing through RQFII and/or China Connect

Some of our structured products may be linked to units of an ETF ("**China ETF**") issued and traded outside mainland China with direct investment in the mainland Chinese securities markets through the Renminbi Qualified Foreign Institutional Investor ("**RQFII**") regime and/or the Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect (collectively, "**China Connect**"), you should note that, amongst others:

(a) the novelty and untested nature of China Connect make China ETFs riskier than traditional ETFs investing directly in more developed markets. The policy and rules for RQFII and China Connect prescribed by the mainland China government are new and subject to change, and there may be uncertainty to their implementation. The uncertainty and change of the laws and regulations in mainland China may adversely impact on the performance of the China ETFs and the trading price of the units;

(b) a China ETF primarily invests in securities traded in the mainland Chinese securities markets and is subject to concentration risk. Investment in the mainland Chinese securities markets (which are inherently stock markets with restricted access) involves certain risks and special considerations as compared with investment in more developed economies or markets, such as greater political, tax, economic, foreign exchange, liquidity and regulatory risks. The operation of a China ETF may also be affected by interventions by the applicable government(s) and regulators in the financial markets;

(c) investment by a China ETF in the Mainland China's securities market under the RQFII regime will be subject to its manager's RQFII quota allocated to such China ETF. In the event that the RQFII quota allocated to such China ETF is reached and the manager is unable to acquire additional RQFII quota for such China ETF, the manager may need to suspend creation of further units of such China ETF, and therefore may affect the liquidity in unit trading of such China ETF. In such event, the trading price of a unit of such China ETF is likely to be at a significant premium to its net asset value, and may be highly volatile; and

(d) although there is no longer an aggregate quota limitation, trading eligible mainland Chinese securities through China Connect is still subject to a daily quota ("**Daily Quota**"). Unlike the RQFII regime (where a certain amount of investment quota is granted to each RQFII licence holder), the Daily Quota under China Connect is applicable to the whole market and limits the maximum net buy value of cross-boundary trades under China Connect each day. Daily Quota limitations may prevent such China ETF from purchasing the eligible mainland Chinese securities when it is otherwise advantageous to do so. In particular, once the remaining balance of the relevant Daily Quota drops to zero or the Daily Quota is exceeded, buy orders will be rejected (although such China ETF will be permitted to sell its eligible mainland Chinese securities regardless of the quota balance). If such China ETF becomes unable to invest directly in or alternatively hold the eligible mainland Chinese securities, the value of the units of such China ETF may be adversely affected.

The above risks may have a significant impact on the performance of the units and the price of our structured products. Please read the offering documents of the relevant China ETF to understand its key features and risks.

(32) Risks relating to structured products linked to ETF traded through dual counters model

Some of our structured products may be linked to units of an ETF traded through the dual counters model. If our structured products are linked to units of an ETF that adopt the dual counters model for trading its units on the stock exchange in Renminbi ("**RMB**") and Hong Kong dollars ("**HKD**") separately, you need to consider the following additional risks in light of the novelty and relatively untested nature of the stock exchange's dual counters model:

(a) our structured products may be linked to HKD-traded or RMB-traded units. If the underlying asset is HKD-traded units, movements in the trading prices of RMB-traded units should not directly affect the price of our structured products. Similarly, if the underlying asset is RMB traded units, movements in the trading prices of HKD-traded units should not directly affect the price of our structured products;

(b) if there is a suspension of inter-counter transfer of such units between the HKD counter and the RMB counter for any reason, such units will only be able to be traded in the relevant currency counter on the stock exchange, which may affect the demand and supply of such units and have an adverse effect on the price of our structured products; and

(c) the trading prices on the stock exchange of HKD-traded units and RMB-traded units may deviate significantly due to different factors, such as market liquidity, RMB conversion risk, supply and demand in each counter and the exchange rate between offshore RMB and HKD. Changes in the trading price of the underlying asset in HKD or RMB (as the case may be) may adversely affect the price of our structured products.

Risk Factors relating to CBBCs

(33) Our CBBCs could automatically expire worthless in certain circumstances

In the case of CBBCs, you should note that you can lose your entire investment on or prior to the expiry date. Unlike Warrants, CBBCs has a mandatory call feature and trading in the CBBCs will be suspended when the price or level of the underlying reaches the call price or call level (as defined in the relevant terms and conditions) (subject to the circumstances in which a mandatory call event will be reversed as set out in the sub-section titled "A mandatory call event is irrevocable" below). No investors can sell the CBBCs after the occurrence of a mandatory call event. Even if the price or level of the underlying bounces back in the right direction, the CBBCs which have been terminated as a result of the mandatory call event will not be revived and investors will not be able to profit from the bounce-back. Investors may receive a residual value per board lot (if positive) (as defined in the relevant terms and conditions) (less any exercise expenses) after the occurrence of a mandatory call event but such amount may be zero. If a mandatory call event occurs, the CBBCs will automatically expire. The CBBCs may become worthless.

(34) The trading price of a CBBC may not be the same as the theoretical value of such CBBC

A CBBC can be terminated when the price or level of the underlying reaches or goes beyond the call price or call level. When the price or level of the underlying approaches the call price or call level (as defined in the relevant terms and conditions), the trading price and theoretical value of the CBBC will likely be more volatile and any change in the trading price of the CBBCs may not be comparable and may be disproportionate with the change in the price or level of the underlying. This is because it is more likely that a mandatory call event will occur.

Once a mandatory call event has occurred in respect of a CBBC, the CBBC will be settled at the residual value (as defined in the relevant terms and conditions) (less exercise expenses), and you will not be able to benefit under that CBBC from any changes to the price or level of the underlying after the occurrence of a mandatory call event.

Further, when you sell your CBBC holdings in the market at any time prior to the expiry of such CBBC, the price realised may not be the same as the theoretical value of the CBBC, as the price will be determined by the levels of supply and demand in the market at that time.

(35) The residual value payable (if any) will not include residual funding cost

The residual value (if any) payable by us following the occurrence of a mandatory call event will not include the residual funding cost for the CBBCs. When a mandatory call event occurs, you will lose the funding cost for the full period.

(36) A mandatory call event is irrevocable

A mandatory call event is irrevocable unless it is triggered due to the occurrence of one of the following events:

(i) report of system malfunction or other technical errors of the stock exchange (e.g. the setting up of the wrong call level or call price or other parameters) by the stock exchange to us; or

(ii) report of manifest errors caused by the relevant third party price sources where applicable (e.g. miscalculation of index level by the index compiler) by us to the stock exchange.

And, in each case, we agree with the stock exchange that such mandatory call event is to be revoked provided that such mutual agreement must be reached no later than 30 minutes before the commencement of trading (including the pre-opening session) (Hong Kong time) on the trading day of the stock exchange immediately following the day on which the mandatory call event occurs, or such other time as prescribed by the stock exchange from time to time.

In such case, the mandatory call event so triggered will be reversed and all trades cancelled (if any) will be reinstated and the trading of the CBBCs will resume.

(37) Delay in mandatory call event notification

We will notify the market as soon as reasonably practicable after the occurrence of a mandatory call event. You should be aware that there may be a delay in our announcement of a mandatory call event due to technical errors, system failures and other factors that are beyond the reasonable control of the stock exchange and us.

(38) Non-Recognition of Post MCE Trades

The stock exchange and its recognised exchange controller, HKEX, will not incur any liability (whether based on contract, tort, (including, without limitation, negligence), or any other legal or equitable grounds and without regard to the circumstances giving rise to any purported claim except in the case of wilful misconduct on the part of the stock exchange and/or HKEX) for, any direct, consequential, special, indirect, economic, punitive, exemplary or any other loss or damage suffered or incurred by us or any other party arising from or in connection with the mandatory call event or the suspension of trading ("**Trading Suspension**") or the non-recognition of trades after a mandatory call event ("**Non-Recognition of Post MCE Trades**"), including without limitation, any delay, failure, mistake or error in the Trading Suspension or Non-Recognition of Post MCE Trades.

We and our affiliates shall not have any responsibility for any losses suffered as a result of the Trading Suspension and/ or Non-Recognition of Post MCE Trades in connection with the occurrence of a mandatory call event, notwithstanding that such Trading Suspension or Non-Recognition of Post MCE Trades may have occurred as a result of an error in the observation of the event.

(39) Fluctuation in the funding cost

The issue price of the CBBCs is set by reference to the difference between the initial reference spot price of the underlying share or unit and the strike price or the initial reference spot level of the index and the strike level (as the case may be), plus the applicable funding cost as of the relevant launch date. The initial funding cost applicable to the CBBCs as set out in the relevant launch announcement and supplemental listing document will fluctuate throughout the life of the CBBCs as the funding rate may change from time to time. The funding rate is a rate determined by us based on one or more of the following factors, including but not limited to the strike price or the strike level (as the case may be), the prevailing interest rate, the expected life of the CBBCs, any expected notional dividends in respect of the underlying shares or any securities comprising the index (as the case may be) and the margin financing provided by us.

(40) Our hedging activities

Our trading and/or hedging activities or those of our related parties related to the CBBCs and/or other financial instruments issued by us from time to time may have an impact on the price or level of the underlying and may trigger a mandatory call event.

In particular, when the price or level of the underlying is close to the call price or call level (as defined in the relevant terms and conditions), our unwinding activities in relation to the underlying may cause a fall or rise (as the case may be) in the price or level of the underlying leading to a mandatory call event as a result of such unwinding activities.

We or our related party may unwind our hedging transactions relating to the CBBCs in proportion to the amount of the CBBCs we repurchase from the market from time to time. Such activity may lead to greater volatility of the price or level of the underlying, and may lead to a mandatory call event as a result. Upon the occurrence of a mandatory call event, we or our related party may unwind any hedging transactions relating to the CBBCs. Such unwinding activities after the occurrence of a mandatory call event may affect the price or level of the underlying and consequently the residual value (if any) for the CBBCs.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE EQUITY WARRANTS (CASH SETTLED)

1. Form, Status, Transfer and Title

(a) *Form.* The call/put Warrants (the "**Warrants**") (which expression shall, unless the context otherwise requires, include any further Warrants issued pursuant to Condition 13) relating to the Shares of the Company are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the "**Global Certificate**") dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the "**Issuer**") and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the "**Instrument**"). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The Warrantholders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.

(b) *Status.* The Warrants represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.

(c) *Transfer.* Transfers of beneficial interests in the Warrants may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).

(d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of Warrants shall be treated by the Issuer as the absolute owner and holder of such number of Warrants. The expression "**Warrantholder**" shall be construed accordingly.

2. Warrant Rights and Exercise Expenses

(a) *Warrant Rights.* Every Board Lot gives each Warrantholder, upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount (as defined below), if any, less any Exercise Expenses (as defined below).

(b) *Exercise Expenses.* On exercise of the Warrants, Warrantholders are required to pay Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct all Exercise Expenses from the applicable Cash Settlement Amount is deemed to be given by a Warrantholder to the Issuer upon purchase of the Warrants. Any Exercise Expenses which have not been determined on the Expiry Date (as defined below) shall be notified to the Warrantholder as soon as practicable after determination thereof by the Issuer and shall be paid by the Warrantholder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

"**Average Price**" means the arithmetic mean of the closing prices of a Share (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) for each Valuation Date (as defined below);

"**Board Lot**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Business Day**" means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

"**Cash Settlement Amount**" means in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

(1) in the case of a series of call Warrants:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Average Price – Exercise Price) x one Board Lot}}{\text{Number of Warrants per Entitlement}}$$

(2) in the case of a series of put Warrants:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Exercise Price – Average Price) x one Board Lot}}{\text{Number of Warrants per Entitlement}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

"**CCASS**" means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited ("**HKSCC**");

"**CCASS Rules**" means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

"**CCASS Settlement Day**" has the meaning ascribed to the term "Settlement Day" in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

"**Company**" means the company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Entitlement**" means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Exercise Expenses**" means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the exercise of the Warrants;

"**Exercise Price**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Expiry Date**" means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Market Disruption Event**" means:

(1) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Shares; or (ii) any options or futures contracts relating to the Shares if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;

(2) the issuance of the tropical cyclone warning signal number 8 or above or a "BLACK" rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the "BLACK" rainstorm signal having been issued; or

(3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

"**Settlement Currency**" has the meaning given to it in the relevant Launch Announcement and Supplement Listing Document;

"**Settlement Date**" means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Average Price is determined in accordance with these Conditions;

"**Settlement Disruption Event**" means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant Warrantholder ("**Designated Bank Account**");

"**Shares**" means the shares of the Company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Stock Exchange**" means The Stock Exchange of Hong Kong Limited; and

"**Valuation Date**" means, with respect to the exercise of Warrants, and subject as provided below in relation to a Market Disruption Event, each of the five Business Days immediately preceding the Expiry Date.

3. Exercise of Warrants, Automatic Exercise and Expiry

(a) *Exercise of Warrants.* The Warrants are exercisable only on the Expiry Date.

(b) *Automatic Exercise.* Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Warrantholders). The Warrantholders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Warrantholders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).

(c) *Expiry.* Any Warrant which has not been automatically exercised in accordance with Condition 3(b) shall expire immediately without value thereafter and all rights of the Warrantholder and obligations of the Issuer with respect to such Warrant shall cease.

4. Exercise of Warrants

(a) Warrants may only be exercised in a Board Lot or integral multiples thereof.

(b) *No requirement to deliver an exercise notice.* The Warrantholders will not be required to deliver an exercise notice for any purpose in relation to the Warrants.

(c) *Cancellation.* The Issuer will, with effect from the first Business Day following the Expiry Date, remove from its register the name of the person in respect of the Warrants which (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions; or (ii) have expired worthless, and thereby cancel the relevant Warrants.

(d) *Cash Settlement.* Subject to automatic exercise of Warrants in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Warrantholder equal to the Cash Settlement Amount less any Exercise Expenses. If the Cash Settlement Amount is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount shall be payable by the Issuer.

The Cash Settlement Amount less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Warrantholder for any interest in respect of the amount due or any loss or damage that such Warrantholder may suffer as a result of the existence of the Settlement Disruption Event.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event, irrespective of whether that postponed Valuation Date would fall on a Business Day that is already or is deemed to be a Valuation Date. For the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date is postponed as aforesaid, the closing price of the Shares on the first succeeding Business Day will be used more than once in determining the Average Price, so that in no event shall there be less than five closing prices used to determine the Average Price. If the postponement of the Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then: (i) the Business Day immediately preceding the Expiry Date (the "**Last Valuation Date**") shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and (ii) the Issuer shall determine the closing price of the Shares on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments

(a) *Rights Issues.* If and whenever the Company shall, by way of Rights (as defined below), offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a "**Rights Offer**"), the Entitlement will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

$$\text{Adjustment Component} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares are traded on a cum-Rights basis

R: Subscription price per new Share as specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Right

M: Number of new Share(s) (whether a whole or a fraction) per existing Share each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\begin{array}{c}\text{Adjusted Exercise Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

For the purposes of these Conditions:

"**Rights**" means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to the holders of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

(b) *Bonus Issues.* If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a "**Bonus Issue**") the Entitlement will be increased on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

Adjustment Component = (1 + N)

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\begin{array}{c}\text{Adjusted Exercise Price}\\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

(c) *Share Splits or Consolidations.* If and whenever the Company shall subdivide its Shares or any class of its outstanding share capital comprised of the Shares into a greater number of shares (a "**Subdivision**") or consolidate the Shares or any class of its outstanding share capital comprised of the Shares into a smaller number of shares (a "**Consolidation**"), the Entitlement in effect immediately prior thereto will be increased (in the case of a Subdivision) or decreased (in the case of a Consolidation) accordingly in each case on the day on which the relevant Subdivision or Consolidation shall have taken effect. In addition, the Exercise Price (which shall be rounded to the nearest 0.001) will be decreased (in the case of a Subdivision) or increased (in the case of a Consolidation) accordingly.

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

(d) *Merger or Consolidation.* If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of any corporation or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the Warrants may in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner) be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a "**Restructuring Event**") (as determined by the Issuer in its absolute discretion (acting in good faith and in a commercially reasonable manner)).

The rights attaching to the Warrants after the adjustment shall, after such Restructuring Event, relate to the number of shares of the corporation(s) resulting from or surviving such Restructuring Event or other securities ("**Substituted Securities**") and/or cash offered in substitution for the affected Shares, as the case may be, to which the holder of such number of Shares to which the Warrants related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Shares shall not be affected by this paragraph (d) and, where cash is offered in substitution for Shares or is deemed to replace Substituted Securities as described above, references in these Conditions to the Shares shall include any such cash.

(e) *Cash Distributions.* Generally, no adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a "**Cash Distribution**") announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for two per cent. or more of the Share's closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Entitlement will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

$$\text{Adjustment Component} = \frac{X - B}{X - B - C}$$

B: Amount of the relevant ordinary cash dividend per Share, provided that B shall be deducted from X only if the Business Day on which trading in the Shares of the Company becomes ex-entitlement with respect to the Cash Distribution and the distribution of the ordinary cash dividend by the Company falls on the same date. For the avoidance of doubt, B shall be deemed to be zero if the ex-entitlement dates of the relevant ordinary cash dividend and the Cash Distribution are different

C: Amount of the relevant Cash Distribution per Share

E: Existing Entitlement immediately prior to the Cash Distribution

X: Cum-Cash Distribution Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares of the Company are traded on a cum-Cash Distribution basis

In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\text{Adjusted Exercise Price (rounded to the nearest 0.001)} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

(f) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:

(i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such adjustment in any particular jurisdiction); or

(ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

(g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Warrantholders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

(a) for it to perform its obligations under the Warrants, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a "**Change in Law Event**"); or

(b) for it or any of its affiliates to maintain the Issuer's hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each Warrantholder a cash amount that Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Warrantholder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the Warrantholders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase Warrants at any price in the open market or by tender or by private treaty. Any Warrants so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The Warrants are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. Warrantholders will not be entitled to definitive certificates in respect of any Warrants issued or transferred to them.

10. Meetings of Warrantholders; Modification

(a) *Meetings of Warrantholders.* The Instrument contains provisions for convening meetings of the Warrantholders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the Warrants or of the Global Certificate.

Any resolution to be passed in a meeting of the Warrantholders shall be decided by poll. Such a meeting may be convened by the Issuer or by Warrantholders holding not less than 10 per cent. of the Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing Warrantholders whatever the number of Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Warrantholders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Warrantholders shall be binding on all the Warrantholders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Warrantholders being held if passed unanimously.

(b) *Modification.* The Issuer may, without the consent of the Warrantholders, effect any modification of the terms and conditions of the Warrants or the Global Certificate which, in the opinion of the Issuer, is:

(i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such modification in any particular jurisdiction);

(ii) of a formal, minor or technical nature;

(iii) made to correct a manifest error; or

(iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the Warrantholders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Warrantholders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Liquidation

In the event of a liquidation or dissolution of the Company or the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, all unexercised Warrants will lapse and shall cease to be valid for any purpose, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

13. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Warrantholders, to create and issue further Warrants so as to form a single series with the Warrants.

14. Delisting

(a) If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the Warrants as it shall, in its absolute discretion (acting in good faith and in a commercially reasonable manner), consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Warrantholders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Warrantholder or the tax or other consequences that may result in any particular jurisdiction).

(b) Without prejudice to the generality of Condition 14(a), where the Shares are, or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Warrantholders, make such adjustments to the entitlements of Warrantholders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

(c) The Issuer shall determine, in its absolute discretion (acting in good faith and in a commercially reasonable manner), any adjustment or amendment and its determination shall be conclusive and binding on the Warrantholders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Warrantholders in accordance with Condition 11 as soon as practicable after they are determined.

15. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Warrants.

16. Governing Law

The Warrants, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each Warrantholder (by its purchase of the Warrants) shall be deemed to have submitted for all purposes in connection with the Warrants, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

17. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE INDEX WARRANTS (CASH SETTLED)

1. Form, Status, Transfer and Title

(a) *Form.* The call/put Warrants (the "**Warrants**") (which expression shall, unless the context otherwise requires, include any further Warrants issued pursuant to Condition 12) relating to the Index as published by the Index Compiler are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the "**Global Certificate**") dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the "**Issuer**") and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the "**Instrument**"). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The Warrantholders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.

(b) *Status.* The Warrants represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.

(c) *Transfer.* Transfers of beneficial interests in the Warrants may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).

(d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of Warrants shall be treated by the Issuer as the absolute owner and holder of such number of Warrants. The expression "**Warrantholder**" shall be construed accordingly.

2. Warrant Rights and Exercise Expenses

(a) *Warrant Rights.* Every Board Lot entitles each Warrantholder, upon due exercise and compliance with Condition 4, to payment of the Cash Settlement Amount (as defined below), if any, less any Exercise Expenses (as defined below).

(b) *Exercise Expenses.* On exercise of the Warrants, Warrantholders are required to pay Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct all Exercise Expenses from the applicable Cash Settlement Amount is deemed to be given by a Warrantholder to the Issuer upon purchase of the Warrants. Any Exercise Expenses which have not been determined on the Expiry Date shall be notified to the Warrantholder as soon as practicable after determination thereof by the Issuer and shall be paid by the Warrantholder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

"**Board Lot**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Business Day**" means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

"**Cash Settlement Amount**" means in respect of every Board Lot, an amount, converted (if applicable) into the Settlement Currency at the Exchange Rate, calculated by the Issuer equal to:

(1) in the case of a series of call Warrants:

$$\text{Cash Settlement Amount per Board Lot} = \frac{(\text{Closing Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(2) in the case of a series of put Warrants:

$$\text{Cash Settlement Amount per Board Lot} = \frac{(\text{Strike Level} - \text{Closing Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

"**CCASS**" means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited ("**HKSCC**");

"**CCASS Rules**" means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

"**CCASS Settlement Day**" has the meaning ascribed to the term "Settlement Day" in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

"**Closing Level**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Divisor**" means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Exchange Rate**" means the rate specified in the relevant Launch Announcement and Supplemental Listing Document (if applicable);

"**Exercise Expenses**" means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the exercise of the Warrants;

"**Expiry Date**" means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Index**" means the index specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Index Compiler**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Index Currency Amount**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Index Exchange**" means the exchange specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Market Disruption Event**" means:

(1) the occurrence or existence, on the Valuation Date during the one-half hour period that ends at the close of trading on the Index Exchange, of any of:

(i) the suspension or material limitation of the trading of a material number of securities that comprise the Index; or

(ii) the suspension or material limitation of the trading of options or futures contracts relating to the Index on any exchanges on which such contracts are traded; or

(iii) the imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount;

for the purposes of paragraph (1), (x) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any relevant exchange, and (y) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event; or

(2) where the Index Exchange is the Stock Exchange, the issuance of the tropical cyclone warning signal number 8 or above or a "BLACK" rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the "BLACK" rainstorm signal having been issued; or

(3) a limitation or closure of the Index Exchange due to any unforeseen circumstances; or

(4) any circumstances beyond the control of the Issuer in which the Closing Level or, if applicable, the Exchange Rate cannot be determined by the Issuer in the manner set out in these Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances;

"**Settlement Currency**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Settlement Date**" means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Closing Level is determined in accordance with these Conditions;

"**Settlement Disruption Event**" means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant Warrantholder ("**Designated Bank Account**");

"**Stock Exchange**" means The Stock Exchange of Hong Kong Limited;

"**Strike Level**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6; and

"**Valuation Date**" means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document.

3. Exercise of Warrants, Automatic Exercise and Expiry

(a) *Exercise of Warrants.* The Warrants are exercisable only on the Expiry Date.

(b) *Automatic Exercise.* Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Warrantholders). The Warrantholders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Warrantholders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).

(c) *Expiry.* Any Warrant which has not been automatically exercised in accordance with Condition 3(b) shall expire immediately without value thereafter and all rights of the Warrantholder and obligations of the Issuer with respect to such Warrant shall cease.

4. Exercise of Warrants

(a) Warrants may only be exercised in a Board Lot or integral multiples thereof.

(b) *No requirement to deliver an exercise notice.* The Warrantholders will not be required to deliver an exercise notice for any purpose in relation to the Warrants.

(c) *Cancellation.* The Issuer will, with effect from the first Business Day following the Expiry Date, remove from its register the name of the person in respect of the Warrants which (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions or (ii) have expired worthless, and thereby cancel the relevant Warrants.

(d) *Cash Settlement.* Subject to automatic exercise of Warrants in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Warrantholder equal to the Cash Settlement Amount less any Exercise Expenses. If the Cash Settlement Amount is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount shall be payable by the Issuer.

The Cash Settlement Amount less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Warrantholder for any interest in respect of the amount due or any loss or damage that such Warrantholder may suffer as a result of the existence of the Settlement Disruption Event.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that on the Valuation Date a Market Disruption Event has occurred, then the Issuer shall determine the Closing Level or, if applicable, the Exchange Rate on the basis of its good faith estimate of the Closing Level or, if applicable, the Exchange Rate that would have prevailed on that day but for the occurrence of the Market Disruption Event provided that in the case of determining the Closing Level, the Issuer, if applicable, may, but shall not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments to the Index

(a) *Successor Index Compiler Calculates and Reports Index.* If the Index is (i) not calculated and announced by the Index Compiler but is calculated and published by a successor to the Index Compiler (the "**Successor Index Compiler**") acceptable to the Issuer or (ii) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index, then the Index will be deemed to be the index so calculated and announced by the Successor Index Compiler or that successor index, as the case may be.

(b) *Modification and Cessation of Calculation of Index.*

If:

(i) on or prior to a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent stock, contracts or commodities and other routine events); or

(ii) on a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler fails to calculate and publish the Index (other than as a result of a Market Disruption Event), then the Issuer shall determine the Closing Level using, in lieu of a published level for the Index, the level for the Index as at that Valuation Date as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to that change or failure, but using only those securities, contracts or commodities that comprised the Index immediately prior to that change or failure.

(c) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Condition, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:

(i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such adjustment in any particular jurisdiction); or

(ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

(d) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Warrantholders. The Issuer will give, or procure that there is given, notice as soon as practicable of any determinations by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

(a) for it to perform its obligations under the Warrants, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a "**Change in Law Event**"); or

(b) for it or any of its affiliates to maintain the Issuer's hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each Warrantholder a cash amount that Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Warrantholder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the Warrantholders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase Warrants at any price in the open market or by tender or by private treaty. Any Warrants so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The Warrants are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. Warrantholders will not be entitled to definitive certificates in respect of any Warrants issued or transferred to them.

10. Meetings of Warrantholders; Modification

(a) *Meetings of Warrantholders.* The Instrument contains provisions for convening meetings of the Warrantholders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the Warrants or of the Global Certificate.

Any resolution to be passed in a meeting of the Warrantholders shall be decided by poll. Such a meeting may be convened by the Issuer or by Warrantholders holding not less than 10 per cent. of the Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing Warrantholders whatever the number of Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Warrantholders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Warrantholders shall be binding on all the Warrantholders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Warrantholders being held if passed unanimously.

(b) *Modification.* The Issuer may, without the consent of the Warrantholders, effect any modification of the terms and conditions of the Warrants or the Global Certificate which, in the opinion of the Issuer, is:

(i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such modification in any particular jurisdiction);

(ii) of a formal, minor or technical nature;

(iii) made to correct a manifest error; or

(iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the Warrantholders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Warrantholders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Warrantholders, to create and issue further Warrants so as to form a single series with the Warrants.

13. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Warrants.

14. Governing Law

The Warrants, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each Warrantholder (by its purchase of the Warrants) shall be deemed to have submitted for all purposes in connection with the Warrants, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

15. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE UNIT FUND WARRANTS (CASH SETTLED)

1. Form, Status, Transfer and Title

(a) *Form.* The call/put Warrants (the "**Warrants**") (which expression shall, unless the context otherwise requires, include any further Warrants issued pursuant to Condition 13) relating to the Units of the Fund are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the "**Global Certificate**") dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the "**Issuer**") and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the "**Instrument**"). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The Warrantholders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.

(b) *Status.* The Warrants represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.

(c) *Transfer.* Transfers of beneficial interests in the Warrants may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).

(d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of Warrants shall be treated by the Issuer as the absolute owner and holder of such number of Warrants. The expression "**Warrantholder**" shall be construed accordingly.

2. Warrant Rights and Exercise Expenses

(a) *Warrant Rights.* Every Board Lot gives each Warrantholder, upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount (as defined below), if any, less any Exercise Expenses (as defined below).

(b) *Exercise Expenses.* On exercise of the Warrants, Warrantholders are required to pay Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct all Exercise Expenses from the applicable Cash Settlement Amount is deemed to be given by a Warrantholder to the Issuer upon purchase of the Warrants. Any Exercise Expenses which have not been determined on the Expiry Date (as defined below) shall be notified to the Warrantholder as soon as practicable after determination thereof by the Issuer and shall be paid by the Warrantholder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

"**Average Price**" means the arithmetic mean of the closing prices of a Unit (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) for each Valuation Date (as defined below);

"**Board Lot**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Business Day**" means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

"**Cash Settlement Amount**" means in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

(1) in the case of a series of call Warrants:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Average Price – Exercise Price) x one Board Lot}}{\text{Number of Warrants per Entitlement}}$$

(2) in the case of a series of put Warrants:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Exercise Price – Average Price) x one Board Lot}}{\text{Number of Warrants per Entitlement}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

"**CCASS**" means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited ("**HKSCC**");

"**CCASS Rules**" means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

"**CCASS Settlement Day**" has the meaning ascribed to the term "Settlement Day" in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

"**Entitlement**" means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Exercise Expenses**" means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the exercise of the Warrants;

"**Exercise Price**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Expiry Date**" means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Fund**" means the fund specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Market Disruption Event**" means:

(1) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Units; or (ii) any options or futures contracts relating to the Units if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;

(2) the issuance of the tropical cyclone warning signal number 8 or above or a "BLACK" rainstorm signal on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the "BLACK" rainstorm signal having been issued; or

(3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

"**Settlement Currency**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Settlement Date**" means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Average Price is determined in accordance with these Conditions;

"**Settlement Disruption Event**" means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant Warrantholder ("**Designated Bank Account**");

"**Stock Exchange**" means The Stock Exchange of Hong Kong Limited;

"**Units**" means the units of the Fund specified as such in the relevant Launch Announcement and Supplemental Listing Document; and

"**Valuation Date**" means, with respect to the exercise of Warrants, and subject as provided below in relation to a Market Disruption Event, each of the five Business Days immediately preceding the Expiry Date.

3. Exercise of Warrants, Automatic Exercise and Expiry

(a) *Exercise of Warrants.* The Warrants are exercisable only on the Expiry Date.

(b) *Automatic Exercise.* Any Warrant will automatically be exercised if the Cash Settlement Amount on the Expiry Date is greater than zero (without notice being given to the Warrantholders). The Warrantholders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the Warrantholders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).

(c) *Expiry.* Any Warrant which has not been automatically exercised in accordance with Condition 3(b) shall expire immediately without value thereafter and all rights of the Warrantholder and obligations of the Issuer with respect to such Warrant shall cease.

4. Exercise of Warrants

(a) Warrants may only be exercised in a Board Lot or integral multiples thereof.

(b) *No requirement to deliver an exercise notice.* The Warrantholders will not be required to deliver an exercise notice for any purpose in relation to the Warrants.

(c) *Cancellation.* The Issuer will, with effect from the first Business Day following the Expiry Date, remove from its register the name of the person in respect of the Warrants which (i) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions; or (ii) have expired worthless, and thereby cancel the relevant Warrants.

(d) *Cash Settlement.* Subject to automatic exercise of Warrants in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant Warrantholder equal to the Cash Settlement Amount less any Exercise Expenses. If the Cash Settlement Amount is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount shall be payable by the Issuer.

The Cash Settlement Amount less the determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the Warrantholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Warrantholder for any interest in respect of the amount due or any loss or damage that such Warrantholder may suffer as a result of the existence of the Settlement Disruption Event.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event, irrespective of whether that postponed Valuation Date would fall on a Business Day that is already or is deemed to be a Valuation Date. For the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date is postponed as aforesaid, the closing price of the Units on the first succeeding Business Day will be used more than once in determining the Average Price, so that in no event shall there be less than five closing prices used to determine the Average Price. If the postponement of the Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then: (i) the Business Day immediately preceding the Expiry Date (the "**Last Valuation Date**") shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and (ii) the Issuer shall determine the closing price of the Units on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments

(a) *Rights Issues.* If and whenever the Fund shall, by way of Rights (as defined below), offer new Units for subscription at a fixed subscription price to the holders of existing Units pro rata to existing holdings (a "**Rights Offer**"), the Entitlement will be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

$$\text{Adjustment Component} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Unit price being the closing price of the Units on the Stock Exchange on the last Business Day on which the Units are traded on a cum-Rights basis

R: Subscription price per new Unit as specified in the Rights Offer plus an amount equal to any distributions or other benefits foregone to exercise the Right

M: Number of new Unit(s) (whether a whole or a fraction) per existing Unit each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\begin{array}{c}\text{Adjusted Exercise Price} \\ \text{(rounded to the nearest 0.001)}\end{array} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

For the purposes of these Conditions:

"**Rights**" means the right(s) attached to each existing Unit or needed to acquire one new Unit (as the case may be) which are given to the holders of existing Units to subscribe at a fixed subscription price for new Units pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

(b) *Bonus Issues.* If and whenever the Fund shall make an issue of Units credited as fully paid to the holders of Units generally (other than pursuant to a scrip distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash distribution and without any payment or other consideration being made or given by such holders) (a "**Bonus Issue**") the Entitlement will be increased on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

$$\text{Adjustment Component} = (1 + N)$$

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Units (whether a whole or a fraction) received by a holder of existing Units for each Unit held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\begin{array}{c}\text{Adjusted Exercise Price}\\\text{(rounded to the nearest 0.001)}\end{array} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

(c) *Unit Splits or Consolidations.* If and whenever the Fund shall subdivide its Units or any class of its outstanding units into a greater number of units (a "**Subdivision**") consolidate the Units or any class of its outstanding units into a smaller number of units (a "**Consolidation**"), the Entitlement in effect immediately prior thereto will be increased (in the case of a Subdivision) or decreased (in the case of a Consolidation) accordingly in each case on the day on which the relevant Subdivision or Consolidation shall have taken effect. In addition, the Exercise Price (which shall be rounded to the nearest 0.001) will be decreased (in the case of a Subdivision) or increased (in the case of a Consolidation) accordingly.

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

(d) *Merger or Consolidation.* If it is announced that the Fund is to or may merge with or into any other fund or consolidate with or into any other fund or corporation (including becoming, by agreement or otherwise, controlled by any person or corporation) (except where the Fund is the surviving entity in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the Warrants may in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner) be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a "**Restructuring Event**") (as determined by the Issuer in its absolute discretion (acting in good faith and in a commercially reasonable manner)).

The rights attaching to the Warrants after the adjustment shall, after such Restructuring Event, relate to the number of units of the fund(s) resulting from or surviving such Restructuring Event or other securities ("**Substituted Securities**") and/ or cash offered in substitution for the affected Units, as the case may be, to which the holder of such number of Units to which the Warrants related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Units shall not be affected by this paragraph (d) and, where cash is offered in substitution for Units or is deemed to replace Substituted Securities as described above, references in these Conditions to the Units shall include any such cash.

(e) *Cash Distributions.* Generally, no adjustment will be made for an ordinary cash distribution (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a "**Cash Distribution**") announced by the Fund, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for two per cent. or more of the Unit's closing price on the day of announcement by the Fund.

If and whenever the Fund shall make a Cash Distribution credited as fully paid to the holders of Units generally, the Entitlement will be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

$$\text{Adjustment Component} = \frac{X - B}{X - B - C}$$

B: Amount of the relevant ordinary cash distribution per Unit, provided that B shall be deducted from X only if the Business Day on which trading in the Units of the Fund becomes ex-entitlement with respect to the Cash Distribution and the distribution of the ordinary cash distribution by the Fund falls on the same date. For the avoidance of doubt, B shall be deemed to be zero if the ex-entitlement dates of the relevant ordinary cash distribution and the Cash Distribution are different

C: Amount of the relevant Cash Distribution per Unit

E: Existing Entitlement immediately prior to the Cash Distribution

X: Cum-Cash Distribution Unit price being the closing price of the Units on the Stock Exchange on the last Business Day on which the Units of the Fund are traded on a cum-Cash Distribution basis

In addition, the Issuer shall adjust the Exercise Price in accordance with the following formula:

$$\text{Adjusted Exercise Price (rounded to the nearest 0.001)} = \text{Exercise Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Exercise Price shall take effect on the same day that the Entitlement is adjusted.

(f) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:

(i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such adjustment in any particular jurisdiction); or

(ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

(g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Warrantholders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

(a) for it to perform its obligations under the Warrants, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a "**Change in Law Event**"); or

(b) for it or any of its affiliates to maintain the Issuer's hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each Warrantholder a cash amount that Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Warrantholder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the Warrantholders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase Warrants at any price in the open market or by tender or by private treaty. Any Warrants so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The Warrants are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. Warrantholders will not be entitled to definitive certificates in respect of any Warrants issued or transferred to them.

10. Meetings of Warrantholders; Modification

(a) *Meetings of Warrantholders.* The Instrument contains provisions for convening meetings of the Warrantholders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the Warrants or of the Global Certificate.

Any resolution to be passed in a meeting of the Warrantholders shall be decided by poll. Such a meeting may be convened by the Issuer or by Warrantholders holding not less than 10 per cent. of the Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing Warrantholders whatever the number of Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Warrantholders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Warrantholders shall be binding on all the Warrantholders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Warrantholders being held if passed unanimously.

(b) *Modification.* The Issuer may, without the consent of the Warrantholders, effect any modification of the terms and conditions of the Warrants or the Global Certificate which, in the opinion of the Issuer, is:

(i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such modification in any particular jurisdiction);

(ii) of a formal, minor or technical nature;

(iii) made to correct a manifest error; or

(iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the Warrantholders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to Warrantholders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Liquidation

In the event of (i) a liquidation, dissolution or termination of the Fund or (ii) the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of its undertaking, property or assets or (iii) the withdrawal of the Securities and Futures Commission's authorisation of the Fund under the Securities and Futures Ordinance, all unexercised Warrants will lapse and shall cease to be valid for any purpose, in the case of (i) voluntary liquidation, on the effective date of the relevant resolution, (ii) an involuntary liquidation or dissolution, on the date of the relevant court order, (iii) a termination, on the effective date of the termination, (iv) the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date on which such appointment is effective, or (v) withdrawal of authorisation, on the date on which such withdrawal becomes effective, but subject (in any such case) to any contrary mandatory requirement of law.

13. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Warrantholders, to create and issue further Warrants so as to form a single series with the Warrants.

14. Delisting

(a) If at any time the Units cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the Warrants as it shall, in its absolute discretion (acting in good faith and in a commercially reasonable manner), consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Warrantholders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any Warrantholder or the tax or other consequences that may result in any particular jurisdiction).

(b) Without prejudice to the generality of Condition 14(a), where the Units are, or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Warrantholders, make such adjustments to the entitlements of Warrantholders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

(c) The Issuer shall determine, in its absolute discretion (acting in good faith and in a commercially reasonable manner), any adjustment or amendment and its determination shall be conclusive and binding on the Warrantholders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Warrantholders in accordance with Condition 11 as soon as practicable after they are determined.

15. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Warrants.

16. Governing Law

The Warrants, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each Warrantholder (by its purchase of the Warrants) shall be deemed to have submitted for all purposes in connection with the Warrants, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

17. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE EQUITY CALLABLE BULL/BEAR CONTRACTS (CASH SETTLED)

1. Form, Status, Transfer and Title

(a) *Form.* The Callable Bull/Bear Contracts (the "**CBBCs**") (which expression shall, unless the context otherwise requires, include any further CBBCs issued pursuant to Condition 13) relating to the Shares of the Company are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the "**Global Certificate**") dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the "**Issuer**") and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the "**Instrument**"). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The CBBC Holders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.

(b) *Status.* The CBBCs represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.

(c) *Transfer.* Transfers of beneficial interests in the CBBCs may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).

(d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of CBBCs shall be treated by the Issuer as the absolute owner and holder of such number of CBBCs. The expression "**CBBC Holder**" shall be construed accordingly.

2. CBBC Rights and Exercise Expenses

(a) *CBBC Rights.* Every Board Lot gives each CBBC Holder, (i) upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount, (if any) less any Exercise Expenses or (ii) upon compliance with Condition 4, the right to receive the payment of the Residual Value, (if any) less any Exercise Expenses following the occurrence of a Mandatory Call Event (all as defined below).

(b) *Exercise Expenses.* On expiry of the CBBCs or upon the occurrence of a Mandatory Call Event, CBBC Holders are required to pay the Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct the Exercise Expenses from the applicable Cash Settlement Amount or the Residual Value (as the case may be) is deemed to be given by a CBBC Holder to the Issuer upon purchase of the CBBCs. Any Exercise Expenses which have not been determined on the Expiry Date or

following the Mandatory Call Event shall be notified to the CBBC Holder as soon as practicable after determination thereof by the Issuer and shall be paid by the CBBC Holder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

"**Board Lot**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Business Day**" means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

"**Call Price**" means the price of the Shares specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Cash Settlement Amount**" means:

(1) in the case of a series of bull CBBCs and in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Closing Price – Strike Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

(2) in the case of a series of bear CBBCs and in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Strike Price – Closing Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

"**CCASS**" means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited ("**HKSCC**");

"**CCASS Rules**" means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

"**CCASS Settlement Day**" has the meaning ascribed to the term "Settlement Day" in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

"**Closing Price**" means the official closing price of one Share (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) on the Valuation Date (as defined below);

"**Company**" means the company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Entitlement**” means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the expiry of the CBBCs or the occurrence of a Mandatory Call Event (as the case may be);

“**Expiry Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**IEP**” means the indicative equilibrium price, as determined in accordance with the Rules and Regulations of the Stock Exchange prescribed by the Stock Exchange from time to time (the “**Trading Rules**”);

“**Mandatory Call Event**” occurs:

(1) in the case of a series of bull CBBCs, if the Spot Price is at or below the Call Price at any time during a Trading Day in the Observation Period; and

(2) in the case of a series of bear CBBCs, if the Spot Price is at or above the Call Price at any time during a Trading Day in the Observation Period;

“**Market Disruption Event**” means:

(1) (i) with respect to exercise of the CBBCs, the occurrence or existence on the Valuation Date during the one-half hour period that ends at the close of trading of, or (ii) with respect to the determination of the Residual Value, the occurrence or existence during a trading session resulting in any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in

   (a) the Shares; and/or

   (b) any options or futures contracts relating to the Shares if, in any such case, that suspension or limitation is, in the determination of the Issuer, material; or

(2) (i) with respect to exercise of the CBBCs, the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal which either results in the Stock Exchange being closed for dealings for an entire day or results in the Stock Exchange being closed prior to its regular time for close of trading on any day, provided that there shall be no Market Disruption Event solely by reason of the Stock Exchange opening later than its regular time for open of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the BLACK rainstorm signal having been issued, or (ii) with respect to the determination of the Residual Value and in respect of a trading session, the issuance of the tropical cyclone warning signal number 8 or above or a BLACK rainstorm signal which results in the Stock Exchange being closed for dealings; or

(3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

"**Maximum Trade Price**" means the highest Spot Price (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

"**MCE Valuation Period**" means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the "**First Session**") and up to the end of the trading session on the Stock Exchange immediately following the First Session (the "**Second Session**") unless, in the determination of the Issuer in good faith, the Second Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the Second Session) does not contain any continuous period of one hour or more than one hour during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed, in which case the MCE Valuation Period shall be extended to the end of the subsequent trading session following the Second Session during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed for a continuous period of at least one hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in good faith that each trading session on each of the four Trading Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of one hour or more than one hour during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed. In that case:

(i) the period commencing from the First Session up to, and including, the last trading session on the Stock Exchange of the fourth Trading Day immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and

(ii) the Issuer shall determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer may determine to be relevant in good faith.

For the avoidance of doubt, all Spot Prices available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

(a) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if any) of the same day; and

(b) the afternoon session and the closing auction session (if any) of the same day,

shall each be considered as one trading session only;

"**Minimum Trade Price**" means the lowest Spot Price (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

"**Observation Commencement Date**" has the meaning specified in the relevant Launch Announcement and Supplemental Listing Document;

"**Observation Period**" means the period from the Observation Commencement Date to the Trading Day immediately preceding the Expiry Date (both dates inclusive);

"**Post MCE Trades**" means, subject to such modification and amendment prescribed by the Stock Exchange from time to time, (i) if the Mandatory Call Event occurs during a pre-opening session or a closing auction session (if applicable), as the case may be, of the Stock Exchange, all auction trades in the CBBCs concluded in such session and all manual trades concluded after the end of the pre-order matching period in such session; or (ii) if the Mandatory Call Event occurs during a continuous trading session of the Stock Exchange, all trades in the CBBCs concluded via auto-matching or manually after the time of the occurrence of a Mandatory Call Event;

"**Price Determination Date**" means the date on which the Maximum Trade Price or the Minimum Trade Price (as the case may be) is determined by the Issuer;

"**Residual Value**" means an amount in the Settlement Currency calculated in accordance with the formula specified below:

(1) in the case of a series of bull CBBCs and in respect of every Board Lot:

$$\frac{\text{Entitlement x (Minimum Trade Price – Strike Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

(2) in the case of a series of bear CBBCs and in respect of every Board Lot:

$$\frac{\text{Entitlement x (Strike Price – Maximum Trade Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

provided that if the Residual Value is a negative amount it shall be deemed to be zero;

"**Settlement Currency**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Settlement Date**" means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of (a) the Expiry Date; and (b) the day on which the Closing Price is determined in accordance with these Conditions (as the case may be);

"**Settlement Disruption Event**" means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant CBBC Holder ("**Designated Bank Account**");

"**Shares**" means the shares of Company specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Spot Price**" means:

(i) in respect of a continuous trading session of the Stock Exchange, the price per Share concluded by means of automatic order matching on the Stock Exchange as reported in the official real-time dissemination mechanism for the Stock Exchange during such continuous trading session in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules); and

(ii) in respect of a pre-opening session or a closing auction session (if applicable) of the Stock Exchange (as the case may be), the final IEP of the Share (if any) calculated at the end of the pre-order matching period of such pre-opening session or closing auction session (if applicable) (as the case may be) in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules),

subject to such modification and amendment prescribed by the Stock Exchange from time to time;

"**Stock Exchange**" means The Stock Exchange of Hong Kong Limited;

"**Strike Price**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Trading Day**" means a day on which the Stock Exchange is scheduled to be open for trading for its regular trading sessions; and

"**Valuation Date**" means the Trading Day immediately preceding the Expiry Date.

3. Exercise of CBBCs, Mandatory Call Event, Automatic Exercise and Expiry

(a) *Exercise of CBBCs.* The CBBCs are exercisable on the Expiry Date, provided that a Mandatory Call Event has not occurred.

(b) *Mandatory Call Event.* Any CBBC in respect of which a Mandatory Call Event has occurred will automatically expire upon the occurrence of a Mandatory Call Event and every Board Lot will entitle the CBBC Holder to receive the Residual Value (if any) less any Exercise Expenses on the Settlement Date.

(c) *Automatic Exercise.* Any CBBC which has not automatically expired will automatically be exercised if, on the Expiry Date, the value of the Cash Settlement Amount is greater than zero (without prior notice being given to the CBBC Holders). The CBBC Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the CBBC Holders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).

(d) *Issuer's Obligations.* For the avoidance of doubt, where the CBBCs have been exercised on the Expiry Date or have automatically expired upon the occurrence of a Mandatory Call Event (as the case may be), payment of the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses shall constitute full and final settlement of the obligations of the Issuer with respect to the CBBCs. Subject to such payment having been made, the Issuer shall have no obligation towards the relevant CBBC Holder under the CBBCs subsequent to such Expiry Date or the date on which a Mandatory Call Event occurs (as the case may be).

(e) *Expiry.* Any CBBC which does not automatically expire in accordance with Condition 3(b) or which has not been automatically exercised in accordance with Condition 3(c) (as the case may be) shall expire immediately without value thereafter and all rights of the CBBC Holder and obligations of the Issuer with respect to such CBBC shall cease.

4. Exercise of CBBCs, Cancellation and Payment

(a) *Board Lots.* CBBCs may only be exercised in a Board Lot or integral multiples thereof.

(b) *No requirement to deliver an exercise notice.* The CBBC Holders will not be required to deliver an exercise notice for any purpose in relation to the CBBCs.

(c) *Cancellation.* The Issuer will, with effect from the first Business Day following the date on which a Mandatory Call Event occurs or the Expiry Date (as the case may be), remove from its register the name of the person in respect of the CBBCs which (i) are the subject of an occurrence of a Mandatory Call Event; (ii) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions; or (iii) have expired worthless, and thereby cancel the relevant CBBCs.

(d) *Cash Settlement.* Subject to automatic exercise of CBBCs or the occurrence of a Mandatory Call Event in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant CBBC Holder equal to the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses. If the Cash Settlement Amount or the Residual Value is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount or Residual Value shall be payable by the Issuer.

The Cash Settlement Amount or the Residual Value (as the case may be) less determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the CBBC Holder for any interest in respect of the amount due or any loss or damage that such CBBC Holder may suffer as a result of the existence of the Settlement Disruption Event, nor shall the Issuer be liable under any circumstances for any acts or defaults of CCASS in relation to the performance of its duties in relation to the CBBCs.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on the Valuation Date, then that Valuation Date shall be postponed to the first succeeding Trading Day on which the Issuer determines that there is no Market Disruption Event, unless the Issuer determines that there is a Market Disruption Event on each of the four Trading Days immediately following the original date that, but for the Market Disruption Event, would have been the Valuation Date. In that case:

(i) the fourth Trading Day immediately following the original date shall be deemed to be the Valuation Date, notwithstanding the Market Disruption Event; and

(ii) the Issuer shall determine the closing price of the Shares having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer determines to be relevant in good faith.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments

(a) *Rights Issues.* If and whenever the Company shall, by way of Rights (as defined below), offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a "**Rights Offer**"), the Entitlement will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

$$\text{Adjustment Component} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares are traded on a cum– Rights basis

R: Subscription price per new Share as specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Right

M: Number of new Share(s) (whether a whole or a fraction) per existing Share each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\underset{\text{(rounded to the nearest 0.001)}}{\text{Adjusted Call Price}} = \text{Call Price} \times \frac{1}{\text{Adjustment Component}}$$

$$\underset{\text{(rounded to the nearest 0.001)}}{\text{Adjusted Strike Price}} = \text{Strike Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

For the purposes of these Conditions:

"**Rights**" means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to the holders of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

(b) *Bonus Issues.* If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a "**Bonus Issue**") the Entitlement will be increased on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

Adjusted Entitlement = Adjustment Component x E

Where:

Adjustment Component = (1 + N)

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\text{Adjusted Call Price (rounded to the nearest 0.001)} = \text{Call Price} \times \frac{1}{\text{Adjustment Component}}$$

$$\text{Adjusted Strike Price (rounded to the nearest 0.001)} = \text{Strike Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

(c) *Share Splits or Consolidations.* If and whenever the Company shall subdivide its Shares or any class of its outstanding share capital comprised of the Shares into a greater number of shares (a "**Subdivision**") or consolidate the Shares or any class of its outstanding share capital comprised of the Shares into a smaller number of shares (a "**Consolidation**"), the Entitlement in effect immediately prior thereto will be increased (in the case of a Subdivision) or decreased (in the case of a Consolidation) accordingly in each case on the day on which the relevant Subdivision or Consolidation shall have taken effect. In addition, the Call Price and/or Strike Price (each of which shall be rounded to the nearest 0.001) will be decreased (in the case of a Subdivision) or increased (in the case of a Consolidation) accordingly.

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

(d) *Merger or Consolidation.* If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of any corporation or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the CBBCs may in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner) be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a "**Restructuring Event**") (as determined by the Issuer in its absolute discretion (acting in good faith and in a commercially reasonable manner)).

The rights attaching to the CBBCs after the adjustment shall, after such Restructuring Event, relate to the number of shares of the corporation(s) resulting from or surviving such Restructuring Event or other securities ("**Substituted Securities**") and/or cash offered in substitution for the affected Shares, as the case may be, to which the holder of such number of Shares to which the CBBCs related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Shares shall not be affected by this paragraph (d) and, where cash is offered in substitution for Shares or is deemed to replace Substituted Securities as described above, references in these Conditions to the Shares shall include any such cash.

(e) *Cash Distributions.* Generally, no adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a "**Cash Distribution**") announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for two per cent. or more of the Share's closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Entitlement will be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

$$\text{Adjustment Component} = \frac{X - B}{X - B - C}$$

B: Amount of the relevant ordinary cash dividend per Share, provided that B shall be deducted from X only if the Business Day on which trading in the Shares of the Company becomes ex-entitlement with respect to the Cash Distribution and the distribution of the ordinary cash dividend by the Company falls on the same date. For the avoidance of doubt, B shall be deemed to be zero if the ex-entitlement dates of the relevant ordinary cash dividend and the Cash Distribution are different

C: Amount of the relevant Cash Distribution per Share

E: Existing Entitlement immediately prior to the Cash Distribution

X: Cum-Cash Distribution Share price being the closing price of the Shares on the Stock Exchange on the last Business Day on which the Shares of the Company are traded on a cum-Cash Distribution basis

In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\text{Adjusted Call Price (rounded to the nearest 0.001)} = \text{Call Price} \times \frac{1}{\text{Adjustment Component}}$$

$$\text{Adjusted Strike Price (rounded to the nearest 0.001)} = \text{Strike Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

(f) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Condition, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the CBBCs as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:

(i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such adjustment in any particular jurisdiction); or

(ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

For the avoidance of doubt, such adjustments may, but need not, be determined by reference to the adjustment(s) made in respect of such event or events by an options exchange to options on the relevant Shares traded on such options exchange.

(g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the CBBC Holders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

(a) for it to perform its obligations under the CBBCs, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a "**Change in Law Event**"); or

(b) for it or any of its affiliates to maintain the Issuer's hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each CBBC Holder a cash amount that Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such CBBC Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the CBBC Holders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase CBBCs at any price in the open market or by tender or by private treaty. Any CBBCs so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The CBBCs are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. CBBC Holders will not be entitled to definitive certificates in respect of any CBBCs issued or transferred to them.

10. Meetings of CBBC Holders; Modification

(a) *Meetings of CBBC Holders.* The Instrument contains provisions for convening meetings of the CBBC Holders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the CBBCs or of the Global Certificate.

Any resolution to be passed in a meeting of the CBBC Holders shall be decided by poll. Such a meeting may be convened by the Issuer or by CBBC Holders holding not less than 10 per cent. of the CBBCs for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the CBBCs for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing CBBC Holders whatever the number of CBBCs so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such CBBC Holders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the CBBC Holders shall be binding on all the CBBC Holders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the CBBC Holders being held if passed unanimously.

(b) *Modification.* The Issuer may, without the consent of the CBBC Holders, effect any modification of the terms and conditions of the CBBCs or the Global Certificate which, in the opinion of the Issuer, is:

(i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such modification in any particular jurisdiction);

(ii) of a formal, minor or technical nature;

(iii) made to correct a manifest error; or

(iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the CBBC Holders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to CBBC Holders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Liquidation

In the event of a liquidation or dissolution of the Company or the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, all unexercised CBBCs will lapse and shall cease to be valid for any purpose, in the case of voluntary liquidation, on the effective date of the relevant resolution and, in the case of an involuntary liquidation or dissolution, on the date of the relevant court order or, in the case of the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of law.

13. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the CBBC Holders, to create and issue further CBBCs so as to form a single series with the CBBCs.

14. Delisting

(a) If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the CBBCs as it shall, in its absolute discretion (acting in good faith and in a commercially reasonable manner), consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the CBBC Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any CBBC Holder or the tax or other consequences that may result in any particular jurisdiction).

(b) Without prejudice to the generality of Condition 14(a), where the Shares are, or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the CBBC Holders, make such adjustments to the entitlements of CBBC Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

(c) The Issuer shall determine, in its absolute discretion (acting in good faith and in a commercially reasonable manner), any adjustment or amendment and its determination shall be conclusive and binding on the CBBC Holders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the CBBC Holders in accordance with Condition 11 as soon as practicable after they are determined.

15. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the CBBCs.

16. Governing Law

The CBBCs, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each CBBC Holder (by its purchase of the CBBCs) shall be deemed to have submitted for all purposes in connection with the CBBCs, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

17. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE INDEX CALLABLE BULL/BEAR CONTRACTS (CASH SETTLED)

1. Form, Status, Transfer and Title

(a) *Form.* The Callable Bull/Bear Contracts (the "**CBBCs**") (which expression shall, unless the context otherwise requires, include any further CBBCs issued pursuant to Condition 12) relating to the Index as published by the Index Compiler are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the "**Global Certificate**") dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the "**Issuer**") and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the "**Instrument**"). Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The CBBC Holders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.

(b) *Status.* The CBBCs represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.

(c) *Transfer.* Transfers of beneficial interests in the CBBCs may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).

(d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of CBBCs shall be treated by the Issuer as the absolute owner and holder of such number of CBBCs. The expression "**CBBC Holder**" shall be construed accordingly.

2. CBBC Rights and Exercise Expenses

(a) *CBBC Rights.* Every Board Lot entitles each CBBC Holder, (i) upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount, (if any) less any Exercise Expenses or (ii) upon compliance with Condition 4, the right to receive the payment of the Residual Value, (if any) less any Exercise Expenses following the occurrence of a Mandatory Call Event (all as defined below).

(b) *Exercise Expenses.* On expiry of the CBBCs or upon the occurrence of a Mandatory Call Event, CBBC Holders are required to pay the Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct the Exercise Expenses from the applicable Cash Settlement Amount or the Residual Value (as the case may be) is deemed to be given by a CBBC Holder to the Issuer upon purchase of the CBBCs. Any Exercise Expenses which have not been determined on the Expiry Date or

following the Mandatory Call Event shall be notified to the CBBC Holder as soon as practicable after determination thereof by the Issuer and shall be paid by the CBBC Holder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

"**Board Lot**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Business Day**" means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

"**Call Level**" means the level of the Index specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Cash Settlement Amount**" means:

(1) in the case of a series of bull CBBCs and in respect of every Board Lot, an amount, converted (if applicable) into the Settlement Currency at the Exchange Rate, calculated by the Issuer equal to:

$$\text{Cash Settlement Amount per Board Lot} = \frac{(\text{Closing Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(2) in the case of a series of bear CBBCs and in respect of every Board Lot, an amount, converted (if applicable) into the Settlement Currency at the Exchange Rate, calculated by the Issuer as equal to:

$$\text{Cash Settlement Amount per Board Lot} = \frac{(\text{Strike Level} - \text{Closing Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

provided that if the Cash Settlement Amount is a negative amount, it shall be deemed to be zero;

"**CCASS**" means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited ("**HKSCC**");

"**CCASS Rules**" means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

"**CCASS Settlement Day**" has the meaning ascribed to the term "Settlement Day" in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

"**Closing Level**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Divisor**" means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Exchange Rate**" means the rate specified in the relevant Launch Announcement and Supplemental Listing Document (if applicable);

"**Exercise Expenses**" means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the expiry of the CBBCs or the occurrence of a Mandatory Call Event (as the case may be);

"**Expiry Date**" means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

"**Index**" means the index specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Index Business Day**" means a day on which the Index is scheduled to be published by the Index Compiler or as the case may be, the Successor Index Compiler;

"**Index Compiler**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Index Currency Amount**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Index Exchange**" means the exchange specified as such in the relevant Launch Announcement and Supplement Listing Document;

"**Mandatory Call Event**" occurs:

(1) in the case of a series of bull CBBCs, if the Spot Level is at or below the Call Level at any time during an Index Business Day in the Observation Period; and

(2) in the case of a series of bear CBBCs, if the Spot Level is at or above the Call Level at any time during an Index Business Day in the Observation Period;

"**Market Disruption Event**" means:

(1) (i) with respect to exercise of the CBBCs, the occurrence or existence, on the Valuation Date during the one-half hour period that ends at the close of trading on the Index Exchange, or (ii) with respect to the determination of the Residual Value, the occurrence or existence during a trading session of any:

   (a) suspension or material limitation of the trading of a material number of securities that comprise the Index; and/or

   (b) suspension or material limitation of the trading of options or futures contracts relating to the Index on any exchanges on which such contracts are traded; and/or

   (c) imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount or the Residual Value (as the case may be);

   for the purposes of paragraph (1), (x) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any exchange, and (y) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event; or

(2) where the Index Exchange is the Stock Exchange, (i) with respect to the exercise of the CBBCs the issuance of the tropical cyclone warning signal number 8 or above or a "BLACK" rainstorm signal which either results in the Stock Exchange being closed for dealings for an entire day or results in the Stock Exchange being closed prior to its regular time for close of trading on any day, provided that there shall be no Market Disruption Event on the Valuation Date solely by reason of the Stock Exchange opening later than its regular time for open of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the "BLACK" rainstorm signal having been issued, or (ii) with respect to the determination of the Residual Value and in respect of a trading session, the issuance of the tropical cyclone warning signal number 8 or above or a "BLACK" rainstorm signal which results in the Stock Exchange being closed for dealings; or

(3) a limitation or closure of the Index Exchange due to any unforeseen circumstances; or

(4) any circumstances beyond the control of the Issuer in which the Closing Level or, if applicable, the Exchange Rate cannot be determined by the Issuer in the manner set out in these Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances;

"**Maximum Index Level**" means the highest Spot Level during the MCE Valuation Period;

"**MCE Valuation Period**" means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the "**First Session**") and up to the end of the trading session on the Index Exchange immediately following the First Session (the "**Second Session**") unless, in the determination of the Issuer in good faith, the Second Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the Second Session) does not contain any continuous period of one hour or more than one hour during which Spot Levels are available, in which case the MCE Valuation Period shall be extended to the end of the subsequent trading session on the Index Exchange following the Second Session during which Spot Levels are available for a continuous period of at least one hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in good faith that each trading session on each of the four Index Business Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of one hour or more than one hour during which Spot Levels are available. In that case:

(i) the period commencing from the First Session up to, and including, the last trading session of the fourth Index Business Day on the Index Exchange immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and

(ii) the Issuer shall determine the Maximum Index Level or the Minimum Index Level (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Level of the Index and such other factors as the Issuer may determine to be relevant in good faith.

For the avoidance of doubt, all Spot Levels available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Index Level or the Minimum Index Level (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

(a) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if any) of the same day; and

(b) the afternoon session and the closing auction session (if any) of the same day,

shall each be considered as one trading session only;

"**Minimum Index Level**" means the lowest Spot Level during the MCE Valuation Period;

"**Observation Commencement Date**" has the meaning specified in the relevant Launch Announcement and Supplemental Listing Document;

"**Observation Period**" means the period from the Observation Commencement Date to the Trading Day immediately preceding the Expiry Date (both dates inclusive);

"**Post MCE Trades**" means, subject to such modification and amendment prescribed by the Stock Exchange from time to time, (i) if the Mandatory Call Event occurs during a pre-opening session or a closing auction session (if applicable), as the case may be, of the Stock Exchange, all auction trades in the CBBC concluded in such session and all manual trades concluded after the end of the pre-order matching period in such session; or (ii) if the Mandatory Call Event occurs during a continuous trading session of the Stock Exchange, all trades of the CBBCs concluded via auto-matching or manually after the time of the occurrence of a Mandatory Call Event;

"**Price Determination Date**" means the date on which the Maximum Index Level or the Minimum Index Level (as the case may be) is determined by the Issuer;

"**Residual Value**" means, an amount, converted (if applicable) into the Settlement Currency at the Exchange Rate, calculated in accordance with the formula specified below:

(1) in the case of a series of bull CBBCs and in respect of every Board Lot:

$$\frac{(\text{Minimum Index Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(2) in the case of a series of bear CBBCs and in respect of every Board Lot:

$$\frac{(\text{Strike Level} - \text{Maximum Index Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

provided that if the Residual Value is a negative amount it shall be deemed to be zero;

"**Settlement Currency**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Settlement Date**" means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of (a) the Expiry Date; and (b) the day on which the Closing Level is determined in accordance with these Conditions (as the case may be);

"**Settlement Disruption Event**" means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant CBBC Holder ("**Designated Bank Account**");

"**Spot Level**" means the spot level of the Index as compiled and published by the Index Compiler;

"**Stock Exchange**" means The Stock Exchange of Hong Kong Limited;

"**Strike Level**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Trading Day**" means a day on which the Index Exchange is scheduled to be open for trading for its regular trading sessions; and

"**Valuation Date**" means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document.

3. Exercise of CBBCs, Mandatory Call Event, Automatic Exercise and Expiry

(a) *Exercise of CBBCs.* The CBBCs are exercisable on the Expiry Date, provided that a Mandatory Call Event has not occurred.

(b) *Mandatory Call Event.* Any CBBC in respect of which a Mandatory Call Event has occurred will automatically expire upon the occurrence of a Mandatory Call Event and every Board Lot will entitle the CBBC Holder to receive the Residual Value (if any) less any Exercise Expenses on the Settlement Date.

(c) *Automatic Exercise.* Any CBBC which has not automatically expired will automatically be exercised if, on the Expiry Date, the value of the Cash Settlement Amount is greater than zero (without prior notice being given to the CBBC Holders). The CBBC Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the CBBC Holders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).

(d) *Issuer's Obligations.* For the avoidance of doubt, where the CBBCs have been exercised on the Expiry Date or have automatically expired upon the occurrence of a Mandatory Call Event (as the case may be), payment of the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses shall constitute full and final settlement of the obligations of the Issuer with respect to the CBBCs. Subject to such payment having been made, the Issuer shall have no obligation towards the relevant CBBC Holder under the CBBCs subsequent to such Expiry Date or the date on which a Mandatory Call Event occurs (as the case may be).

(e) *Expiry.* Any CBBC which does not automatically expire in accordance with Condition 3(b) or which has not been automatically exercised in accordance with Condition 3(c) (as the case may be) shall expire immediately without value thereafter and all rights of the CBBC Holder and obligations of the Issuer with respect to such CBBC shall cease.

4. Exercise of CBBCs, Cancellation and Payment

(a) *Board Lots.* CBBCs may only be exercised in a Board Lot or integral multiples thereof.

(b) *No requirement to deliver an exercise notice.* The CBBC Holders will not be required to deliver an exercise notice for any purpose in relation to the CBBCs.

(c) *Cancellation.* The Issuer will, with effect from the first Business Day following the date on which a Mandatory Call Event occurs or the Expiry Date (as the case may be), remove from its register the name of the person in respect of the CBBCs which (i) are the subject of an occurrence of a Mandatory Call Event; (ii) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions or (iii) have expired worthless, and thereby cancel the relevant CBBCs.

(d) *Cash Settlement.* Subject to automatic exercise of CBBCs or the occurrence of a Mandatory Call Event in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant CBBC Holder equal to the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses. If the Cash Settlement Amount or the Residual Value is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount or Residual Value shall be payable by the Issuer.

The Cash Settlement Amount or the Residual Value (as the case may be) less determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the CBBC Holder for any interest in respect of the amount due or any loss or damage that such CBBC Holder may suffer as a result of the existence of the Settlement Disruption Event, nor shall the Issuer be liable under any circumstances for any acts or defaults of CCASS in relation to the performance of its duties in relation to the CBBCs.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on the Valuation Date, then the Issuer shall determine the Closing Level or, if applicable, the Exchange Rate on the basis of its good faith estimate of the Closing Level or, if applicable, the Exchange Rate that would have prevailed on that day but for the occurrence of the Market Disruption Event provided that in the case of determining the Closing Level, the Issuer, if applicable, may, but shall not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

5. **Register**

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. **Adjustments to the Index**

(a) *Successor Index Compiler Calculates and Reports Index.* If the Index is (i) not calculated and announced by the Index Compiler but is calculated and published by a successor to the Index Compiler (the "**Successor Index Compiler**") acceptable to the Issuer or (ii) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index, then the Index will be deemed to be the index so calculated and announced by the Successor Index Compiler or that successor index, as the case may be.

(b) *Modification and Cessation of Calculation of Index.*

If:

(i) on or prior to a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent stock, contracts or commodities and other routine events); or

(ii) on a Valuation Date the Index Compiler or (if applicable) the Successor Index Compiler fails to calculate and publish the Index (other than as a result of a Market Disruption Event),

then the Issuer shall determine the Closing Level using, in lieu of a published level for the Index, the level for the Index as at that Valuation Date as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to that change or failure, but using only those securities/ commodities that comprised the Index immediately prior to that change or failure.

(c) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the CBBCs as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:

(i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such adjustment in any particular jurisdiction); or

(ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

(d) *Notice of Determinations.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the CBBC Holders. The Issuer will give, or procure that there is given, notice as soon as practicable of any determinations by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

(a) for it to perform its obligations under the CBBCs, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a "**Change in Law Event**"); or

(b) for it or any of its affiliates to maintain the Issuer's hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each CBBC Holder a cash amount that Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such CBBC Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the CBBC Holders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase CBBCs at any price in the open market or by tender or by private treaty. Any CBBCs so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The CBBCs are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. CBBC Holders will not be entitled to definitive certificates in respect of any CBBCs issued or transferred to them.

10. Meetings of CBBC Holders; Modification

(a) *Meetings of CBBC Holders.* The Instrument contains provisions for convening meetings of the CBBC Holders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the CBBCs or of the Global Certificate.

Any resolution to be passed in a meeting of the CBBC Holders shall be decided by poll. Such a meeting may be convened by the Issuer or by CBBC Holders holding not less than 10 per cent. of the CBBCs for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the CBBCs for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing CBBC Holders whatever the number of CBBCs so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such CBBC Holders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the CBBC Holders shall be binding on all the CBBC Holders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the CBBC Holders being held if passed unanimously.

(b) *Modification.* The Issuer may, without the consent of the CBBC Holders, effect any modification of the terms and conditions of the CBBCs or the Global Certificate which, in the opinion of the Issuer, is:

(i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such modification in any particular jurisdiction);

(ii) of a formal, minor or technical nature;

(iii) made to correct a manifest error; or

(iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the CBBC Holders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to CBBC Holders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the CBBC Holders, to create and issue further CBBCs so as to form a single series with the CBBCs.

13. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the CBBCs.

14. Governing Law

The CBBCs, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each CBBC Holder (by its purchase of the CBBCs) shall be deemed to have submitted for all purposes in connection with the CBBCs, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

15. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

The relevant terms and conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the global certificate. The applicable launch announcement and supplemental listing document in relation to the issue of any series of structured products may specify additional terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant terms and conditions, replace or modify the relevant terms and conditions for the purpose of such series of structured products. Capitalised terms used in the relevant terms and conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE UNIT FUND CALLABLE BULL/BEAR CONTRACTS (CASH SETTLED)

1. Form, Status, Transfer and Title

(a) *Form.* The Callable Bull/Bear Contracts (the "**CBBCs**") (which expression shall, unless the context otherwise requires, include any further CBBCs issued pursuant to Condition 13) relating to the Units of the Fund are issued in registered form subject to and with the benefit of a global certificate by way of deed poll (the "**Global Certificate**") dated the Issue Date, made by The Hongkong and Shanghai Banking Corporation Limited (the "**Issuer**") and an instrument by way of deed poll dated 2 April 2012 executed by the Issuer (the "**Instrument**") Copies of the Global Certificate and the Instrument are available for inspection at the specified office of the Issuer. The CBBC Holders (as defined below) are entitled to the benefit of, are bound by and are deemed to have notice of all the provisions of the Global Certificate and the Instrument.

(b) *Status.* The CBBCs represent general, unsecured, contractual obligations of the Issuer and of no other person and rank *pari passu* among themselves and (save for certain obligations required to be preferred by law) equally with all other unsecured obligations of the Issuer.

(c) *Transfer.* Transfers of beneficial interests in the CBBCs may be effected only in Board Lots or integral multiples thereof in CCASS (as defined below) in accordance with the CCASS Rules (as defined below).

(d) *Title.* Each person who is for the time being shown in the register kept by the Issuer as entitled to a particular number of CBBCs shall be treated by the Issuer as the absolute owner and holder of such number of CBBCs. The expression "**CBBC Holder**" shall be construed accordingly.

2. CBBC Rights and Exercise Expenses

(a) *CBBC Rights.* Every Board Lot gives each CBBC Holder, (i) upon due exercise and compliance with Condition 4, the right to receive the payment of the Cash Settlement Amount, (if any) less any Exercise Expenses or (ii) upon compliance with Condition 4, the right to receive the payment of the Residual Value, (if any) less any Exercise Expenses following the occurrence of a Mandatory Call Event (all as defined below).

(b) *Exercise Expenses.* On expiry of the CBBCs or upon the occurrence of a Mandatory Call Event, CBBC Holders are required to pay the Exercise Expenses. To effect such payment, an irrevocable authorisation to deduct the Exercise Expenses from the applicable Cash Settlement Amount or the Residual Value (as the case may be) is deemed to be given by a CBBC Holder to the Issuer upon purchase of the CBBCs. Any Exercise Expenses which have not been determined on the Expiry Date or

following the Mandatory Call Event shall be notified to the CBBC Holder as soon as practicable after determination thereof by the Issuer and shall be paid by the CBBC Holder immediately upon demand.

(c) *Definitions.* For the purposes of these Conditions:

"**Board Lot**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Business Day**" means a day (excluding Saturdays) on which the Stock Exchange (as defined below) is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong;

"**Call Price**" means the price of the Units specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

"**Cash Settlement Amount**" means:

(1) in the case of a series of bull CBBCs and in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Closing Price – Strike Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

(2) in the case of a series of bear CBBCs and in respect of every Board Lot, an amount in the Settlement Currency calculated by the Issuer as equal to:

$$\text{Cash Settlement Amount per Board Lot} = \frac{\text{Entitlement x (Strike Price – Closing Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

provided that if the Cash Settlement Amount is a negative amount it shall be deemed to be zero;

"**CCASS**" means the Central Clearing and Settlement System established and operated by Hong Kong Securities Clearing Company Limited ("**HKSCC**");

"**CCASS Rules**" means the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time;

"**CCASS Settlement Day**" has the meaning ascribed to the term "Settlement Day" in the General Rules of CCASS, subject to such modification and amendment prescribed by HKSCC from time to time;

"**Closing Price**" means the official closing price of one Unit (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) on the Valuation Date (as defined below);

"**Entitlement**" means the number specified as such in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 6;

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred or withheld in respect of the expiry of the CBBCs or the occurrence of a Mandatory Call Event (as the case may be);

“**Expiry Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**Fund**” means the fund specified as such in the relevant Launch Announcement and Supplemental Listing Document;

“**IEP**” means the indicative equilibrium price, as determined in accordance with the Rules and Regulations of the Stock Exchange prescribed by the Stock Exchange from time to time (the “**Trading Rules**”);

“**Mandatory Call Event**” occurs:

(1) in the case of a series of bull CBBCs, if the Spot Price is at or below the Call Price at any time during a Trading Day in the Observation Period; and

(2) in the case of a series of bear CBBCs, if the Spot Price is at or above the Call Price at any time during a Trading Day in the Observation Period;

“**Market Disruption Event**” means:

(1) (i) with respect to exercise of the CBBCs, the occurrence or existence on the Valuation Date during the one-half hour period that ends at the close of trading of, or (ii) with respect to the determination of the Residual Value, the occurrence or existence during a trading session resulting in any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in

(a) the Units; and/or

(b) any options or futures contracts relating to the Units if, in any such case, that suspension or limitation is, in the determination of the Issuer, material; or

(2) (i) with respect to exercise of the CBBCs, the issuance of the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal which either results in the Stock Exchange being closed for dealings for an entire day or results in the Stock Exchange being closed prior to its regular time for close of trading on any day, provided that there shall be no Market Disruption Event solely by reason of the Stock Exchange opening later than its regular time for open of trading on any day as a result of the tropical cyclone warning signal number 8 or above or the BLACK rainstorm signal having been issued, or (ii) with respect to the determination of the Residual Value and in respect of a trading session, the issuance of the tropical cyclone warning signal number 8 or above or a BLACK rainstorm signal which results in the Stock Exchange being closed for dealings; or

(3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances;

"**Maximum Trade Price**" means the highest Spot Price (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

"**MCE Valuation Period**" means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the "**First Session**") and up to the end of the trading session on the Stock Exchange immediately following the First Session (the "**Second Session**") unless, in the determination of the Issuer in good faith, the Second Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the Second Session) does not contain any continuous period of one hour or more than one hour during which trading in the Units is permitted on the Stock Exchange with no limitation imposed, in which case the MCE Valuation Period shall be extended to the end of the subsequent trading session following the Second Session during which trading in the Units is permitted on the Stock Exchange with no limitation imposed for a continuous period of at least one hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in good faith that each trading session on each of the four Trading Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of one hour or more than one hour during which trading in the Units is permitted on the Stock Exchange with no limitation imposed. In that case:

(i) the period commencing from the First Session up to, and including, the last trading session on the Stock Exchange of the fourth Trading Day immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and

(ii) the Issuer shall determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer may determine to be relevant in good faith.

For the avoidance of doubt, all Spot Prices available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

(a) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if any) of the same day; and

(b) the afternoon session and the closing auction session (if any) of the same day,

shall each be considered as one trading session only;

"**Minimum Trade Price**" means the lowest Spot Price (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 6 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

"**Observation Commencement Date**" has the meaning specified in the relevant Launch Announcement and Supplemental Listing Document;

"**Observation Period**" means the period from the Observation Commencement Date to the Trading Day immediately preceding the Expiry Date (both dates inclusive);

"**Post MCE Trades**" means, subject to such modification and amendment prescribed by the Stock Exchange from time to time, (i) if the Mandatory Call Event occurs during a pre-opening session or a closing auction session (if applicable), as the case may be, of the Stock Exchange, all auction trades in the CBBC concluded in such session and all manual trades concluded after the end of the pre-order matching period in such session; or (ii) if the Mandatory Call Event occurs during a continuous trading session of the Stock Exchange, all trades of the CBBCs concluded via auto-matching or manually after the time of the occurrence of a Mandatory Call Event;

"**Price Determination Date**" means the date on which the Maximum Trade Price or the Minimum Trade Price (as the case may be) is determined by the Issuer;

"**Residual Value**" means an amount in the Settlement Currency calculated in accordance with the formula specified below:

(1) in the case of a series of bull CBBCs and in respect of every Board Lot:

$$\frac{\text{Entitlement x (Minimum Trade Price – Strike Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

(2) in the case of a series of bear CBBCs and in respect of every Board Lot:

$$\frac{\text{Entitlement x (Strike Price – Maximum Trade Price) x one Board Lot}}{\text{Number of CBBCs per Entitlement}}$$

provided that if the Residual Value is a negative amount it shall be deemed to be zero;

"**Settlement Currency**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document;

"**Settlement Date**" means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of (a) the Expiry Date; and (b) the day on which the Closing Price is determined in accordance with these Conditions (as the case may be);

"**Settlement Disruption Event**" means an event beyond the control of the Issuer as a result of which the Issuer is unable to procure payment electronically through CCASS to the relevant bank account designated by the relevant CBBC Holder ("**Designated Bank Account**");

"**Spot Price**" means:

(i) in respect of a continuous trading session of the Stock Exchange, the price per Unit concluded by means of automatic order matching on the Stock Exchange as reported in the official real-time dissemination mechanism for the Stock Exchange during such continuous trading session in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules); and

(ii) in respect of a pre-opening session or a closing auction session (if applicable) of the Stock Exchange (as the case may be), the final IEP of the Unit (if any) calculated at the end of the pre-order matching period of such pre-opening session or closing auction session (if applicable) (as the case may be) in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules),

subject to such modification and amendment prescribed by the Stock Exchange from time to time;

"**Stock Exchange**" means The Stock Exchange of Hong Kong Limited;

"**Strike Price**" has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with condition 6;

"**Trading Day**" means a day on which the Stock Exchange is scheduled to be open for trading for its regular trading sessions;

"**Units**" means the units of the Fund specified as such in the relevant Launch Announcement and Supplemental Listing Document; and

"**Valuation Date**" means the Trading Day immediately preceding the Expiry Date.

3. Exercise of CBBCs, Mandatory Call Event, Automatic Exercise and Expiry

(a) *Exercise of CBBCs.* The CBBCs are exercisable on the Expiry Date, provided that a Mandatory Call Event has not occurred.

(b) *Mandatory Call Event.* Any CBBC in respect of which a Mandatory Call Event has occurred will automatically expire upon the occurrence of a Mandatory Call Event and every Board Lot will entitle the CBBC Holder to receive the Residual Value (if any) less any Exercise Expenses on the Settlement Date.

(c) *Automatic Exercise.* Any CBBC which has not automatically expired will automatically be exercised if, on the Expiry Date, the value of the Cash Settlement Amount is greater than zero (without prior notice being given to the CBBC Holders). The CBBC Holders will not be required to deliver any exercise notice and the Issuer or its agent will pay to the CBBC Holders the Cash Settlement Amount (if any) less any Exercise Expenses in accordance with Condition 4(d).

(d) *Issuer's Obligations.* For the avoidance of doubt, where the CBBCs have been exercised on the Expiry Date or have automatically expired upon the occurrence of a Mandatory Call Event (as the case may be), payment of the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses shall constitute full and final settlement of the obligations of the Issuer with respect to the CBBCs. Subject to such payment having been made, the Issuer shall have no obligation towards the relevant CBBC Holder under the CBBCs subsequent to such Expiry Date or the date on which a Mandatory Call Event occurs (as the case may be).

(e) *Expiry.* Any CBBC which does not automatically expire in accordance with Condition 3(b) or which has not been automatically exercised in accordance with Condition 3(c) (as the case may be) shall expire immediately without value thereafter and all rights of the CBBC Holder and obligations of the Issuer with respect to such CBBC shall cease.

4. **Exercise of CBBCs, Cancellation and Payment**

(a) *Board Lots.* CBBCs may only be exercised in a Board Lot or integral multiples thereof.

(b) *No requirement to deliver an exercise notice.* The CBBC Holders will not be required to deliver an exercise notice for any purpose in relation to the CBBCs.

(c) *Cancellation.* The Issuer will, with effect from the first Business Day following the date on which a Mandatory Call Event occurs or the Expiry Date (as the case may be), remove from its register the name of the person in respect of the CBBCs which (i) are the subject of an occurrence of a Mandatory Call Event; (ii) are the subject of an exercise pursuant to automatic exercise in accordance with these Conditions; or (iii) have expired worthless, and thereby cancel the relevant CBBCs.

(d) *Cash Settlement.* Subject to automatic exercise of CBBCs or the occurrence of a Mandatory Call Event in accordance with these Conditions, the Issuer will make a payment, in respect of every Board Lot, to the relevant CBBC Holder equal to the Cash Settlement Amount or the Residual Value (if any) (as the case may be) less any Exercise Expenses. If the Cash Settlement Amount or the Residual Value is equal to, or less than, the determined Exercise Expenses, no Cash Settlement Amount or Residual Value shall be payable by the Issuer.

The Cash Settlement Amount or the Residual Value (as the case may be) less determined Exercise Expenses shall be despatched no later than the Settlement Date by crediting that amount in accordance with the CCASS Rules, to the Designated Bank Account.

If as a result of a Settlement Disruption Event, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant Designated Bank Account of the CBBC Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the CBBC Holder for any interest in respect of the amount due or any loss or damage that such CBBC Holder may suffer as a result of the existence of the Settlement Disruption Event, nor shall the Issuer be liable under any circumstances for any acts or defaults of CCASS in relation to the performance of its duties in relation to the CBBCs.

If the Issuer determines, in its sole discretion (acting in good faith and in a commercially reasonable manner), that a Market Disruption Event has occurred on the Valuation Date, then that Valuation Date shall be postponed to the first succeeding Trading Day on which the Issuer determines that there is no Market Disruption Event, unless the Issuer determines that there is a Market Disruption Event on each of the four Trading Days immediately following the original date that, but for the Market Disruption Event, would have been the Valuation Date. In that case:

(i) the fourth Trading Day immediately following the original date shall be deemed to be the Valuation Date, notwithstanding the Market Disruption Event; and

(ii) the Issuer shall determine the closing price of the Units having regard to the then prevailing market conditions, the last reported Spot Price and such other factors as the Issuer determines to be relevant in good faith.

5. Register

The Issuer will at all times maintain or arrange for the maintenance of a register in Hong Kong.

6. Adjustments

(a) *Rights Issues.* If and whenever the Fund shall, by way of Rights (as defined below), offer new Units for subscription at a fixed subscription price to the holders of existing Units pro rata to existing holdings (a "**Rights Offer**"), the Entitlement will be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

$$\text{Adjustment Component} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

S: Cum-Rights Unit price being the closing price of the Units on the Stock Exchange on the last Business Day on which the Units are traded on a cum– Rights basis

R: Subscription price per new Unit as specified in the Rights Offer plus an amount equal to any distributions or other benefits foregone to exercise the Right

M: Number of new Unit(s) (whether a whole or a fraction) per existing Unit each holder thereof is entitled to subscribe

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\text{Adjusted Call Price (rounded to the nearest 0.001)} = \text{Call Price} \times \frac{1}{\text{Adjustment Component}}$$

$$\text{Adjusted Strike Price (rounded to the nearest 0.001)} = \text{Strike Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

For the purposes of these Conditions:

"**Rights**" means the right(s) attached to each existing Unit or needed to acquire one new Unit (as the case may be) which are given to the holders of existing Units to subscribe at a fixed subscription price for new Units pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

(b) *Bonus Issues.* If and whenever the Fund shall make an issue of Units credited as fully paid to the holders of Units generally (other than pursuant to a scrip distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash distribution and without any payment or other consideration being made or given by such holders) (a "**Bonus Issue**") the Entitlement will be increased on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

Adjustment Component = (1 + N)

E: Existing Entitlement immediately prior to the Bonus Issue

N: Number of additional Units (whether a whole or a fraction) received by a holder of existing Units for each Unit held prior to the Bonus Issue

Provided that if the adjustment to be made would result in the Entitlement being changed by one per cent. or less, then no adjustment will be made. In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\underset{\text{(rounded to the nearest 0.001)}}{\text{Adjusted Call Price}} = \text{Call Price} \times \frac{1}{\text{Adjustment Component}}$$

$$\underset{\text{(rounded to the nearest 0.001)}}{\text{Adjusted Strike Price}} = \text{Strike Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

(c) *Unit Splits or Consolidations.* If and whenever the Fund shall subdivide its Units or any class of its outstanding units into a greater number of units (a "**Subdivision**") or consolidate the Units or any class of its outstanding units into a smaller number of units (a "**Consolidation**"), the Entitlement in effect immediately prior thereto will be increased (in the case of a Subdivision) or decreased (in the case of a Consolidation) accordingly in each case on the day on which the relevant Subdivision or Consolidation shall have taken effect. In addition, the Call Price and/or Strike Price (each of which shall be rounded to the nearest 0.001) will be decreased (in the case of a Subdivision) or increased (in the case of a Consolidation) accordingly.

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

(d) *Merger or Consolidation.* If it is announced that the Fund is to or may merge with or into any other fund or consolidate with or into any other fund or corporation (including becoming, by agreement or otherwise, controlled by any person or corporation) (except where the Fund is the surviving entity in a merger) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the CBBCs may in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner) be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a "**Restructuring Event**") (as determined by the Issuer in its absolute discretion (acting in good faith and in a commercially reasonable manner)).

The rights attaching to the CBBCs after the adjustment shall, after such Restructuring Event, relate to the number of units of the fund(s) resulting from or surviving such Restructuring Event or other securities ("**Substituted Securities**") and/or cash offered in substitution for the affected Units, as the case may be, to which the holder of such number of Units to which the CBBCs related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Units shall not be affected by this paragraph (d) and, where cash is offered in substitution for Units or is deemed to replace Substituted Securities as described above, references in these Conditions to the Units shall include any such cash.

(e) *Cash Distributions.* Generally, no adjustment will be made for an ordinary cash distribution (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a "**Cash Distribution**") announced by the Fund, no adjustment will be made unless the value of the Cash Distribution accounts for two per cent. or more of the Unit's closing price on the day of announcement by the Fund.

If and whenever the Fund shall make a Cash Distribution credited as fully paid to the holders of Units generally, the Entitlement will be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

$$\text{Adjusted Entitlement} = \text{Adjustment Component} \times E$$

Where:

$$\text{Adjustment Component} = \frac{X - B}{X - B - C}$$

B: Amount of the relevant ordinary cash distribution per Unit, provided that B shall be deducted from X only if the Business Day on which trading in the Units of the Fund becomes ex-entitlement with respect to the Cash Distribution and the distribution of the ordinary cash distribution by the Fund falls on the same date. For the avoidance of doubt, B shall be deemed to be zero if the ex-entitlement dates of the relevant ordinary cash distribution and the Cash Distribution are different

C: Amount of the relevant Cash Distribution per Unit

E: Existing Entitlement immediately prior to the Cash Distribution

X: Cum-Cash Distribution Unit price being the closing price of the Units on the Stock Exchange on the last Business Day on which the Units of the Fund are traded on a cum-Cash Distribution basis

In addition, the Issuer shall adjust the Call Price and/or Strike Price in accordance with the following formulas:

$$\underset{\text{(rounded to the nearest 0.001)}}{\text{Adjusted Call Price}} = \text{Call Price} \times \frac{1}{\text{Adjustment Component}}$$

$$\text{Adjusted Strike Price (rounded to the nearest 0.001)} = \text{Strike Price} \times \frac{1}{\text{Adjustment Component}}$$

Adjustment to the Call Price and/or Strike Price shall take effect on the same day that the Entitlement is adjusted.

(f) *Other Adjustments.* Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Condition, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the CBBCs as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is:

(i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such adjustment in any particular jurisdiction); or

(ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.

For the avoidance of doubt, such adjustments may, but need not, be determined by reference to the adjustment(s) made in respect of such event or events by an options exchange to options on the relevant Units traded on such options exchange.

(g) *Notice of Adjustments.* All determinations made by the Issuer pursuant hereto will be conclusive and binding on the CBBC Holders. The Issuer will give, or procure that there is given, notice as soon as practicable of any adjustment and of the date from which such adjustment is effective by publication in accordance with Condition 11.

7. Illegality or Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

(a) for it to perform its obligations under the CBBCs, in whole or in part, as a result of: (i) the adoption of, any change in, any relevant law or regulation (including any tax law); or (ii) the promulgation of, or any change in the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law), (each of (i) and (ii), a "**Change in Law Event**"); or

(b) for it or any of its affiliates to maintain the Issuer's hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by applicable law or regulation, pay to each CBBC Holder a cash amount that Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such CBBC Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement and any charges or expenses including any taxes or duties which are incurred or withheld as determined by the Issuer in its sole and absolute discretion (acting in good faith and in a commercially reasonable manner). Payment will be made in such manner as shall be notified to the CBBC Holders in accordance with Condition 11.

8. Purchases

The Issuer and/or any of its subsidiaries and affiliates may at any time purchase CBBCs at any price in the open market or by tender or by private treaty. Any CBBCs so purchased may be held or resold or surrendered for cancellation.

9. Global Certificate

The CBBCs are represented by the Global Certificate registered in the name of HKSCC Nominees Limited and deposited with CCASS in accordance with the CCASS Rules. CBBC Holders will not be entitled to definitive certificates in respect of any CBBCs issued or transferred to them.

10. Meetings of CBBC Holders; Modification

(a) *Meetings of CBBC Holders.* The Instrument contains provisions for convening meetings of the CBBC Holders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution (as defined in the Instrument) of a modification of the provisions of the CBBCs or of the Global Certificate.

Any resolution to be passed in a meeting of the CBBC Holders shall be decided by poll. Such a meeting may be convened by the Issuer or by CBBC Holders holding not less than 10 per cent. of the CBBCs for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons holding or representing not less than 25 per cent. of the CBBCs for the time being remaining unexercised, or at any adjourned meeting two or more persons being or representing CBBC Holders whatever the number of CBBCs so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such CBBC Holders who, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the CBBC Holders shall be binding on all the CBBC Holders, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the CBBC Holders being held if passed unanimously.

(b) *Modification.* The Issuer may, without the consent of the CBBC Holders, effect any modification of the terms and conditions of the CBBCs or the Global Certificate which, in the opinion of the Issuer, is:

(i) not materially prejudicial to the interests of the CBBC Holders generally (without considering the circumstances of any individual CBBC Holder or the tax or other consequences of such modification in any particular jurisdiction);

(ii) of a formal, minor or technical nature;

(iii) made to correct a manifest error; or

(iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Any such modification shall be binding on the CBBC Holders and shall be notified to them by the Issuer as soon as practicable in accordance with Condition 11.

11. Notices

All notices to CBBC Holders will be validly given if published in English and in Chinese on the website of Hong Kong Exchanges and Clearing Limited. Such notices shall be deemed to have been given on the date of the first such publication. If publication is not practicable, notice will be given in such other manner as the Issuer may determine.

12. Liquidation

In the event of (i) a liquidation, dissolution or termination of the Fund or (ii) the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of its undertaking, property or assets or (iii) the withdrawal of the Securities and Futures Commission's authorisation of the Fund under the Securities and Futures Ordinance, all unexercised CBBCs will lapse and shall cease to be valid for any purpose, in the case of (i) voluntary liquidation, on the effective date of the relevant resolution, (ii) an involuntary liquidation or dissolution, on the date of the relevant court order, (iii) a termination, on the effective date of the termination, (iv) the appointment of a liquidator or receiver or administrator or analogous person under any applicable law in respect of the whole or substantially the whole of its undertaking, property or assets, on the date on which such appointment is effective, or (v) withdrawal of authorisation, on the date on which such withdrawal becomes effective, but subject (in any such case) to any contrary mandatory requirement of law.

13. Further Issues

The Issuer shall be at liberty from time to time, without the consent of the CBBC Holders, to create and issue further CBBCs so as to form a single series with the CBBCs.

14. Delisting

(a) If at any time the Units cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the CBBCs as it shall, in its absolute discretion (acting in good faith and in a commercially reasonable manner), consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the CBBC Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of any CBBC Holder or the tax or other consequences that may result in any particular jurisdiction).

(b) Without prejudice to the generality of Condition 14(a), where the Units are, or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer (acting in good faith and in a commercially reasonable manner), be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the CBBC Holders, make such adjustments to the entitlements of CBBC Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as may be appropriate in the circumstances.

(c) The Issuer shall determine, in its absolute discretion (acting in good faith and in a commercially reasonable manner), any adjustment or amendment and its determination shall be conclusive and binding on the CBBC Holders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the CBBC Holders in accordance with Condition 11 as soon as practicable after they are determined.

15. Contracts (Rights of Third Parties) Ordinance

A person who is not a party to these Conditions has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the CBBCs.

16. Governing Law

The CBBCs, the Global Certificate and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and each CBBC Holder (by its purchase of the CBBCs) shall be deemed to have submitted for all purposes in connection with the CBBCs, the Global Certificate and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

17. Language

In the event of any inconsistency between the Chinese translation of these Conditions and the English version of these Conditions, the English version of these Conditions shall prevail.

INFORMATION ABOUT US

Incorporation and Business

On 14 August 1866, "The Hongkong and Shanghai Banking Corporation" was established with limited liability in the Hong Kong Special Administrative Region (the "**Hong Kong SAR**") by The Hongkong and Shanghai Bank Ordinance 1866, as subsequently amended by The Hongkong and Shanghai Banking Corporation Limited Ordinance (Cap. 70) of Hong Kong (the "**Ordinance**"). On 6 October 1989, it was registered under the name of "The Hongkong and Shanghai Banking Corporation Limited" pursuant to Part IX of the then Companies Ordinance (Cap. 32) of Hong Kong, which is now Part 17 of the new Companies Ordinance (Cap. 622) with company number 263876. On 6 June 1997, Memorandum and Articles of Association (the "**M&A**") were adopted, replacing the Ordinance in part and superseding The Hongkong and Shanghai Bank Regulations (Cap. 70A) of Hong Kong which formerly were the constitutive documents of the Bank. Subsequently, a new set of Articles of Association was adopted in substitution for and to the exclusion of the M&A on 19 May 2014. Its registered and head office is situated at 1 Queen's Road Central, Hong Kong.

Established in Hong Kong and Shanghai in 1865, The Hongkong and Shanghai Banking Corporation Limited is the founding member of HSBC Holdings plc and its subsidiaries (the "**HSBC Group**") – one of the world's largest banking and financial services organisations. It is the largest bank incorporated in Hong Kong and one of Hong Kong's three note-issuing banks. It is a wholly-owned subsidiary of HSBC Holdings plc, the holding company of the HSBC Group, which has an international network organised into five geographical regions: Europe, Asia, Middle East and North Africa, North America and Latin America.

Directors and Secretary

As of the date of this base listing document, the Directors and Secretary of the Bank are set out below.

Names of Directors

John Michael Flint#, *Chairman*
Peter Tung Shun Wong, *Deputy Chairman and Chief Executive*
Laura May Lung Cha*, GBM, *Deputy Chairman*
Zia Mody*, *Deputy Chairman*
Graham John Bradley*
Louisa Wai Wan Cheang
Dr Christopher Wai Chee Cheng*, GBS, OBE
Dr Raymond Kuo Fung Ch'ien*, GBS, CBE
Yiu Kwan Choi*
Irene Yun-lien Lee*
Jennifer Xinzhe Li*
Victor Tzar Kuoi Li#
Bin Hwee Quek (nee Chua)*, JP
Kevin Anthony Westley*, BBS
Marjorie Mun Tak Yang*, GBS
Tan Sri Dr Francis Sock Ping Yeoh*, CBE

 # non-executive Director
** independent non-executive Director*

Name of Secretary

Neil Olofsson, FCIS

Principal Subsidiaries

The principal subsidiaries of the Bank as at 31 December 2018 are:

Name	Place of Incorporation	Principal activity	The Bank Group's interest in issued share capital/ registered or charter capital
Hang Seng Bank Limited	Hong Kong	Banking	62.14%
HSBC Bank (China) Company Limited	People's Republic of China	Banking	100%
HSBC Bank Malaysia Berhad	Malaysia	Banking	100%
HSBC Bank Australia Limited[1]	Australia	Banking	100%
HSBC Bank (Taiwan) Limited[1]	Taiwan	Banking	100%
HSBC Bank (Singapore) Limited	Singapore	Banking	100%
HSBC Life (International) Limited[1]	Bermuda	Retirement benefits and life insurance	100%

Note:

1 Held indirectly

The principal places of business are the same as the places of incorporation except for HSBC Life (International) Limited which operates mainly in Hong Kong.

Share capital

The following shows the share capital of the Bank and its subsidiaries (the "**Bank Group**") as at 31 December 2018:

The issued and fully paid up ordinary share capital of the Bank was HK$172,335 million, comprising 46,440,991,798 ordinary shares, which included HK$116,103 million paid up in HK$ and HK$56,232 million paid up in US$. The paid up share capital in US$ represents preference shares which have been redeemed or bought back via payment out of distributable profits and for which the amount was transferred from retained earnings to share capital in accordance with the requirements of the Companies Ordinance.

The issued and fully paid up preference shares of the Bank Group, presented as financial liabilities in the Bank Group's balance sheet in accordance with Hong Kong Accounting Standard 32 'Financial Instruments: Presentation', was INR870 million (HK$98 million), comprising 8,700,000 compulsorily convertible preference shares of INR100 each in the share capital of a subsidiary, HSBC InvestDirect Securities (India) Private Limited.

In 2018, the Bank redeemed 2,478 million (US$2,478 million or HK$19,409 million) of issued non-cumulative irredeemable preference shares and 200 million (US$200 million or HK$1,566 million) of issued cumulative irredeemable preference shares, which had been classified as financial liabilities in the Bank Group's consolidated balance sheet. There were no remaining issued non-cumulative or cumulative irredeemable preference shares as at 31 December 2018.

Total shareholders' equity

The total shareholders' equity of the Bank Group as at 31 December 2018 was HK$752,758 million comprising HK$172,335 million of share capital, HK$35,879 million of other equity instruments, HK$114,949 million of other reserves and HK$429,595 million of retained earnings.

Subordinated liabilities

Subordinated liabilities of the Bank Group issued to third parties measured at amortised cost, as at 31 December 2018 and 2017, consisted of undated primary capital notes and other loan capital having an original term to maturity of five years or more. Subordinated liabilities issued to group entities are not included in the below.

	2018	**2017**
	HK$m	*HK$m*
Subordinated liabilities	4,081	4,090

Debt Securities in Issue

The debt securities in issue of the Bank Group as at 31 December 2018 were HK$58,236 million.

SALES AND TRANSFER RESTRICTIONS

General

We have not or will not take any action that would permit a public offering of structured products or possession or distribution of any offering material in relation to the structured products in any jurisdiction where action for that purpose is required. No offers, sales or deliveries of any structured products, or distribution of any offering material relating to the structured products, may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws or regulations and will not impose any obligations on us. You are required to inform yourself about, and to observe, all such applicable laws and regulations.

United States of America

The structured products have not been, and will not be, registered under the U.S. Securities Act of 1933, as amended (the "**Securities Act**"), nor qualified under the securities laws of any state of the United States. The structured products are being offered outside the United States in accordance with Regulation S under the Securities Act ("**Regulation S**") and may not at any time be offered, sold, resold or delivered, directly or indirectly, within the United States or to, or for the account or benefit of, any U.S. person or to others for offer or sale within the United States or to, or for the account or benefit of, any such U.S. person. Offers and sales of structured products or interests therein or the effectuation of hedging transactions with respect to structured products, within the United States or to U.S. persons would constitute a violation of United States securities laws unless made in compliance with Regulation S or an exemption from the registration requirements of the Securities Act and the qualification requirements of any applicable state securities laws. Terms used in this paragraph have the meanings given to them by Regulation S.

The structured products may not at any time be offered, sold, resold or delivered, directly or indirectly, to or for the account or benefit of any CFTC U.S. person or to others for offer or sale to or for the account or benefit of any such CFTC U.S. person.

European Economic Area

The structured products which are the subject of the offering as contemplated by this base listing document has not been offered, sold or otherwise made available and will not be offered, sold or otherwise made available to any retail investor in the European Economic Area. For the purposes of this provision:

(a) the expression "**retail investor**" means a person who is one (or more) of the following:

   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 2016/97/EU (as amended, the Insurance Distribution 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, including by Directive 2010/73/EU, the Prospectus Directive); and

(b) the expression "**offer**" includes the communication in any form and by any means of sufficient information on the terms of the offer and the structured products to be offered so as to enable an investor to decide to purchase or subscribe the structured products.

United Kingdom

Each dealer represents and agrees that, and each further dealer to be appointed will be required to represent and agree,

(a) in respect of structured products having a maturity of less than one year: (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of its business; and (ii) it has not offered or sold and will not offer or sell any structured products other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or as agent) for the purposes of their businesses where the issue of the structured products would otherwise constitute a contravention of Section 19 of Financial Services and Markets Act, as amended (the "**FSMA**") by the Issuer;

(b) 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 structured products in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and

(c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any structured products in, from or otherwise involving the United Kingdom.

TAXATION

The comments below are of a general nature and are only a summary of the law and practice currently applicable under the relevant law. The comments relate to the position of persons who are the absolute beneficial owners of the structured products and may not apply equally to all persons. If you are in any doubt as to your tax position on purchase, ownership, transfer or exercise of any structured product, you should consult your own tax advisers.

GENERAL

You may be required to pay stamp duties, taxes and other charges in accordance with the laws and practices of the country of purchase in addition to the issue price of each structured product.

HONG KONG

Profits tax

No tax is payable in Hong Kong by way of withholding or otherwise in respect of dividends of any company or in respect of any capital gains arising on the sale of any shares or structured products, except that Hong Kong profits tax may be chargeable on any such gains in the case of certain persons carrying on a trade, profession or business in Hong Kong.

Stamp duty

Stamp duty is not chargeable on the transfer of purely cash settled structured products in Hong Kong.

UNITED STATES OF AMERICA

The following section on "U.S. Foreign Account Tax Compliance Act" is applicable to all investors. If you are uncertain about the tax consequences of investing in our structured products, you should consult your own tax adviser.

U.S. Foreign Account Tax Compliance Act

We and other financial institutions through which payments on the structured products are made may be required to withhold U.S. tax at a rate of 30 per cent. on all, or a portion of, payments made after the second anniversary of the date on which final U.S. Treasury Regulations defining the term "foreign passthru payments" are published with the U.S. Federal Register in respect of (i) any structured products characterised as obligations for U.S. federal tax purposes that are issued after (or are materially modified after) the date that is six months after the date on which final U.S. Treasury Regulations defining the term "foreign passthru payments" are filed with the U.S. Federal Register and (ii) any structured products not characterised as obligations for U.S. federal tax purposes, whenever issued, pursuant to Sections 1471 through 1474 of the U.S. Internal Revenue Code ("**FATCA**") or similar law implementing an intergovernmental approach to FATCA.

In addition, we and other financial institutions through which payments on the structured products are made may be required to withhold U.S. tax pursuant to FATCA at a rate of 30 per cent. on payments made in respect of any structured products characterised as obligations for U.S. federal tax purposes that are issued after (or are materially modified after) the date that is six months after the date on which such products are treated as giving rise to "dividend equivalent" payments as described below under "Legislation Affecting Dividend Equivalent Payments.".

FATCA withholding tax may apply to an investor or to any non-U.S. financial institution through which payment on the structured products is made if the Investor or non-US financial institution does not fulfill its obligations under FATCA, including if (i) that investor (unless otherwise exempt from FATCA) does not provide information or consent to determine whether the investor is a U.S. person or should otherwise be treated as holding a "United States account" of the Issuer or (ii) that non-US financial institution does not become a Participating Foreign Financial Institution (as defined by FATCA) by entering into an agreement with the U.S. Internal Revenue Service ("**IRS**") to provide the IRS with certain information in respect of its account holders and investors or is not otherwise deemed FATCA compliant or exempt from FATCA withholding tax. Structured product holders therefore may receive less settlement amount than expected. We are not required to pay any additional amounts with respect to amounts so withheld.

Each holder of structured products should consult its own tax advisor as to the application of FATCA to an investment in the structured products.

Further information on FATCA may be found at *https://www.irs.gov/corporations* under the section headed "Foreign Account Tax Compliance Act FATCA". Any information appearing on such website does not form part of this base listing document.

The following section on "Legislation Affecting Dividend Equivalent Payments" is applicable to structured products that are linked to U.S. equities and to all investors of such structured products.

Legislation Affecting Dividend Equivalent Payments

U.S. Treasury Regulations under Section 871(m) of the U.S. Internal Revenue Code require withholding of up to 30% (depending on whether an income tax treaty or other exemption applies) on payments or deemed payments made to non-U.S. persons on certain financial instruments to the extent that such payments are contingent upon or determined by reference to U.S.-source dividends. These rules differentiate between "Delta-One" and "Non-Delta-One" transactions. This withholding should generally apply to structured products, but should not apply to Non-Delta-One structured products issued before 1 January 2021 (unless the Non-Delta-One structured products are "significantly modified" on or after 1 January 2021). Significant aspects of the application of these regulations to the structured products are uncertain. Payments on structured products, other than Non-Delta-One structured products that are issued before 1 January 2021, that are treated by the applicable Treasury regulations as being contingent upon, or determined by reference to, any U.S. source dividends may be subject to this withholding.

Withholding in respect of dividend equivalents amounts will generally be required when the relevant payment is made on a structured product or upon the date of maturity, lapse or other disposition by a non-U.S. investor of the structured products. Structured products may be treated as paying dividend equivalent amounts to the extent U.S. source dividends are expected to be paid on the underlying equity securities, even if no corresponding payment on the structured product is explicitly linked to such dividends and even if, upon maturity, lapse or other disposition by the non-U.S. investor, the investor realizes a loss. The regulations provide exceptions to withholding, in particular for certain instruments linked to certain broad-based indices. In the event any withholding would be required pursuant to Section 871(m) with respect to payments on the structured products, no person will be required to pay additional amounts as a result of the withholding. Prospective investors should consult their tax advisers regarding the potential application of Section 871(m) and the applicable regulations to the structured products.

Who is responsible for this base listing document?

We accept full responsibility for the accuracy of the information contained in this base listing document.

We have included references to websites to guide you to sources of freely available information. The information on these websites does not form part of our listing document. We do not accept any responsibility for the information on those websites. Such information has not been prepared for the purposes of our structured products. You should conduct your own web searches and consult publicly available information to ensure that you are viewing the most up-to-date information.

This base listing document is accurate at the date stated on the cover. You must not assume, however, that information in this base listing document is accurate at any time after the date of this base listing document.

This document has not been reviewed by the Securities and Futures Commission. You are advised to exercise caution in relation to the offer of the structured products.

The liquidity provider is not responsible in any way for ensuring the accuracy of our listing documents.

Is there any guarantee or collateral for the structured products?

No. Our obligations under the structured products are neither guaranteed by any third party, nor collateralised with any of our assets or other collaterals. When you purchase our structured products, you are relying on our creditworthiness only, and of no other person. If we become insolvent or default on our obligations under the structured products, you can only claim as an unsecured creditor of the Issuer. In such event, you may not be able to recover all or even part of the amount due under the structured products (if any).

Are we regulated by the Hong Kong Monetary Authority referred to in rule 15A.13(2) or the Securities and Futures Commission referred to in rule 15A.13(3)?

We are a licensed bank regulated by the Hong Kong Monetary Authority, and a registered institution under the Securities and Futures Ordinance (Cap. 571) of Hong Kong to carry on type 1 (Dealing in Securities), type 2 (Dealing in Futures Contracts), type 4 (Advising on Securities), type 5 (Advising on Futures Contracts), type 6 (Advising on Corporate Finance) and type 9 (Asset Management) regulated activities.

What are our credit ratings?

Our long-term debt ratings are:

Rating agency	**Rating as of the day immediately preceding the date of this base listing document**
Moody's Investors Service, Inc. ("**Moody's**")	Aa3 (Stable Outlook)
S&P Global Ratings ("**S&P**")	AA- (Stable Outlook)

The long-term debt ratings are only an assessment by the credit rating agencies of the Issuer's overall financial capacity to pay its debts.

Aa3 is among the top three major credit rating categories and is the fourth highest investment-grade of the ten investment-grade credit ratings (including 1, 2 and 3 sub-grades) assigned by Moody's.

AA- is among the top three major credit rating categories and is the fourth highest investment-grade of the ten investment-grade credit ratings (including + or – sub-grades) assigned by S&P.

Please refer to Exhibit C to this base listing document for further information on credit ratings.

Rating agencies usually receive a fee from the companies that they rate. When evaluating our creditworthiness, you should not solely rely on our credit ratings because:

(a) a credit rating is not a recommendation to buy, sell or hold our structured products;

(b) ratings of companies may involve difficult-to-quantify factors such as market competition, the success or failure of new products and markets and managerial competence;

(c) a high credit rating is not necessarily indicative of low risk. Our credit ratings as of the day immediately preceding the date of this document are for reference only. Any downgrading of our ratings could result in a reduction in the value of the structured products;

(d) a credit rating is not an indication of the liquidity or volatility of the structured products; and

(e) a credit rating may be downgraded if the credit quality of the Issuer declines.

Our structured products are not rated.

Our credit ratings are subject to change or withdrawal at any time within each rating agency's sole discretion. You should conduct your own research using publicly available sources to obtain the latest information with respect to our ratings from time to time.

Are we subject to any litigation?

Except as set out in this base listing document, there are no legal or arbitration proceedings (including any such proceedings which are pending or threatened of which we are aware) which may have, or have had in the previous 12 months, a significant effect on us and our subsidiaries.

Has our financial position changed since last financial year?

Except as set out in this base listing document, there has been no material adverse change in our financial or trading position or prospects or indebtedness since 31 December 2018.

If, after the date of this document, you receive this document or purchase any structured products issued pursuant to this document you should not assume that there have been no changes in our affairs or financial condition since the date of this document. You should ask us if we have published any addenda to this document or any subsequent base listing document relating to our programme. Any such addenda will be available for inspection in the manner described under the section headed *"Where can you find out information about us?"* below.

Who is authorised to give information or make representations?

No person has been authorised to give any information or make any representations other than those contained in this document and the applicable launch announcement and supplemental listing document. If any person gives any such information or makes any such representations you should not rely on them as having been authorised by us.

Who are our authorised representatives?

Our authorised representatives are Thomas de Garidel-Thoron and Paul Hedley, both c/o The Hongkong and Shanghai Banking Corporation Limited, Level 15, HSBC Main Building, 1 Queen's Road Central, Hong Kong.

Who makes determinations and calculations?

We will make any necessary determinations or calculations in respect of the structured products.

Where can you find out information about us?

You can find out more about us on the website of the group of companies to which we belong, which is www.hsbc.com.

You may also inspect copies of the following documents at the office of The Hongkong and Shanghai Banking Corporation Limited during the period in which the structured products are listed on the stock exchange:

(a) a copy of this document and any addendum to this document (both the English version and the Chinese translation);

(b) a copy of our latest publicly available annual report and interim report (if any); and

(c) a copy of the consent letter of our auditor referred to in this document.

Please refer to the base listing document dated 10 April 2018 for the extract of the Annual Report and Accounts 2017 of the Issuer, including the auditor's report and the audited consolidated financial statements of the Issuer as at and for the year ended 31 December 2017.

Are there any experts/auditors involved?

Our auditor ("**Auditor**"), PricewaterhouseCoopers, has given and has not withdrawn its written consent to the inclusion of its report dated 19 February 2019 on the consolidated financial statements of the Issuer as at and for the year ended 31 December 2018, and/or references to its name in this base listing document, in the form and context in which they are included. Its report was not prepared exclusively for incorporation into this base listing document. The Auditor does not own any of our shares or shares in any member of our group, nor does it have the right (whether legally enforceable or not) to subscribe for or to nominate persons to subscribe for our securities or securities in any member of our group.

Do the stock exchange and the Securities and Futures Commission charge any fees?

The stock exchange charges a trading fee currently at the rate of 0.005 per cent. and the Securities and Futures Commission charges a transaction levy currently the rate of 0.0027 per cent. in respect of each transaction effected on the stock exchange payable by each of the seller and the buyer and calculated on the value of the consideration for the relevant securities. The levy for the investor compensation fund is currently suspended. Under the terms and conditions of the structured products, you are required to pay all charges arising on the transfer of underlying shares following the exercise of structured products.

Your broker may charge commission or other fees. You should check with your broker what fees will be chargeable.

You should be aware that you may be required to pay taxes including stamp taxes or other documentary charges in accordance with the laws and practices of the country where the structured products are transferred, or where the issuer of the underlying asset is organised or resident. If you are in any doubt as to your tax position, you should consult your own independent tax advisers. You should also be aware that tax regulations and their application by the relevant taxation authorities may change from time to time.

How are the structured products transferred and settled?

Settlement of transactions between members of the stock exchange on any business day must take place on or before the second business day thereafter. Securities executed on the stock exchange would normally be settled under the continuous net settlement system in CCASS.

Dealings in the structured products will take place in relevant board lots in the relevant settlement currency. For further details on transfers of structured products and their exercise, termination pursuant to mandatory call event or settlement, you should refer to the terms and conditions of the relevant issue of structured products.

EXHIBIT A

THE EXTRACT OF THE ANNUAL REPORT AND ACCOUNTS INCLUDING THE AUDITED CONSOLIDATED FINANCIAL STATEMENTS OF THE ISSUER AS AT AND FOR THE YEAR ENDED 31 DECEMBER 2018

The information in this Exhibit A has been extracted from the Annual Report and Accounts 2018 of the Issuer. References to page numbers (i.e. the numeric page numbers as referred to within this Exhibit A and the numeric page numbers which appear on the bottom of the pages of this base listing document) in this Exhibit A are to the page numbers of the Annual Report and Accounts 2018. The extracts set out in this Exhibit A are not complete and reference should be made to the Annual Report and Accounts 2018 which is available for inspection at the Issuer's office at HSBC Main Building, 1 Queen's Road Central, Hong Kong.

References in this Exhibit A to "HSBC", "HSBC Group" or "the Group" are to HSBC Holdings plc and its subsidiaries and references in this Exhibit A to "the Bank" are to The Hongkong and Shanghai Banking Corporation Limited and "the group" are to The Hongkong and Shanghai Banking Corporation Limited and its subsidiaries.

Independent Auditor’s Report

To the shareholder of The Hongkong and Shanghai Banking Corporation Limited (incorporated in Hong Kong with limited liability)

Opinion

What we have audited

The consolidated financial statements of The Hongkong and Shanghai Banking Corporation Limited (‘the Bank’) and its subsidiaries (together, ‘the group’) set out on pages 52 to 113, which comprise:

- the consolidated balance sheet as at 31 December 2018;
- the consolidated income statement for the year then ended;
- the consolidated statement of comprehensive income for the year then ended;
- the consolidated statement of changes in equity for the year then ended;
- the consolidated statement of cash flows for the year then ended; and
- the notes[1] on the consolidated financial statements, which include a summary of significant accounting policies.

1 *Certain required disclosures as described in Note 1.1 (d) have been presented elsewhere in the Annual Report and Accounts 2018, rather than in the notes to the financial statements. These are cross-referenced from the financial statements and are identified as audited.*

Our opinion

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the group as at 31 December 2018, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards (‘HKFRSs’) issued by the Hong Kong Institute of Certified Public Accountants (‘HKICPA’) and have been properly prepared in compliance with the Hong Kong Companies Ordinance.

Basis for Opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing (‘HKSAs’) issued by the HKICPA. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report.
We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the group in accordance with the HKICPA’s Code of Ethics for Professional Accountants (‘the Code’), and we have fulfilled our other ethical responsibilities in accordance with the Code.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters identified in our audit are summarised as follows:

- IT access management
- Investment in associate – Bank of Communications Co., Limited (‘BoCom’)
- The present value of in-force long-term insurance business (‘PVIF’) and liabilities under non-linked life insurance contracts
- Impairment of loans and advances to customers
- Alternative performance measure

IT access management

Nature of the Key Audit Matter	Matters discussed with the Audit Committee
The audit approach relies extensively on automated controls and therefore on the effectiveness of controls over IT systems. In previous years, we identified and reported that controls over access to applications, operating systems and data in the financial reporting process required improvements. Access management controls are critical to ensure that changes to applications and underlying data are made in an appropriate manner. Appropriate access controls contribute to mitigating the risk of potential fraud or errors as a result of changes to applications and data. Management has implemented remediation activities that have contributed to reducing the risk over access management in the financial reporting process. However, issues related to privileged access and business user access remained unresolved on parts of the technology infrastructure, requiring our audit approach to respond to the risks presented.	The status of management's remediation, our audit response and the results of our testing procedures was discussed at Audit Committee meetings in 2018 and 2019.

How our audit addressed the Key Audit Matter

Access rights were tested over applications, operating systems and databases relied upon for financial reporting. Specifically, the audit tested that:

- new access requests for joiners were properly reviewed and authorised;
- user access rights were removed on a timely basis when an individual left or moved role;
- access rights to applications, operating systems and databases were periodically monitored for appropriateness; and
- highly privileged access was restricted to appropriate personnel.

Other areas that were independently assessed included password policies, security configurations, controls over changes to applications and databases, and that business users, developers and production support did not have access to change applications, the operating system or databases in the production environment.

As a consequence of the deficiencies identified, a range of other procedures were performed:

- where inappropriate access was identified, we understood the nature of the access, and obtained additional evidence on the appropriateness of the activities performed;
- additional substantive testing was performed on specific year-end reconciliations (i.e. custodian, bank account and suspense account reconciliations) and confirmations with external counterparties;
- testing was performed on other compensating controls such as business performance reviews;
- testing was performed over controls that prevent inappropriate combinations of access; and
- a list of users' access permissions was obtained and manually compared to other access lists where segregation of duties was deemed to be of higher risk, for example users having access to both core banking and payments systems.

Relevant references in the *Annual Report and Accounts 2018*

Risk: Top and Emerging Risks, page 17; Operational Risk, page 36

Investment in associate – Bank of Communications Company, Limited ('BoCom')

Nature of the Key Audit Matter	Matters discussed with the Audit Committee
At 31 December 2018, the market value of the Bank's investment in BoCom based on the share price was HK$53,536 million lower than the carrying value. This is considered an indicator of potential impairment. An impairment test was performed by the Bank using a value in use (VIU) model to estimate the investment's value assuming it continues to be held in perpetuity rather than sold. The VIU was HK$1,723 million in excess of carrying value at 31 December 2018. On this basis, no impairment was recorded and the share of BoCom's profits has been recognised in the consolidated income statement.	The VIU model is dependent on many assumptions, both short-term and long-term in nature. These assumptions are derived from a combination of management estimates, analysts' forecasts and market data, and are highly judgemental. Given the proximity of the carrying value and VIU, small changes in some of these assumptions would lead to an impairment. We discussed the appropriateness of these assumptions with the Audit Committee, particularly those with the greatest sensitivity related to short term cash flows and the minimum level of capital required by BoCom. We discussed whether the impact of China-US trade tensions and the impact of government policies on the China banking market had been fully reflected. We also reviewed with the Audit Committee the long term profit growth rate and loan impairment rate, and considered reasonably possible alternatives. In the discussion we specifically considered whether the assumptions used captured the current levels of uncertainty, both individually and considering the output of the model in aggregate.

How our audit addressed the Key Audit Matter

- The conclusions on the appropriateness of the model were evaluated, with the assistance of our valuation expert.
- Inputs used in the determination of assumptions within the model were challenged and corroborating information was obtained with reference to external market information, third-party sources including analyst reports, and historical publicly available BoCom information.
- A reasonable range for the discount rate used within the model was independently calculated with the assistance of our valuation experts.
- The controls in place over the model, and its mathematical accuracy were tested.
- A meeting between management and senior BoCom executive management, held specifically to identify facts or circumstances impacting management assumptions, was observed.
- Disclosures made in the Annual Report and Accounts 2018 in relation to BoCom were tested and assessed for appropriateness.
- Representations were obtained from the Bank that the assumptions used were consistent with information currently available to the Bank both as shareholder and to which the Bank is entitled through participation on BoCom's board of Directors.

Relevant references in the *Annual Report and Accounts 2018*

Financial Review, page 11
Note 1: Basis of preparation and significant accounting policies, page 59
Note 15: Interests in associates and joint ventures, page 86-88

The present value of in-force long-term insurance business ('PVIF') and liabilities under non-linked life insurance contracts

Nature of the Key Audit Matter	Matters discussed with the Audit Committee
The group has recorded an asset for PVIF of HK$48,522 million and liabilities under non-linked life insurance contracts of HK$433,668 million as at 31 December 2018. The determination of these balances requires the use of appropriate actuarial methodologies and also highly judgemental assumptions. Such assumptions include the long-term economic returns of insurance contracts issued, assumptions over policyholder behaviour such as longevity, mortality and persistency, and management assumptions over the future costs of obtaining and maintaining the group's insurance business. Small movements in these assumptions can have a material impact on the PVIF asset and the liabilities under non-linked life insurance contracts.	We discussed with the Audit Committee the results of our testing procedures over key assumptions used in the valuation of the PVIF asset and the liabilities under non-linked life insurance contracts including testing of changes made during the reporting period to the models and to the basis of the determination of key assumptions.

How our audit addressed the Key Audit Matter

The controls in place for the determination of the valuation of the PVIF asset and the liabilities under non-linked life insurance contracts were tested. Specifically, these included controls over:

- policy data reconciliations from the policyholder administration system to the actuarial valuation system,
- assumption setting,
- review and determination of valuation methodologies,
- restriction of user access to the actuarial models, and
- production and approval of the actuarial results.

With the assistance of our actuarial experts, the appropriateness of the models, methodologies and assumptions used were assessed for reasonableness. Specifically, these included assumptions in respect of:

- long-term economic returns of insurance contracts issued;
- policyholder behaviour such as longevity, mortality and persistency; and
- future costs of obtaining and maintaining the insurance business.

Our challenge and evaluation of the key judgements and assumptions made by management included whether these were supported by relevant experience, market information and formed a reasonable basis for setting the assumptions.

Relevant references in the *Annual Report and Accounts 2018*

Risk: Risks of insurance manufacturing operations, page 38-41

Note 1: Basis of preparation and significant accounting policies, page 65

Note 4: Liabilities under insurance contracts, page 77

Note 16: Goodwill and intangible assets, page 89

Impairment of loans and advances to customers

Nature of the Key Audit Matter	Matters discussed with the Audit Committee
As this is the first year of adoption of HKFRS 9, there is limited experience available to back-test the expected credit loss ('ECL') charge and allowance against actual results. There has been a significant increase in the number of data points required for the impairment calculation. The data is sourced from a number of systems that have not been used previously for the preparation of the accounting records. This increases the risk around completeness and accuracy of certain data used to create assumptions and operate the models. The global credit environment has remained relatively benign for an extended period of time, in part due to the low interest rate environment, and the relative strength of the global economy. However, there are a number of headwinds to the global economy as well as certain regional and country specific risks. As a result, whilst the current levels of delinquencies and defaults remains low, the risk of impairment remains significant.	At each Audit Committee meeting there was a discussion on changes to risk factors and other inputs within the models, geopolitical risks, such as escalating US-China trade tensions, as well as individually significant loan impairments. The more judgemental interpretations of HKFRS 9 made by management were discussed, in particular the application of forward economic guidance, including the severity and magnitude of modelled downside scenarios; and associated considerations of post model adjustments. As the control environment for the calculation of ECL under HKFRS 9 continued to be strengthened following initial adoption, we provided updates on the changes being made and the results of our testing procedures.

How our audit addressed the Key Audit Matter

- Model performance monitoring and validation controls were tested, including periodic policy and independent model reviews, back testing of performance, and approval of model changes. We also performed risk based substantive testing of models, including independently re-building certain assumptions.
- We tested the review and challenge of multiple economic scenarios by an expert panel and internal governance committee, and assessed the reasonableness of the multiple economic scenarios and variables using our economic experts.
- Controls over the inputs of critical data into source systems and the flow and transformation of data between source systems to the impairment calculation system were tested. We also performed substantive testing over the critical data used in the year end ECL calculation.
- We assessed management's user acceptance testing over the automated calculation of ECL to ensure it is performed in line with business requirements, as well as independently reviewed the underlying system script to validate that the calculation operated as we would have expected.
- We observed challenge forums to assess the ECL output and approval of post model adjustments.
- We tested the approval of the key inputs, assumptions and discounted cash-flows that supported the impairment provisions for a sample of significant individually assessed loans.

Relevant references in the *Annual Report and Accounts 2018*

Risk: Credit Risk, page 18-31
Note 1: Basis of preparation and significant accounting policies, page 62-65
Note 3: Operating profit - Change in expected credit losses and other credit impairment charges, page 75

Alternative performance measure

Nature of the Key Audit Matter	Matters discussed with the Audit Committee
The group’s results are significant to HSBC Holdings plc (‘HSBC’), a listed company. The use of alternative performance measures is common by listed companies to help better explain performance to the established strategy. HSBC use a number of alternative performance measures, including a Jaws target. Jaws represents the difference between the rate of growth of revenue and the rate of growth of costs in a given financial period. During the year we discussed with the Audit Committee the sensitivity of the jaws metric of HSBC to small changes in revenue and costs. We concluded that this increased the incentive for management to override controls to meet targets prompting us to perform a number of incremental procedures which might indicate that revenue or costs were intentionally misstated.	We communicated our risk assessment in November 2018, and designed a year end testing response as a result. The outcome of our testing was communicated to the Audit Committee in February 2019.

How our audit addressed the Key Audit Matter

- We reassessed significant judgements in light of the enhanced incentives noted in the risk assessment.
- We performed additional tests on journals, specifically considering cutoff and unusual combinations that impact costs and revenue.
- We tested expenses booked post year end to assess if they were included in the correct period.
- We tested the clearance and appropriateness of classification of aged unreconciled items, considering if there was a trend towards only resolving issues which would improve revenue or reduce costs.
- We performed additional tests on the completeness and accuracy of accruals and capitalised expenses.

Relevant references in the *Annual Report and Accounts 2018*

Report of the Directors: Asia Strategy, page 3
Risk: Operational Risk, page 36

Other Information

The directors of the Bank are responsible for the other information. The other information comprises the information included in the Financial Highlights, Report of the Directors, Financial Review, Risk, Capital and Statement of Directors’ Responsibilities sections of the *Annual Report and Accounts 2018* (but does not include the consolidated financial statements and our auditor’s report thereon), which we obtained prior to the date of this auditor’s report, and the Banking Disclosure Statement 2018 and the list of the directors of the Bank’s subsidiary undertakings (consolidated in the financial statements) during the period from 1 January 2018 to 19 February 2019, which are expected to be made available to us after the date of this auditor’s report.

Our opinion on the consolidated financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor’s report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

When we read the Banking Disclosure Statement 2018 and the list of the directors of the Bank’s subsidiary undertakings (consolidated in the financial statements) during the period from 1 January 2018 to 19 February 2019, if we conclude that there is a material misstatement therein, we are required to communicate the matter to the Audit Committee and take appropriate action considering our legal rights and obligations.

Responsibilities of Directors and the Audit Committee for the Consolidated Financial Statements

The directors of the Bank are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or to cease operations, or have no realistic alternative but to do so.

The Audit Committee is responsible for overseeing the group’s financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. We report our opinion solely to you, as a body, in accordance with Section 405 of the Hong Kong Companies Ordinance and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Mr. Mervyn Robert John Jacob.

PricewaterhouseCoopers

Certified Public Accountants

Hong Kong, 19 February 2019

Consolidated Financial Statements

Consolidated income statement

for the year ended 31 December

	Notes	2018 HK$m	2017 HK$m
Net interest income	3a	**126,463**	110,237
– interest income		**170,065**	138,081
– interest expense		**(43,602)**	(27,844)
Net fee income	3b	**44,231**	43,150
– fee income		**54,585**	52,312
– fee expense		**(10,354)**	(9,162)
Net income from financial instruments held for trading or managed on a fair value basis	3c	**31,723**	23,098
Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss	3c	**(5,561)**	15,607
Changes in fair value of long-term debt issued and related derivatives	3c	**20**	(115)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	3c	**(217)**	N/A
Gains less losses from financial investments	3d	**501**	2,108
Dividend income		**164**	232
Net insurance premium income	4a	**60,678**	56,176
Other operating income	3e	**10,306**	4,740
Total operating income		**268,308**	255,233
Net insurance claims and benefits paid and movement in liabilities to policyholders	4b	**(57,839)**	(68,790)
Net operating income before change in expected credit losses and other credit impairment charges		**210,469**	186,443
Change in expected credit losses and other credit impairment charges	3f	**(4,720)**	N/A
Loan impairment charges and other credit risk provisions		**N/A**	(4,437)
Net operating income		**205,749**	182,006
Employee compensation and benefits	5a	**(40,793)**	(40,095)
General and administrative expenses	3g	**(39,989)**	(34,786)
Depreciation and impairment of property, plant and equipment	17	**(4,686)**	(4,650)
Amortisation and impairment of intangible assets		**(1,956)**	(1,536)
Total operating expenses		**(87,424)**	(81,067)
Operating profit		**118,325**	100,939
Share of profit in associates and joint ventures		**16,258**	14,680
Profit before tax		**134,583**	115,619
Tax expense	6	**(22,467)**	(19,601)
Profit for the year		**112,116**	96,018
Profit attributable to shareholders of the parent company		**103,013**	88,530
Profit attributable to non-controlling interests		**9,103**	7,488

Consolidated statement of comprehensive income

for the year ended 31 December

	2018 HK$m	2017 HK$m
Profit for the year	**112,116**	96,018
Other comprehensive income/(expense)		
Items that will be reclassified subsequently to profit or loss when specific conditions are met:		
Available-for-sale investments	**N/A**	1,609
– fair value gains	**N/A**	3,346
– fair value gains reclassified to the income statement	**N/A**	(1,667)
– amounts reclassified to the income statement in respect of impairment losses	**N/A**	5
– income taxes	**N/A**	(75)
Debt instruments at fair value through other comprehensive income	**826**	N/A
– fair value gains	**908**	N/A
– fair value losses transferred to the income statement on disposal	**142**	N/A
– expected credit losses recognised in the income statement	**(9)**	N/A
– income taxes	**(215)**	N/A
Cash flow hedges	**131**	607
– fair value gains/(losses)	**1,264**	(6,780)
– fair value (gains)/losses reclassified to the income statement	**(1,125)**	7,506
– income taxes	**(8)**	(119)
Share of other comprehensive expense of associates and joint ventures	**(146)**	(852)
Exchange differences	**(18,098)**	25,387
Items that will not be reclassified subsequently to profit or loss:		
Property revaluation	**8,826**	8,864
– fair value gains	**10,626**	10,442
– income taxes	**(1,800)**	(1,578)
Equity instruments measured at fair value through other comprehensive income	**(581)**	N/A
– fair value losses	**(576)**	N/A
– income taxes	**(5)**	N/A
Changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	**(199)**	(209)
– before income taxes	**(241)**	(250)
– income taxes	**42**	41
Remeasurement of defined benefit asset/liability	**(910)**	1,371
– before income taxes	**(1,091)**	1,640
– income taxes	**181**	(269)
Other comprehensive income for the year, net of tax	**(10,151)**	36,777
Total comprehensive income for the year	**101,965**	132,795
Attributable to:		
– shareholders of the parent company	**92,796**	123,739
– non-controlling interests	**9,169**	9,056
Total comprehensive income for the year	**101,965**	132,795

Consolidated balance sheet

at 31 December

	Notes	2018 HK$m	2017 HK$m
Assets			
Cash and sight balances at central banks		**205,660**	208,073
Items in the course of collection from other banks		**25,380**	25,714
Hong Kong Government certificates of indebtedness		**280,854**	267,174
Trading assets	8	**558,838**	496,434
Derivatives	9	**292,869**	300,243
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	10	**132,859**	N/A
Financial assets designated at fair value	10	**N/A**	122,646
Reverse repurchase agreements – non-trading		**406,327**	330,890
Placings with and advances to banks		**338,151**	433,005
Loans and advances to customers	11	**3,528,702**	3,328,980
Financial investments	12	**1,871,026**	1,720,873
Amounts due from Group companies	34	**70,455**	227,729
Interests in associates and joint ventures	15	**142,885**	144,717
Goodwill and intangible assets	16	**65,104**	59,865
Property, plant and equipment	17	**112,080**	116,336
Deferred tax assets	6	**2,315**	2,156
Prepayments, accrued income and other assets	18	**229,949**	158,511
Total assets		**8,263,454**	7,943,346
Liabilities			
Hong Kong currency notes in circulation		**280,854**	267,174
Items in the course of transmission to other banks		**33,806**	38,283
Repurchase agreements – non-trading		**70,279**	47,170
Deposits by banks		**164,664**	201,697
Customer accounts	19	**5,207,666**	5,138,272
Trading liabilities	20	**81,194**	231,365
Derivatives	9	**295,553**	309,353
Financial liabilities designated at fair value	21	**161,143**	49,278
Debt securities in issue	22	**58,236**	38,394
Retirement benefit liabilities	5b	**3,369**	2,222
Amounts due to Group companies	34	**396,487**	265,688
Accruals and deferred income, other liabilities and provisions	23	**196,665**	110,687
Liabilities under insurance contracts	4	**468,589**	438,017
Current tax liabilities	6	**3,337**	3,242
Deferred tax liabilities	6	**24,513**	24,391
Subordinated liabilities	24	**4,081**	4,090
Preference shares	25	**98**	21,037
Total liabilities		**7,450,534**	7,190,360
Equity			
Share capital	26	**172,335**	151,360
Other equity instruments	27	**35,879**	14,737
Other reserves		**114,949**	123,417
Retained earnings		**429,595**	406,966
Total shareholders' equity		**752,758**	696,480
Non-controlling interests		**60,162**	56,506
Total equity		**812,920**	752,986
Total liabilities and equity		**8,263,454**	7,943,346

Consolidated statement of cash flows

for the year ended 31 December

	2018 HK$m	2017 HK$m
Profit before tax	**134,583**	115,619
Adjustments for non-cash items:		
Depreciation and amortisation	**6,657**	6,202
Net gain from investing activities	**(1,071)**	(3,564)
Share of profits in associates and joint ventures	**(16,258)**	(14,680)
(Gain)/loss on disposal of subsidiaries, businesses, associates and joint ventures	**(38)**	186
Change in expected credit losses gross of recoveries and other credit impairment charges	**4,720**	N/A
Loan impairment losses gross of recoveries and other credit risk provisions	**N/A**	5,330
Provisions	**51**	(618)
Share-based payment expense	**881**	970
Other non-cash items included in profit before tax	**(3,861)**	510
Elimination of exchange differences	**15,723**	(36,213)
Changes in operating assets and liabilities		
Change in net trading securities and derivatives	**(65,937)**	(55,262)
Change in loans and advances to banks and customers	**(299,137)**	(491,235)
Change in reverse repurchase agreements – non-trading	**(61,887)**	(75,091)
Change in financial assets designated and otherwise mandatorily measured at fair value through profit and loss	**1,176**	N/A
Change in financial assets designated at fair value	**N/A**	(16,630)
Change in other assets	**113,636**	144,752
Change in deposits by banks and customer accounts	**71,688**	247,486
Change in repurchase agreements – non-trading	**23,109**	19,360
Change in debt securities in issue	**19,842**	13,159
Change in financial liabilities designated at fair value	**(8,605)**	(1,838)
Change in other liabilities	**166,634**	63,627
Dividends received from associates	**4,948**	4,556
Contributions paid to defined benefit plans	**(576)**	(722)
Tax paid	**(18,216)**	(14,674)
Net cash from operating activities	**88,062**	(88,770)
Purchase of financial investments	**(822,067)**	(721,925)
Proceeds from the sale and maturity of financial investments	**756,630**	749,277
Purchase of property, plant and equipment	**(1,646)**	(2,997)
Proceeds from sale of property, plant and equipment and assets held for sale	**11,820**	5,572
Proceeds from disposal of customer loan portfolios	**2,542**	2,004
Net investment in intangible assets	**(4,691)**	(2,831)
Cash outflow on purchase of subsidiaries	**—**	(1,757)
Net cash from investing activities	**(57,412)**	27,343
Issue of ordinary share capital and other equity instruments	**21,142**	1,744
Redemption of preference shares and other equity instruments	**(20,975)**	(6,022)
Subordinated loan capital issued[1]	**79,834**	76,433
Subordinated loan capital repaid[1]	**(42,986)**	(18,737)
Dividends paid to shareholders of the parent company and non-controlling interests	**(52,508)**	(60,892)
Net cash from financing activities	**(15,493)**	(7,474)
Net increase/(decrease) in cash and cash equivalents	**15,157**	(68,901)
Cash and cash equivalents at 1 Jan[2]	**718,038**	752,705
Exchange differences in respect of cash and cash equivalents	**(11,586)**	34,234
Cash and cash equivalents at 31 Dec	**721,609**	718,038
Cash and cash equivalents comprise[3]		
– cash and balances at central banks	**205,660**	208,073
– items in the course of collection from other banks	**25,380**	25,714
– loans and advances to banks of one month or less	**179,952**	293,499
– reverse repurchase agreements with banks of one month or less	**165,654**	152,104
– treasury bills, other bills and certificates of deposit less than three months	**178,769**	76,931
– less: items in the course of transmission to other banks	**(33,806)**	(38,283)
Cash and cash equivalents at 31 Dec	**721,609**	718,038

Interest received was HK$166,441m (2017: HK$136,539m), interest paid was HK$41,583m (2017: HK$28,324m) and dividends received were HK$178m (2017: HK$175m).

1 *Changes in subordinated liabilities (including those issued to Group companies) during the year included amounts from issuance and repayments as presented above, and non-cash changes from foreign exchange losses (HK$ 280m) and fair value losses (HK$353m).*
2 *At 1 January 2018, the cumulative changes in cash and cash equivalents as a result of remeasurement upon the transition to HKFRS 9 'Financial Instruments' was a loss of HK$1m.*
3 *At 31 December 2018 HK$ 122,899m (2017: HK$ 199,336m) was not available for use by the group, of which HK$ 71,783m (2017: HK$ 82,667m) related to mandatory deposits at Central banks.*

Consolidated statement of changes in equity

for the year ended 31 December

				Other reserves							
	Share capital	Other equity instruments	Retained earnings	Property revaluation reserve	Financial assets at FVOCI reserve[7]	Cash flow hedge reserve	Foreign exchange reserve	Other[1]	Total share-holders' equity	Non-controlling interests	Total equity
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2017	**151,360**	**14,737**	**406,966**	**58,381**	**6,825**	**(197)**	**(6,948)**	**65,356**	**696,480**	**56,506**	**752,986**
Impact on transition to HKFRS 9	–	–	(7,478)	–	(4,512)	–	–	–	(11,990)	(323)	(12,313)
At 1 Jan 2018	**151,360**	**14,737**	**399,488**	**58,381**	**2,313**	**(197)**	**(6,948)**	**65,356**	**684,490**	**56,183**	**740,673**
Profit for the year	–	–	103,013	–	–	–	–	–	103,013	9,103	112,116
Other comprehensive income/(expense) (net of tax)	–	–	(890)	8,050	228	98	(17,701)	(2)	(10,217)	66	(10,151)
– debt instruments at fair value through other comprehensive income	–	–	–	–	734	–	–	–	734	92	826
– equity instruments designated at fair value through other comprehensive income	–	–	–	–	(367)	–	–	–	(367)	(214)	(581)
– cash flow hedges	–	–	–	–	–	98	–	–	98	33	131
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	–	–	(197)	–	–	–	–	–	(197)	(2)	(199)
– property revaluation	–	–	–	8,050	–	–	–	–	8,050	776	8,826
– remeasurement of defined benefit asset/liability	–	–	(688)	–	–	–	–	–	(688)	(222)	(910)
– share of other comprehensive expense of associates and joint ventures	–	–	(5)	–	(139)	–	–	(2)	(146)	–	(146)
– exchange differences	–	–	–	–	–	–	(17,701)	–	(17,701)	(397)	(18,098)
Total comprehensive income/(expense) for the year	–	–	102,123	8,050	228	98	(17,701)	(2)	92,796	9,169	101,965
Other equity instruments issued[2]	–	21,142	–	–	–	–	–	–	21,142	–	21,142
Dividends paid[3]	–	–	(47,440)	–	–	–	–	–	(47,440)	(5,068)	(52,508)
Movement in respect of share-based payment arrangements	–	–	(234)	–	–	–	–	246	12	10	22
Transfers and other movements[4,5,6]	20,975	–	(24,342)	(8,517)	412	–	–	13,230	1,758	(132)	1,626
At 31 Dec 2018	**172,335**	**35,879**	**429,595**	**57,914**	**2,953**	**(99)**	**(24,649)**	**78,830**	**752,758**	**60,162**	**812,920**
At 1 Jan 2017	114,359	14,737	413,024	53,763	6,189	(793)	(31,861)	58,588	628,006	51,130	679,136
Profit for the year	–	–	88,530	–	–	–	–	–	88,530	7,488	96,018
Other comprehensive income/(expense) (net of tax)	–	–	976	8,144	636	596	24,913	(56)	35,209	1,568	36,777
– available-for-sale investments	–	–	–	–	1,422	–	–	–	1,422	187	1,609
– cash flow hedges	–	–	–	–	–	596	–	–	596	11	607
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	–	–	(207)	–	–	–	–	–	(207)	(2)	(209)
– property revaluation	–	–	–	8,144	–	–	–	–	8,144	720	8,864
– remeasurement of defined benefit asset/liability	–	–	1,193	–	–	–	–	–	1,193	178	1,371
– share of other comprehensive expense of associates and joint ventures	–	–	(10)	–	(786)	–	–	(56)	(852)	–	(852)
– exchange differences	–	–	–	–	–	–	24,913	–	24,913	474	25,387
Total comprehensive income/(expense) for the year	–	–	89,506	8,144	636	596	24,913	(56)	123,739	9,056	132,795
Shares issued	1,744	–	–	–	–	–	–	–	1,744	–	1,744
Dividends paid[3]	–	–	(56,260)	–	–	–	–	–	(56,260)	(4,632)	(60,892)
Movement in respect of share-based payment arrangements	–	–	(73)	–	–	–	–	(324)	(397)	(9)	(406)
Transfers and other movements[4,5,6]	35,257	–	(39,231)	(3,526)	–	–	–	7,148	(352)	961	609
At 31 Dec 2017	151,360	14,737	406,966	58,381	6,825	(197)	(6,948)	65,356	696,480	56,506	752,986

1 *The other reserves mainly comprise share of associates' other reserves, purchase premium arising from transfer of business from fellow subsidiaries, property revaluation reserve relating to transfer of properties to a fellow subsidiary and the share-based payment reserve. The share-based payment reserve is used to record the amount relating to share awards and options granted to employees of the group directly by HSBC Holdings plc.*
2 *In 2018, there were US$2,700m additional tier 1 capital instruments issued.*
3 *Including distributions paid on perpetual subordinated loans classified as equity under HKFRS.*
4 *Ordinary share capital includes preference shares which have been redeemed or bought back via payment out of distributable profits. In 2018, the Bank redeemed HK$20,975m (2017: HK$35,257m) of preference shares.*
5 *The movement from retained earnings to other reserves includes the relevant transfers in associates according to local regulatory requirements.*
6 *The movement from property revaluation reserve to other reserves in 2018 included HK$7,169m (2017: HK$2,100m) relating to transfer of properties to a fellow subsidiary as part of the Recovery and Resolution Plan as set out in the Report of Directors in the* Annual Report and Accounts 2018*.*
7 *The balance at 31 December 2017 represents the HKAS 39 Available-for-sale fair value reserve as at 31 December 2017.*

Notes on the Consolidated Financial Statements

1 Basis of preparation and significant accounting policies

1.1 Basis of preparation

(a) Compliance with Hong Kong Financial Reporting Standards

The consolidated financial statements of The Hongkong and Shanghai Banking Corporation Limited ('the Bank') and its subsidiaries (together 'the group') have been prepared in accordance with Hong Kong Financial Reporting Standards ('HKFRSs') as issued by the Hong Kong Institute of Certified Public Accountants ('HKICPA') and accounting principles generally accepted in Hong Kong. These financial statements also comply with the requirements of the Hong Kong Companies Ordinance (Cap. 622) which are applicable to the preparation of financial statements.

Standards adopted during the year ended 31 December 2018

The group has adopted the requirements of HKFRS 9 'Financial Instruments' from 1 January 2018, with the exception of the provisions relating to the presentation of gains and losses on financial liabilities designated at fair value, which were adopted from 1 January 2017. This includes the adoption of 'Prepayment Features with Negative Compensation (Amendments to HKFRS 9)' which is effective for annual periods beginning on or after 1 January 2019 with early adoption permitted. The effect of adopting the amendments to HKFRS 9 is not considered to be significant. HKFRS 9 includes an accounting policy choice to remain with HKAS 39 hedge accounting, which the group has exercised. The classification and measurement and impairment requirements are applied retrospectively by adjusting the opening balance sheet at the date of initial application. As permitted by HKFRS 9, the group has not restated comparatives. Adoption reduced net assets at 1 January 2018 by HK$12,313m as set out in note 2.

In addition, the group has adopted the requirements of HKFRS 15 'Revenue from Contracts with Customers' and a number of interpretations and amendments to standards which have had an insignificant effect on the group's consolidated financial statements.

HKFRS 9 transitional requirements

The transition requirements of HKFRS 9 have necessitated a review of the designation of financial instruments at fair value. HKFRS 9 requires that the designation is revoked where there is no longer an accounting mismatch at 1 January 2018 and permits designations to be revoked or additional designations created at 1 January 2018 if there are accounting mismatches at that date. As a result, fair value designations for financial liabilities have been revoked where the accounting mismatch no longer exists, as required by HKFRS 9.

The results of these changes are included in the reconciliation set out in note 2.

Changes in accounting policy

While not necessarily required by the adoption of HKFRS 9, the following voluntary changes in accounting policy and presentation have been made as a result of reviews carried out in conjunction with its adoption. The effect of presentational changes at 1 January 2018 is included in the reconciliation set out in note 2 and comparatives have not been restated.

- We have considered market practices for the presentation of certain financial liabilities which contain both deposit and derivative components. We have concluded that a change in accounting policy and presentation from 'Trading liabilities' would be appropriate, since it would better align with the presentation of similar financial instruments by peers and therefore provide more relevant information about the effect of these financial liabilities on our financial position and performance. As a result, rather than being classified as held for trading, we designate these financial liabilities as at fair value through profit or loss since they are managed and their performance evaluated on a fair value basis. A further consequence of this change in presentation is that the effects of changes in the liabilities' credit risk will be presented in 'Other comprehensive income' with the remaining effect presented in profit or loss in accordance with group's accounting policy adopted in 2017 (following the adoption of the requirements in HKFRS 9 relating to the presentation of gains and losses on financial liabilities designated at fair value).
- Cash collateral, margin and settlement accounts have been reclassified from 'Trading assets', 'Placings with and advances to banks' and 'Loans and advances to customers' to 'Prepayments, accrued income and other assets' and from 'Trading liabilities' and 'Deposits by banks' and 'Customer accounts' to 'Accruals and deferred income, other liabilities and provisions'. The change in presentation for financial assets is in accordance with HKFRS 9 and the change in presentation for financial liabilities is considered to provide more relevant information, given the change in presentation for the financial assets. The change in presentation for financial liabilities has had no effect on measurement of these items and therefore on retained earnings or profit for any period.
- Certain stock borrowing assets have been reclassified from 'Placings with and advances to banks' and 'Loans and advances to customers' to 'Trading assets'. The change in measurement is a result of the determination of the global business model for this activity and will align to the global presentation.

(b) Future accounting developments

Minor amendments to HKFRSs

The HKICPA has published a number of minor amendments to HKFRSs which are effective from 1 January 2019. The group expects they will have an insignificant effect, when adopted, on the consolidated financial statements.

Major new HKFRSs

The HKICPA has published HKFRS 16 'Leases' and HKFRS 17 'Insurance contracts'.

HKFRS 16 'Leases'

HKFRS 16 'Leases' has an effective date for annual periods beginning on or after 1 January 2019. HKFRS 16 results in lessees accounting for most leases within the scope of the standard in a manner similar to the way in which finance leases are currently accounted for under HKAS 17 'Leases'. Lessees will recognise a right of use ('ROU') asset and a corresponding financial liability on the balance sheet. The asset will be amortised over the length of the lease, and the financial liability measured at amortised cost. Lessor accounting remains substantially the same as under HKAS 17. At 1 January 2019, the group expects to adopt the standard using a modified retrospective approach where the cumulative effect of initially applying the standard is recognised as an adjustment to the opening balance of retained earnings and comparatives are not restated. The implementation is expected to increase assets by approximately HK$9.2bn and increase financial liabilities by the same amount, with no effect on net assets or retained earnings.

As a consequence of HKFRS 16, properties currently reported under 'Prepayments, accrued income and other assets' as operating leases and held at cost will be reclassified to 'Property, plant and equipment' and be measured at fair value. The implementation is expected to increase 'Property, plant and equipment' by HK$16.3bn and increase deferred tax liabilities by HK$2.7bn, with the net impact taken to the 'Property Revaluation Reserve'.

HKFRS 17 'Insurance Contracts'

HKFRS 17 'Insurance Contracts' was issued in January 2018 and sets out the requirements that an entity should apply in accounting for insurance contracts it issues and reinsurance contracts it holds. HKFRS 17 is effective from 1 January 2021. However, the HKICPA is considering delaying the mandatory implementation date by one year and may make additional changes to the standard. The group is in the process of implementing HKFRS 17. Industry practice and interpretation of the standard is still developing and there may be changes to the standard, therefore the likely impact of its implementation remains uncertain.

Amendment to HKAS 12 'Income Taxes'

An amendment to HKAS 12 was issued in February 2018 as part of the Annual Improvement Cycle. The amendment clarifies that an entity should recognise the tax consequences of dividends where the transactions or events that generated the distributable profits are recognised. This amendment will be effective for annual periods beginning on or after 1 January 2019 and is applied to the income tax consequences of distributions recognised on or after the beginning of the earliest comparative period. As a consequence, income tax related to distributions on perpetual subordinated loans will be presented in profit or loss rather than equity.

(c) Foreign currencies

Items included in each of the group's entities are measured using the currency of the primary economic environment in which the entity operates (the 'functional currency'). The group's consolidated financial statements are presented in Hong Kong dollars.

Transactions in foreign currencies are recorded at the rate of exchange on the date of the transaction. Assets and liabilities denominated in foreign currencies are translated at the rate of exchange at the balance sheet date except non-monetary assets and liabilities measured at historical cost that are translated using the rate of exchange at the initial transaction date. Exchange differences are included in other comprehensive income or in the income statement depending on where the gain or loss on the underlying item is recognised.

In the consolidated financial statements, the assets, liabilities and results of foreign operations whose functional currency is not Hong Kong dollars are translated into the group's presentation currency at the reporting date. Exchange differences arising are recognised in other comprehensive income. On disposal of a foreign operation, exchange differences previously recognised in other comprehensive income are reclassified to the income statement.

(d) Presentation of information

Certain disclosures required by HKFRSs have been included in the audited sections of the *Annual Report and Accounts* as follows:

- Consolidated income statement and balance sheet data by global business are included in the 'Financial Review' on page 8.
- Disclosures concerning the nature and extent of risks relating to banking and insurance activities are included in the 'Risk' section on pages 14 to 15, pages 18 to 29, page 32, page 33, page 34, page 35 and pages 38 to 41 as specified as "audited".
- Capital disclosures are included in the 'Capital' section on page 42.

In accordance with the group's policy to provide disclosures that help other stakeholders to understand the group's performance, financial position and changes thereto, the information provided in the Risk section and the Capital section goes beyond the minimum levels required by accounting standards, statutory and regulatory requirements. In addition, the group assesses good practice recommendations issued from time to time by relevant regulators and standard setters and will assess the applicability and relevance of such guidance, enhancing disclosures where appropriate.

(e) Critical accounting estimates and judgements

The preparation of financial information requires the use of estimates and judgements about future conditions. In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of items highlighted as the critical accounting estimates and judgements in note 1.2 below, it is possible that the outcomes in the next financial year could differ from those on which management's estimates are based. This could result in materially different estimates and judgements from those reached by management for the purposes of the 2018 Financial Statements. Management's selection of the group's accounting policies which contain critical estimates and judgements reflects the materiality of the items to which the policies are applied and the high degree of judgement and estimation uncertainty involved.

(f) Segmental analysis

The group's chief operating decision-maker is the Executive Committee which operates as a general management committee under the direct authority of the Board and operating segments are reported in a manner consistent with the internal reporting provided to the Executive Committee.

Measurement of segmental assets, liabilities, income and expenses is in accordance with the group's accounting policies. Segmental income and expenses include transfers between segments and these transfers are conducted at arm's length. Shared costs are included in segments on the basis of the actual recharges made.

(g) Going concern

The financial statements are prepared on a going concern basis, as the Directors are satisfied that the group and parent company have the resources to continue in business for the foreseeable future. In making this assessment, the Directors have considered a wide range of information relating to present and future conditions, including future projections of profitability, cash flows and capital resources.

1.2 Summary of significant accounting policies

(a) Consolidation and related policies

Investments in subsidiaries

Where an entity is governed by voting rights, the group consolidates when it holds, directly or indirectly, the necessary voting rights to pass resolutions by the governing body. In all other cases, the assessment of control is more complex and requires judgement of other factors, including having exposure to variability of returns, power to direct relevant activities and whether power is held as agent or principal.

Business combinations are accounted for using the acquisition method. The amount of non-controlling interest is measured either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. This election is made for each business combination.

The Bank's investments in subsidiaries are stated at cost less impairment losses.

Goodwill

Goodwill is allocated to cash-generating units ('CGU') for the purpose of impairment testing, which is undertaken at the lowest level at which goodwill is monitored for internal management purposes. Impairment testing is performed at least annually, or whenever there is an indication of impairment, by comparing the recoverable amount of a CGU with its carrying amount.

Interests in associates

The group classifies investments in entities over which it has significant influence, and that are neither subsidiaries nor joint arrangements, as associates.

Investments in associates are recognised using the equity method. The attributable share of the results and reserves of associates are included in the consolidated financial statements of the group based on either financial statements made up to 31 December or pro-rated amounts adjusted for any material transactions or events occurring between the date of financial statements available and 31 December.

Investments in associates are assessed at each reporting date and tested for impairment when there is an indication that the investment may be impaired. Goodwill on acquisitions of interests in associates is not tested separately for impairment but is assessed as part of the carrying amount of the investment.

Critical accounting estimates and judgements

Impairment testing of investments in associates involves significant judgement in determining the value in use, and in particular estimating the present values of cash flows expected to arise from continuing to hold the investment. The most significant judgements relate to the impairment testing of our investment in Bank of Communications ('BoCom'). Key assumptions used in estimating BoCom's value in use, the sensitivity of the value in use calculation to different assumptions and a sensitivity analysis that shows the changes in key assumptions that would reduce the excess of value in use over the carrying amount (the 'headroom') to nil are described in note 15.

(b) Income and expenses

Operating income

Interest income and expense

Interest income and expense for all financial instruments, excluding those classified as held for trading or designated at fair value are recognised in 'Interest income' and 'Interest expense' in the income statement using the effective interest method. However, as an exception to this, interest on debt securities issued by the group that are designated under the fair value option and derivatives managed in conjunction with those debt securities are included in interest expense.

Interest on impaired financial assets is recognised using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

Non-interest income and expense

The group generates fee income from services provided at a fixed price over time, such as account service and card fees, or when the group delivers a specific transaction at a point in time such as broking services and import/export services. With the exception of certain fund management and performance fees, all other fees are generated at a fixed price. Fund management and performance fees can be variable depending on the size of the customer portfolio and the group's performance as fund manager. Variable fees are recognised when all uncertainties are resolved. Fee income is generally earned from short term contracts with payment terms that do not include a significant financing component.

The group acts as principal in the majority of contracts with customers, with the exception of broking services. For most brokerage trades the group acts as agent in the transaction and recognises broking income net of fees payable to other parties in the arrangement.

The group recognises fees earned on transaction-based arrangements at a point in time when we have fully provide the service to the customer. Where the contract requires services to be provided over time, income is recognised on a systematic basis over the life of the agreement.

Where the group offers a package of services that contains multiple non-distinct performance obligations, such as those included in account service packages, the promised services are treated as a single performance obligation. If a package of services contains distinct performance obligations, such as those including both account and insurance services, the corresponding transaction price is allocated to each performance obligation based on the estimated stand-alone selling prices.

Dividend income is recognised when the right to receive payment is established. This is the ex-dividend date for listed equity securities, and usually the date when shareholders approve the dividend for unlisted equity securities.

Net income/(expense) from financial instruments measured at fair value through profit or loss includes the following:

- 'Net income from financial instruments held for trading or managed on a fair value basis'. This element is comprised of the net trading income, which includes all gains and losses from changes in the fair value of financial assets and financial liabilities held for trading, together with the related interest income, expense and dividends; and it also includes all gains and losses from changes in the fair value of derivatives that are managed in conjunction with financial assets and liabilities measured at fair value through profit or loss.

- 'Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss'. This includes interest income, interest expense and dividend income in respect of financial assets and liabilities measured at fair value through profit or loss; and those derivatives managed in conjunction with the above which can be separately identifiable from other trading derivatives.
- 'Changes in fair value of long-term debt and related derivatives'. Interest paid on the external long-term debt and interest cash flows on related derivatives is presented in interest expense.
- 'Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss'. This includes interest on instruments which fail the SPPI test. See (d) below.

The accounting policies for insurance premium income are disclosed in note 1.2(j).

(c) Valuation of financial instruments

All financial instruments are initially recognised at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value of a financial instrument on initial recognition is generally its transaction price (that is, the fair value of the consideration given or received). However, if there is a difference between the transaction price and the fair value of financial instruments whose fair value is based on a quoted price in an active market or a valuation technique that uses only data from observable markets, the group recognises the difference as a trading gain or loss at inception ('day 1 gain or loss'). In all other cases, the entire day 1 gain or loss is deferred and recognised in the income statement over the life of the transaction until the transaction matures or is closed out, the valuation inputs become observable or the group enters into an offsetting transaction.

The fair value of financial instruments is generally measured on an individual basis. However, in cases where the group manages a group of financial assets and liabilities according to its net market or credit risk exposure, the fair value of the group of financial instruments is measured on a net basis but the underlying financial assets and liabilities are presented separately in the financial statements, unless they satisfy the HKFRSs offsetting criteria.

Critical accounting estimates and judgements

The majority of valuation techniques employ only observable market data. However, certain financial instruments are valued on the basis of valuation techniques that feature one or more significant market inputs that are unobservable, where the measurement of fair value is more judgemental. An instrument in its entirety is classified as valued using significant unobservable inputs if, in the opinion of management, a significant proportion of the instrument's inception profit or greater than 5% of the instrument's valuation is driven by unobservable inputs. 'Unobservable' in this context means that there is little or no current market data available from which to determine the price at which an arm's length transaction would be likely to occur. It generally does not mean that there is no data available at all upon which to base a determination of fair value (consensus pricing data may, for example, be used).

(d) Financial instruments measured at amortised cost

Financial assets that are held to collect the contractual cash flows and that contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest, such as most loans and advances to banks and customers and some debt securities, are measured at amortised cost. In addition, most financial liabilities are measured at amortised cost. The group accounts for regular way amortised cost financial instruments using trade date accounting. The carrying value of these financial assets at initial recognition includes any directly attributable transactions costs. If the initial fair value is lower than the cash amount advanced, such as in the case of some leveraged finance and syndicated lending activities, the difference is deferred and recognised over the life of the loan through the recognition of interest income.

The group may commit to underwrite loans on fixed contractual terms for specified periods of time. When the loan arising from the lending commitment is expected to be held for trading, the commitment to lend is recorded as a derivative. When the group intends to hold the loan, the loan commitment is included in the impairment calculations set out below.

Non-trading reverse repurchase, repurchase and similar agreements

When debt securities are sold subject to a commitment to repurchase them at a predetermined price ('repos'), they remain on the balance sheet and a liability is recorded in respect of the consideration received. Securities purchased under commitments to resell ('reverse repos') are not recognised on the balance sheet and an asset is recorded in respect of the initial consideration paid. Non-trading repos and reverse repos are measured at amortised cost. The difference between the sale and repurchase price or between the purchase and resale price is treated as interest and recognised in net interest income over the life of the agreement.

Contracts that are economically equivalent to reverse repurchase or repurchase agreements (such as sales or purchases of debt securities entered into together with total return swaps with the same counterparty) are accounted for similarly to, and presented together with, reverse repurchase or repurchase agreements.

(e) Financial assets measured at fair value through other comprehensive income ('FVOCI')

Financial assets held for a business model that is achieved by both collecting contractual cash flows and selling and that contain contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest are measured at FVOCI. These comprise primarily debt securities. They are recognised on the trade date when the group enters into contractual arrangements to purchase and are normally derecognised when they are either sold or redeemed. They are subsequently remeasured at fair value and changes therein (except for those relating to impairment, interest income and foreign currency exchange gains and losses) are recognised in other comprehensive income until the assets are sold. Upon disposal, the cumulative gains or losses in other comprehensive income are recognised in the income statement as 'Gains less losses from financial instruments'. Financial assets measured at FVOCI are included in the impairment calculations set out below and impairment is recognised in profit or loss.

(f) Equity securities measured at fair value with fair value movements presented in OCI

The equity securities for which fair value movements are shown in OCI are business facilitation and other similar investments where the group holds the investments other than to generate a capital return. Gains or losses on the derecognition of these equity securities are not transferred to profit or loss. Dividend income is recognised in profit or loss.

(g) Financial instruments designated at fair value through profit or loss

Financial instruments, other than those held for trading, are classified in this category if they meet one or more of the criteria set out below and are so designated irrevocably at inception:

- the use of the designation removes or significantly reduces an accounting mismatch;
- when a group of financial assets and liabilities or a group of financial liabilities is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy; and
- where the financial liability contains one or more non-closely related embedded derivatives.

Designated financial assets are recognised when the group enters into contracts with counterparties, which is generally on trade date, and are normally derecognised when the rights to the cash flows expire or are transferred. Designated financial liabilities are recognised when the group enters into contracts with counterparties, which is generally on settlement date, and are normally derecognised when extinguished. Subsequent changes in fair values are recognised in the income statement in 'Net income from financial instruments held for trading or managed on a fair value basis' or 'Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss'.

Under the above criterion, the main classes of financial instruments designated by the group are:

- Long-term debt issues

The interest and/or foreign exchange exposure on certain fixed rate debt securities issued has been matched with the interest and/or foreign exchange exposure on certain swaps as part of a documented risk management strategy.

- Financial assets and financial liabilities under unit-linked and non-linked investment contracts

A contract under which the group does not accept significant insurance risk from another party is not classified as an insurance contract, other than investment contracts with discretionary participation features ('DPF'), but is accounted for as a financial liability. Customer liabilities under linked and certain non-linked investment contracts issued by insurance subsidiaries are determined based on the fair value of the assets held in the linked funds. If no fair value designation was made for the related assets, at least some of the assets would otherwise be measured at either fair value through other comprehensive income or amortised cost. The related financial assets and liabilities are managed and reported to management on a fair value basis. Designation at fair value of the financial assets and related liabilities allows changes in fair values to be recorded in the income statement and presented in the same line.

(h) Derivatives

Derivatives are financial instruments that derive their value from the price of underlying items such as equities, interest rates or other indices. Derivatives are recognised initially and are subsequently measured at fair value, with changes in fair value generally recorded in the income statement. Derivatives are classified as assets when their fair value is positive or as liabilities when their fair value is negative. This includes embedded derivatives in financial liabilities which are bifurcated from the host contract when they meet the definition of a derivative on a stand-alone basis.

Where the derivatives are managed with debt securities issued by the group that are designated at fair value, the contractual interest is shown in 'Interest expense' together with the interest payable on the issued debt.

Hedge accounting

When derivatives are held for risk management purposes, they are designated in hedge accounting relationships where the required criteria for documentation and hedge effectiveness are met. The group enters into fair value hedges, cash flow hedges or hedges of net investments in foreign operations as appropriate to the risk being hedged.

Fair value hedge

Fair value hedge accounting does not change the recording of gains and losses on derivatives and other hedging instruments, but results in recognising changes in the fair value of the hedged assets or liabilities attributable to the hedged risk that would not otherwise be recognised in the income statement. If a hedge relationship no longer meets the criteria for hedge accounting, hedge accounting is discontinued; the cumulative adjustment to the carrying amount of the hedged item is amortised to the income statement on a recalculated effective interest rate, unless the hedged item has been derecognised, in which case it is recognised in the income statement immediately.

Cash flow hedge

The effective portion of gains and losses on hedging instruments is recognised in other comprehensive income; the ineffective portion of the change in fair value of derivative hedging instruments that are part of a cash flow hedge relationship is recognised immediately in the income statement within 'Net income from financial instruments held for trading or managed on a fair value basis'. The accumulated gains and losses recognised in other comprehensive income are reclassified to the income statement in the same periods in which the hedged item affects profit or loss. In hedges of forecast transactions that result in recognition of a non-financial asset or liability, previous gains and losses recognised in other comprehensive income are included in the initial measurement of the asset or liability. When a hedge relationship is discontinued, or partially discontinued, any cumulative gain or loss recognised in other comprehensive income remains in equity until the forecast transaction is recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss previously recognised in other comprehensive income is immediately reclassified to the income statement.

Derivatives that do not qualify for hedge accounting

Non-qualifying hedges are derivatives entered into as economic hedges of assets and liabilities for which hedge accounting was not applied.

(i) Impairment of amortised cost and FVOCI financial assets

Expected credit losses ('ECL') are recognised for placings with and advances to banks, loans and advances to customers, non-trading reverse repurchase agreements, other financial assets held at amortised cost, debt instruments measured at fair value through other comprehensive income, and certain loan commitments and financial guarantee contracts. At initial recognition, allowance (or provision in the case of some loan commitments and financial guarantees) is required for ECL resulting from default events that are possible within the next 12 months (or less, where the remaining life is less than 12 months) ('12-month ECL'). In the event of a significant increase in credit risk, allowance (or provision) is required for ECL resulting from all possible default events over the expected life of the financial instrument ('lifetime ECL'). Financial assets where 12-month ECL is recognised are considered to be 'stage 1'; financial assets which are considered to have experienced a significant increase in credit risk are in 'stage 2'; and financial assets for which there is objective evidence of impairment so are considered to be in default or otherwise credit-impaired are in 'stage 3'. Purchased or originated credit-impaired financial assets ('POCI') are treated differently as set out below.

Credit-impaired (stage 3)

The group determines that a financial instrument is credit-impaired and in stage 3 by considering relevant objective evidence, primarily whether:

- contractual payments of either principal or interest are past due for more than 90 days;
- there are other indications that the borrower is unlikely to pay such as that a concession has been granted to the borrower for economic or legal reasons relating to the borrower's financial condition; and
- the loan is otherwise considered to be in default.

If such unlikeliness to pay is not identified at an earlier stage, it is deemed to occur when an exposure is 90 days past due, even where regulatory rules permit default to be defined based on 180 days past due. Therefore the definitions of credit-impaired and default are aligned as far as possible so that stage 3 represents all loans which are considered defaulted or otherwise credit-impaired.

Interest income is recognised by applying the effective interest rate to the amortised cost amount, i.e. gross carrying amount less ECL allowance.

Write-off

Financial assets (and the related impairment allowances) are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, this is generally after receipt of any proceeds from the realisation of security. In circumstances where the net realisable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

Renegotiation

Loans are identified as renegotiated and classified as credit-impaired when we modify the contractual payment terms due to significant credit distress of the borrower. Renegotiated loans remain classified as credit-impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows and retain the designation of renegotiated until maturity or derecognition.

A loan that is renegotiated is derecognised if the existing agreement is cancelled and a new agreement is made on substantially different terms or if the terms of an existing agreement are modified such that the renegotiated loan is a substantially different financial instrument. Any new loans that arise following derecognition events in these circumstances are considered to be purchased or originated credit-impaired ('POCI') and will continue to be disclosed as renegotiated loans.

Other than originated credit-impaired loans, all other modified loans could be transferred out of stage 3 if they no longer exhibit any evidence of being credit-impaired and, in the case of renegotiated loans, there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, over the minimum observation period, and there are no other indicators of impairment. These loans could be transferred to stage 1 or 2 based on the mechanism as described below by comparing the risk of a default occurring at the reporting date (based on the modified contractual terms) and the risk of a default occurring at initial recognition (based on the original, unmodified contractual terms). Any amount written off as a result of the modification of contractual terms would not be reversed.

Loan modifications that are not credit-impaired

Loan modifications that are not identified as renegotiated are considered to be commercial restructuring. Where a commercial restructuring results in a modification (whether legalised through an amendment to the existing terms or the issuance of a new loan contract) such that the group's rights to the cash flows under the original contract have expired, the old loan is derecognised and the new loan is recognised at fair value. The rights to cash flows are generally considered to have expired if the commercial restructure is at market rates and no payment-related concession has been provided.

Significant increase in credit risk (stage 2)

An assessment of whether credit risk has increased significantly since initial recognition is performed at each reporting period by considering the change in the risk of default occurring over the remaining life of the financial instrument. The assessment explicitly or implicitly compares the risk of default occurring at the reporting date compared to that at initial recognition, taking into account reasonable and supportable information, including information about past events, current conditions and future economic conditions. The assessment is unbiased, probability-weighted, and to the extent relevant, uses forward-looking information consistent with that used in the measurement of ECL. The analysis of credit risk is multifactor. The determination of whether a specific factor is relevant and its weight compared with other factors depends on the type of product, the characteristics of the financial instrument and the borrower, and the geographical region. Therefore, it is not possible to provide a single set of criteria that will determine what is considered to be a significant increase in credit risk and these criteria will differ for different types of lending, particularly between retail and wholesale. However, unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when 30 days past due. In addition, wholesale loans that are individually assessed, typically corporate and commercial customers, and included on a watch or worry list are included in stage 2.

For wholesale portfolios, the quantitative comparison assesses default risk using a lifetime probability of default ('PD') which encompasses a wide range of information including the obligor's customer risk rating ('CRR'), macroeconomic condition forecasts and credit transition probabilities. For origination CRRs up to 3.3, significant increase in credit risk is measured by comparing the average PD for the remaining term estimated at origination with the equivalent estimation at reporting date. The quantitative measure of significance varies depending on the credit quality at origination as follows:

Origination CRR	Significance trigger – PD to increase by
0.1–1.2	15bps
2.1–3.3	30bps

For CRRs greater than 3.3 which are not impaired, a significant increase in credit risk is considered to have occurred when the origination PD has doubled. The significance of changes in PD was informed by expert credit risk judgement, referenced to historical credit mitigations and to relative changes in external market rates.

For loans originated prior to the implementation of HKFRS 9, the origination PD does not include adjustments to reflect expectations of future macroeconomic conditions since these are not available without the use of hindsight. In the absence of this data, origination PD must be approximated assuming through-the-cycle ('TTC') PDs and TTC migration probabilities, consistent with the instrument's underlying modelling approach and the CRR at origination. For these loans, the quantitative comparison is supplemented with additional CRR deterioration based thresholds as set out in the table below:

Origination CRR	Additional significance criteria – Number of CRR grade notches deterioration required to identify as significant credit deterioration (stage 2) (> or equal to)
0.1	5 notches
1.1–4.2	4 notches
4.3–5.1	3 notches
5.2–7.1	2 notches
7.2–8.2	1 notch
8.3	0 notch

Further information about the 23-grade scale used for CRR can be found on page 25.

For certain portfolios of debt securities where external market ratings are available and credit ratings are not used in credit risk management, the debt securities will be in stage 2 if their credit risk increases to the extent they are no longer considered investment grade. Investment grade is where the financial instrument has a low risk of incurring losses, the structure has a strong capacity to meet its contractual cash flow obligations in the near term and adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil their contractual cash flow obligations.

For retail portfolios, default risk is assessed using a reporting date 12-month PD derived from credit scores which incorporate all available information about the customer. This PD is adjusted for the effect of macroeconomic forecasts for periods longer than 12 months and is considered to be a reasonable approximation of a lifetime PD measure. Retail exposures are first segmented into homogeneous portfolios, generally by country, product and brand. Within each portfolio, the stage 2 accounts are defined as accounts with an adjusted 12-month PD greater than the average 12-month PD of loans in that portfolio 12 months before they become 30 days past due. The expert credit risk judgement is that no prior increase in credit risk is significant. This portfolio-specific threshold identifies loans with a PD higher than would be expected from loans that are performing as originally expected and higher than that which would have been acceptable at origination. It therefore approximates a comparison of origination to reporting date PDs.

Unimpaired and without significant increase in credit risk – (stage 1)

ECL resulting from default events that are possible within the next 12 months ('12-month ECL') are recognised for financial instruments that remain in stage 1.

Purchased or originated credit-impaired ('POCI')

Financial assets that are purchased or originated at a deep discount that reflects the incurred credit losses are considered to be POCI. This population includes the recognition of a new financial instrument following a renegotiation where concessions have been granted for economic or contractual reasons relating to the borrower's financial difficulty that otherwise would not have been considered. The amount of change-in-lifetime ECL is recognised in profit or loss until the POCI is derecognised, even if the lifetime ECL are less than the amount of ECL included in the estimated cash flows on initial recognition.

Movement between stages

Financial assets can be transferred between the different categories (other than POCI) depending on their relative increase in credit risk since initial recognition. Financial instruments are transferred out of stage 2 if their credit risk is no longer considered to be significantly increased since initial recognition based on the assessments described above. Except for renegotiated loans, financial instruments are transferred out of stage 3 when they no longer exhibit any evidence of credit impairment as described above. Renegotiated loans that are not POCI will continue to be in stage 3 until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows, observed over a minimum one-year period and there are no other indicators of impairment. For loans that are assessed for impairment on a portfolio basis, the evidence typically comprises a history of payment performance against the original or revised terms, as appropriate to the circumstances. For loans that are assessed for impairment on an individual basis, all available evidence is assessed on a case-by-case basis.

Measurement of ECL

The assessment of credit risk, and the estimation of ECL, are unbiased and probability-weighted, and incorporate all available information which is relevant to the assessment including information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions at the reporting date. In addition, the estimation of ECL should take into account the time value of money.

In general, the group calculates ECL using three main components, a probability of default, a loss given default ('LGD') and the exposure at default ('EAD').

The 12-month ECL is calculated by multiplying the 12-month PD, LGD and EAD. Lifetime ECL is calculated using the lifetime PD instead. The 12-month and lifetime PDs represent the probability of default occurring over the next 12 months and the remaining maturity of the instrument respectively.

The EAD represents the expected balance at default, taking into account the repayment of principal and interest from the balance sheet date to the default event together with any expected drawdowns of committed facilities. The LGD represents expected losses on the EAD given the event of default, taking into account, among other attributes, the mitigating effect of collateral value at the time it is expected to be realised and the time value of money.

The group leverages the Basel II IRB framework where possible, with recalibration to meet the differing HKFRS 9 requirements as follows.

Model	Regulatory capital	HKFRS 9
PD	• Through the cycle (represents long-run average PD throughout a full economic cycle) • The definition of default includes a backstop of 90+ days past due	• Point in time (based on current conditions, adjusted to take into account estimates of future conditions that will impact PD) • Default backstop of 90+ days past due for all portfolios
EAD	• Cannot be lower than current balance	• Amortisation captured for term products
LGD	• Downturn LGD (consistent losses expected to be suffered during a severe but plausible economic downturn) • Regulatory floors may apply to mitigate risk of underestimating downturn LGD due to lack of historical data • Discounted using cost of capital • All collection costs included	• Expected LGD (based on estimate of loss given default including the expected impact of future economic conditions such as changes in value of collateral) • No floors • Discounted using the original effective interest rate of the loan • Only costs associated with obtaining/selling collateral included
Other		• Discounted back from point of default to balance sheet date

While 12-month PDs are recalibrated from Basel models where possible, the lifetime PDs are determined by projecting the 12-month PD using a term structure. For the wholesale methodology, the lifetime PD also takes into account credit migration, i.e. a customer migrating through the CRR bands over its life.

The ECL for wholesale stage 3 is determined on an individual basis using a discounted cash flow ('DCF') methodology. The expected future cash flows are based on the credit risk officer's estimates as at the reporting date, reflecting reasonable and supportable assumptions and projections of future recoveries and expected future receipts of interest. Collateral is taken into account if it is likely that the recovery of the outstanding amount will include realisation of collateral based on its estimated fair value of collateral at the time of expected realisation, less costs for obtaining and selling the collateral. The cash flows are discounted at a reasonable approximation of the original effective interest rate. For significant cases, cash flows under four different scenarios are probability-weighted by reference to the three economic scenarios applied more generally by the group and the judgement of the credit risk officer in relation to the likelihood of the workout strategy succeeding or receivership being required. For less significant cases, the effect of different economic scenarios and work-out strategies is approximated and applied as an adjustment to the most likely outcome.

Period over which ECL is measured

Expected credit loss is measured from the initial recognition of the financial asset. The maximum period considered when measuring ECL (be it 12-month or lifetime ECL) is the maximum contractual period over which the group is exposed to credit risk. For wholesale overdrafts, credit risk management actions are taken no less frequently than on an annual basis and therefore this period is to the expected date of the next substantive credit review. The date of the substantive credit review also represents the initial recognition of the new facility. However, where the financial instrument includes both a drawn and undrawn commitment and the contractual ability to demand repayment and cancel the undrawn commitment does not serve to limit the group's exposure to credit risk to the contractual notice period, the contractual period does not determine the maximum period considered. Instead, ECL is measured over the period the group remains exposed to credit risk that is not mitigated by credit risk management actions. This applies to retail overdrafts and credit cards, where the period is the average time taken for stage 2 exposures to default or close as performing accounts, determined on a portfolio basis and ranging from between two and six years. In addition, for these facilities it is not possible to identify the ECL on the loan commitment component separately from the financial asset component. As a result, the total ECL is recognised in the loss allowance for the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised as a provision.

Forward-looking economic inputs

The group will in general apply three forward-looking global economic scenarios determined with reference to external forecast distributions representative of our view of forecast economic conditions, the consensus economic scenario approach. This approach is considered sufficient to calculate unbiased expected loss in most economic environments. They represent a most likely outcome (the Central scenario) and two, less likely, outer scenarios referred to as an Upside and a Downside scenario. The Central scenario is used by the annual operating planning process and, with regulatory modifications, will also be used in enterprise-wide stress tests. The Upside and Downside are constructed following a standard process supported by a scenario narrative reflecting the group's current top and emerging risks and by consulting external and internal subject matter experts. The relationship between the outer scenarios and Central scenario will generally be fixed with the Central scenario being assigned a weighting of 80% and the Upside and Downside scenarios 10% each, with the difference between the Central and Outer scenarios in terms of economic severity being informed by the spread of external forecast distributions among professional industry forecasts. The outer scenarios are economically plausible, internally consistent states of the world and will not necessarily be as severe as scenarios used in stress testing. The period of forecast is five years, after which the forecasts will revert to a view based on average past experience. The spread between the central and outer scenarios is grounded on consensus distributions of projected gross domestic product of the following economies: UK, France, Hong Kong, mainland China, US and Canada. The economic factors include, but are not limited to, gross domestic product, unemployment, interest rates, inflation and commercial property prices across all the countries and territories in which the group operates.

In general, the consequences of the assessment of credit risk and the resulting ECL outputs will be probability-weighted using the standard probability weights. This probability weighting may be applied directly or the effect of the probability weighting determined on a periodic basis, at least annually, and then applied as an adjustment to the outcomes resulting from the central economic forecast. The central economic forecast is updated quarterly.

The group recognises that the consensus economic scenario approach using three scenarios will be insufficient in certain economic environments. Additional analysis may be requested at management's discretion, including the production of extra scenarios. If conditions warrant, this could result in alternative scenarios and probability weightings being applied in arriving at the ECL.

Critical accounting estimates and judgements

In determining ECL, management is required to exercise judgement in defining what is considered to be a significant increase in credit risk and in making assumptions and estimates to incorporate relevant information about past events, current conditions and forecasts of economic conditions. Judgement has been applied in determining the lifetime and point of initial recognition of revolving facilities.
The PD, LGD and EAD models which support these determinations are reviewed regularly in light of differences between loss estimates and actual loss experience, but given that HKFRS 9 requirements have only just been applied, there has been little time available to make these comparisons. Therefore, the underlying models and their calibration, including how they react to forward-looking economic conditions, remain subject to review and refinement. This is particularly relevant for lifetime PDs, which have not been previously used in regulatory modelling and for the incorporation of 'Upside scenarios' which have not generally been subject to experience gained through stress testing.
The exercise of judgement in making estimations requires the use of assumptions which are highly subjective and very sensitive to the risk factors, in particular to changes in economic and credit conditions across a large number of geographical areas. Many of the factors have a high degree of interdependency and there is no single factor to which loan impairment allowances as a whole are sensitive. Pages 20 to 29 set out the assumptions underlying the Central scenario and information about how scenarios are developed in relation to the group's top and emerging risks and its judgements, informed by consensus forecasts of professional industry forecasters. The sensitivity of ECL to different economic scenarios is illustrated by recalculating the ECL for selected portfolios as if 100% weighting had been assigned to each scenario.

(j) Insurance contracts

A contract is classified as an insurance contract where the group accepts significant insurance risk from another party by agreeing to compensate that party on the occurrence of a specified uncertain future event. An insurance contract may also transfer financial risk, but is accounted for as an insurance contract if the insurance risk is significant. In addition, the group issues investment contracts with DPF which are also accounted for as insurance contracts as required by HKFRS 4 'Insurance Contracts'.

Net insurance premium income

Premiums for life insurance contracts are accounted for when receivable, except in unit-linked insurance contracts where premiums are accounted for when liabilities are established.

Reinsurance premiums are accounted for in the same accounting period as the premiums for the direct insurance contracts to which they relate.

Net insurance claims and benefits paid and movements in liabilities to policyholders

Gross insurance claims for life insurance contracts reflect the total cost of claims arising during the year, including claim handling costs and any policyholder bonuses allocated in anticipation of a bonus declaration.

Maturity claims are recognised when due for payment. Surrenders are recognised when paid or at an earlier date on which, following notification, the policy ceases to be included within the calculation of the related insurance liabilities. Death claims are recognised when notified.

Reinsurance recoveries are accounted for in the same period as the related claim.

Liabilities under insurance contracts

Liabilities under non-linked life insurance contracts are calculated by each life insurance operation based on local actuarial principles. Liabilities under unit-linked life insurance contracts are at least equivalent to the surrender or transfer value, which is calculated by reference to the value of the relevant underlying funds or indices.

Future profit participation on insurance contracts with Discretionary Participation Feature ('DPF')

Where contracts provide discretionary profit participation benefits to policyholders, liabilities for these contracts include provisions for the future discretionary benefits to policyholders. These provisions reflect the actual performance of the investment portfolio to date and management's expectation of the future performance of the assets backing the contracts, as well as other experience factors such as mortality, lapses and operational efficiency, where appropriate. The benefits to policyholders may be determined by the contractual terms, regulation, or past distribution policy.

Investment contracts with DPF

While investment contracts with DPF are financial instruments, they continue to be treated as insurance contracts as required by HKFRS 4. The group therefore recognises the premiums for these contracts as revenue and recognises as an expense the resulting increase in the carrying amount of the liability.

In the case of net unrealised investment gains on these contracts, whose discretionary benefits principally reflect the actual performance of the investment portfolio, the corresponding increase in the liabilities is recognised in either the income statement or other comprehensive income, following the treatment of the unrealised gains on the relevant assets. In the case of net unrealised losses, a deferred participating asset is recognised only to the extent that its recoverability is highly probable. Movements in the liabilities arising from realised gains and losses on relevant assets are recognised in the income statement.

Present value of in-force long-term insurance business

The group recognises the value placed on insurance contracts and investment contracts with DPF, which are classified as long-term and in-force at the balance sheet date, as an asset. The asset represents the present value of the equity holders' interest in the issuing insurance companies' profits expected to emerge from these contracts written at the balance sheet date. The present value of in-force business ('PVIF') is determined by discounting those expected future profits using appropriate assumptions in assessing factors such as future mortality, lapse rates and levels of expenses, and a risk discount rate that reflects the risk premium attributable to the respective contracts. The PVIF incorporates allowances for both non-market risk and the value of financial options and guarantees. The PVIF asset is presented gross of attributable tax in the balance sheet and movements in the PVIF asset are included in 'Other operating income' on a gross of tax basis.

Critical accounting estimates and judgements

The value of PVIF depends upon assumptions regarding future events. The PVIF is determined by discounting those expected future profits using appropriate assumptions in assessing factors such as future mortality, lapse rates and levels of expenses, and a risk discount rate that reflects the risk premium attributable to the respective contracts. The PVIF incorporates allowances for both non-market risk and the value of financial options and guarantees. The assumptions are reassessed at each reporting date and changes in the estimates which affect the value of PVIF are reflected in the income statement.

(k) Property

Land and buildings

Land and buildings held for own use are carried at their revalued amount, being the fair value at the date of the revaluation less any subsequent accumulated depreciation and impairment losses.

Revaluations are performed by professional qualified valuers, on a market basis, with sufficient regularity to ensure that the net carrying amount does not differ materially from the fair value. Surpluses arising on revaluation are credited firstly to the income statement, to the extent of any deficits arising on revaluation previously charged to the income statement in respect of the same land and buildings, and are thereafter taken to the 'Property revaluation reserve'. Deficits arising on revaluation are first set off against any previous revaluation surpluses included in the 'Property revaluation reserve' in respect of the same land and buildings, and are thereafter recognised in the income statement.

Buildings held for own use which are situated on leasehold land where it is possible to reliably separate the value of the building from the value of the leasehold land at inception of the lease are revalued by professional qualified valuers, on a depreciated replacement cost basis or surrender value, with sufficient regularity to ensure that the net carrying amount does not differ materially from the fair value.

Leasehold land and buildings are depreciated over the shorter of the unexpired terms of the leases or the remaining useful lives.

The Government of Hong Kong owns all the land in Hong Kong and permits its use under leasehold arrangements. Similar arrangements exist in mainland China. At inception of the lease, where the cost of land is known or can be reliably determined and the term of the lease is not less than 50 years, the group records its interests in leasehold land and land use rights as land and buildings held for own use. Where the term is less than 50 years, the group records its interests as operating leases.

Where the cost of the land is unknown or cannot be reliably determined, and the leasehold land and land use rights are not clearly held under an operating lease, they are accounted for as land and buildings held for own use.

Investment properties

The group holds certain properties as investments to earn rentals or for capital appreciation, or both, and those investment properties are included on balance sheet at fair value with changes in fair value being recognised in the income statement.

(l) Employee compensation and benefits

Post-employment benefit plans

The group operates a number of pension schemes including defined benefit and defined contribution, and post-employment benefit schemes.

Payments to defined contribution schemes are charged as an expense as the employees render service.

Defined benefit pension obligations are calculated using the projected unit credit method. The net charge to the income statement mainly comprises the service cost and the net interest on the net defined benefit asset or liability, and is presented in operating expenses.

Remeasurements of the net defined benefit asset or liability, which comprise actuarial gains and losses, return on plan assets excluding interest and the effect of the asset ceiling (if any, excluding interest), are recognised immediately in other comprehensive income. The net defined benefit asset or liability represents the present value of defined benefit obligations reduced by the fair value of plan assets, after applying the asset ceiling test, where the net defined benefit surplus is limited to the present value of available refunds and reductions in future contributions to the plan.

(m) Tax

Income tax comprises current tax and deferred tax. Income tax is recognised in the income statement except to the extent that it relates to items recognised in other comprehensive income or directly in equity, in which case the tax is recognised in the same statement as the related item appears.

Current tax is the tax expected to be payable on the taxable profit for the year and on any adjustment to tax payable in respect of previous years. The group provides for potential current tax liabilities that may arise on the basis of the amounts expected to be paid to the tax authorities.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the balance sheet, and the amounts attributed to such assets and liabilities for tax purposes. Deferred tax is calculated using the tax rates expected to apply in the periods in which the assets will be realised or the liabilities settled.

Current and deferred tax are calculated based on tax rates and laws enacted, or substantively enacted, by the balance sheet date.

(n) Provisions, contingent liabilities and guarantees

Provisions

Provisions are recognised when it is probable that an outflow of economic benefits will be required to settle a present legal or constructive obligation that has arisen as a result of past events and for which a reliable estimate can be made.

Critical accounting estimates and judgements

Judgement is involved in determining whether a present obligation exists and in estimating the probability, timing and amount of any outflows. Professional expert advice is taken on the assessment of litigation, property (including onerous contracts) and similar obligations. Provisions for legal proceedings and regulatory matters typically require a higher degree of judgement than other types of provisions. When matters are at an early stage, accounting judgements can be difficult because of the high degree of uncertainty associated with determining whether a present obligation exists, and estimating the probability and amount of any outflows that may arise. As matters progress, management and legal advisers evaluate on an ongoing basis whether provisions should be recognised, revising previous judgements and estimates as appropriate. At more advanced stages, it is typically easier to make judgements and estimates around a better defined set of possible outcomes. However, the amount provisioned can remain very sensitive to the assumptions used. There could be a wide range of possible outcomes for any pending legal proceedings, investigations or inquiries. As a result, it is often not practicable to quantify a range of possible outcomes for individual matters. It is also not practicable to meaningfully quantify ranges of potential outcomes in aggregate for these types of provisions because of the diverse nature and circumstances of such matters and the wide range of uncertainties involved. Provisions for customer remediation also require significant levels of estimation and judgement. The amounts of provisions recognised depend on a number of different assumptions, such as the volume of inbound complaints, the projected period of inbound complaint volumes, the decay rate of complaint volumes, the population identified as systemically mis-sold and the number of policies per customer complaint.

Contingent liabilities, contractual commitments and guarantees

Contingent liabilities

Contingent liabilities, which include certain guarantees and letters of credit pledged as collateral security, and contingent liabilities related to legal proceedings or regulatory matters, are not recognised in the financial statements but are disclosed unless the probability of settlement is remote.

Financial guarantee contracts

Liabilities under financial guarantee contracts which are not classified as insurance contracts are recorded initially at their fair value, which is generally the fee received or present value of the fee receivable.

The Bank has issued financial guarantees and similar contracts to other group entities. The group elects to account for certain guarantees as insurance contracts in the Bank's financial statements, in which case they are measured and recognised as insurance liabilities. This election is made on a contract-by-contract basis, and is irrevocable.

(o) Accounting policies applicable prior to 1 January 2018

Financial instruments measured at amortised cost

Loans and advances to banks and customers, held-to-maturity investments and most financial liabilities are measured at amortised cost. The carrying value of these financial assets at initial recognition includes any directly attributable transactions costs. If the initial fair value is lower than the cash amount advanced, such as in the case of some leveraged finance and syndicated lending activities, the difference is deferred and recognised over the life of the loan (as described in note 1.2(c) above) through the recognition of interest income, unless the loan becomes impaired.

The group may commit to underwriting loans on fixed contractual terms for specified periods of time. When the loan arising from the lending commitment is expected to be held for trading, the commitment to lend is recorded as a derivative. When the group intends to hold the loan, a provision on the loan commitment is only recorded where it is probable that the group will incur a loss.

Impairment of loans and advances

Losses for impaired loans are recognised when there is objective evidence that impairment of a loan or portfolio of loans has occurred. Losses which may arise from future events are not recognised.

Individually assessed loans and advances

The factors considered in determining whether a loan is individually significant for the purposes of assessing impairment include the size of the loan, the number of loans in the portfolio, the importance of the individual loan relationship and how this is managed. Loans that are determined to be individually significant will be individually assessed for impairment, except when volumes of defaults and losses are sufficient to justify treatment under a collective methodology.

Loans considered as individually significant are typically to corporate and commercial customers, are for larger amounts and are managed on an individual basis. For these loans, the group considers on a case-by-case basis at each balance sheet date whether there is any objective evidence that a loan is impaired.

The determination of the realisable value of security is based on the most recently updated market value at the time the impairment assessment is performed. The value is not adjusted for expected future changes in market prices, though adjustments are made to reflect local conditions such as forced sale discounts.

Impairment losses are calculated by discounting the expected future cash flows of a loan, which include expected future receipts of contractual interest, at the loan’s original effective interest rate or an approximation thereof, and comparing the resultant present value with the loan’s current carrying amount.

Collectively assessed loans and advances

Impairment is assessed collectively to cover losses which have been incurred but have not yet been identified on loans subject to individual assessment or for homogeneous groups of loans that are not considered individually significant, which are generally retail lending portfolios.

Incurred but not yet identified impairment

Individually assessed loans for which no evidence of impairment has been specifically identified on an individual basis are grouped together according to their credit risk characteristics for a collective impairment assessment. This assessment captures impairment losses that the group has incurred as a result of events occurring before the balance sheet date that the group is not able to identify on an individual loan basis, and that can be reliably estimated. When information becomes available that identifies losses on individual loans within a group, those loans are removed from the group and assessed individually.

Homogeneous groups of loans and advances

Statistical methods are used to determine collective impairment losses for homogeneous groups of loans not considered individually significant. The methods used to calculate collective allowances are set out below:

- When appropriate empirical information is available, the group utilises roll-rate methodology, which employs statistical analyses of historical data and experience of delinquency and default to reliably estimate the amount of the loans that will eventually be written off as a result of events occurring before the balance sheet date. Individual loans are grouped using ranges of past due days, and statistical estimates are made of the likelihood that loans in each range will progress through the various stages of delinquency and become irrecoverable. Additionally, individual loans are segmented based on their credit characteristics, such as industry sector, loan grade or product. In applying this methodology, adjustments are made to estimate the periods of time between a loss event occurring, for example because of a missed payment, and its confirmation through write-off (known as the loss identification period). Current economic conditions are also evaluated when calculating the appropriate level of allowance required to cover inherent loss. In certain highly developed markets, models also take into account behavioural and account management trends as revealed in, for example bankruptcy and rescheduling statistics.
- When the portfolio size is small or when information is insufficient or not reliable enough to adopt a roll-rate methodology, the group adopts a basic formulaic approach based on historical loss rate experience, or a discounted cash flow model. Where a basic formulaic approach is undertaken, the period between a loss event occurring and its identification is estimated by local management, and is typically between six and 12 months.

Write-off of loans and advances

Loans and the related impairment allowance accounts are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, this is generally after receipt of any proceeds from the realisation of security. In circumstances where the net realisable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

Reversals of impairment

If the amount of an impairment loss decreases in a subsequent period, and the decrease can be related objectively to an event occurring after the impairment was recognised, the excess is written back by reducing the loan impairment allowance account accordingly. The write-back is recognised in the income statement.

Assets acquired in exchange for loans

When non-financial assets acquired in exchange for loans as part of an orderly realisation are held for sale, these assets are recorded as 'Assets held for sale.'

Renegotiated loans

Loans subject to collective impairment assessment whose terms have been renegotiated are no longer considered past due, but are treated as up-to-date loans for measurement purposes once a minimum number of required payments has been received. Where collectively assessed loan portfolios include significant levels of renegotiated loans, these loans are segregated from other parts of the loan portfolio for the purposes of collective impairment assessment to reflect their risk profile. Loans subject to individual impairment assessment, whose terms have been renegotiated, are subject to ongoing review to determine whether they remain impaired. The carrying amounts of loans that have been classified as renegotiated retain this classification until maturity or derecognition.

A loan that is renegotiated is derecognised if the existing agreement is cancelled and a new agreement made on substantially different terms or if the terms of an existing agreement are modified such that the renegotiated loan is substantially a different financial instrument. Any new loans that arise following derecognition events will continue to be disclosed as renegotiated loans and are assessed for impairment as above.

Non-trading reverse repurchase, repurchase and similar agreements

When debt securities are sold subject to a commitment to repurchase them at a predetermined price ('repos'), they remain on the balance sheet and a liability is recorded in respect of the consideration received. Securities purchased under commitments to resell ('reverse repos') are not recognised on the balance sheet and an asset is recorded in respect of the initial consideration paid. Non-trading repos and reverse repos are measured at amortised cost. The difference between the sale and repurchase price or between the purchase and resale price is treated as interest and recognised in net interest income over the life of the agreement.

Contracts that are economically equivalent to reverse repurchase or repurchase agreements (such as sales or purchases of debt securities entered into together with total return swaps with the same counterparty) are accounted for similarly to, and presented together with, reverse repurchase or repurchase agreements.

Financial instruments measured at fair value

Available-for-sale financial assets

Available-for-sale financial assets are recognised on the trade date when the group enters into contractual arrangements to purchase them, and are normally derecognised when they are either sold or redeemed. They are subsequently remeasured at fair value, and changes therein are recognised in other comprehensive income until the assets are either sold or become impaired. Upon disposal, the cumulative gains or losses in other comprehensive income are recognised in the income statement as 'Gains less losses from financial investments'.

Impairment of available-for-sale financial assets

Available-for-sale financial assets are assessed at each balance sheet date for objective evidence of impairment. Impairment losses are recognised in the income statement within 'Loan impairment charges and other credit risk provisions' for debt instruments and within 'Gains less losses from financial investments' for equities.

Available-for-sale debt securities

In assessing objective evidence of impairment at the reporting date, the group considers all available evidence, including observable data or information about events specifically relating to the securities which may result in a shortfall in the recovery of future cash flows. A subsequent decline in the fair value of the instrument is recognised in the income statement when there is objective evidence of impairment as a result of decreases in the estimated future cash flows. Where there is no further objective evidence of impairment, the decline in the fair value of the financial asset is recognised in other comprehensive income. If the fair value of a debt security increases in a subsequent period, and the increase can be objectively related to an event occurring after the impairment loss was recognised in the income statement, or the instrument is no longer impaired, the impairment loss is reversed through the income statement.

Available-for-sale equity securities

A significant or prolonged decline in the fair value of the equity below its cost is objective evidence of impairment. In assessing whether it is significant, the decline in fair value is evaluated against the original cost of the asset at initial recognition. In assessing whether it is prolonged, the decline is evaluated against the continuous period in which the fair value of the asset has been below its original cost at initial recognition.

All subsequent increases in the fair value of the instrument are treated as a revaluation and are recognised in other comprehensive income. Subsequent decreases in the fair value of the available-for-sale equity security are recognised in the income statement to the extent that further cumulative impairment losses have been incurred. Impairment losses recognised on the equity security are not reversed through the income statement.

Financial instruments designated at fair value

Financial instruments, other than those held for trading, are classified in this category if they meet one or more of the criteria set out below, and are so designated irrevocably at inception:

- the use of the designation removes or significantly reduces an accounting mismatch;
- when a group of financial assets, liabilities or both is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy; and
- where financial instruments contain one or more non-closely related embedded derivatives.

Designated financial assets are recognised when the bank enters into contracts with counterparties, which is generally on trade date, and are normally derecognised when the rights to the cash flows expire or are transferred. Designated financial liabilities are recognised when the bank enters into contracts with counterparties, which is generally on settlement date, and are normally derecognised when extinguished. Subsequent changes in fair values are recognised in the income statement in 'Net income/(expense) from financial instruments designated at fair value'. Under this criterion, the main classes of financial instruments designated by the group are:

Long-term debt issues

The interest and/or foreign exchange exposure on certain fixed rate debt securities issued has been matched with the interest and/or foreign exchange exposure on certain swaps as part of a documented risk management strategy.

Financial assets and financial liabilities under unit-linked and non-linked investment contracts

A contract under which the group does not accept significant insurance risk from another party is not classified as an insurance contract, other than investment contracts with discretionary participation features ('DPF'), but is accounted for as a financial liability. See note 1.2(j) for investment contracts with DPF and contracts where the group accepts significant insurance risk. Customer liabilities under linked and certain non-linked investment contracts issued by insurance subsidiaries and the corresponding financial assets are designated at fair value. Liabilities are at least equivalent to the surrender or transfer value which is calculated by reference to the value of the relevant underlying funds or indices. Premiums receivable and amounts withdrawn are accounted for as increases or decreases in the liability recorded in respect of investment contracts. The incremental costs directly related to the acquisition of new investment contracts or renewing existing investment contracts are deferred and amortised over the period during which the investment management services are provided.

2 Effects of reclassification upon adoption of HKFRS 9

Reconciliation of consolidated balance sheet at 31 December 2017 and 1 January 2018

	Footnotes	HKAS 39 measurement category	HKFRS 9 measurement category	HKAS 39 carrying amount at 31 Dec 2017	Other changes in classification	HKFRS 9 reclassification to: Fair value through profit and loss	HKFRS 9 reclassification to: Fair value through other comprehensive income	HKFRS 9 reclassification to: Amortised cost	Carrying amount post reclassification	HKFRS 9 remeasurement including expected credit losses[4]	HKFRS 9 carrying amount at 1 Jan 2018
				HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Assets											
Cash and sight balances at central banks		**Amortised cost**	**Amortised cost**	**208,073**	**–**	**–**	**–**	**–**	**208,073**	**(1)**	**208,072**
Items in the course of collection from other banks		**Amortised cost**	**Amortised cost**	**25,714**	**–**	**–**	**–**	**–**	**25,714**	**–**	**25,714**
Hong Kong Government certificates of indebtedness		**Amortised cost**	**Amortised cost**	**267,174**	**–**	**–**	**–**	**–**	**267,174**	**–**	**267,174**
Trading assets	*1, 3*	**FVPL**	**FVPL**	**496,434**	**36,282**	**–**	**–**	**(26,572)**	**506,144**	**9**	**506,153**
Derivatives		**FVPL**	**FVPL**	**300,243**	**–**	**–**	**–**	**–**	**300,243**	**–**	**300,243**
Financial assets designated and otherwise mandatorily measured at fair value	*2,5,6,7*	**FVPL**	**FVPL**	**122,646**	**–**	**12,130**	**–**	**(899)**	**133,877**	**158**	**134,035**
Reverse repurchase agreements – non-trading		**Amortised cost**	**Amortised cost**	**330,890**	**–**	**–**	**–**	**–**	**330,890**	**–**	**330,890**
Placings with and advances to banks	*1, 2, 3*	**Amortised cost**	**Amortised cost**	**433,005**	**(37,095)**	**(4,667)**	**–**	**–**	**391,243**	**(53)**	**391,190**
Loans and advances to customers	*1, 2, 3, 4*	**Amortised cost**	**Amortised cost**	**3,328,980**	**(35,406)**	**(2,654)**	**–**	**–**	**3,290,920**	**(3,492)**	**3,287,428**
Financial investments	*5*	**FVOCI (Available for sale – debt instruments)**	**FVOCI**	**1,410,655**	**–**	**(47)**	**–**	**(50,699)**	**1,359,909**	**–**	**1,359,909**
	6	**FVOCI (Available for sale – equity instruments)**	**FVOCI**	**9,275**	**–**	**(3,093)**	**297**	**–**	**6,479**	**6**	**6,485**
	5	**Amortised cost**	**Amortised cost**	**300,943**	**–**	**–**	**–**	**51,598**	**352,541**	**(4,457)**	**348,084**
Amounts due from Group companies		**Amortised cost / FVPL**	**Amortised cost / FVPL**	**227,729**	**–**	**–**	**–**	**–**	**227,729**	**(26)**	**227,703**
Interests in associates and joint ventures	*8*	**N/A**	**N/A**	**144,717**	**–**	**–**	**–**	**–**	**144,717**	**(6,029)**	**138,688**
Goodwill and intangible assets	*9*	**N/A**	**N/A**	**59,865**	**–**	**–**	**–**	**–**	**59,865**	**(616)**	**59,249**
Property, plant and equipment		**N/A**	**N/A**	**116,336**	**–**	**–**	**–**	**–**	**116,336**	**–**	**116,336**
Deferred tax assets		**N/A**	**N/A**	**2,156**	**–**	**–**	**–**	**–**	**2,156**	**383**	**2,539**
Prepayments, accrued income and other assets	*1, 7*	**N/A**	**N/A**	**158,511**	**36,219**	**(1,669)**	**(297)**	**26,572**	**219,336**	**(32)**	**219,304**
Total assets				**7,943,346**	**–**	**–**	**–**	**–**	**7,943,346**	**(14,150)**	**7,929,196**

For footnotes, see page 73.

Reconciliation for consolidated balance sheet at 31 December 2017 and 1 January 2018 (continued)

	Footnotes	HKAS 39 measurement category	HKFRS 9 measurement category	HKAS 39 carrying amount at 31 Dec 2017	Other changes in classi-fication	HKFRS 9 reclassification to: Fair value through profit and loss	HKFRS 9 reclassification to: Fair value through other compre-hensive income	HKFRS 9 reclassification to: Amortised cost	Carrying amount post reclassification	HKFRS 9 remeasure-ment including expected credit losses[4]	HKFRS 9 carrying amount at 1 Jan 2018
				HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Liabilities											
Hong Kong currency notes in circulation		Amortised cost	Amortised cost	267,174	–	–	–	–	267,174	–	267,174
Items in the course of transmission to other banks		Amortised cost	Amortised cost	38,283	–	–	–	–	38,283	–	38,283
Repurchase agreements – non-trading		Amortised cost	Amortised cost	47,170	–	–	–	–	47,170	–	47,170
Deposits by banks	1	Amortised cost	Amortised cost	201,697	(24,023)	–	–	–	177,674	–	177,674
Customer accounts	1	Amortised cost	Amortised cost	5,138,272	(15,303)	–	–	–	5,122,969	–	5,122,969
Trading liabilities	1, 10	FVPL	FVPL	231,365	(147,654)	–	–	–	83,711	–	83,711
Derivatives		FVPL	FVPL	309,353	–	–	–	–	309,353	–	309,353
Financial liabilities designated at fair value	9, 10	FVPL	FVPL	49,278	120,397	–	–	–	169,675	73	169,748
Debt securities in issue		Amortised cost	Amortised cost	38,394	–	–	–	–	38,394	–	38,394
Retirement benefit liabilities		N/A	N/A	2,222	–	–	–	–	2,222	–	2,222
Amounts due to Group companies		Amortised cost / FVPL	Amortised cost / FVPL	265,688	–	–	–	–	265,688	–	265,688
Accruals and deferred income, other liabilities and provisions	1, 4	N/A	N/A	110,687	66,583	–	–	–	177,270	487	177,757
Liabilities under insurance contracts	9	N/A	N/A	438,017	–	–	–	–	438,017	(536)	437,481
Current tax liabilities		N/A	N/A	3,242	–	–	–	–	3,242	–	3,242
Deferred tax liabilities		N/A	N/A	24,391	–	–	–	–	24,391	(1,861)	22,530
Subordinated liabilities		Amortised cost	Amortised cost	4,090	–	–	–	–	4,090	–	4,090
Preference shares		Amortised cost	Amortised cost	21,037	–	–	–	–	21,037	–	21,037
Total liabilities				7,190,360	–	–	–	–	7,190,360	(1,837)	7,188,523

	Footnotes	HKAS 39 carrying amount at 31 Dec 2017	HKFRS 9 reclassification	Carrying amount post reclassification	HKFRS 9 remeasurement including expected credit losses	Carrying amount at 1 January 2018
		HK$m	HK$m	HK$m	HK$m	HK$m
Equity						
Called up share capital		151,360	–	151,360	–	151,360
Other equity instruments		14,737	–	14,737	–	14,737
Other reserves	11	123,417	(4,569)	118,848	57	118,905
Retained earnings		406,966	4,569	411,535	(12,047)	399,488
Total shareholders' equity		696,480	–	696,480	(11,990)	684,490
Non-controlling interests		56,506	–	56,506	(323)	56,183
Total equity		752,986	–	752,986	(12,313)	740,673

For footnotes, see page 73.

Reconciliation of impairment allowance under HKAS 39 and provision under HKAS 37 to expected credit losses under HKFRS 9

		Reclassification to		Remeasurement			
	HKAS 39 measurement category	Fair value through profit and loss	Fair value through other comprehensive income	Amortised cost	Stage 3	Stage 1 & Stage 2	Total
		HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Financial assets at amortised cost							
HKAS 39 impairment allowance at 31 Dec 2017		–	–	–	–	–	13,046
Cash and sight balances at central banks	**Amortised cost (Loans and receivables)**	–	–	–	–	1	1
Items in the course of collection from other banks	**Amortised cost (Loans and receivables)**	–	–	–	–	–	–
Hong Kong Government certificates of indebtedness	**Amortised cost (Loans and receivables)**	–	–	–	–	–	–
Reverse repurchase agreements – non-trading	**Amortised cost (Loans and receivables)**	–	–	–	–	–	–
Placings with and advances to banks	**Amortised cost (Loans and receivables)**	–	–	–	–	53	53
Loans and advances to customers	**Amortised cost (Loans and receivables)**	–	–	–	827	2,665	3,492
Financial investments	**Amortised cost (Held to maturity)**	–	–	23	–	99	122
Prepayments, accrued income and other assets	**Amortised cost (Loans and receivables)**	–	–	–	–	32	32
Expected credit loss allowance at 1 Jan 2018		–	–	–	–	–	16,746
Loan commitments and financial guarantee contracts							
HKAS 37 provisions at 31 Dec 2017		–	–	–	–	–	54
Provisions (loan commitments and financial guarantees)	N/A	N/A	N/A	N/A	1	486	487
Expected credit loss provision at 1 Jan 2018		–	–	–	–	–	541

The pre-tax net asset impact of additional impairment allowances on adoption of HKFRS 9 is HK$4,187m; HK$3,700m in respect of financial assets at amortised cost and HK$487m related to loan commitments and financial guarantee contracts. Total expected credit loss allowance at 1 January 2018 is HK$16,746m in respect of financial assets at amortised cost and HK$541m related to loan commitments and financial guarantee contracts.

Effects of reclassification upon adoption of HKFRS 9

			Assuming no reclassification	
	Carrying amount at 31 Dec 2018	Fair value at 31 Dec 2018	Gains/(losses) recognised in profit or loss	Gains/(losses) recognised in other comprehensive income
	HK$m	HK$m	HK$m	HK$m
Reclassified from available-for-sale to amortised cost				
Debt instruments measured at amortised cost	41,704	42,448	N/A	(3,427)

The majority of the assets reclassified from fair value through profit and loss to amortised cost matured during the year.

Footnotes to Effects of reclassification upon adoption of HKFRS 9

1 Settlement accounts of HK$26,572m have been reclassified from 'Trading assets' to 'Prepayments, accrued income and other assets' as a result of the assessment of business model in accordance with HKFRS 9. Cash collateral, margin and settlement accounts previously presented as 'Placings with and advances to banks' of HK$28,032m and 'Loans and advances to customers' of HK$8,187m have been represented in 'Prepayments, accrued income and other assets' to ensure consistent presentation of all such balances. Cash collateral, margin and settlement accounts previously presented as 'Trading liabilities' of HK$27,257m, 'Deposits by banks' of HK$24,023m and 'Customer accounts' of HK$15,303m have been represented in 'Accruals and deferred income, other liabilities and provisions'. This change in presentation for financial liabilities is considered to provide more relevant information, given the change in presentation for the financial assets. These changes in presentation for financial assets and liabilities have had no effect on measurement of these items and therefore on 'Retained earnings'.

2 'Loans and advances to customers' of HK$2,654m and 'Placings with and advances to banks' of HK$4,667m did not meet the 'solely payments of principal and interest' ('SPPI') requirement for amortised cost classification under HKFRS 9. As a result, these financial assets were reclassified to 'Financial assets designated and otherwise mandatorily measured at fair value'.

3 Stock borrowing assets of HK$36,282m have been reclassified from 'Placings with and advances to banks' and 'Loans and advances to customers' to 'Trading assets'. The change in measurement is a result of the determination of the global business model for this activity and to align the presentation throughout the group.

4 HKFRS 9 expected credit losses have decreased net assets by HK$4,187m principally comprising of HK$3,492m reduction in the carrying value of assets classified as 'Loans and advances to customers' and HK$487m increase in 'Provisions' relating to expected credit losses on loan commitments and financial guarantee contracts.

5 Debt instruments of HK$47m previously classified as available-for-sale under HKAS 39 did not meet the SPPI requirement for FVOCI classification. As a result, these financial assets were classified as 'Financial assets designated and otherwise mandatorily measured at fair value' upon adoption of HKFRS 9. Debt instruments of HK$50,699m previously classified as available-for-sale under HKAS 39, have been reclassified to amortised cost as a result of 'hold to collect' business model classification under HKFRS 9. This resulted in a HK$4,335m downward remeasurement of the financial assets now measured at amortised cost excluding expected credit losses.

6 HK$3,093m of available-for-sale equity instruments have been reclassified as 'Financial assets designated and otherwise mandatorily measured at fair value' in accordance with HKFRS 9. The group has elected to apply the FVOCI option under HKFRS 9 for the remaining HK$6,182m.

7 HK$1,669m of other financial assets, representing default fund contributions which were measured at amortised cost under HKAS 39, did not meet the SPPI requirement for amortised cost classification under HKFRS 9. As a result, these financial assets were classified as 'Financial assets designated and otherwise mandatorily measured at fair value'.

8 'Interests in associates and joint ventures' includes the consequential downward remeasurement of our interests in associates and joint ventures as a result of these entities applying HKFRS 9 of HK$6,029m.

9 Changes in the classification and measurement of financial assets held in our insurance business and the recognition of ECL under HKFRS 9 has resulted in secondary impacts on the present value of in-force long-term insurance business ('PVIF') and liabilities to holders of insurance and investment contracts. The gross carrying value of PVIF reported in 'Goodwill and intangible assets' and liabilities reported in 'Liabilities under insurance contracts' has decreased by HK$616m and HK$536m respectively. Liabilities reported under 'Financial liabilities designated at fair value' have increased by HK$73m.

10 We have considered market practices for the presentation of HK$120,397m of financial liabilities which contain both deposit and derivative components. We have concluded that a change in accounting policy and presentation from 'Trading liabilities' would be appropriate, since it would better align with the presentation of similar financial instruments by peers and therefore provide more relevant information about the effect of these financial liabilities on our financial position and performance. As a result, rather than being classified as held for trading, we have designated these financial liabilities as at fair value since they are managed and their performance evaluated on a fair value basis.

11 While HKFRS 9 ECL has no effect on the carrying value of FVOCI financial assets, which remain measured at fair value, the adoption of HKFRS 9 results in a transfer from the FVOCI reserve (formerly AFS reserve) to retained earnings to reflect the cumulative impairment recognised in profit or loss in accordance with HKFRS 9 (net of impairment losses previously recognised in profit or loss under HKAS 39). The resulting cumulative expected credit losses recognised in 'Retained earnings' on financial assets measured at FVOCI on adoption of HKFRS 9 is HK$55m. In addition, the cumulative AFS reserve relating to financial investments reclassified to 'Financial assets designated and otherwise mandatorily measured at fair value' in accordance with HKFRS 9 has been transferred to retained earnings.

3 Operating profit

(a) Net interest income

Net interest income includes:

	2018 HK$m	2017 HK$m
Interest income recognised on impaired financial assets	276	277
Interest income recognised on financial assets measured at amortised cost	143,709	N/A
Interest income recognised on financial assets measured at FVOCI	26,412	N/A
Interest expense on financial instruments, excluding interest on financial liabilities held for trading or designated or otherwise mandatorily measured at fair value	(41,259)	N/A

(b) Net fee income

Net fee income by global business

	2018						2017
	Retail Banking and Wealth Management	Commercial Banking	Global Banking and Markets	Global Private Banking	Corporate Centre[1]	Total	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Account services	1,434	979	337	55	3	2,808	2,863
Funds under management	4,122	724	1,749	910	1	7,506	7,000
Cards	6,552	1,788	74	–	–	8,414	7,622
Credit facilities	242	1,568	1,360	9	1	3,180	2,886
Broking income	3,397	73	702	507	–	4,679	4,386
Imports/exports	–	2,909	723	–	–	3,632	3,627
Unit trusts	6,381	172	–	558	(4)	7,107	6,987
Underwriting	5	3	1,111	–	(7)	1,112	1,477
Remittances	333	2,183	625	3	(6)	3,138	3,316
Global custody	713	51	3,025	95	(18)	3,866	3,626
Insurance agency commission[2]	1,510	142	4	94	(9)	1,741	1,528
Other	1,816	2,020	5,087	719	(2,240)	7,402	6,994
Fee income	26,505	12,612	14,797	2,950	(2,279)	54,585	52,312
Fee expense	(5,418)	(2,014)	(5,003)	(300)	2,381	(10,354)	(9,162)
Net fee income	21,087	10,598	9,794	2,650	102	44,231	43,150

1 *Includes inter-segment elimination*
2 *Re-insurance fees (previously reported under 'insurance agency commission') were reclassified under 'Other' to align with the Group's presentation. Comparatives have been represented to conform to the current year's presentation.*

Net fee income includes:

	2018 HK$m	2017 HK$m
Net fee income includes the following:		
Fees earned on financial assets that are not at fair value through profit and loss (other than amounts included in determining the effective interest rate)	11,583	11,031
– fee income	16,368	15,443
– fee expense	(4,785)	(4,412)
Fee earned on trust and other fiduciary activities	9,653	8,904
– fee income	10,787	9,843
– fee expense	(1,134)	(939)

(c) Net income from financial instruments measured at fair value

	2018 HK$m	2017 HK$m
Net income/(expense) arising on:		
Trading activities	**32,567**	23,432
Gain on termination of hedges	**–**	38
Other trading income - hedging ineffectiveness	**(122)**	(14)
– on cash flow hedges	**–**	1
– on fair value hedges	**(122)**	(15)
Fair value movement on non-qualifying hedges	**(209)**	(246)
Other instruments designated at fair value and related derivatives[1]	**(513)**	(112)
Net income from financial instruments held for trading or managed on a fair value basis	**31,723**	23,098
Financial assets held to meet liabilities under insurance and investment contracts	**(6,104)**	18,162
Liabilities to customers under investment contracts	**543**	(2,555)
Net income/(expense) from assets and liabilities of insurance businesses, including related derivatives, measured at fair value through profit or loss[1]	**(5,561)**	15,607
Changes in fair value of long-term debt issued and related derivatives	**20**	(115)
Changes in fair value of other financial instruments mandatorily measured at fair value through profit or loss	**(217)**	N/A
Year ended 31 Dec	**25,965**	38,590

1 *The presentation has been updated to show the net income/(expense) from assets and liabilities backing insurance and investment contracts separately. Comparatives have been represented to conform to the current year's presentation.*

(d) Gains less losses from financial investments

	2018 HK$m	2017 HK$m
Gains on disposal of debt instruments measured at fair value through other comprehensive income	**501**	N/A
Gains on disposal of available-for-sale securities	**N/A**	2,113
Impairment of available-for-sale equity investments	**N/A**	(5)
Year ended 31 Dec	**501**	2,108

The decrease in gains on disposal of financial investments was mainly due to the non-recurrence of disposal of the investment in Techcom Bank in 2017.

(e) Other operating income

	2018 HK$m	2017 HK$m
Movement in present value of in-force insurance business	**4,629**	305
Gains on investment properties	**639**	416
Gains/(losses) on disposal of property, plant and equipment and assets held for sale	**(69)**	77
Gains/(losses) on disposal of subsidiaries, associates and business portfolios	**38**	(186)
Rental income from investment properties	**416**	426
Other	**4,653**	3,702
Year ended 31 Dec	**10,306**	4,740

There was a loss on disposal of loans and receivables of HK$5m in the year (2017: loss of HK$75m). There were no gains or losses on disposal of financial liabilities measured at amortised cost in the year (2017: nil).

(f) Change in expected credit losses and other credit impairment charges

	2018 HK$m	2017 HK$m
Change in expected credit losses/ loan impairment charges		
Loans and advances to banks and customers	**4,611**	4,330
– new allowances net of allowance releases	**5,551**	5,224
– recoveries of amounts previously written off	**(940)**	(894)
– modification losses and other movements	**–**	N/A
Loan commitments and guarantees	**123**	107
Other financial assets	**(14)**	–
Year ended 31 Dec	**4,720**	4,437

Change in expected credit losses as a percentage of average gross customer advances was 0.13% for 2018 (2017: 0.14%).

(g) General and administrative expenses

	2018	2017
	HK$m	HK$m
Premises and equipment	8,208	7,814
– rental expenses	4,134	3,717
– other premises and equipment expenses	4,074	4,097
Marketing and advertising expenses	2,940	2,785
Other administrative expenses	28,841	24,187
Year ended 31 Dec	**39,989**	34,786

Included in operating expenses were direct operating expenses of HK$35m (2017: HK$32m) arising from investment properties that generated rental income in the year. Direct operating expenses arising from investment properties that did not generate rental income amounted to HK$3m (2017: HK$4m).

Included in operating expenses were minimum lease payments under operating leases of HK$3,550m (2017: HK$3,598m).

(h) Auditors' remuneration

Auditors' remuneration amounted to HK$125m (2017: HK$122m).

4 Insurance business

(a) Net insurance premium Income

	Non-linked	Unit-linked	Total
	HK$m	HK$m	HK$m
Gross insurance premium income	63,462	1,586	65,048
Reinsurers' share of gross insurance premium income	(4,349)	(21)	(4,370)
At 31 Dec 2018	**59,113**	**1,565**	**60,678**
Gross insurance premium income	61,577	1,669	63,246
Reinsurers' share of gross insurance premium income	(7,052)	(18)	(7,070)
At 31 Dec 2017	54,525	1,651	56,176

(b) Net insurance claims and benefits paid and movement in liabilities to policyholders

	Non-linked	Unit-linked	Total
	HK$m	HK$m	HK$m
Gross claims and benefits paid and movement in liabilities to policyholders	65,002	(3,080)	61,922
– claims, benefits and surrenders paid	27,086	7,598	34,684
– movement in liabilities	37,916	(10,678)	27,238
Reinsurers' share of claims and benefits paid and movement in liabilities	(4,155)	72	(4,083)
– claims, benefits and surrenders paid	(1,930)	(1,394)	(3,324)
– movement in liabilities	(2,225)	1,466	(759)
At 31 Dec 2018	**60,847**	**(3,008)**	**57,839**
Gross claims and benefits paid and movement in liabilities to policyholders	65,671	8,841	74,512
– claims, benefits and surrenders paid	19,765	7,239	27,004
– movement in liabilities	45,906	1,602	47,508
Reinsurers' share of claims and benefits paid and movement in liabilities	(6,894)	1,172	(5,722)
– claims, benefits and surrenders paid	(1,727)	(1,715)	(3,442)
– movement in liabilities	(5,167)	2,887	(2,280)
At 31 Dec 2017	58,777	10,013	68,790

Liabilities under insurance contracts	2018			2017		
	Gross	**Reinsurers' share**[2]	**Net**	Gross	Reinsurers' share[2]	Net
	HK$m	**HK$m**	**HK$m**	HK$m	HK$m	HK$m
Non-linked insurance contracts						
At 31 Dec	**391,348**	**(15,624)**	**375,724**	342,134	(10,077)	332,057
Impact on transition to HKFRS 9	**(535)**	**—**	**(535)**	—	—	—
At 1 Jan	**390,813**	**(15,624)**	**375,189**	342,134	(10,077)	332,057
Claims and benefits paid	**(27,086)**	**1,930**	**(25,156)**	(19,765)	1,727	(18,038)
Increase/(decrease) in liabilities to policyholders	**65,002**	**(4,155)**	**60,847**	65,671	(6,894)	58,777
Exchange differences and other movements[1]	**4,939**	**91**	**5,030**	3,308	(380)	2,928
At 31 Dec	**433,668**	**(17,758)**	**415,910**	391,348	(15,624)	375,724
Linked insurance contracts						
At 1 Jan	**46,669**	**(110)**	**46,559**	44,036	(1,291)	42,745
Claims and benefits paid	**(7,598)**	**1,394**	**(6,204)**	(7,239)	1,715	(5,524)
Increase/(decrease) in liabilities to policyholders	**(3,080)**	**72**	**(3,008)**	8,841	1,172	10,013
Exchange differences and other movements[1]	**(1,070)**	**(1,390)**	**(2,460)**	1,031	(1,706)	(675)
At 31 Dec	**34,921**	**(34)**	**34,887**	46,669	(110)	46,559
Total liabilities to policyholders	**468,589**	**(17,792)**	**450,797**	438,017	(15,734)	422,283

1 *Exchange differences and other movements' includes movements in liabilities arising from net unrealised investment gains recognised in other comprehensive income.*
2 *Amounts recoverable from reinsurance of liabilities under insurance contracts are included in the consolidated balance sheet in 'Prepayment, accrued income and other assets'.*

The key factors contributing to the movement in liabilities to policyholders included death claims, surrenders, lapses, liabilities to policyholders created at the initial inception of the policies, the declaration of bonuses and other amounts attributable to policyholders.

5 Employee compensation and benefits

(a) Employee compensation and benefits

	2018	2017
	HK$m	HK$m
Wages and salaries	**36,972**	36,485
Social security costs	**1,249**	1,110
Retirement benefits costs	**2,572**	2,500
– defined contribution plans	**1,804**	1,685
– defined benefit plans	**768**	815
Year ended 31 Dec	**40,793**	40,095

Share-based payments

'Wages and salaries' include the effect of share-based payments arrangements of HK$968m (2017: HK$1,052m).

(b) Retirement benefit pension plans

The group operates a number of retirement benefit plans for its employees. 'Pension risk management' in the Risk section contains details of the policies and practices associated with these benefit plans. Some of these plans are defined benefit plans, of which the largest plan is The HSBC Group Hong Kong Local Staff Retirement Benefit Scheme ('the Principal Plan').

The Principal Plan

In Hong Kong, the Principal Plan covers employees of the Bank and certain other local employees of the Group. The Principal Plan comprises a funded defined benefit scheme (which provides a lump sum benefit on retirement but is now closed to new members) and a defined contribution scheme. The latter was established on 1 January 1999 for new employees, and the group has been providing defined contribution plans to all new employees. Since the defined benefit scheme of the Principal Plan is a final salary lump sum scheme, its exposure to longevity risk and interest rate risk is limited compared to a scheme that provides annuity payments.

The investment strategy of the defined benefit scheme of the Principal Plan is to hold the majority of assets in bonds, with a smaller portion in equities and each investment manager has been assigned a benchmark applicable to their respective asset class. The target asset allocation for the portfolio is as follows: Bonds 65% and Equity 35%. The Principal Plan is predominantly a funded plan with assets which are held in trust funds separate from the group. The actuarial funding valuation of the Principal Plan is reviewed at least on a triennial basis in accordance with the local practice and regulations. The actuarial assumptions used to conduct the actuarial funding valuation of the Principal Plan vary according to the economic conditions.

The trustee assumes the overall responsibility for the Principal Plan and the group has established a management committee and a number of sub-committees to broaden the governance and manage the concomitant issues.

Defined benefit pension plans

Net asset/(liability) under defined benefit pension plans

	Fair value of plan assets	Present value of defined benefit obligations	Net defined benefit liability
	HK$m	HK$m	HK$m
At 1 Jan 2018	**15,167**	**(17,308)**	**(2,141)**
Service cost	**—**	**(697)**	**(697)**
– current service cost	**—**	**(684)**	**(684)**
– past service cost and gains from settlements[1]	**—**	**(13)**	**(13)**
Net interest expense on the net defined benefit liability	**289**	**(338)**	**(49)**
Re-measurement effects recognised in other comprehensive income	**(692)**	**(399)**	**(1,091)**
– return on plan assets (excluding interest income)	**(692)**	**—**	**(692)**
– actuarial losses	**—**	**(399)**	**(399)**
Exchange differences and other movements	**(80)**	**74**	**(6)**
Contributions by the group	**576**	**—**	**576**
Benefits paid	**(1,404)**	**1,471**	**67**
At 31 Dec 2018	**13,856**	**(17,197)**	**(3,341)**
Retirement benefit liabilities recognised on the balance sheet			**(3,369)**
Retirement benefit assets recognised on the balance sheet (within 'Prepayment, accrued income and other assets')			**28**
Present value of defined benefit obligation relating to:			
– actives		**(16,848)**	
– deferreds		**(19)**	
– pensioners		**(330)**	
At 1 Jan 2017	14,755	(18,552)	(3,797)
Service cost	—	(722)	(722)
– current service cost	—	(748)	(748)
– past service cost and gains from settlements[1]	—	26	26
Net interest expense on the net defined benefit liability	281	(362)	(81)
Re-measurement effects recognised in other comprehensive income	1,633	7	1,640
– return on plan assets (excluding interest income)	1,633	–	1,633
– actuarial gains	—	7	7
Exchange differences and other movements[2]	(450)	482	32
Contributions by the group	722	—	722
Benefits paid	(1,774)	1,839	65
At 31 Dec 2017	15,167	(17,308)	(2,141)
Retirement benefit liabilities recognised on the balance sheet			(2,222)
Retirement benefit assets recognised on the balance sheet (within 'Prepayment, accrued income and other assets')			81
Present value of defined benefit obligation relating to:			
– actives		(17,044)	
– pensioners		(264)	

1 *Gains from settlements arise as the difference between assets distributed and liabilities extinguished on settlements.*
2 *Other movements in 2017 included the impact from transfer of certain employees to a fellow subsidiary.*

The group expects to make HK$581m of contributions to defined benefit pension plans during 2019. Benefits expected to be paid from the Principal Plan to retirees over each of the next five years, and in aggregate for the five years thereafter, are as follows:

Benefits expected to be paid from the Principal Plan

	2019	2020	2021	2022	2023	2024-2028
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
HSBC Group Hong Kong Local Staff Retirement Benefit Scheme[1]	**612**	**988**	**1,090**	**1,051**	**825**	**3,783**

1 The duration of the defined benefit obligation is 7 years for the Principal Plan under the disclosure assumptions adopted (2017: 7 years).

Fair value of plan assets by asset classes

	At 31 Dec 2018			At 31 Dec 2017		
	Value	**Quoted market price in active market**	**Thereof HSBC**	Value	Quoted market price in active market	Thereof HSBC
	HK$m	**HK$m**	**HK$m**	HK$m	HK$m	HK$m
Fair value of plan assets	**13,856**	**13,856**	**454**	15,167	15,167	321
– equities	**4,390**	**4,390**	**—**	4,791	4,791	—
– bonds	**8,448**	**8,448**	**—**	9,539	9,539	—
– other[1]	**1,018**	**1,018**	**454**	837	837	321

1 *Other mainly consists of cash and deposits.*

The Principal Plan's principal actuarial financial assumptions

The group determines the discount rate to be applied to its obligations under the defined benefit scheme as prescribed by HKAS 19 and in consultation with the Principal Plan's local actuary, on the basis of the current average yields of Hong Kong Government bonds and Hong Kong Exchange Fund Notes, with maturities consistent with that of the defined benefit obligation.

The present value of the Principal Plan's obligation was HK$9,739m (2017: HK$10,086m). The principal actuarial assumptions used to calculate the group's obligations for the Principal Plan for the year, and used as the basis for measuring the expenses in relation to the Principal Plan, were as follows:

Key actuarial assumptions for the principal plan

	2018	2017
	% p.a.	% p.a.
Discount rate	**1.95**	1.70
Rate of pay increase	**3.0**	3.0
Mortality table	**HKLT2017[1]**	HKLT2016[2]

1 *HKLT2017- Hong Kong Life Tables 2017*
2 *HKLT2016- Hong Kong Life Tables 2016*

Actuarial assumption sensitivities

The discount rate and rate of pay increase are sensitive to changes in market conditions arising during the reporting period. The following table shows the financial impact of assumption changes on the Principal Plan at year end:

The effect of changes in key assumptions on the principal plan

	Impact on pension obligation			
	Financial impact of increase		Financial impact of decrease	
	2018	2017	2018	2017
	HK$m	HK$m	HK$m	HK$m
Discount rate – increase/decrease of 25bps	**(167)**	(183)	**172**	189
Rate of pay increase – increase/decrease of 25bps	**176**	193	**(172)**	(188)

(c) Directors' emoluments

The aggregate emoluments of the Directors of the Bank disclosed pursuant to section 4 of the Companies (Disclosure of Information about Benefits of Directors) Regulation were HK$115m (2017: HK$108m). This comprises fees of HK$10m (2017: HK$9m) and other emoluments of HK$105m (2017: HK$99m) which includes contributions to pension schemes of HK$1m (2017: HK$1m). Non-cash benefits which are included in other emoluments mainly relate to share-based payment awards, and the provision of housing and furnishing. 2017 balances have been represented to align to the 2018 presentation. Details on loans to directors are set out in note 34.

6 Tax

The Bank and its subsidiaries in Hong Kong have provided for Hong Kong profits tax at the rate of 16.5% (2017: 16.5%) on the profits for the year assessable in Hong Kong. Overseas branches and subsidiaries have similarly provided for tax in the countries in which they operate at the appropriate rates of tax in force in 2018. Deferred taxation is provided for in accordance with the group's accounting policy in note 1.2(m).

Tax expense

	2018	2017
	HK$m	HK$m
Current tax	**20,413**	18,801
– Hong Kong taxation – on current year profit	**12,155**	10,489
– Hong Kong taxation – adjustments in respect of prior years	**(11)**	(3)
– overseas taxation – on current year profit	**8,471**	8,588
– overseas taxation – adjustments in respect of prior years	**(202)**	(273)
Deferred tax	**2,054**	800
– origination and reversal of temporary differences	**1,938**	805
– effect of changes in tax rates	**62**	3
– adjustments in respect of prior years	**54**	(8)
Year ended 31 Dec	**22,467**	19,601

Tax reconciliation

The tax charged to the income statement differs from the tax charge that would apply if all profits had been taxed at the applicable tax rates in the countries concerned as follows:

Reconciliation between taxation charge and accounting profit at applicable tax rates

	2018	2017
	HK$m	HK$m
Profit before tax	134,583	115,619
Notional tax on profit before tax, calculated at the rates applicable to profits in the countries concerned	25,232	21,915
Effects of profits in associates and joint ventures	(2,683)	(2,333)
Non-taxable income and gains	(3,412)	(2,623)
Local taxes and overseas withholding taxes	1,470	810
Permanent disallowables	1,132	1,001
Others	728	831
Year ended 31 Dec	**22,467**	19,601

Movements of deferred tax assets and liabilities

	Accelerated capital allowances	Insurance business	Expense provisions	Impairment allowance on financial instruments	Revaluation of properties	Other	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Assets	93	–	1,296	491	–	2,154	4,034
Liabilities	(751)	(7,417)	–	–	(13,667)	(4,435)	(26,270)
At 31 Dec 2017	(658)	(7,417)	1,296	491	(13,667)	(2,281)	(22,236)
Impact on transition to HKFRS 9	(2)	103	(2)	873	–	1,321	2,293
At 1 Jan 2018	(660)	(7,314)	1,294	1,364	(13,667)	(960)	(19,943)
Exchange and other adjustments	3	27	(60)	117	1,484	51	1,622
Charge/(credit) to income statement	185	(770)	185	(167)	310	(1,797)	(2,054)
Charge/(credit) to other comprehensive income	–	–	–	–	(1,800)	(23)	(1,823)
At 31 Dec 2018	(472)	(8,057)	1,419	1,314	(13,673)	(2,729)	(22,198)
Assets[1]	111	–	1,419	1,314	–	1,870	4,714
Liabilities[1]	(583)	(8,057)	–	–	(13,673)	(4,599)	(26,912)
Assets[1]	108	–	961	674	–	2,415	4,158
Liabilities[1]	(626)	(7,323)	–	–	(12,768)	(3,339)	(24,056)
At 1 Jan 2017	(518)	(7,323)	961	674	(12,768)	(924)	(19,898)
Exchange and other adjustments	9	(44)	84	18	396	(15)	448
Charge/(credit) to income statement	(149)	(50)	251	(201)	283	(934)	(800)
Charge/(credit) to other comprehensive income	–	–	–	–	(1,578)	(408)	(1,986)
At 31 Dec 2017	(658)	(7,417)	1,296	491	(13,667)	(2,281)	(22,236)
Assets[1]	93	–	1,296	491	–	2,154	4,034
Liabilities[1]	(751)	(7,417)	–	–	(13,667)	(4,435)	(26,270)

1 *After netting off balances within countries, the balances as disclosed in the accounts are as follows: deferred tax assets HK$2,315m (2017: HK$2,156m); and deferred tax liabilities HK$24,513m (2017: HK$24,391m).*

The amount of unused tax losses for which no deferred tax asset is recognised in the balance sheet is HK$3,626m (2017: HK$2,572m). Of this amount, HK$1,950m (2017: HK$1,898m) has no expiry date and the remaining will expire within 10 years.

Deferred tax of HK$2,261m (2017: HK$2,321m) has been provided in respect of distributable reserves or post-acquisition reserves of associates that, on distribution or sale, would attract withholding tax.

Deferred tax is not recognised in respect of the group's investments in subsidiaries and branches where remittance or other realisation is not probable, and for those associates and interests in joint ventures where it has been determined that no additional tax will arise.

7 Dividends

Dividends to ordinary shareholders of the parent company

	2018		2017	
	HK$ per share	**HK$m**	HK$ per share	HK$m
Dividends paid on ordinary shares				
In respect of previous year:				
– fourth interim dividend in respect of the previous financial year approved and paid during the year	**0.36**	**16,559**	0.56	25,438
In respect of current year:				
– first interim dividend paid	**0.22**	**10,000**	0.22	10,000
– second interim dividend paid	**0.22**	**10,000**	0.22	10,000
– third interim dividend paid	**0.22**	**10,000**	0.22	10,000
Total	**1.02**	**46,559**	1.22	55,438

The Directors have declared a fourth interim dividend in respect of the financial year ended 31 December 2018 of HK$0.47 per ordinary share (HK$21,958m) (2017: HK$0.36 per ordinary share (HK$16,559m)).

Distributions on other equity instruments

	2018	2017
	HK$m	HK$m
US$1,900m floating rate perpetual subordinated loans (interest rate at one year US dollar LIBOR plus 3.84%)	**881**	822

8 Trading assets

	2018	2017
	HK$m	HK$m
Treasury and other eligible bills	**140,050**	100,566
Debt securities	**283,506**	250,730
Equity securities	**119,475**	107,301
Other[1,2]	**15,807**	37,837
At 31 Dec	**558,838**	496,434

1 *'Other' includes reverse repos, stock borrowing and other accounts with banks and customers.*
2 *Settlement accounts were reclassified from 'Trading assets' to 'Other assets' on 1 January 2018 in accordance with HKFRS 9.*

9 Derivatives

Notional contract amounts and fair values of derivatives by product contract type

	Notional contract amount		Fair value - Assets			Fair value – Liabilities		
	Trading	**Hedging**	**Trading**	**Hedging**	**Total**	**Trading**	**Hedging**	**Total**
	HK$m	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**
Foreign Exchange	**21,492,856**	**91,274**	**187,746**	**909**	**188,655**	**186,776**	**1,529**	**188,305**
Interest rate	**32,926,700**	**365,130**	**196,720**	**2,924**	**199,644**	**197,904**	**2,790**	**200,694**
Equity	**574,411**	**–**	**17,302**	**–**	**17,302**	**18,619**	**–**	**18,619**
Credit	**926,082**	**–**	**5,967**	**–**	**5,967**	**5,904**	**–**	**5,904**
Commodity and other	**112,386**	**–**	**1,710**	**–**	**1,710**	**2,440**	**–**	**2,440**
Gross total	**56,032,435**	**456,404**	**409,445**	**3,833**	**413,278**	**411,643**	**4,319**	**415,962**
Offset					**(120,409)**			**(120,409)**
At 31 Dec 2018					**292,869**			**295,553**
Foreign Exchange	18,928,664	132,198	198,483	2,449	200,932	201,829	3,575	205,404
Interest rate	26,655,864	298,036	145,569	2,431	148,000	147,460	702	148,162
Equity	762,895	–	22,116	–	22,116	25,106	–	25,106
Credit	659,200	–	5,591	–	5,591	5,970	–	5,970
Commodity and other	82,181	–	1,228	–	1,228	2,335	–	2,335
Gross total	47,088,804	430,234	372,987	4,880	377,867	382,700	4,277	386,977
Offset					(77,624)			(77,624)
At 31 Dec 2017					300,243			309,353

Use of derivatives

The group transacts derivatives for three primary purposes: to create risk management solutions for clients, to manage the portfolio risk arising from client business, and to manage and hedge the group's own risks. Derivatives (except for derivatives which are designated as effective hedging instruments) are held for trading. Within the held for trading classification are two types of derivative instruments: those used in sales and trading activities, and those used for risk management purposes but which for various reasons do not meet the qualifying criteria for hedge accounting. The second category includes derivatives managed in conjunction with financial instruments designated at fair value. These activities are described more fully below.

The group's derivative activities give rise to significant open positions in portfolios of derivatives. These positions are managed constantly to ensure that they remain within acceptable risk levels. When entering into derivative transactions, the group employs the same credit risk management framework to assess and approve potential credit exposures that it uses for traditional lending.

Trading derivatives

Most of the group's derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Trading activities include market-making and risk management. Market-making entails quoting bid and offer prices to other market participants for the purpose of generating revenues based on spread and volume. Risk management activity is undertaken to manage the risk arising from client transactions, with the principal purpose of retaining client margin. Other derivatives classified as held for trading include non-qualifying hedging derivatives.

Derivatives valued using models with unobservable inputs

Any initial gain or loss on financial instruments where the valuation is dependent on unobservable parameters is deferred over the life of the contract or until the instrument is redeemed, transferred or sold or the fair value becomes observable. All derivatives that are part of qualifying hedging relationships have valuations based on observable market parameters.

The aggregate unobservable inception profit yet to be recognised in the income statement is immaterial.

Hedge accounting derivatives

The group applies hedge accounting to manage the following risks: interest rate, foreign exchange and net investment in foreign operations. The group uses derivatives (principally interest rate and currency swaps) for hedging purposes in the management of its own asset and liability portfolios and structural positions. This enables the group to optimise the overall costs to the group of accessing debt capital markets, and to mitigate the market risk which would otherwise arise from structural imbalances in the maturity and other profiles of its assets and liabilities. The accounting treatment of hedging transactions varies according to the nature of the instrument hedged and the type of hedging transaction. Derivatives may qualify as hedges for accounting purposes if they are fair value hedges, cash flow hedges, or hedges of net investments in foreign operations.

Fair value hedges

The group enters into to fixed-for-floating-interest-rate swaps to manage the exposure to changes in fair value due to movements in market interest rates on certain fixed rate financial instruments which are not measured at fair value through profit or loss, including debt securities held and issued.

Sources of hedge ineffectiveness may arise from basis risk including but not limited to the discount rates used for calculating the fair value of derivatives, hedges using instruments with a non-zero fair value and notional and timing differences between the hedged items and hedging instruments.

For some debt securities held, the group manages interest rate risk in a dynamic risk management strategy. The assets in scope of this strategy are high quality fixed-rate debt securities, which may be sold to meet liquidity and funding requirements.

The interest rate risk of the group's fixed rate debt securities issued is managed in a non-dynamic risk management strategy.

Cash flow hedges

The group's cash flow hedging instruments consist principally of interest rate swaps and cross-currency swaps that are used to manage the variability in future interest cash flows of non-trading financial assets and liabilities, arising due to changes in market interest rates and foreign-currency basis.

The group applies macro cash flow hedging for interest-rate risk exposures on portfolios of replenishing current and forecasted issuances of non-trading assets and liabilities that bear interest at variable rates, including rolling such instruments. The amounts and timing of future cash flows, representing both principal and interest flows, are projected for each portfolio of financial assets and liabilities on the basis of their contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate cash flows representing both principal balances and interest cash flows across all portfolios are used to determine the effectiveness and ineffectiveness. Macro cash flow hedges are considered to be dynamic hedges.

The group also hedges the variability in future cash-flows on foreign-denominated financial assets and liabilities arising due to changes in foreign exchange market rates with cross-currency swaps; these are considered non-dynamic hedges.

10 Financial assets designated and otherwise mandatorily measured at fair value through profit or loss

	2018			2017		
	Designated at fair value	**Mandatorily measured at fair value**	**Total**	Designated at fair value	Mandatorily measured at fair value	Total
	HK$m	**HK$m**	**HK$m**	HK$m	HK$m	HK$m
Treasury and other eligible bills	**107**	**220**	**327**	514	N/A	514
Debt securities	**13,380**	**6,134**	**19,514**	18,142	N/A	18,142
Equity securities[1]	**—**	**99,836**	**99,836**	103,990	N/A	103,990
Other[2]	**—**	**13,182**	**13,182**	N/A	N/A	N/A
At 31 Dec	**13,487**	**119,372**	**132,859**	122,646	N/A	122,646

1 *Equity securities have been reclassified from 'Financial assets designated at fair value' to 'Financial assets mandatorily measured at fair value through profit or loss' in accordance with HKFRS 9.*
2 *'Other' primarily includes loans and advance to banks and customers.*

11 Loans and advances to customers

	2018	2017
	HK$m	HK$m
Gross loans and advances to customers	**3,545,258**	3,342,025
Expected credit losses/Impairment allowances	**(16,556)**	(13,045)
At 31 Dec	**3,528,702**	3,328,980

The following table provides an analysis of loans and advances to customers by industry sector.

Analysis of gross loans and advances to customers

	2018	2017
	HK$m	HK$m
Residential mortgages	**937,666**	855,788
Credit card advances	**93,200**	89,368
Other personal	**236,133**	230,119
Total personal	**1,266,999**	1,175,275
Real estate	**626,120**	563,921
Wholesale and retail trade	**433,734**	460,347
Manufacturing	**424,813**	411,225
Transportation and storage	**95,773**	95,834
Other	**484,186**	429,800
Total corporate and commercial[1]	**2,064,626**	1,961,127
Non-bank financial institutions	**213,633**	205,623
At 31 Dec	**3,545,258**	3,342,025
By geography[2]		
Hong Kong	**2,282,909**	2,107,700
Rest of Asia Pacific	**1,262,349**	1,234,325

1 *With effect from 2018, the industry sector is based on the Statistical Classification of economic activities in the European Community ('NACE') codes. Comparatives figures have been represented to conform to the current year presentation.*
2 *The geographical information shown above has been classified by the location of the principal operations of the subsidiary and by the location of the branch responsible for advancing the funds.*

Finance lease receivables and hire purchase contracts

The group leases a variety of assets to third parties under finance leases. At the end of lease terms, assets may be sold to third parties or leased for further terms. Rentals are calculated to recover the cost of assets less their residual value, and earn finance income. Loans and advances to customers include receivables under finance leases and hire purchase contracts having the characteristics of finance leases.

Net investment in finance leases and hire purchase contracts

	2018			2017		
	Total future minimum payments	Unearned finance income	Present value	Total future minimum payments	Unearned finance income	Present value
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Amounts receivable						
– within one year	**2,990**	**(640)**	**2,350**	2,552	(584)	1,968
– after one year but within five years	**8,622**	**(2,097)**	**6,525**	8,504	(1,922)	6,582
– after five years	**23,346**	**(3,819)**	**19,527**	22,823	(3,594)	19,229
	34,958	**(6,556)**	**28,402**	33,879	(6,100)	27,779
Expected credit losses/Impairment allowances			**(117)**			(82)
Net investment in finance leases and hire purchase contracts at 31 Dec			**28,285**			27,697

12 Financial investments

	2018 HK$m	2017 HK$m
Financial investments measured at fair value through other comprehensive income	**1,503,625**	N/A
– treasury and other eligible bills	**660,871**	N/A
– debt securities	**836,896**	N/A
– equity securities	**5,858**	N/A
Debt instruments measured at amortised cost	**367,401**	N/A
– treasury and other eligible bills	**3,624**	N/A
– debt securities	**363,777**	N/A
Available-for-sale securities at fair value	**N/A**	1,419,930
– treasury and other eligible bills	**N/A**	539,014
– debt securities	**N/A**	871,641
– equity securities	**N/A**	9,275
Held-to-maturity securities at amortised cost	**N/A**	300,943
– treasury and other eligible bills	**N/A**	699
– debt securities	**N/A**	300,244
At 31 Dec[1]	**1,871,026**	1,720,873

1 *Categories of financial instruments are disclosed under HKFRS 9 at 31 December 2018. These are not directly comparable with 31 December 2017, where the instruments were categorised in accordance with HKAS 39.*

Equity instruments measured at fair value through other comprehensive income

	Instruments held at year end	
Type of equity instruments	**Fair value HK$m**	**Dividends recognised HK$m**
Business facilitation	**5,137**	**155**
Investments required by central institutions	**356**	**3**
Others	**365**	**5**
At 31 Dec 2018	**5,858**	**163**

13 Assets pledged, assets transferred and collateral received

Assets pledged

Financial assets pledged to secure liabilities

	2018 HK$m	2017 HK$m
Financial assets pledged as collateral		
Treasury bills, debt securities, equities and deposits	**195,688**	225,590
Amount of liabilities secured	**162,036**	169,722

The table above shows assets where a charge has been granted to secure liabilities on a legal and contractual basis. These transactions are conducted under terms that are usual and customary to collateralised transactions including sale and repurchase agreements, securities lending, derivative margining, and include assets pledged to cover short positions and to facilitate settlement processes with clearing houses.

Hong Kong currency notes in circulation are secured by the deposit of funds in respect of which the Hong Kong Government certificates of indebtedness are held.

Assets transferred

Transferred financial assets not qualifying for full derecognition and associated financial liabilities

	2018		2017	
	Carrying amount of:		Carrying amount of:	
	Transferred assets HK$m	Associated liabilities HK$m	Transferred assets HK$m	Associated liabilities HK$m
Repurchase agreements	**70,492**	**59,118**	77,151	45,778
Securities lending agreements	**6,702**	**870**	3,209	63
	77,194	**59,988**	80,360	45,841

The financial assets shown above include amounts transferred to third parties that do not qualify for derecognition, notably debt securities held by counterparties as collateral under repurchase agreements and equity securities lent under securities lending agreements. As the substance of these transactions is secured borrowings, the collateral assets continue to be recognised in full and the related liabilities, reflecting the group's obligation to repurchase the transferred assets for a fixed price at a future date, are also recognised on the balance sheet. As a result of these transactions, the group is unable to use, sell or pledge the transferred assets for the duration of the transactions. The group remains exposed to interest rate risk, credit risk and market risk on these pledged instruments. The counterparty's recourse is not limited to the transferred assets.

Collateral received

Assets accepted as collateral relate primarily to standard securities lending, reverse repurchase agreements and derivative margining. These transactions are conducted under terms that are usual and customary to standard securities lending, reverse repurchase agreements and derivative margining.

Fair value of collateral accepted as security for assets

	2018	2017
	HK$m	HK$m
Fair value of collateral permitted to sell or repledge in the absence of default	512,242	642,318
Fair value of collateral actually sold or repledged	112,832	102,382

14 Investments in subsidiaries

Principal subsidiaries of the Bank

	Place of incorporation	Principal activity	The group's interest in issued share capital/ registered or charter capital
Hang Seng Bank Limited	Hong Kong	Banking	62.14%
HSBC Bank (China) Company Limited	People's Republic of China	Banking	100%
HSBC Bank Malaysia Berhad	Malaysia	Banking	100%
HSBC Bank Australia Limited[1]	Australia	Banking	100%
HSBC Bank (Taiwan) Limited[1]	Taiwan	Banking	100%
HSBC Bank (Singapore) Limited	Singapore	Banking	100%
HSBC Life (International) Limited[1]	Bermuda	Retirement benefits and life insurance	100%

1 *Held indirectly.*

All the above subsidiaries are included in the group's consolidated financial statements. All these subsidiaries make their financial statements up to 31 December.

The principal places of business are the same as the places of incorporation except for HSBC Life (International) Limited which operates mainly in Hong Kong.

The proportion of voting rights held is the same as the proportion of ownership interest held.

The principal subsidiaries are regulated banking and insurance entities in the Asia-Pacific region and, as such, are required to maintain certain minimum levels of capital and liquid assets to support their operations. The effect of these regulatory requirements is to limit the extent to which the subsidiaries may transfer funds to the Bank in the form of repayment of shareholder loans or cash dividends.

Subsidiary with significant non-controlling interest

	2018	2017
Hang Seng Bank Limited		
Proportion of ownership interests and voting rights held by non-controlling interests	37.86%	37.86%
	HK$m	HK$m
Profit attributable to non-controlling interests	9,144	7,579
Accumulated non-controlling interests of the subsidiary	58,750	54,919
Dividends paid to non-controlling interests	5,066	4,632
Summarised financial information (before intra-group eliminations):		
– total assets	1,571,297	1,478,418
– total liabilities	1,409,190	1,326,339
– net operating income before loan impairment	41,493	35,498
– profit for the year	24,188	20,003
– other comprehensive income for the year	400	3,969
– total comprehensive income for the year	24,588	23,972

15 Interests in associates and joint ventures

Associates

	2018	2017
	HK$m	HK$m
Share of net assets	139,052	140,670
Goodwill	3,857	4,071
Impairment	(24)	(24)
At 31 Dec	**142,885**	144,717

The above balance represented the group's interests in associates.

Principal associate

	Place of incorporation	The group's interest in issued share capital
Bank of Communications Co., Limited	People's Republic of China	19.03%

Bank of Communications Co., Ltd. is listed on recognised stock exchanges. The fair value represents valuation based on the quoted market price of the shares held (Level 1 in the fair value hierarchy) and amounted to HK$86,086m at 31 December 2018 (2017: HK$81,987m).

Bank of Communications Co., Limited ('BoCom')

The group's investment in BoCom is classified as an associate. Significant influence in BoCom was established via representation on BoCom's Board of Directors and participation in a Technical Cooperation and Exchange Programme ('TCEP'). Under the TCEP, a number of HSBC staff have been seconded to assist in the maintenance of BoCom's financial and operating policies. Investments in associates are recognised using the equity method of accounting in accordance with HKAS 28 whereby the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the group's share of BoCom's net assets. An impairment test is required if there is any indication of impairment.

Impairment testing

At 31 December 2018, the fair value of the group's investment in BoCom had been below the carrying amount for approximately 80 months. As a result, the group performed an impairment test on the carrying amount, which confirmed that there was no impairment at 31 December 2018 as the recoverable amount as determined by a value-in-use ('VIU') calculation was higher than the carrying value.

	At					
	31 Dec 2018			31 Dec 2017		
	VIU	Carrying value	Fair value	VIU	Carrying value	Fair value
	HK$bn	HK$bn	HK$bn	HK$bn	HK$bn	HK$bn
BoCom	141.3	139.6	86.1	143.2	141.7	82.0

In future periods, the VIU may increase or decrease depending on the effect of changes to model inputs. The main model inputs are described below and are based on factors observed at period-end. The factors that could result in a change in the VIU and an impairment include a short-term under-performance by BoCom, a change in regulatory capital requirements, or an increase in uncertainty regarding the future performance of BoCom resulting in a downgrade of the future asset growth or profitability. An increase in the discount rate as a result of an increase in the risk premium or risk-free rates could also result in a reduction of VIU and an impairment. At the point where the carrying value exceeds the VIU, impairment would be recognised.

If the group did not have significant influence in BoCom, the investment would be carried at fair value rather than the current carrying value.

Basis of recoverable amount

The impairment test was performed by comparing the recoverable amount of BoCom, determined by a VIU calculation, with its carrying amount. The VIU calculation uses discounted cash flow projections based on management's best estimates of future earnings available to ordinary shareholders prepared in accordance with HKAS 36. Significant management judgement is required in arriving at the best estimate. There are two main components to the VIU calculation. The first component is management's best estimate of BoCom's earnings which is based on management's explicit forecasts over the short to medium term. This results in forecast earnings growth that is lower than recent historical actual growth and also reflects the uncertainty arising from the current economic outlook. Earnings beyond the short to medium term are then extrapolated in perpetuity using a long-term growth rate to derive a terminal value, which comprises the majority of the VIU. The second component is the capital maintenance charge ('CMC') which is management's forecast of the earnings that need to be withheld in order for BoCom to meet regulatory capital requirements over the forecast period (i.e. CMC is deducted when arriving at management's estimate of future earnings available to ordinary shareholders). The principal inputs to the CMC calculation include estimates of asset growth, the ratio of risk-weighted assets to total assets, and the expected minimum regulatory capital requirements. An increase in the CMC as a result of a change to these principal inputs would reduce VIU. Additionally, management considers other factors (including qualitative factors) to ensure that the inputs to the VIU calculation remain appropriate.

Key assumptions in value in use calculation

We used a number of assumptions in our VIU calculation, in accordance with the requirements of HKAS 36:

- Long-term profit growth rate: 3% (2017: 3%) for periods after 2022, which does not exceed forecast GDP growth in mainland China and is consistent with forecasts by external analysts.
- Long-term asset growth rate: 3% (2017: 3%) for periods after 2022, which is the rate that assets are expected to grow to achieve long-term profit growth of 3%.

- Discount rate: 11.82% (2017: 11.85%) which is based on a Capital Asset Pricing Model ('CAPM') calculation for BoCom, using market data. Management also compares the rate derived from the CAPM with discount rates from external sources. The discount rate used is within the range of 10.4% to 15.0% (2017: 10.2% to 13.4%) indicated by external sources.
- Loan impairment charge as a percentage of customer advances: ranges from 0.73% to 0.79% (2017: 0.66% to 0.82%) in the short to medium-term and reflect increases due to the US-China trade tensions. For periods after 2022, the ratio is 0.7% (2017: 0.7%) which is slightly higher than the historical average.
- Risk-weighted assets as a percentage of total assets: 62% (2017: 62%) for all forecast periods. This is slightly higher than BoCom's actual results and slightly lower than the forecasts disclosed by external analysts.
- Cost-income ratio: ranges from 38.7% to 39.0% (2017: 37.1% to 38%) in the short-to medium-term. This is consistent with the forecasts disclosed by external analysts.
- Effective tax rate: ranges from 13.8% to 22.3% (2017: 18.2% to 22.5%) in the short to medium-term reflecting an expected increase towards the long-term assumption. For periods after 2022, the rate is 22.5% (2017: 22.5%) which is slightly higher than the historical average.
- Regulatory capital requirements: Capital adequacy ratio: 11.5% (2017: 11.5%) and Tier 1 capital adequacy ratio: 9.5% (2017: 9.5%), based on the minimum regulatory requirements.

The following table shows the change to each key assumption in the VIU calculation that on its own would reduce the headroom to nil:

Key assumption	Changes to key assumption to reduce headroom to nil
• Long-term profit growth rate	• Decrease by 10 basis points
• Long-term asset growth rate	• Increase by 9 basis points
• Discount rate	• Increase by 12 basis points
• Loan impairment charge as a percentage of customer advances	• Increase by 2 basis point
• Risk-weighted assets as a percentage of total assets	• Increase by 58 basis points
• Cost-income ratio	• Increase by 37 basis points
• Long-term effective tax rate	• Increase by 92 basis points
• Regulatory capital requirements - capital adequacy ratio	• Increase by 11 basis points
• Regulatory capital requirements - tier 1 capital adequacy ratio	• Increase by 69 basis points

The following table further illustrates the impact on VIU of reasonably possible changes to key assumptions. This reflects the sensitivity of the VIU to each key assumption on its own and it is possible that more than one favourable and/or unfavourable change may occur at the same time. The selected rates of reasonably possible changes to key assumptions is largely based on external analysts' forecasts which can change period to period.

	Favourable change			Unfavourable change		
		Increase in VIU	VIU		Decrease in VIU	VIU
	bps	HK$bn	HK$bn	bps	HK$bn	HK$bn
At 31 December 2018						
Long-term profit growth rate	**+100**	**20.2**	**161.5**	**-10**	**(1.7)**	**139.6**
Long-term asset growth rate	**-10**	**2.0**	**143.3**	**+100**	**(21.7)**	**119.6**
Discount rate	**-142**	**25.4**	**166.7**	**+28**	**(4.0)**	**137.3**
Loan impairment charge as a percentage of customer advances	**2018 to 2022: 0.70% 2023 onwards: 0.65%**	**7.0**	**148.3**	**2018 to 2022: 0.83% 2023 onwards: 0.77%**	**(7.9)**	**133.4**
Risk-weighted assets as a percentage of total assets	**-140**	**4.1**	**145.4**	**+80**	**(2.3)**	**139.0**
Cost-income ratio	**-160**	**8.8**	**150.1**	**+200**	**(10.9)**	**130.4**
Long term effective tax rate	**-280**	**5.3**	**146.6**	**+250**	**(4.6)**	**136.7**
Earnings in short to medium term - compound annual growth rate[1]	**+204**	**12.2**	**153.5**	**-366**	**(19.9)**	**121.4**
Regulatory capital requirements - capital adequacy ratio	**-**	**—**	**141.3**	**+258**	**(39.4)**	**101.9**
Regulatory capital requirements - tier 1 capital adequacy ratio	**-**	**—**	**141.3**	**+243**	**(25.2)**	**116.1**
At 31 December 2017						
Long-term profit growth rate	+200	51.5	194.7	–	–	143.2
Long-term asset growth rate	-20	4.2	147.4	+200	(55.4)	87.8
Discount rate	-35	5.7	148.9	+65	(9.5)	133.7
Loan impairment charge as a percentage of customer advances	2017 to 2020: 0.71% 2021 onwards: 0.70%	1.1	144.3	2017 to 2020: 0.90% 2021 onwards: 0.77%	(10.0)	133.2
Risk-weighted assets as a percentage of total assets	-60	1.9	145.1	+30	(1.0)	142.2
Cost-income ratio	-173	11.7	154.9	–	–	143.2
Long term effective tax rate	-120	2.5	145.7	+250	(5.2)	138.0
Earnings in short to medium term - compound annual growth rate[1]	+288	22.0	165.2	-311	(28.1)	115.1
Regulatory capital requirements - capital adequacy ratio	-	-	143.2	+248	(43.8)	99.4
Regulatory capital requirements - tier 1 capital adequacy ratio	-	-	143.2	+234	(27.9)	115.3

1 - Based on management's explicit forecasts over the short to medium-term.

Considering the interrelationship of the changes set out in the table above, management estimates that the reasonably possible range of VIU is HK$121.4bn to HK$153.5bn (2017: HK$115.1bn to HK$165.2bn). In 2018, the range is based on the favourable/unfavourable change in the earnings in the short to medium-term and long-term LICs set out in the table above. All other long-term assumptions, the discount rate and the basis of the CMC have been kept unchanged when determining the reasonably possible range of the VIU.

Selected financial information of BoCom

The statutory accounting reference date of BoCom is 31 December. For the year ended 31 December 2018, the group included the associate's results on the basis of financial statements made up for the 12 months to 30 September 2018, but taking into account the financial effect of significant transactions or events in the period from 1 October 2018 to 31 December 2018.

Selected balance sheet information of BoCom

	At 30 Sep	
	2018	2017
	HK$m	HK$m
Cash and balances at central banks	**982,268**	1,141,256
Loans and advances to banks and other financial institutions	**806,561**	940,983
Loans and advances to customers	**5,380,339**	5,179,210
Other financial assets	**3,196,602**	3,017,209
Other assets	**332,795**	458,039
Total assets	**10,698,565**	10,736,697
Deposits by banks and other financial institutions	**2,384,086**	2,868,142
Customer accounts	**6,497,116**	5,844,883
Other financial liabilities	**743,278**	967,143
Other liabilities	**284,560**	254,525
Total liabilities	**9,909,040**	9,934,693
Total equity[1]	**789,525**	802,004

1 Due to the adoption of HKFRS 9, the equity balance of BoCom as at 1 January 2018 was reduced by HKD31,672m.

Reconciliation of BoCom's net assets to carrying amount in the group's consolidated financial statements

	At 30 Sep	
	2018	2017
	HK$m	HK$m
The group's share of ordinary shareholders' equity	**135,871**	137,769
Goodwill	**3,753**	3,958
Carrying amount	**139,624**	141,727

Selected income statement information of BoCom

	For the 12 months ended 30 Sep	
	2018	2017
	HK$m	HK$m
Net interest income	**151,223**	148,688
Net fee and commission income	**48,949**	44,401
Change in expected credit losses/ loan impairment charges	**(43,907)**	(33,400)
Depreciation and amortisation	**(6,012)**	(10,460)
Tax expense	**(12,178)**	(17,411)
– profit for the year	**87,122**	80,172
– other comprehensive income	**1,490**	(4,860)
Total comprehensive income	**88,612**	75,312
Dividends received from BoCom	**4,792**	4,401

Other associates

Summarised aggregate financial information for all associates excluding BoCom

	At	
	31 Dec	31 Dec
	2018	2017
	HK$m	HK$m
Carrying value	**3,261**	2,990
The group's share of:		
– total assets	**7,618**	7,465
– total liabilities	**4,461**	4,588
– profit or loss from continuing operations	**327**	160
– total comprehensive income	**327**	160
Other expense related to investment in an associate:		
– Impairment of an associate	**24**	24

At 31 December 2018, the group's share of associates' contingent liabilities was HK$319,469m (2017: HK$303,541m).

16 Goodwill and intangible assets

Goodwill and intangible assets include goodwill arising on business combinations, the present value of in-force long-term insurance business, and other intangible assets.

	2018	2017
	HK$m	HK$m
Goodwill	5,932	7,128
Present value of in-force long-term insurance business	48,522	44,621
Other intangible assets	10,650	8,116
At 31 Dec	65,104	59,865

The present value of in-force long-term insurance business

When calculating the present value of in-force insurance business ('PVIF'), expected cash flows are projected after adjusting for a variety of assumptions made by each insurance operation to reflect local market conditions and management's judgement of future trends, and uncertainty in the underlying assumptions is reflected by applying margins (as opposed to a cost of capital methodology). Variations in actual experience and changes to assumptions can contribute to volatility in the results of the insurance business.

Actuarial Control Committees of each key insurance entity meet on a quarterly basis to review and approve PVIF assumptions. All changes to non-economic assumptions, economic assumptions that are not observable and model methodology must be approved by the Actuarial Control Committee.

Movements in PVIF

	2018	2017
	HK$m	HK$m
PVIF at 31 Dec	44,621	44,077
Impact on transition to HKFRS 9	(616)	–
PVIF at 1 Jan	44,005	44,077
Changes in PVIF of long-term insurance business	4,629	305
– value of new business written during the year	8,138	6,597
– expected return	(4,650)	(3,687)
– experience variances	(165)	(180)
– changes in operating assumptions	(1,877)	(1,685)
– investment return variances	3,052	(638)
– changes in investment assumptions	143	(178)
– other adjustments	(12)	76
Exchange differences and other	(112)	239
PVIF at 31 Dec	48,522	44,621

Key assumptions used in the computation of PVIF for main life insurance operations

Economic assumptions are set in a way that is consistent with observable market values. The following are the key long-term assumptions used in the computation of PVIF for Hong Kong, being the main life insurance operations:

	2018	2017
	%	%
Weighted average risk free rate	2.29	2.02
Weighted average risk discount rate	5.90	6.20
Expense inflation	3.00	3.00

17 Property, plant and equipment

Movement in property, plant and equipment

	2018			2017		
	Land and buildings	**Investment properties**	**Equipment**	Land and buildings	Investment properties	Equipment
	HK$m	**HK$m**	**HK$m**	HK$m	HK$m	HK$m
Cost or valuation						
At 1 Jan	**97,619**	**12,617**	**22,617**	95,134	10,629	22,092
Exchange and other adjustments	**(497)**	**1**	**(342)**	621	2	585
Additions	**271**	**278**	**1,097**	765	—	2,232
Disposals	**(361)**	**—**	**(644)**	(312)	—	(2,292)
Transfers[1]	**(11,126)**	**(464)**	**—**	(5,106)	—	—
Elimination of accumulated depreciation on revalued land and buildings	**(2,613)**	**—**	**—**	(2,353)	—	—
Surplus on revaluation	**10,626**	**639**	**—**	9,479	1,379	—
Reclassifications	**118**	**(196)**	**—**	(609)	607	—
At 31 Dec	**94,037**	**12,875**	**22,728**	97,619	12,617	22,617
Accumulated depreciation						
At 1 Jan	**210**	**—**	**16,307**	169	—	16,046
Exchange and other adjustments	**(2)**	**—**	**(251)**	22	—	469
Charge for the year	**2,643**	**—**	**2,043**	2,678	—	1,972
Disposals	**(165)**	**—**	**(612)**	(306)	—	(2,180)
Elimination of accumulated depreciation on revalued land and buildings	**(2,613)**	**—**	**—**	(2,353)	—	—
At 31 Dec	**73**	**—**	**17,487**	210	—	16,307
Net book value at 31 Dec	**93,964**	**12,875**	**5,241**	97,409	12,617	6,310
Total at 31 Dec			**112,080**			116,336

1 *During 2017 and 2018, certain properties have been transferred to a fellow subsidiary as part of the Recovery and Resolution Plan as set out in the Report of Directors on page 10-11. The balance represented the carrying value of these properties on the date of transfer.*

The carrying amount of land and buildings, had they been stated at cost less accumulated depreciation, would have been as follows:

	2018	2017
	HK$m	HK$m
Cost less accumulated depreciation	**16,281**	19,358

Valuation of land and buildings and investment properties

The group's land and buildings and investment properties were revalued in November 2018 and updated for any material changes at 31 December 2018. The basis of valuation for land and buildings and investment properties was open market value, depreciated replacement cost or surrender value as noted in note 1.2(k). The resultant values are Level 3 in the fair value hierarchy. The fair values for land and buildings are determined by using direct comparison approach which values the properties in their respective existing states and uses, assuming sale with immediate vacant possession and by making reference to comparable sales evidence. The valuations take into account the characteristics of the properties (unobservable inputs) which include the location, size, shape, view, floor level, year of completion and other factors collectively. The premium or discount applied to the characteristics of the properties is within minus 20% and plus 20%. In determining the open market value of investment properties, expected future cash flows have been discounted to their present values. The net book value of 'Land and buildings' includes HK$8,374m (2017: HK$8,853m) in respect of properties which were valued using the depreciated replacement cost method or surrender value.

Valuation of land and buildings and investment properties in Hong Kong, Macau and mainland China were largely carried out by Cushman & Wakefield Limited, who have recent experience in the location and type of properties and who are members of the Hong Kong Institute of Surveyors. This represents 93% by value of the group's properties subject to valuation. Other properties were valued by different independent professionally qualified valuers.

18 Prepayments, accrued income and other assets

	2018 HK$m	2017 HK$m
Prepayments and accrued income	**27,897**	24,541
Bullion	**50,058**	44,555
Acceptances and endorsements	**44,401**	36,720
Reinsurers' share of liabilities under insurance contracts (note 4)	**17,792**	15,734
Current tax assets	**1,517**	2,485
Settlement accounts[1, 2]	**23,683**	N/A
Cash collateral and margin receivables[1,2]	**30,378**	N/A
Other assets	**34,223**	34,476
At 31 Dec[1,2]	**229,949**	158,511

1 Settlement accounts were reclassified from 'Trading assets' to 'Other assets' on 1 January 2018 in accordance with HKFRS 9.
2 Settlement accounts, cash collateral and margin receivables were reclassified from 'Placings with and advances to Banks' and 'Loans and advances to customers' to 'Other assets' on 1 January 2018. This reclassification is to better reflect the nature of these balances and ensure consistency of presentation. Comparatives have not been restated.

Prepayments, accrued income and other assets included HK$159,483m (2017: HK$93,610m) of financial assets, the majority of which were measured at amortised cost.

19 Customer accounts

Customer accounts by country

	2018 HK$m	2017 HK$m
Hong Kong	**3,797,807**	3,728,687
Mainland China	**358,026**	359,428
Singapore	**331,479**	321,548
Australia	**161,726**	157,959
India	**111,297**	103,264
Malaysia	**108,899**	109,626
Taiwan	**106,537**	105,189
Indonesia	**29,843**	32,907
Other	**202,052**	219,664
At 31 Dec[1]	**5,207,666**	5,138,272

1 Settlement accounts, cash collateral and margin payables were reclassified from 'Customer accounts' to 'Other liabilities' on 1 January 2018. This reclassification is to better reflect the nature of these balances and ensure consistency of presentation. Comparatives have not been restated.

20 Trading liabilities

	2018 HK$m	2017 HK$m
Deposits by banks[1,2]	**1,162**	9,984
Customer accounts[1,2,3]	**773**	117,602
Debt securities in issue[3]	**—**	20,755
Net short positions in securities	**79,259**	83,024
At 31 Dec	**81,194**	231,365

1 'Deposits by banks' and 'Customer accounts' include repos, stock lending and other amounts.
2 Settlement accounts, cash collateral and margin payable included within 'Deposits by banks' and 'Customer accounts' were reclassified from 'Trading liabilities' to 'Other liabilities' on 1 January 2018. This reclassification is to better reflect the nature of these balances and ensure consistency of presentation. Comparatives have not been restated.
3 Financial liabilities which contain both deposit and derivative components were reclassified from 'Trading liabilities' to 'Financial liabilities designated at fair value' on 1 January 2018. This reclassification is to better align with the presentation of similar financial instruments by peers and therefore provide more relevant information about the effect of these financial liabilities on the group's financial position and performance.

21 Financial liabilities designated at fair value

	2018	2017
	HK$m	HK$m
Deposits by banks and customer accounts[1]	82,136	N/A
Debt securities in issue	42,369	11,010
Liabilities to customers under investment contracts	36,638	38,268
At 31 Dec	**161,143**	49,278

1 *Financial liabilities which contain both deposit and derivative components were reclassified from 'Trading liabilities' to 'Financial liabilities designated at fair value' on 1 January 2018. This reclassification is to better align with the presentation of similar financial instruments by peers and therefore provide more relevant information about the effect of these financial liabilities on the group's financial position and performance.*

The carrying amount of financial liabilities designated at fair value was HK$2,232m lower than the contractual amount at maturity (2017: HK$27m higher). The cumulative gain in fair value attributable to changes in credit risk was HK$177m (2017: HK$8m loss).

22 Debt securities in issue

	2018	2017
	HK$m	HK$m
Bonds and medium-term note	75,980	59,266
Other debt securities in issue	24,625	10,893
Total debt securities in issue	**100,605**	70,159
Included within:		
– trading liabilities (note 20)	–	(20,755)
– financial liabilities designated at fair value (note 21)	(42,369)	(11,010)
At 31 Dec	**58,236**	38,394

23 Accruals and deferred income, other liabilities and provisions

	2018	2017
	HK$m	HK$m
Accruals and deferred income	26,932	25,880
Acceptances and endorsements	44,438	36,720
Settlement accounts[1]	37,833	N/A
Cash collateral and margin payables[1]	36,613	N/A
Share-based payment liability to HSBC Holdings plc	1,923	2,268
Other liabilities	47,521	45,193
Provisions for liabilities and charges	1,405	626
At 31 Dec[1]	**196,665**	110,687

1 *Settlement accounts, cash collateral and margin payables were reclassified from 'Trading liabilities', 'Deposits by banks' and 'Customer accounts' to 'Other liabilities' on 1 January 2018. This reclassification is to better reflect the nature of these balances and ensure consistency of presentation. Comparatives have not been restated.*

Accruals and deferred income, other liabilities and provisions included HK$184,221m (2017: HK$102,902m) of financial liabilities which were measured at amortised cost.

Movement in provisions

	Restructuring costs	Other	Total
	HK$m	HK$m	HK$m
Provisions (excluding contractual commitments)			
At 31 Dec 2017	192	380	572
Additions	11	469	480
Amounts utilised	(97)	(91)	(188)
Unused amounts reversed	(37)	(83)	(120)
Exchange and other movements	5	(35)	(30)
At 31 Dec 2018	74	640	714
Contractual commitments[1]			
At 31 Dec 2017			54
Impact on transition to HKFRS 9			487
Net change in expected credit loss provision			150
At 31 Dec 2018			691
Total Provisions at 31 Dec 2018			1,405

1 *The contractual commitments provision at 31 December 2017 represented HKAS 37 provisions on off-balance sheet loan commitments and guarantees, for which expected credit losses are provided following transition to HKFRS 9 on 1 January 2018.*

Movement in provisions (continued)

	Restructuring costs	Other	Total
	HK$m	HK$m	HK$m
At 1 Jan 2017	786	381	1,167
Additions	110	232	342
Amounts utilised	(728)	(84)	(812)
Unused amounts reversed	(14)	(109)	(123)
Exchange and other movements	38	14	52
At 31 Dec 2017	192	434	626

24 Subordinated liabilities

Subordinated liabilities issued to third parties measured at amortised cost consist of undated primary capital notes and other loan capital having an original term to maturity of five years or more. Subordinated liabilities issued to Group entities are not included in the below.

		2018	2017
		HK$m	HK$m
US$400m	Undated floating rate primary capital notes	3,133	3,126
MYR500m	Fixed rate (5.05%) subordinated bonds due 2027, callable from 2022[1]	948	964
At 31 Dec		**4,081**	4,090

1 *The interest rate on the MYR500m 5.05% callable subordinated bonds due 2027 will increase by 1% from November 2022.*

25 Preference shares

Irredeemable preference shares, issued and fully paid

	2018	2017
	HK$m	HK$m
At 1 Jan	**21,037**	26,879
Redeemed / bought back during the year	**(20,975)**	(6,022)
Exchange and other movements	**36**	180
At 31 Dec	**98**	21,037

The preference shares were issued at the then nominal value, and may be redeemed subject to 30 days' notice in writing to shareholders and with the prior consent of the Hong Kong Monetary Authority. In the event of redemption, holders of the shares shall be entitled to receive the issue price of US$1 per share held together with any unpaid dividends for the period since the annual dividend payment date immediately preceding the date of redemption, subject to the Bank having sufficient distributable profits. The holders of the preference shares are entitled to one vote per share at shareholders' meetings of the Bank.

2,478m of issued non-cumulative irredeemable preference shares were fully bought back during the year (2017: 775m) and there were no remaining balance of issued non-cumulative irredeemable preference shares at 31 December 2018 (2017: 2,478m). The preference shares are no longer in issue.

200m of issued cumulative irredeemable preference shares were fully bought back during the year (2017: nil) and there were no remaining balance of issued cumulative preference shares at 31 December 2018 (2017: 200m). The preference shares are no longer in issue.

There was INR870m (2017: INR870m) of authorised preference share capital, comprising 8.7m compulsorily convertible preference shares ('CCPS') of INR100 each in the share capital of a subsidiary, HSBC InvestDirect Securities (India) Private Limited ('HSBC InvestDirect'). The CCPS were issued and fully paid in 2009 at a nominal value of INR100 each. These shares may be converted into fully paid equity shares of HSBC InvestDirect at any time after one year to 10 years from the date of allotment of the CCPS by written notice. The conversion shall be made at par or premium as may be determined by the Board of HSBC InvestDirect at the time of the conversion. The CCPS shall carry a fixed dividend of 0.001% of the face value per annum. After 10 years following the allotment of the CCPS, all outstanding CCPS shall be converted at par or premium as may be determined by the Board of HSBC InvestDirect at the time of the conversion. HSBC InvestDirect did not convert any CCPS during 2018 (2017: nil). The number of issued CCPS at 31 December 2018 was 8.7m (2017: 8.7m). No CCPS were issued during the year (2017: nil).

26 Share capital

	2018	2017
	HK$m	HK$m
Paid up share capital in HK$	**116,103**	116,103
Paid up share capital in US$ [1]	**56,232**	35,257
At 31 Dec	**172,335**	151,360

Ordinary shares issued and fully paid

	2018		2017	
	HK$m	Number	HK$m	Number
At 1 Jan	**151,360**	**46,440,991,798**	114,359	45,743,491,798
Shares issued during the year	**–**	**–**	1,744	697,500,000
Redemption / bought back of preference shares	**20,975**	**–**	35,257	–
At 31 Dec	**172,335**	**46,440,991,798**	151,360	46,440,991,798

1. Paid up share capital in US$ represents preference shares which have been redeemed or bought back via payment out of distributable profits and for which the amount was transferred from retained earnings to share capital in accordance with the requirements of the Companies Ordinance.

During 2018, no new ordinary shares were issued (2017: 698m). The holders of the ordinary shares are entitled to receive dividends as declared from time to time, rank equally with regard to the Bank's residual assets and are entitled to one vote per share at shareholder meetings of the Bank.

27 Other equity instruments

Other equity instruments comprise additional tier 1 capital instruments in issue which are accounted for in equity.

		2018	2017
		HK$m	HK$m
US$1,000m	Floating rate perpetual subordinated loan, callable from Dec 2019[1]	**7,756**	7,756
US$900m	Floating rate perpetual subordinated loan, callable from Dec 2019[1]	**6,981**	6,981
US$900m	Floating rate perpetual subordinated loan, callable from Nov 2023[2]	**7,048**	–
US$500m	Floating rate perpetual subordinated loan, callable from Nov 2023[2]	**3,915**	–
US$700m	Floating rate perpetual subordinated loan, callable from Dec 2023[3]	**5,481**	–
US$600m	Floating rate perpetual subordinated loan, callable from Nov 2024[4]	**4,698**	–
At 31 Dec		**35,879**	14,737

1 Interest rate at one year US dollar LIBOR plus 3.84%
2 Interest rate at three months US dollar LIBOR plus 3.51%
3 Interest rate at three months US dollar LIBOR plus 4.98%
4 Interest rate at three months US dollar LIBOR plus 3.62%

The additional tier 1 capital instruments are perpetual subordinated loans on which coupon payments may be cancelled at the sole discretion of the Bank. The subordinated loans will be written down at the point of non-viability on the occurrence of a trigger event as defined in the Banking (Capital) Rules. They rank higher than ordinary shares in the event of a wind-up.

28 Maturity analysis of assets and liabilities

The following table provides an analysis of consolidated total assets and liabilities by residual contractual maturity at the balance sheet date. These balances are included in the maturity analysis as follows:

- Trading assets and liabilities (including trading derivatives but excluding reverse repos, repos and debt securities in issue) are included in the 'Due not more than 1 month' time bucket, because trading balances are typically held for short periods of time.
- Financial assets and liabilities with no contractual maturity (such as equity securities) are included in the 'Due over 5 years' time bucket. Undated or perpetual instruments are classified based on the contractual notice period which the counterparty of the instrument is entitled to give. Where there is no contractual notice period, undated or perpetual contracts are included in the 'Due over 5 years' time bucket.
- Non-financial assets and liabilities with no contractual maturity are included in the 'Due over 5 years' time bucket.
- Liabilities under insurance contracts are included in the 'Due over 5 years' time bucket. Liabilities under investment contracts are classified in accordance with their contractual maturity. Undated investment contracts are included in the 'Due over 5 years' time bucket, however, such contracts are subject to surrender and transfer options by the policyholders.

Maturity analysis of assets and liabilities

	Due not more than1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Financial assets									
Cash and sight balances at central banks	205,660	–	–	–	–	–	–	–	205,660
Items in the course of collection from other banks	25,380	–	–	–	–	–	–	–	25,380
Hong Kong Government certificates of indebtedness	280,854	–	–	–	–	–	–	–	280,854
Trading assets	554,886	1,359	1,723	–	–	870	–	–	558,838
Derivatives	291,515	83	117	247	17	324	318	248	292,869
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	9,308	24	1,108	615	1,121	3,839	11,210	105,634	132,859
Reverse repurchase agreements – non-trading	250,550	87,939	15,059	4,326	7,771	37,682	3,000	–	406,327
Placings with and advances to banks	177,476	56,118	17,869	11,374	19,247	22,912	26,835	6,320	338,151
Loans and advances to customers	638,718	323,164	268,711	159,123	145,495	350,859	767,323	875,309	3,528,702
Financial investments	235,488	409,356	185,205	84,225	75,210	218,508	297,627	365,407	1,871,026
Amounts due from Group companies	63,150	6,477	649	28	–	2	149	–	70,455
Accrued income and other financial assets	102,461	33,492	14,830	2,189	1,178	1,071	584	3,678	159,483
Financial assets at 31 Dec 2018	2,835,446	918,012	505,271	262,127	250,039	636,067	1,107,046	1,356,596	7,870,604
Non-financial assets	–	–	–	–	–	–	–	392,850	392,850
Total assets at 31 Dec 2018	2,835,446	918,012	505,271	262,127	250,039	636,067	1,107,046	1,749,446	8,263,454
Financial liabilities									
Hong Kong currency notes in circulation	280,854	–	–	–	–	–	–	–	280,854
Items in the course of transmission to other banks	33,806	–	–	–	–	–	–	–	33,806
Repurchase agreements – non-trading	63,273	723	1,159	4,555	569	–	–	–	70,279
Deposits by banks	154,915	2,415	3,923	2,018	1,260	53	80	–	164,664
Customer accounts	4,547,352	342,264	150,739	72,992	61,663	16,011	16,570	75	5,207,666
Trading liabilities	81,194	–	–	–	–	–	–	–	81,194
Derivatives	294,112	304	157	250	207	209	314	–	295,553
Financial liabilities designated at fair value	22,524	23,447	21,021	7,873	10,014	18,541	18,314	39,409	161,143
Debt securities in issue	2,631	6,287	9,810	859	519	15,913	19,053	3,164	58,236
Amounts due to Group companies	120,904	93,361	1,299	50	27	15	77,508	103,323	396,487
Accruals and other financial liabilities	115,539	40,894	16,241	3,542	4,423	1,718	1,154	710	184,221
Subordinated liabilities[2]	–	–	–	–	–	–	948	3,133	4,081
Preference shares	–	–	–	–	–	–	–	98	98
Total financial liabilities at 31 Dec 2018	5,717,104	509,695	204,349	92,139	78,682	52,460	133,941	149,912	6,938,282
Non-financial liabilities	–	–	–	–	–	–	–	512,252	512,252
Total liabilities at 31 Dec 2018	5,717,104	509,695	204,349	92,139	78,682	52,460	133,941	662,164	7,450,534

Maturity analysis of assets and liabilities[1] (continued)

(Represented)	Due not more than1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Financial assets									
Cash and sight balances at central banks	208,073	—	—	—	—	—	—	—	208,073
Items in the course of collection from other banks	25,714	—	—	—	—	—	—	—	25,714
Hong Kong Government certificates of indebtedness	267,174	—	—	—	—	—	—	—	267,174
Trading assets	492,178	4,121	135	—	—	—	—	—	496,434
Derivatives	295,653	827	503	644	178	768	1,487	183	300,243
Financial assets designated at fair value	1,145	294	1,515	1,156	446	3,150	7,893	107,047	122,646
Reverse repurchase agreements – non-trading	212,556	62,050	5,381	3,437	7,654	6,972	32,840	—	330,890
Placings with and advances to banks	282,259	74,043	20,088	10,398	6,724	14,877	15,997	8,619	433,005
Loans and advances to customers	656,101	315,163	227,683	149,786	156,397	334,895	676,249	812,706	3,328,980
Financial investments	205,553	351,781	197,723	75,119	91,276	186,116	303,034	310,271	1,720,873
Amounts due from Group companies	74,484	151,749	100	318	442	446	110	80	227,729
Accrued income and other financial assets	49,384	27,632	10,733	1,810	809	446	382	2,414	93,610
Financial assets at 31 Dec 2017	2,770,274	987,660	463,861	242,668	263,926	547,670	1,037,992	1,241,320	7,555,371
Non-financial assets	—	—	—	—	—	—	—	387,975	387,975
Total assets at 31 Dec 2017	2,770,274	987,660	463,861	242,668	263,926	547,670	1,037,992	1,629,295	7,943,346
Financial liabilities									
Hong Kong currency notes in circulation	267,174	—	—	—	—	—	—	—	267,174
Items in the course of transmission to other banks	38,283	—	—	—	—	—	—	—	38,283
Repurchase agreements – non-trading	45,000	2,170	—	—	—	—	—	—	47,170
Deposits by banks	192,187	2,840	5,079	1,045	313	94	139	—	201,697
Customer accounts	4,727,204	217,307	94,791	42,207	40,152	9,456	6,881	274	5,138,272
Trading liabilities	212,618	2,493	2,321	2,722	841	2,491	7,857	22	231,365
Derivatives	305,014	361	950	368	636	1,333	343	348	309,353
Financial liabilities designated at fair value	199	—	2,621	—	—	6,182	1,940	38,336	49,278
Debt securities in issue	1,189	2,677	5,331	301	3,363	3,963	17,151	4,419	38,394
Amounts due to Group companies	119,364	1,919	168	27	324	34	47,609	96,243	265,688
Accruals and other financial liabilities	43,617	35,430	12,236	3,502	2,625	2,071	1,016	244	100,741
Subordinated liabilities[2]	—	—	—	—	—	—	964	3,126	4,090
Preference shares	—	—	—	—	—	—	—	21,037	21,037
Financial liabilities at 31 Dec 2017	5,951,849	265,197	123,497	50,172	48,254	25,624	83,900	164,049	6,712,542
Non-financial liabilities	—	—	—	—	—	—	—	477,818	477,818
Total liabilities at 31 Dec 2017	5,951,849	265,197	123,497	50,172	48,254	25,624	83,900	641,867	7,190,360

1 The table has been revised to align with the Group's presentation and comparatives have been represented to conform to the current year's presentation.
2 The maturity for subordinated liabilities is based on the earliest date on which the group is required to pay, i.e. the callable date.

29 Analysis of cash flows payable under financial liabilities by remaining contractual maturities

	On demand	Due within 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2018						
Hong Kong currency notes in circulation	**280,854**	**—**	**—**	**—**	**—**	**280,854**
Items in the course of transmission to other banks	**—**	**33,806**	**—**	**—**	**—**	**33,806**
Repurchase agreements – non-trading	**12,492**	**51,591**	**6,464**	**—**	**—**	**70,547**
Deposits by banks	**146,159**	**12,019**	**7,221**	**137**	**—**	**165,536**
Customer accounts	**3,941,160**	**953,242**	**289,185**	**34,197**	**80**	**5,217,864**
Trading liabilities	**81,194**	**—**	**—**	**—**	**—**	**81,194**
Derivatives	**293,073**	**1,679**	**403**	**1,754**	**—**	**296,909**
Financial liabilities designated at fair value	**463**	**46,394**	**40,498**	**39,723**	**39,474**	**166,552**
Debt securities in issue	**—**	**9,329**	**12,028**	**37,140**	**3,521**	**62,018**
Amounts due to Group companies	**38,093**	**176,357**	**885**	**88,418**	**137,417**	**441,170**
Other financial liabilities	**81,633**	**68,515**	**22,377**	**2,850**	**1,194**	**176,569**
Subordinated liabilities	**—**	**22**	**65**	**1,294**	**3,995**	**5,376**
Preference shares	**—**	**—**	**98**	**—**	**—**	**98**
	4,875,121	**1,352,954**	**379,224**	**205,513**	**185,681**	**6,998,493**
Loan commitments	**1,950,956**	**612,015**	**237**	**—**	**—**	**2,563,208**
Financial guarantees	**57,964**	**—**	**—**	**—**	**—**	**57,964**
	6,884,041	**1,964,969**	**379,461**	**205,513**	**185,681**	**9,619,665**
At 31 Dec 2017						
Hong Kong currency notes in circulation	267,174	—	—	—	—	267,174
Items in the course of transmission to other banks	—	38,283	—	—	—	38,283
Repurchase agreements – non-trading	11,829	35,554	—	—	—	47,383
Deposits by banks	163,030	32,048	6,467	267	—	201,812
Customer accounts	4,229,543	717,651	179,389	17,795	281	5,144,659
Trading liabilities	231,365	—	—	—	—	231,365
Derivatives	304,970	412	1,820	1,253	411	308,866
Financial liabilities designated at fair value	199	32	2,724	8,524	38,069	49,548
Debt securities in issue	40	4,026	9,521	22,421	4,753	40,761
Amounts due to Group companies	40,004	82,614	4,495	67,306	113,635	308,054
Other financial liabilities	8,870	69,010	16,515	3,287	218	97,900
Subordinated liabilities	—	25	74	1,361	3,634	5,094
Preference shares	—	283	412	2,781	27,990	31,466
	5,257,024	979,938	221,417	124,995	188,991	6,772,365
Loan commitments	1,821,774	640,726	14,437	4,678	97	2,481,712
Financial guarantees	57,353	—	—	—	—	57,353
	7,136,151	1,620,664	235,854	129,673	189,088	9,311,430

The balances in the above tables incorporates all cash flows relating to principal and future coupon payments on an undiscounted basis (except for trading liabilities and trading derivatives). Trading liabilities and trading derivatives have been included in the 'On demand' time bucket as trading liabilities are typically held for short periods of time. The undiscounted cash flows payable under hedging derivative liabilities are classified according to their contractual maturity. Investment contract liabilities have been included in financial liabilities designated at fair value, whereby the policyholders have the options to surrender or transfer at any time, and are reported in the 'Due after 5 years' time bucket. A maturity analysis prepared on the basis of the earliest possible contractual repayment date (assuming that all surrender and transfer options are exercised) would result in all investment contracts being presented as falling due within one year or less. The undiscounted cash flows potentially payable under loan commitments and financial guarantee contracts are classified on the basis of the earliest date they can be called. Cash flows payable in respect of customer accounts are primarily contractually repayable on demand or at short notice.

30 Contingent liabilities, contractual commitments and guarantees

Off-balance sheet contingent liabilities and commitments

	2018 HK$m	2017 HK$m
Contingent liabilities and financial guarantee contracts:		
– financial guarantees[1]	**57,964**	57,124
– Performance & other guarantee[2]	**234,265**	231,709
– other contingent liabilities	**3,416**	1,059
At 31 Dec	**295,645**	289,892
Commitments[3]:		
– documentary credits and short-term trade-related transactions	**23,258**	28,045
– forward asset purchases and forward forward deposits placed	**14,087**	8,198
– undrawn formal standby facilities, credit lines and other commitments to lend	**2,525,863**	2,445,468
At 31 Dec	**2,563,208**	2,481,711

1 *Financial guarantees are contracts that require the issuer to make specified payments to reimburse the holder for a loss incurred because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. The amounts in the above table are nominal principal amounts.*
2 *Performance and other guarantees include re-insurance letters of credit related to particular transactions, trade-related letters of credit issued without provision for the issuing entity to retain title to the underlying shipment, performance bonds, bid bonds, standby letters of credit and other transaction-related guarantees.*
3 *Includes HK$1,490,711m of commitments at 31 December 2018 to which the impairment requirements in HKFRS 9 are applied where the group has become party to an irrevocable commitment.*

The above table discloses the nominal principal amounts of commitments (excluding capital commitments), guarantees and other contingent liabilities, which represent the amounts at risk should contracts be fully drawn upon and clients default. The amount of the loan commitments shown above reflects, where relevant, the expected level of take-up of pre-approved facilities. As a significant portion of guarantees and commitments is expected to expire without being drawn upon, the total of the contractual amounts is not representative of future liquidity requirements.

It also reflect the group's maximum exposure under a large number of individual guarantee undertakings. The risks and exposures from guarantees are captured and managed in accordance with HSBC's overall credit risk management policies and procedures. Guarantees are subject to an annual credit review process.

Other contingent liabilities at 31 Dec 2018 included provisions made in relation to legal and regulatory matters as set out in note 39.

31 Other commitments

Capital commitments

At 31 December 2018, capital commitments, mainly related to the commitment for purchase of premises, were HK$7,912m (2017: HK$7,097m).

Operating lease commitments

The group leases certain properties and equipment under operating leases. The leases normally run for a period of one to 10 years and may include an option to renew. Lease payments are usually adjusted annually to reflect market rentals. None of the leases include contingent rentals. Future minimum lease payments under non-cancellable operating leases for premises and equipment are as follows:

	2018 HK$m	2017 HK$m
Amounts payable within		
– one year or less	**2,925**	2,948
– five years or less but over one year	**3,967**	4,277
– over five years	**1,391**	874
At 31 Dec	**8,283**	8,099

32 Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously (‘the offset criteria’).

The ‘Amounts not set off in the balance sheet’ include transactions where:

- the counterparty has an offsetting exposure with the group and a master netting or similar arrangement is in place with a right to set off only in the event of default, insolvency or bankruptcy, or the offset criteria are otherwise not satisfied; and
- in the case of derivatives and reverse repurchase/repurchase, stock borrowing/lending and similar agreements, cash and non-cash collateral has been received/pledged.

For risk management purposes, the net amounts of loans and advances to customers are subject to limits, which are monitored and the relevant customer agreements are subject to review and updated, as necessary, to ensure that the legal right to set off remains appropriate.

Offsetting of financial assets and financial liabilities

	Amounts subject to enforceable netting arrangements								
				Amounts not offset in the balance sheet					
	Gross amounts	Amounts offset	Net amounts reported in the balance sheet	Financial instruments	Non-cash collateral	Cash collateral	Net amount	Amounts not subject to enforceable netting arrangements[1]	Balance sheet total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2018									
Financial assets[2]									
Derivatives	**380,939**	**(120,409)**	**260,530**	**(208,893)**	**(5,637)**	**(31,801)**	**14,199**	**32,339**	**292,869**
Reverse repos, stock borrowing and similar agreements classified as:	**444,711**	**(31,283)**	**413,428**	**—**	**(413,374)**	**(42)**	**12**	**29,862**	**443,290**
– trading assets	**23,112**	**—**	**23,112**	**—**	**(23,100)**	**—**	**12**	**—**	**23,112**
– non-trading assets	**421,599**	**(31,283)**	**390,316**	**—**	**(390,274)**	**(42)**	**—**	**29,862**	**420,178**
Loans and advances to customers at amortised cost	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	825,650	**(151,692)**	**673,958**	**(208,893)**	**(419,011)**	**(31,843)**	**14,211**	**62,201**	**736,159**
Financial liabilities[3]									
Derivatives	**391,064**	**(120,409)**	**270,655**	**(208,893)**	**(9,558)**	**(18,754)**	**33,450**	**24,898**	**295,553**
Repos, stock lending and similar agreements	**146,026**	**(31,283)**	**114,743**	**—**	**(114,548)**	**(4)**	**191**	**26,560**	**141,303**
– trading liabilities	**2,023**	**—**	**2,023**	**—**	**(2,007)**	**—**	**16**	**—**	**2,023**
– non-trading liabilities	**144,003**	**(31,283)**	**112,720**	**—**	**(112,541)**	**(4)**	**175**	**26,560**	**139,280**
Customer accounts at amortised cost	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
	537,090	**(151,692)**	**385,398**	**(208,893)**	**(124,106)**	**(18,758)**	**33,641**	**51,458**	**436,856**
At 31 Dec 2017									
Financial assets[2]									
Derivatives	353,713	(77,624)	276,089	(234,555)	(4,926)	(28,992)	7,616	24,154	300,243
Reverse repos, stock borrowing and similar agreements classified as:	550,165	(12,689)	537,476	—	(537,348)	(62)	66	23,487	560,963
– trading assets	8,966	—	8,966	—	(8,966)	—	—	—	8,966
– non-trading assets	541,199	(12,689)	528,510	—	(528,382)	(62)	66	23,487	551,997
Loans and advances to customers at amortised cost	—	—	—	—	—	—	—	—	—
	903,878	(90,313)	813,565	(234,555)	(542,274)	(29,054)	7,682	47,641	861,206
Financial liabilities[3]									
Derivatives	366,456	(77,624)	288,832	(234,555)	(4,738)	(27,959)	21,580	20,521	309,353
Repos, stock lending and similar agreements classified as:	94,755	(12,689)	82,066	—	(81,847)	—	219	27,617	109,683
– trading liabilities	687	—	687	—	(686)	—	1	—	687
– non-trading liabilities	94,068	(12,689)	81,379	—	(81,161)	—	218	27,617	108,996
Customer accounts at amortised cost	—	—	—	—	—	—	—	—	—
	461,211	(90,313)	370,898	(234,555)	(86,585)	(27,959)	21,799	48,138	419,036

1 *These exposures continue to be secured by financial collateral, but the group may not have sought or been able to obtain a legal opinion evidencing enforceability of the offsetting right.*
2 *Amounts presented in the balance sheet included balances due from Group companies of HK$103,358m (2017: HK$262,159m).*
3 *Amounts presented in the balance sheet included balances due to Group companies of HK$139,410m (2017: HK$132,091m).*

33 Segmental analysis

The group's operating segments are organised into four global businesses and a Corporate Centre. The group's chief operating decision-maker, the Executive Committee ('EXCO'), regularly reviews operating activities on a number of bases, including by global businesses and by countries. Although the chief operating decision-maker reviews information on a number of bases, business performance is assessed and capital resources are allocated by global business, and the segmental analysis is presented on that basis. The global businesses are therefore considered our reportable segments under HKFRS 8.

Information provided to EXCO is measured in accordance with HKFRSs. The group's operations are closely integrated and, accordingly, the presentation of data includes internal allocations of certain items of income and expenses. These allocations include the costs of certain support services and global functions to the extent that they can be meaningfully attributed to operational business lines and geographical regions. While such allocations have been made on a systematic and consistent basis, they necessarily involve a degree of subjectivity. Costs which are not allocated to global businesses are included in the 'Corporate Centre'. Where relevant, income and expenses amounts presented include the results of inter-segment funding along with inter-company and inter-business line transactions. All such transactions are undertaken on arm's length terms. The intra-group elimination items for the global businesses are presented in the Corporate Centre.

The group provides a comprehensive range of banking and related financial services to its customers organised by global business:

- Retail Banking and Wealth Management ('RBWM') serves personal customers. We take deposits and provide transactional banking services to enable customers to manage their day to day finances and save for the future. We selectively offer credit facilities to assist customers in their short or longer-term borrowing requirements; and we provide financial advisory, broking, insurance and investment services to help them manage and protect their financial futures.
- Commercial Banking ('CMB') is segmented into Corporate, to serve both corporate and mid-market companies with more sophisticated financial needs, and Business Banking, to serve small- and medium-sized enterprises ('SMEs'), enabling differentiated coverage of our target customers. This allows us to provide continuous support to companies as they grow both domestically and internationally, and ensures a clear focus on internationally aspirant customers.
- Global Banking and Markets ('GB&M') provides tailored financial solutions to major government, corporate and institutional clients worldwide. GB&M operates a long-term relationship management approach to build a full understanding of clients' financial requirements. Sector-focused client service teams comprising relationship managers and product specialists develop financial solutions to meet individual client needs.
- Global Private Banking ('GPB') provides investment management and trustee solutions to high net worth individuals and their families. We aim to meet the needs of our clients by providing excellent customer service, leveraging our global footprint and offering a comprehensive suite of solutions.
- Corporate Centre was established to align certain functions of the group. The Corporate Centre includes Balance Sheet Management, certain interests in associates and joint ventures, as well as the results of our financing operations and central support costs with associated recoveries.

Performance by global business is presented in the 'Financial Review' section.

Information by geographical region

	Hong Kong	Rest of Asia-Pacific	Intra-segment elimination	Total
	HK$m	HK$m	HK$m	HK$m
For the year ended 31 Dec 2018				
Total operating income	**195,249**	**75,297**	**(2,238)**	**268,308**
Profit before tax	**88,017**	**46,566**	**–**	**134,583**
At 31 Dec 2018				
Total assets	**6,036,854**	**2,939,955**	**(713,355)**	**8,263,454**
Total liabilities	**5,590,770**	**2,573,119**	**(713,355)**	**7,450,534**
Credit commitments and contingent liabilities (contract amounts)	**1,584,981**	**1,273,872**	**–**	**2,858,853**
For the year ended 31 Dec 2017				
Total operating income	187,935	70,397	(3,099)	255,233
Profit before tax	73,577	42,042	–	115,619
At 31 Dec 2017				
Total assets	5,643,940	2,923,926	(624,520)	7,943,346
Total liabilities	5,263,539	2,551,341	(624,520)	7,190,360
Credit commitments and contingent liabilities (contract amounts)	1,500,456	1,271,147	–	2,771,603

Information by country

	Revenue[1]		Non-current assets[2]	
	For the year ended 31 Dec		At 31 Dec	
	2018	2017	**2018**	2017
	HK$m	HK$m	**HK$m**	HK$m
Hong Kong	**142,665**	125,698	**110,125**	111,164
Mainland China	**17,653**	14,264	**147,444**	150,778
Australia	**7,658**	6,636	**825**	871
India	**7,880**	8,372	**1,934**	2,108
Indonesia	**3,702**	4,395	**3,566**	3,851
Malaysia	**6,330**	5,663	**962**	833
Singapore	**10,053**	9,054	**1,415**	1,404
Taiwan	**3,509**	3,295	**2,201**	2,325
Other	**11,019**	9,066	**3,075**	2,963
Total	**210,469**	186,443	**271,547**	276,297

1 *Revenue (defined as 'Net operating income before change in expected credit losses and other impairment charges') is attributable to countries based on the location of the principal operations of the branch, subsidiary, associate or joint venture.*
2 *Non-current assets consist of property, plant and equipment, goodwill, other intangible assets, interests in associates and joint ventures and certain other assets.*

34 Related party transactions

The group's related parties include the parent, fellow subsidiaries, associates, joint ventures, post-employment benefit plans for the group's employees, Key Management Personnel ('KMP') as defined by HKAS 24, close family members of KMP and entities which are controlled or jointly controlled by KMP or their close family members.

Particulars of transactions with related parties are set out below.

(a) Inter-company

As part of recovery and resolution planning, the ownership of the group was transferred in November 2018 from HSBC Asia Holdings B.V. (previously the group's immediate holding company) to HSBC Asia Holdings Limited, a newly incorporated intermediate holding company in Hong Kong that is a wholly-owned subsidiary of HSBC Holdings plc (incorporated in England).

During the year, the group transferred another property to the service company, HSBC Global Services (Hong Kong) Limited (the 'ServCo'), which is a fellow subsidiary of the group set up in Hong Kong as part of recovery and resolution planning to provide functional support services to the group. The transfer was made at market value with no impact to the profit and loss. The group recognised a management charge of HK$1,098m for services provided by ServCo for the year ended 31 Dec 2018 (2017: HK$238m), which is included under 'General and administrative expenses'.

The group entered into transactions with its fellow subsidiaries in the normal course of business, including the acceptance and placement of interbank deposits, correspondent banking transactions and off-balance sheet transactions. The activities were on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

The group shared the costs of certain IT projects with its fellow subsidiaries and also used certain processing services of fellow subsidiaries. The Bank also acted as agent for the distribution of retail investment funds for fellow subsidiaries and paid professional fees for services provided by fellow subsidiaries. These transactions and services are priced on an arm's length basis.

The aggregate amount of income and expenses arising from these transactions during the year and the balances of amounts due to and from the relevant parties at the year end were as follows:

	2018			2017		
	Immediate holding company	**Ultimate holding company**	**Fellow subsidiaries**	Immediate holding company	Ultimate holding company	Fellow subsidiaries
	HK$m	**HK$m**	**HK$m**	HK$m	HK$m	HK$m
Income and expenses for the year						
Interest income	**–**	**–**	**1,220**	–	–	2,447
Interest expense[1]	**1,563**	**5,545**	**1,681**	2,739	1,709	625
Fee income	**–**	**43**	**2,547**	–	41	2,605
Fee expense	**–**	**–**	**1,153**	–	–	1,100
Net income from financial instruments held for trading or managed on a fair value basis	**–**	**5**	**1,289**	–	2	27
Other operating income	**–**	**1,348**	**2,531**	–	1,201	2,506
Other operating expenses[2]	**–**	**3,405**	**13,682**	2	2,879	9,632
At 31 Dec						
Assets	**–**	**327**	**149,122**	1	713	306,099
– trading assets[3]	**–**	**123**	**11,586**	–	202	8,270
– derivative assets	**–**	**–**	**78,994**	–	–	79,084
– other assets[3]	**–**	**204**	**58,542**	1	511	218,745
Liabilities	**–**	**254,547**	**212,358**	71,700	94,460	190,831
Trading liabilities[3]	**–**	**15**	**97**	–	2	12,994
Financial liabilities designated at fair value[3,4]	**–**	**87,065**	**298**	–	35,866	15
Derivative liabilities	**–**	**–**	**70,320**	–	–	70,266
Other liabilities[3]	**–**	**96,000**	**120,551**	515	1,067	107,449
Subordinated liabilities[3,5]	**–**	**71,467**	**20,994**	50,255	57,525	–
Preference shares	**–**	**–**	**98**	20,930	–	107
Guarantees	**–**	**–**	**17,763**	–	–	17,908
Commitments	**–**	**–**	**14,319**	–	–	14,372

1 *Interest expense included distribution on preference shares and interest on subordinated liabilities.*
2 *In 2018, payments were made of HK$459m (2017: HK$432m) for software costs which were capitalised as intangible assets in the balance sheet of the group.*
3 *These balances are presented under 'Amounts due from/to Group companies' in the consolidated balance sheet.*
4 *The balance included subordinated liabilities of HK$87,065m to meet Total Loss Absorbing Capacity ('TLAC') requirements (2017: HK$35,866m).*
5 *The balance included subordinated liabilities of HK$78,450m to meet TLAC requirements (2017: HK$89,889m).*

(b) Share option and share award schemes

The group participates in various share option and share plans operated by HSBC whereby share options or shares of HSBC are granted to employees of the group. The group recognises an expense in respect of these share options and share awards. The cost borne by the ultimate holding company in respect of share options is treated as a capital contribution and is recorded within 'Other reserves'. In respect of share awards, the group recognises a liability to the ultimate holding company over the vesting period. This liability is measured at the fair value of the shares at each reporting date, with changes since the award dates adjusted through the capital contribution account within 'Other reserves'. The balances of the capital contribution and the liability at 31 December 2018 amounted to HK$3,147m and HK$1,923m respectively (2017: HK$2,901m and HK$2,268m respectively).

(c) Retirement benefit plans

At 31 December 2018, HK$12.3bn (2017: HK$15.1bn) of the group's retirement benefit plan assets were under management by group companies, earning management fees of HK$29m in 2018 (2017: HK$27m). At 31 December 2018, the group's retirement benefit plans had placed deposits of HK$486m (2017: HK$370m) with its banking subsidiaries, earning interest payable to the schemes of HK$2m (2017: HK$3m). The above outstanding balances arose from the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

(d) Associates and joint ventures

The group provides certain banking and financial services to associates and joint ventures, including loans, overdrafts, interest and non-interest bearing deposits and current accounts. Details of interests in associates and joint ventures are given in note 15. Transactions and balances during the year with associates and joint ventures were as follows:

	2018		2017	
	Highest balance during the year	**Balance at 31 December**	Highest balance during the year	Balance at 31 December
	HK$m	**HK$m**	HK$m	HK$m
Amounts due from associates – unsubordinated	**30,411**	**23,487**	24,178	19,793
Amounts due to associates	**15,821**	**2,141**	20,454	9,632
Commitments	**1**	**1**	1	1

The disclosure of the year-end balance and the highest amounts outstanding during the year is considered to be the most meaningful information to represent the amount of transactions and outstanding balances during the year.

The transactions resulting in outstanding balances arose in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

(e) Key Management Personnel

Key Management Personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Bank and the group. It includes members of the Board of Directors and Executive Committee of the Bank and the Board of Directors and Group Managing Directors of HSBC Holdings plc.

The following table shows the expense in respect of compensation for Key Management Personnel of the Bank for services rendered to the Bank:

	2018	2017
	HK$m	HK$m
Salaries and other short-term benefits	337	308
Post employment benefits	10	10
Share-based payments[1]	92	94
Total[1]	439	412

1 2017 amounts have been represented.

Transactions, arrangements and agreements involving Key Management Personnel

	2018	2017
	HK$m	HK$m
During the year		
Highest average assets[1]	47,132	36,413
Highest average liabilities[1]	48,251	55,629
Contribution to group's profit before tax	936	899
At the year end		
Guarantees	7,060	10,249
Commitments	3,841	2,961

1 The disclosure of the highest average balance during the year is considered the most meaningful information to represent transactions during the year.

Transactions, arrangements and agreements are entered into by the group with companies that may be controlled by Key Management Personnel of the group and their immediate relatives. These transactions are primarily loans and deposits, and were entered into in the ordinary course of business and on substantially the same terms, including interest rates and security, as comparable transactions with persons or companies of a similar standing or, where applicable, with other employees. The transactions did not involve more than the normal risk of repayment or present other unfavourable features.

Change in expected credit losses recognised for the year, and impairment allowances against balances outstanding at the end of the year, in respect of Key Management Personnel were insignificant (2017: nil).

(f) Loans to directors

Directors are defined as the Directors of the Bank, its ultimate holding company, HSBC Holdings plc and intermediate companies. Loans to directors also include loans to companies that are controlled by, and entities that are connected with these directors. Particulars of loans to directors disclosed pursuant to section 17 of the Companies (Disclosure of Information about Benefits of Directors) Regulation are as follows:

	Aggregate amount outstanding at 31 Dec		Maximum aggregate amount outstanding during the year	
	2018	2017	2018	2017
	HK$m	HK$m	HK$m	HK$m
By the Bank	857	1,090	7,986	1,213
By subsidiaries	8	–	10	1
	865	1,090	7,996	1,214

These amounts include principal and interest, and the maximum liability that may be incurred under guarantees.

35 Fair values of financial instruments carried at fair value

Control framework

Fair values are subject to a control framework designed to ensure that they are either determined, or validated, by a function independent of the risk-taker.

Where fair values are determined by reference to externally quoted prices or observable pricing inputs to models, independent price determination or validation is utilised. For inactive markets, the group sources alternative market information, with greater weight given to information that is considered to be more relevant and reliable. Examples of the factors considered are price observability, instrument comparability, consistency of data sources, underlying data accuracy and timing of prices.

For fair values determined using valuation models, the control framework includes development or validation by independent support functions of the model logic, inputs, model outputs and adjustments. Valuation models are subject to a process of due diligence before becoming operational and are calibrated against external market data on an ongoing basis.

Changes in fair value are generally subject to a profit and loss analysis process and are disaggregated into high-level categories including portfolio changes, market movements and other fair value adjustments.

The majority of financial instruments measured at fair value are in GB&M. GB&M's fair value governance structure comprises its Finance function and Valuation Committees. Finance is responsible for establishing procedures governing valuation and ensuring fair values are in compliance with accounting standards. The fair values are reviewed by the group's Valuation Committees, which consist of independent support functions. These Committees are overseen by the Group's Valuation Committee Review Group, which considers all material subjective valuations.

Financial liabilities measured at fair value

In certain circumstances, the group records its own debt in issue at fair value, based on quoted prices in an active market for the specific instrument. When quoted market prices are unavailable, the own debt in issue is valued using valuation techniques, the inputs for which are either based on quoted prices in an inactive market for the instrument or are estimated by comparison with quoted prices in an active market for similar instruments. In both cases, the fair value includes the effect of applying the credit spread which is appropriate to the group's liabilities. The change in fair value of issued debt securities attributable to the group's own credit spread is computed as follows: for each security at each reporting date, an externally verifiable price is obtained or a price is derived using credit spreads for similar securities for the same issuer. Then, using discounted cash flow, each security is valued using a Libor-based discount curve. The difference in the valuations is attributable to the group's own credit spread. This methodology is applied consistently across all securities.

Structured notes issued and certain other hybrid instruments are included within 'Financial liabilities designated at fair value' and are measured at fair value. The credit spread applied to these instruments is derived from the spreads at which the group issues structured notes.

Gains and losses arising from changes in the credit spread of liabilities issued by the group reverse over the contractual life of the debt, provided that the debt is not repaid at a premium or a discount.

Fair value hierarchy

Fair values of financial assets and liabilities are determined according to the following hierarchy:

- Level 1 – valuation technique using quoted market price: financial instruments with quoted prices for identical instruments in active markets that the group can access at the measurement date.
- Level 2 – valuation technique using observable inputs: financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets and financial instruments valued using models where all significant inputs are observable.
- Level 3 – valuation technique with significant unobservable inputs: financial instruments valued using valuation techniques where one or more significant inputs are unobservable.

Financial instruments carried at fair value and bases of valuation

	Fair Value Hierarchy					
	Level 1	Level 2	Level 3	Third-party total	Inter-company[2]	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2018						
Assets						
Trading assets[1]	**395,769**	**162,841**	**228**	**558,838**	**–**	**558,838**
Derivatives	**3,219**	**209,450**	**1,206**	**213,875**	**78,994**	**292,869**
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	**75,105**	**36,599**	**21,155**	**132,859**	**–**	**132,859**
Financial investments	**1,146,426**	**352,490**	**4,709**	**1,503,625**	**–**	**1,503,625**
Liabilities						
Trading liabilities[1]	**74,376**	**6,818**	**–**	**81,194**	**–**	**81,194**
Derivatives	**3,348**	**220,043**	**1,842**	**225,233**	**70,320**	**295,553**
Financial liabilities designated at fair value[1]	**–**	**139,782**	**21,361**	**161,143**	**–**	**161,143**
At 31 Dec 2017						
Assets						
Trading assets[1]	300,646	195,575	213	496,434	–	496,434
Derivatives	4,773	215,869	517	221,159	79,084	300,243
Financial assets designated at fair value	90,641	23,567	8,438	122,646	–	122,646
Financial investments	916,385	498,512	5,033	1,419,930	–	1,419,930
Liabilities						
Trading liabilities[1]	79,209	141,972	10,184	231,365	–	231,365
Derivatives	4,501	232,627	1,959	239,087	70,266	309,353
Financial liabilities designated at fair value[1]	–	49,278	–	49,278	–	49,278

1 *Amounts with HSBC Group entities are not reflected here.*
2 *Derivatives balances with HSBC Group entities are largely under 'Level 2'.*

Transfers between Level 1 and Level 2 fair values

	Assets				Liabilities		
	Financial investments	Trading assets	Designated and otherwise mandatorily measured at fair value	Derivatives	Trading liabilities	Designated at fair value	Derivatives
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2018							
Transfers from Level 1 to Level 2	**9,955**	**1,389**	**–**	**–**	**349**	**–**	**–**
Transfers from Level 2 to Level 1	**121,667**	**18,109**	**–**	**–**	**376**	**–**	**–**

	Assets				Liabilities		
	Available-for-sale	Held for trading	Designated at fair value	Derivatives	Held for trading	Designated at fair value	Derivatives
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2017							
Transfers from Level 1 to Level 2	5,424	9,402	–	–	–	–	–
Transfers from Level 2 to Level 1	63,280	–	–	–	–	–	–

Transfers between levels of the fair value hierarchy are deemed to occur at the end of each quarterly reporting period. Transfers into and out of Level of the fair value hierarchy are primarily attributable to changes in observability of valuation inputs and price transparency.

Movements in Level 3 financial instruments

There were no material transfers from/to Level 1 and 2 as a result of change in observability of valuation inputs, settlement, nor gains/loss recognised in the income statement/other comprehensive income during the year in relation to financial instruments carried at fair value in Level 3 (2017: immaterial). The increase in Level 3 assets was mainly due to the purchase of financial assets of HK$12,200m (2017: HK$4,577m) to support growth in insurance business. The increase in Level 3 liabilities was mainly due to increased financial liabilities which contain both deposit and derivative components of HK$10,954m (2017: Nil), reflecting increase in customers' demand.

Fair value adjustments

Fair value adjustments are adopted when the group determines there are additional factors considered by market participants that are not incorporated within the valuation model. Movements in the level of fair value adjustments do not necessarily result in the recognition of profits or losses within the income statement, such as when models are enhanced and therefore fair value adjustments may no longer be required.

Bid-offer

HKFRS 13 requires use of the price within the bid-offer spread that is most representative of fair value. Valuation models will typically generate mid-market values. The bid-offer adjustment reflects the extent to which bid-offer costs would be incurred if substantially all residual net portfolio market risks were closed using available hedging instruments or by disposing of, or unwinding the position.

Uncertainty

Certain model inputs may be less readily determinable from market data, and/or the choice of model itself may be more subjective. In these circumstances, an adjustment may be necessary to reflect the likelihood that market participants would adopt more conservative values for uncertain parameters and/or model assumptions, than those used in the group's valuation model.

Credit valuation adjustment ('CVA') and debit valuation adjustment ('DVA')

The CVA is an adjustment to the valuation of over-the-counter ('OTC') derivative contracts to reflect the possibility that the counterparty may default and the group may not receive the full market value of the transactions.

The DVA is an adjustment to the valuation of OTC derivative contracts to reflect the possibility that the group may default, and that the group may not pay the full market value of the transactions.

The group calculates a separate CVA and DVA for each legal entity, and for each counterparty to which the entity has exposure. With the exception of central clearing parties, all third-party counterparties are included in the CVA and DVA calculations, and these adjustments are not netted across group entities.

The group calculates the CVA by applying the probability of default ('PD') of the counterparty, conditional on the non-default of the group, to the group's expected positive exposure to the counterparty and multiplying the result by the loss expected in the event of default. Conversely, the group calculates the DVA by applying the PD of the group, conditional on the non-default of the counterparty, to the expected positive exposure of the counterparty to the group and multiplying the result by the loss expected in the event of default. Both calculations are performed over the life of the potential exposure.

For most products the group uses a simulation methodology, which incorporates a range of potential exposures over the life of the portfolio, to calculate the expected positive exposure to a counterparty. The simulation methodology includes credit mitigants, such as counterparty netting agreements and collateral agreements with the counterparty.

The methodologies do not, in general, account for 'wrong-way risk' which arises when the underlying value of the derivative prior to any CVA is positively correlated to the PD of the counterparty. When there is significant wrong-way risk, a trade-specific approach is applied to reflect this risk in the valuation.

Funding fair value adjustment ('FFVA')

The FFVA is calculated by applying future market funding spreads to the expected future funding exposure of any uncollateralised component of the OTC derivative portfolio. The expected future funding exposure is calculated by a simulation methodology, where available and is adjusted for events that may terminate the exposure, such as the default of the group or the counterparty. The FFVA and DVA are calculated independently.

Model limitation

Models used for portfolio valuation purposes may be based upon a simplifying set of assumptions that do not capture all material market characteristics. In these circumstances, model limitation adjustments are adopted.

Inception profit (Day 1 profit or loss reserves)

Inception profit adjustments are adopted when the fair value estimated by a valuation model is based on one or more significant unobservable inputs.

Effects of changes in significant unobservable assumptions to reasonably possible alternatives

The key unobservable inputs to Level 3 financial instruments include volatility and correlation for structured notes and deposits valued using option models, bid quotes for corporate bonds valued using approaches that take into account of market comparables, and multiple items for private equity and strategic investments. In the absence of an active market, the fair value of private equity and strategic investments is estimated on the basis of an analysis of the investee's financial position and results, risk profile, prospects and other factors, as well as by reference to market valuations for similar entities quoted in an active market, or the price at which similar companies have changed ownership. The change in fair values due to changes in reasonably possible alternative assumptions for these unobservable inputs is not significant.

Favourable and unfavourable changes are determined on the basis of sensitivity analysis. The sensitivity analysis aims to measure a range of fair values consistent with the application of a 95% confidence interval. Methodologies take account of the nature of the valuation technique employed, the availability and reliability of observable proxies and historical data. When the available data is not amenable to statistical analysis, the quantification of uncertainty is judgemental, but remains guided by the 95% confidence interval. The sensitivity of Level 3 fair values to reasonably possible alternative assumptions is not significant.

36 Fair values of financial instruments not carried at fair value

Fair values of financial instruments not carried at fair value and bases of valuation

		Fair Value Hierarchy			
	Carrying amount	Quoted market price Level 1	Observable inputs Level 2	Significant unobservable inputs Level 3	Total
	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2018					
Assets					
Reverse repurchase agreements – non-trading	**406,327**	**–**	**396,061**	**10,723**	**406,784**
Placings with and advances to banks	**338,151**	**–**	**322,443**	**15,531**	**337,974**
Loans and advances to customers	**3,528,702**	**–**	**52,262**	**3,473,497**	**3,525,759**
Financial investments – at amortised cost	**367,401**	**8,543**	**356,836**	**–**	**365,379**
Liabilities					
Repurchase agreements – non-trading	**70,279**	**–**	**70,282**	**–**	**70,282**
Deposits by banks	**164,664**	**–**	**164,662**	**–**	**164,662**
Customer accounts	**5,207,666**	**–**	**5,207,871**	**–**	**5,207,871**
Debt securities in issue	**58,236**	**–**	**58,808**	**–**	**58,808**
Subordinated liabilities	**4,081**	**–**	**960**	**2,919**	**3,879**
Preference shares	**98**	**–**	**–**	**98**	**98**
At 31 Dec 2017					
Assets					
Reverse repurchase agreements – non-trading	330,890	–	318,849	11,927	330,776
Placings with and advances to banks	433,005	–	418,652	14,561	433,213
Loans and advances to customers	3,328,980	–	92,146	3,230,365	3,322,511
Financial investments – at amortised cost	300,244	6,244	303,240	–	309,484
Liabilities					
Repurchase agreements – non-trading	47,170	–	47,155	–	47,155
Deposits by banks	201,697	–	201,456	233	201,689
Customer accounts	5,138,272	–	5,138,352	–	5,138,352
Debt securities in issue	38,394	–	38,279	–	38,279
Subordinated liabilities	4,090	–	993	2,773	3,766
Preference shares	21,037	–	–	21,539	21,539

The fair values above are stated at a specific date and may be significantly different from the amounts which will actually be paid on the maturity or settlement dates of the instruments. In many cases, it would not be possible to realise immediately the estimated fair values given the size of the portfolios measured. Accordingly, these fair values do not represent the value of these financial instruments to the group as a going concern.

Other financial instruments not carried at fair value are typically short-term in nature or reprice to current market rates frequently. Accordingly, their carrying amount is a reasonable approximation of fair value. They include cash and sight balances at central banks, items in the course of collection from and transmission to other banks, Hong Kong Government certificates of indebtedness and Hong Kong currency notes in circulation, all of which are measured at amortised cost.

Valuation

Fair value is an estimate of the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It does not reflect the economic benefits and costs that the group expects to flow from an instrument's cash flow over its expected future life. Our valuation methodologies and assumptions in determining fair values for which no observable market prices are available may differ from those of other companies.

Repurchase and reverse repurchase agreements – non-trading

Fair values approximate carrying amounts as these balances are generally short dated.

Loans and advances to banks and customers

To determine the fair value of loans and advances to banks and customers, loans are segregated, as far as possible, into portfolios of similar characteristics. Fair values are based on observable market transactions, when available. When they are unavailable, fair values are estimated using valuation models incorporating a range of input assumptions. These assumptions may include: value estimates from third-party brokers reflecting over-the-counter trading activity; forward-looking discounted cash flow models, taking account of expected customer prepayment rates, using assumptions that the group believes are consistent with those that would be used by market participants in valuing such loans; new business rates estimates for similar loans; and trading inputs from other market participants including observed primary and secondary trades. From time to time, we may engage a third-party valuation specialist to measure the fair value of a pool of loans.

The fair value of loans reflects expected credit losses at the balance sheet date and estimates of market participants' expectations of credit losses over the life of the loans, and the fair value effect of repricing between origination and the balance sheet date. For credit impaired loans, fair value is estimated by discounting the future cash flows over the time period they are expected to be recovered.

Financial investments

The fair values of listed financial investments are determined using bid market prices. The fair values of unlisted financial investments are determined using valuation techniques that incorporate the prices and future earnings streams of equivalent quoted securities.

Deposits by banks and customer accounts

The fair values of on-demand deposits are approximated by their carrying value. For deposits with longer-term maturities, fair values are estimated using discounted cash flows, applying current rates offered for deposits of similar remaining maturities.

Debt securities in issue and subordinated liabilities

Fair values are determined using quoted market prices at the balance sheet date where available, or by reference to quoted market prices for similar instruments.

37 Structured entities

The group is involved with both consolidated and unconsolidated structured entities through the securitisation of financial assets, conduits and investment funds, established either by the group or a third party.

Consolidated structured entities

The group uses consolidated structured entities to securitise customer loans and advances it originates to diversify its sources of funding for asset origination and capital efficiency purposes. The loans and advances are transferred by the group to the structured entities for cash or synthetically through credit default swaps, and the structured entities issue debt securities to investors. The group's transactions with these entities are not significant.

Unconsolidated structured entities

The term 'unconsolidated structured entities' refers to all structured entities not controlled by the group. The group enters into transactions with unconsolidated structured entities in the normal course of business to facilitate customer transactions and for specific investment opportunities.

Nature and risks associated with the group's interests in unconsolidated structured entities

	Securitisations	HSBC managed funds	Non-HSBC managed funds	Other	Total
Total asset values of the entities (HK$bn)					
0–4	**38**	**39**	**97**	**36**	**210**
4–15	**7**	**18**	**84**	**1**	**110**
15–39	**1**	**4**	**38**	**–**	**43**
39–196	**–**	**1**	**21**	**–**	**22**
196+	**–**	**1**	**5**	**–**	**6**
Number of entities at 31 Dec 2018	**46**	**63**	**245**	**37**	**391**
	HK$m	**HK$m**	**HK$m**	**HK$m**	**HK$m**
Total assets in relation to the group's interests in the unconsolidated structured entities	**17,907**	**20,540**	**40,101**	**15,598**	**94,146**
– trading assets	**–**	**76**	**–**	**–**	**76**
– financial assets designated and otherwise mandatorily measured at fair value	**–**	**19,292**	**40,101**	**–**	**59,393**
– derivatives	**–**	**–**	**–**	**–**	**–**
– loans and advances to customers	**17,907**	**–**	**–**	**15,253**	**33,160**
– financial investments	**–**	**1,172**	**–**	**–**	**1,172**
– other assets	**–**	**–**	**–**	**345**	**345**
Total liabilities in relation to the group's interests in the unconsolidated structured entities	**–**	**–**	**–**	**–**	**–**
Other off balance sheet commitments	**19**	**–**	**8,905**	**6,877**	**15,801**
The group's maximum exposure at 31 Dec 2018	**17,926**	**20,540**	**49,006**	**22,475**	**109,947**
Total asset values of the entities (HK$bn)					
0–4	36	39	92	25	192
4–15	4	16	75	1	96
15–39	–	8	36	–	44
39–196	2	2	29	–	33
196+	–	1	4	–	5
Number of entities at 31 Dec 2017	42	66	236	26	370
	HK$m	HK$m	HK$m	HK$m	HK$m
Total assets in relation to the group's interests in the unconsolidated structured entities	20,201	28,160	44,854	8,578	101,793
– trading assets	–	874	–	–	874
– financial assets designated at fair value	–	26,016	44,463	–	70,479
– derivatives	1	–	–	–	1
– loans and advances to customers	20,200	–	–	8,281	28,481
– financial investments	–	1,270	391	–	1,661
– other assets	–	–	–	297	297
Total liabilities in relation to the group's interests in the unconsolidated structured entities	–	–	–	–	–
Other off balance sheet commitments	18	–	6,265	3,120	9,403
The group's maximum exposure at 31 Dec 2017	20,219	28,160	51,119	11,698	111,196

The maximum exposure to loss from the group's interests in unconsolidated structured entities represents the maximum loss it could incur as a result of its involvement with these entities regardless of the probability of the loss being incurred.

- For commitments, guarantees and written credit default swaps, the maximum exposure to loss is the notional amount of potential future losses.
- For retained and purchased investments in and loans to unconsolidated structured entities, the maximum exposure to loss is the carrying value of these interests at the balance sheet reporting date.

The maximum exposure to loss is stated gross of the effects of hedging and collateral arrangements entered into to mitigate the group's exposure to loss.

Securitisations

The group has interests in unconsolidated securitisation vehicles through holding notes issued by these entities.

HSBC managed funds

The group establishes and manages money market funds and non-money market investment funds to provide customers with investment opportunities. The group, as fund manager, may be entitled to receive management and performance fees based on the assets under management. The group may also retain units in these funds.

Non-HSBC managed funds

The group purchases and holds units of third-party managed funds in order to facilitate business and meet customer needs. In addition to entities, asset and liability classes disclosed above, the group enters into derivative contracts with non-HSBC managed funds.

Other

The group has established structured entities in the normal course of business, such as structured credit transactions for customers, to provide finance to public and private sector infrastructure projects, and for asset and structured finance transactions. In addition to the interest disclosed above, the group enters into derivative contracts, reverse repos and stock borrowing transactions with structured entities. These interests arise in the normal course of business for the facilitation of third-party transactions and risk management solutions.

Structured entities sponsored by the group

The amount of assets transferred to and income received from such sponsored entities during 2018 and 2017 were not significant.

38 Bank balance sheet and statement of changes in equity

Bank balance sheet at 31 December 2018

	2018 HK$m	2017 HK$m
Assets		
Cash and sight balances at central banks	**147,447**	149,529
Items in the course of collection from other banks	**18,021**	19,172
Hong Kong Government certificates of indebtedness	**280,854**	267,174
Trading assets	**439,155**	354,114
Derivatives	**276,558**	281,552
Financial assets designated and otherwise mandatorily measured at fair value through profit or loss	**6,298**	N/A
Financial assets designated at fair value	**N/A**	463
Reverse repurchase agreements – non-trading	**243,203**	203,031
Placings with and advances to banks	**159,636**	187,495
Loans and advances to customers	**1,947,307**	1,832,490
Financial investments	**866,566**	796,384
Amounts due from Group companies	**347,652**	486,744
Investments in subsidiaries	**88,169**	89,418
Interests in associates and joint ventures	**39,830**	39,830
Goodwill and intangible assets	**8,419**	5,542
Property, plant and equipment	**75,897**	83,520
Deferred tax assets	**682**	738
Prepayments, accrued income and other assets	**130,057**	87,287
Total assets	**5,075,751**	4,884,483
Liabilities		
Hong Kong currency notes in circulation	**280,854**	267,174
Items in the course of transmission to other banks	**22,786**	28,217
Repurchase agreements – non-trading	**55,142**	12,243
Deposits by banks	**121,618**	154,728
Customer accounts	**3,186,542**	3,179,845
Trading liabilities	**47,491**	101,529
Derivatives	**279,056**	289,649
Financial liabilities designated at fair value	**42,545**	7,838
Debt securities in issue	**41,398**	27,865
Retirement benefit liabilities	**2,085**	1,675
Amounts due to Group companies	**439,262**	337,344
Accruals and deferred income, other liabilities and provisions	**98,983**	51,929
Current tax liabilities	**1,600**	1,099
Deferred tax liabilities	**8,836**	8,758
Subordinated liabilities	**3,133**	3,126
Preference shares	**–**	20,930
Total liabilities	**4,631,331**	4,493,949
Equity		
Share capital	**172,335**	151,360
Other equity instruments	**35,879**	14,737
Other reserves	**23,346**	18,855
Retained earnings	**212,860**	205,582
Total equity	**444,420**	390,534
Total equity and liabilities	**5,075,751**	4,884,483

Bank statement of changes in equity for the year ended 31 December 2018

	Share capital	Other equity instruments	Retained earnings	Other reserves: Property revaluation reserve	Other reserves: Financial assets at FVOCI reserve[7]	Other reserves: Cash flow hedge reserve	Other reserves: Foreign exchange reserve	Other reserves: Other[1]	Total equity
	HK$m	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**
At 31 Dec 2017	**151,360**	**14,737**	**205,582**	**39,799**	**1,688**	**(118)**	**(9,473)**	**(13,041)**	**390,534**
Impact on transition to HKFRS 9	**—**	**—**	**(896)**	**—**	**(356)**	**—**	**—**	**—**	**(1,252)**
At 1 Jan 2018	**151,360**	**14,737**	**204,686**	**39,799**	**1,332**	**(118)**	**(9,473)**	**(13,041)**	**389,282**
Profit for the year	**–**	**–**	**75,742**	**–**	**–**	**–**	**–**	**–**	**75,742**
Other comprehensive income/(expense) (net of tax)	**–**	**–**	**(535)**	**8,410**	**(295)**	**34**	**(3,373)**	**–**	**4,241**
– debt instruments at fair value through other comprehensive income	**–**	**–**	**–**		**(261)**	**–**	**–**	**–**	**(261)**
– equity instruments designated at fair value through other comprehensive income	**–**	**–**	**–**		**(34)**	**–**	**–**	**–**	**(34)**
– cash flow hedges	**–**	**–**	**–**		**–**	**34**	**–**	**–**	**34**
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	**–**	**–**	**(208)**		**–**	**–**	**–**	**–**	**(208)**
– property revaluation			**–**	**8,410**					**8,410**
– remeasurement of defined benefit asset/ liability	**–**	**–**	**(327)**		**–**	**–**	**–**	**–**	**(327)**
– exchange differences	**–**	**–**	**–**	**–**	**–**	**–**	**(3,373)**	**–**	**(3,373)**
Total comprehensive income/(expense) for the year	**–**	**–**	**75,207**	**8,410**	**(295)**	**34**	**(3,373)**	**–**	**79,983**
Other equity instruments issued[2]	**–**	**21,142**	**–**	**–**	**–**	**–**	**–**	**–**	**21,142**
Dividends paid[3]	**–**	**–**	**(47,440)**	**–**	**–**	**–**	**–**	**–**	**(47,440)**
Movement in respect of share-based payment arrangements	**–**	**–**	**(213)**	**–**	**–**	**–**	**–**	**215**	**2**
Transfers and other movements[4,6]	**20,975**	**–**	**(19,380)**	**(8,703)**	**–**	**–**	**–**	**8,559**	**1,451**
At 31 Dec 2018	**172,335**	**35,879**	**212,860**	**39,506**	**1,037**	**(84)**	**(12,846)**	**(4,267)**	**444,420**

	Share capital	Other equity instruments	Retained earnings	Other reserves: Property revaluation reserve	Other reserves: Available-for-sale investment reserve	Other reserves: Cash flow hedge reserve	Other reserves: Foreign exchange reserve	Other reserves: Other[1]	Total equity
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 1 Jan 2017	114,359	14,737	232,782	35,816	2,262	(675)	(13,734)	(15,226)	370,321
Profit for the year	—	—	62,511	—	—	—	—	—	62,511
Other comprehensive income/expense (net of tax)	—	—	707	7,252	(538)	557	4,261	—	12,239
– available-for-sale investments	—	—	—	—	(538)	—	—	—	(538)
– cash flow hedges	—	—	—	—	—	557	—	—	557
– changes in fair value of financial liabilities designated at fair value upon initial recognition arising from changes in own credit risk	—	—	(205)	—	—	—	—	—	(205)
– property revaluation	—	—	—	7,252	—	—	—	—	7,252
– remeasurement of defined benefit asset/ liability	—	—	912	—	—	—	—	—	912
– exchange differences	—	—	—	—	—	—	4,261	—	4,261
Total comprehensive income/(expense) for the year	—	—	63,218	7,252	(538)	557	4,261	—	74,750
Shares issued	1,744	—	—	—	—	—	—	—	1,744
Dividends paid[3]	—	—	(56,260)	—	—	—	—	—	(56,260)
Movement in respect of share-based payment arrangements	—	—	(103)	—	—	—	—	(311)	(414)
Transfers and other movements[4,6]	35,257	—	(34,055)	(3,269)	(36)	—	—	2,496	393
At 31 Dec 2017	151,360	14,737	205,582	39,799	1,688	(118)	(9,473)	(13,041)	390,534

For footnotes, please refer to page 56.

39 Legal proceedings and regulatory matters

The group is party to legal proceedings and regulatory matters in a number of jurisdictions arising out of its normal business operations. Apart from the matters described below, the Bank considers that none of these matters are material. The recognition of provisions is determined in accordance with the accounting policies set out in note 1.2(n). While the outcome of legal proceedings and regulatory matters is inherently uncertain, management believes that, based on the information available to it, appropriate provisions have been made in respect of these matters as at 31 December 2018. Any provision recognised does not constitute an admission of wrongdoing or legal liability. It is not practicable to provide an aggregate estimate of potential liability for our legal proceedings and regulatory matters as a class of contingent liabilities.

Anti-money laundering and sanctions-related matters

In 2010, HSBC Bank USA entered into a consent cease and desist order with the Office of the Comptroller of the Currency ('OCC') and the indirect parent of that company, HSBC North America Holdings Inc. ('HNAH'), entered into a consent cease and desist order with the US Federal Reserve Board ('FRB'). In 2012, HSBC Bank USA further entered into an enterprise-wide compliance consent order with the OCC (together the 'Orders'). These Orders required improvements to establish an effective compliance risk management programme across HSBC's US businesses, including risk management related to the US Bank Secrecy Act ('BSA') and anti-money laundering ('AML') compliance. In 2012, an additional consent order was entered into with the OCC that required HSBC Bank USA to correct the circumstances noted in the OCC's report and imposed restrictions on HSBC Bank USA acquiring control of, or holding an interest in, any new financial subsidiary, or commencing a new activity in its existing financial subsidiary, without the OCC's approval. Between June and September 2018, following implementation of the required remediation actions by HNAH and HSBC Bank USA, the FRB and OCC terminated each of these orders.

In December 2012, among other agreements, HSBC Holdings plc consented to a cease-and-desist order with the FRB and agreed to an undertaking with the UK Financial Conduct Authority ('FCA') to comply with certain forward-looking AML and sanctions-related obligations and to retain an independent compliance monitor (who is, for FCA purposes, a 'skilled person' under section 166 of the Financial Services and Markets Act) to produce periodic assessments of the Group's AML and sanctions compliance programme (the 'Skilled Person/Independent Consultant'). In December 2012, HSBC Holdings plc also entered into an agreement with the Office of Foreign Assets Control ('OFAC') regarding historical transactions involving parties subject to OFAC sanctions. The Skilled Person/ Independent Consultant will continue to conduct country reviews and provide periodic reports for a period of time at the FCA's and FRB's discretion.

Through his country-level reviews, the Skilled Person/Independent Consultant has identified potential AML and sanctions compliance issues that HSBC is reviewing further with the FRB and/or FCA. The Financial Crimes Enforcement Network of the US Treasury Department as well as the Civil Division of the US Attorney's Office for the Southern District of New York are investigating the collection and transmittal of third-party originator information in certain payments instructed over HSBC's proprietary payment systems. HSBC is cooperating with all of these investigations.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of these matters, including the timing or any possible impact on HSBC, which could be significant.

Tax investigations

The Bank continues to cooperate with the relevant US and other authorities, including with respect to clients of the Bank in India who may have had US tax reporting obligations.

In addition, various tax administration, regulatory and law enforcement authorities around the world, including in India, are conducting investigations and reviews of HSBC Swiss Private Bank and other HSBC companies in connection with allegations of tax evasion or tax fraud, money laundering and unlawful cross-border banking solicitation. In February 2015, the Indian tax authority issued a summons and request for information to the Bank in India.

The Bank and other HSBC companies are cooperating with these ongoing investigation. There are many factors that may affect the range of outcomes, and the resulting financial impact, of these investigations and reviews, which could be significant.

In light of the media attention regarding these matters, it is possible that other tax administration, regulatory or law enforcement authorities will also initiate or enlarge similar investigations or regulatory proceedings.

Singapore Interbank Offered Rate ('Sibor'), Singapore Swap Offer Rate ('SOR') and Australia Bank Bill Swap Rate ('BBSW')

In July 2016 and August 2016, HSBC and other panel banks were named as defendants in two putative class actions filed in the New York District Court on behalf of persons who transacted in products related to the SIBOR, SOR and BBSW benchmark rates. The complaints allege, among other things, misconduct related to these benchmark rates in violation of US antitrust, commodities and racketeering laws, and state law. Following a decision in October 2018 on the defendants' motion to dismiss in the SIBOR/SOR litigation, the claims against a number of HSBC entities were dismissed and the Bank remains the only HSBC defendant in this action. In October 2018, the Bank filed a motion for reconsideration of the decision based on the issue of personal jurisdiction. The plaintiff filed a third amended complaint in October 2018 naming only the SIBOR panel members. In November 2018, the defendants moved to dismiss the third amended complaint, and this motion remains pending.

In November 2018, the court granted in part and denied in part the defendants' motion to dismiss the BBSW case and dismissed all foreign defendants, including all the HSBC entities, on personal jurisdiction grounds. The plaintiff sought leave to file a second amended complaint in January 2019.

There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters, which could be significant.

United States Bankruptcy Court for the Southern District of New York litigation

In June 2018, a claim was issued against the Bank in the United States Bankruptcy Court for the Southern District of New York by the Chapter 11 Trustee of CFG Peru Investments Pte. Ltd. (Singapore) (the 'Trustee Complaint'). The Trustee Complaint makes allegations under the Peruvian Civil Code, Hong Kong and U.S. common law and the Bankruptcy Code concerning the Bank's alleged conduct in commencing the winding-up proceedings and pursuing the appointment of joint provisional liquidators for affiliates of CFG Peru

Investments Pte. Ltd. The Trustee is seeking damages and equitable subordination or disallowance of the Bank's Chapter 11 claims in a related bankruptcy proceeding.

The Bank will seek to dismiss the Trustee Complaint. Based on the facts currently known, it is not practicable at this time to predict the resolution of these matters, including the timing or any possible impact, which could be significant.

Foreign exchange rate investigations

In January 2018, HSBC Holdings plc entered into a three-year deferred prosecution agreement with the Criminal Division of the DoJ (the 'FX DPA'), regarding fraudulent conduct in connection with two particular transactions in 2010 and 2011. This concluded the DoJ's investigation into HSBC's historical foreign exchange activities. Under the terms of the FX DPA, HSBC has a number of ongoing obligations, including implementing enhancements to its internal controls and procedures in its Global Markets business, which will be the subject of annual reports to the DoJ. In addition, HSBC agreed to pay a financial penalty and restitution.

There are many factors that may affect the range of outcomes and the resulting financial impact of this matter, which could be significant.

Other regulatory investigations, reviews and litigation

HSBC Holdings plc and/or certain of its affiliates are subject to a number of other investigations and reviews by various regulators and competition and law enforcement authorities, as well as litigation, in connection with various matters relating to the firm's businesses and operations, including:

- requests for information from various tax administration or regulatory authorities relating to Mossack Fonseca & Co.;
- an investigation by the US Securities and Exchange Commission of multiple institutions, including HSBC, in relation to hiring practices of candidates referred by or related to government officials or employees of state-owned enterprises in Asia-Pacific.

There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters, which could be significant.

40 Ultimate holding company

The ultimate holding company of the Bank is HSBC Holdings plc, which is incorporated in England.

The largest group in which the accounts of the Bank are consolidated is that headed by HSBC Holdings plc. The consolidated accounts of HSBC Holdings plc are available to the public on the HSBC Group's website at www.hsbc.com or may be obtained from 8 Canada Square, London E14 5HQ, United Kingdom.

41 Events after the balance sheet date

During 2018, the group also made progress to remove internal operational dependencies (for instance, where one group entity provides critical services to another) to further facilitate the recovery and resolution planning of the group. In particular, the group transferred critical shared services to a separate internal group of service companies ('ServCo group'), which is outside of the group but remain wholly-owned by HSBC Holdings plc. The transfer to the ServCo group of relevant employees, critical shared services and assets in Hong Kong was substantially completed on 1 January 2019. The establishment of the ServCo group does not change how the group operates and there were no changes to employment terms and conditions or pension benefits as a result of these transfers.

42 Approval of financial statements

The financial statements were approved and authorised for issue by the Board of Directors on 19 February 2019.

EXHIBIT B

RISK MANAGEMENT SYSTEM

The information in this Exhibit B describes the risk management system of the Issuer and references herein to the "**HSBC Group**" or the "**group**" are to the Issuer and its subsidiaries.

The information in this Exhibit B has been extracted from the Annual Report and Accounts 2018 of the Issuer. Reference to page numbers (i.e. the pages numbers which appear on the bottom of the pages) in this Exhibit B are to pages of the Annual Report and Accounts 2018. The extracts set out in this Exhibit B are not complete and reference should be made to the Annual Report and Accounts 2018 which is available for inspection at the Issuer's office at HSBC Main Building, 1 Queen's Road Central, Hong Kong.

Risk

Risk Management

(Unaudited)

This section describes the enterprise-wide risk management framework and the significant policies and practices employed by HSBC in managing its material risks, both financial and non-financial.

Our risk management framework

Key aspects of risk management framework

We use an enterprise-wide risk management framework at all levels of the organisation and across all risk types, underpinned by our risk culture.

The framework fosters continuous monitoring, promotes risk awareness and encourages sound operational and strategic decision making. It also ensures a consistent approach to monitoring, managing and mitigating the risks we accept and incur in our activities.

The following diagram and descriptions summarise key aspects of the framework, including governance and structure, our risk management tools and our risk culture, which together help align employee behaviour with our risk appetite.

Key components of our risk management framework

HSBC Values and risk culture

Risk governance	**Non-executive risk governance**	The Board approves the group's risk appetite, plans and performance targets. It sets the 'tone from the top' and is advised by the group's Risk Committee.
	Executive risk governance	Responsible for the enterprise-wide management of all risks, including key policies and frameworks for the management of risk within the group.
Roles and responsibilities	**Three lines of defence model**	Our 'Three lines of defence' model defines roles and responsibilities for risk management. An independent Risk function ensures the necessary balance in risk/return decisions.
Processes and tools	**Risk appetite**	Processes to identify/assess, monitor and mitigate risks to ensure we remain within our risk appetite.
	Enterprise-wide risk management tools	
	Active risk management: identification/assessment, monitoring, management and reporting	
Internal controls	**Policies and procedures**	Policies and procedures define the minimum requirements for the controls required to manage our risks.
	Control activities	The operational risk management framework defines minimum standards and processes for managing operational risks and internal controls.
	Systems and infrastructure	Systems and/or processes that support the identification, capture and exchange of information to support risk management activities.

Systems and tools

Our risk culture

Risk culture refers to HSBC's norms, attitudes and behaviours related to risk awareness, risk taking and risk management.

HSBC has long recognised the importance of a strong risk culture, the fostering of which is a key responsibility of senior executives. Our risk culture is reinforced by HSBC Values and our Global Standards. It is instrumental in aligning the behaviours of individuals with our attitude to assuming and managing risk, which helps to ensure that our risk profile remains in line with our risk appetite.

We use clear and consistent employee communications on risk to convey strategic messages and set the tone from the Board and senior management. We also deploy mandatory training on risk and compliance topics to embed skills and understanding in order to strengthen our risk culture and reinforce the attitude to risk in the behaviour expected of employees, as described in our risk policies.

We operate a global whistleblowing platform, HSBC Confidential, allowing staff to report matters of concern confidentially. We also maintain an external email address for concerns about accounting and internal financial controls or auditing matters (accountingdisclosures@hsbc.com). The Group has a strict policy prohibiting retaliation against those who raise their concerns. All allegations of retaliation reported are escalated to senior management.

Our risk culture is also reinforced by our approach to remuneration. Individual awards, including those for senior executives, are based on compliance with HSBC Values and the achievement of financial and non-financial objectives which are aligned to our risk appetite and global strategy.

Risk Governance

The Board has ultimate responsibility for the effective management of risk and approves the group's risk appetite. It is advised by the Risk Committee on risk appetite and its alignment with strategy, risk governance and internal controls, and high-level risk related matters.

Executive accountability for the ongoing monitoring, assessment and management of risk environment and the effectiveness of the risk management framework resides with the group's Chief Risk Officer. He is supported by the Risk Management Meeting ('RMM').

The management of financial crime risk resides with the group's Chief Executive Officer. He is supported by the Financial Crime Risk Management Committee.

Day-to-day responsibility for risk management is delegated to senior managers with individual accountability for decision making. All employees have a role to play in risk management. These roles are defined using the three lines of defence model, which takes into account the group's business and functional structures.

We use a defined executive risk governance structure to help ensure appropriate oversight and accountability of risk, which facilitates reporting and escalation to the RMM.

Our responsibilities

All employees are responsible for identifying and managing risk within the scope of their role as part of the three lines of defence model.

Three lines of defence

To create a robust control environment to manage risks, we use an activity-based three lines of defence model. This model delineates management accountabilities and responsibilities for risk management and the control environment.

The model underpins our approach to risk management by clarifying responsibilities, encouraging collaboration and enabling efficient coordination of risk and control activities.

The three lines of defence are summarised below:

- The first line of defence owns the risks and is responsible for identifying, recording, reporting and managing them and ensuring that the right controls and assessments are in place to mitigate them.
- The second line of defence sets the policy and guidelines for managing specific risk areas, provides advice and guidance in relation to the risk, and challenges the first line of defence on effective risk management.
- The third line of defence is our Internal Audit function, which provides independent and objective assurance of the adequacy of the design and operational effectiveness of the group's risk management framework and control governance process.

Independent Risk function

The group's Risk function, headed by the group's Chief Risk Officer, is responsible for the group's risk management framework. This responsibility includes establishing and monitoring of risk profiles and forward-looking risk identification and management. The group's Risk function is made up of sub-functions covering all risks to our operations and forms part of the second line of defence. It is independent from the global businesses, including sales and trading functions, to provide challenge, appropriate oversight and balance in risk/return decisions.

Enterprise-wide risk management tools

The Group uses a range of tools to identify, monitor and manage risk. The key enterprise-wide risk management tools are summarised below.

Risk appetite

The Risk Appetite Statement ('RAS') sets out the aggregate level and risk types that the group is willing to accept in order to achieve its business objectives. It provides a benchmark for business decisions that are based on balancing risk and return, and making the best use of our capital. The group's RAS is interlinked with the group's strategic and financial plans, as well as remuneration, and is therefore forward-looking in describing the group's desired risk appetite profile. The RAS consists of qualitative statements and quantitative metrics, covering financial and non-financial risks and is formally approved by the Board every six months on the recommendation of the group's Risk Committee. It is fundamental to the development of business line strategies, strategic and business planning, and senior management balanced scorecards.

The group's performance against the RAS is reported to the RMM on a monthly basis so that any actual performance which falls outside the approved risk appetite is discussed and appropriate mitigating actions are determined. This reporting allows risks to be promptly identified and mitigated, and informs risk-adjusted remuneration to drive a strong risk culture.

Global businesses and strategic countries are required to have their own RASs, which are monitored to ensure they remain aligned with the group's RAS. All RASs and business activities are guided and underpinned by a set of qualitative principles. Additionally, quantitative metrics are defined along with appetite and tolerance thresholds for key risk areas.

Risk map

The group's risk map provides a point-in-time view of its risk profile across HSBC's risk taxonomy. It assess the potential for these risks to have a material impact on the group's financial results, reputation and the sustainability of its business. Risks that have an 'amber' or 'red' risk rating require monitoring and mitigating action plans to be either in place or initiated to manage the risk down to acceptable levels.

Top and emerging risks

We use a top and emerging risks process to provide a forward-looking view of issues that have the potential to threaten the execution of our strategy or operations over the medium to long term.

We proactively assess the internal and external risk environment, as well as review the themes identified across our regions and global businesses, for any risks that may require global escalation, updating our top and emerging risks as necessary.

We define a 'top risk' as a thematic issue that may form and crystallise between six months and one year, and has the potential to materially affect the group's financial results, reputation or business model. It may arise across any combination of risk types, countries or global businesses. The impact may be well understood by senior management and some mitigating actions may already be in place. Stress tests of varying granularity may already have been carried out to assess the impact.

An 'emerging risk' is defined as a thematic issue with large unknown components that may form and crystallise beyond a one-year time horizon. If it were to materialise, it could have a material effect on a combination of the group's long-term strategy, profitability and/or reputation. Existing mitigation action plans are likely to be minimal, reflecting the uncertain nature of these risks at this stage. Some high-level analysis and/or stress testing may have been carried out to assess the potential impact.

Our top and emerging risks are discussed on page 16.

Stress testing

The group operates a comprehensive stress testing programme that supports our risk management and capital planning. It includes execution of stress tests mandated by our regulators, as well as internal stress tests and reverse stress tests. Our stress testing is supported by dedicated teams and infrastructure and is overseen at the most senior level of the group.

Our stress testing programme assesses our capital strength through a rigorous examination of our resilience to external shocks. It also helps us understand and mitigate risks and informs our decisions about capital levels.

Internal stress tests are an important element in our risk management and capital management frameworks. Our capital plan is assessed through a range of stress scenarios which explore risks identified by management. They include potential adverse macroeconomic, geopolitical and operational risk events, and other potential events that are specific to the group. The selection of scenarios reflects our top and emerging risks identification process and our risk appetite. Stress testing analysis helps management understand the nature and extent of vulnerabilities to which the group is exposed. Using this information, management decides whether risks can or should be mitigated through management actions or, if they were to crystallise, should be absorbed through capital. This in turn informs decisions about preferred capital levels.

Reverse stress tests are conducted annually at group and, where required, subsidiary entity level in order to understand which potential extreme conditions would make our business model non-viable. Reverse stress testing identifies potential stresses and vulnerabilities which the group might face, and helps inform early-warning triggers, management actions and contingency plans designed to mitigate risks.

Our material banking and insurance risks

The material risk types associated with our banking and insurance manufacturing operations are described in the following tables:

Description of risks – banking operations

(Audited)

Risks	Arising from	Measurement, monitoring and management of risk
Credit risk		
Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract.	• Credit risk arises principally from direct lending, trade finance and leasing business, but also from certain other products such as guarantees and derivatives.	Credit risk is: • measured as the amount which could be lost if a customer or counterparty fails to make repayments; • monitored using various internal risk management measures and within limits approved by individuals within a framework of delegated authorities; and • managed through a robust risk control framework which outlines clear and consistent policies, principles and guidance for risk managers.
Liquidity and funding risk		
Liquidity risk is the risk that we do not have sufficient financial resources to meet our obligations as they fall due or that we can only do so at an excessive cost. Funding risk is the risk that funding considered to be sustainable, and therefore used to fund assets, is not sustainable over time.	• Liquidity risk arises from mismatches in the timing of cash flows. • Funding risk arises when illiquid asset positions cannot be funded at the expected terms and when required.	Liquidity and funding risk is: • measured using a range of metrics including liquidity coverage ratio and net stable funding ratio; • assessed through the internal liquidity adequacy assessment process; • monitored against the group’s liquidity and funding risk framework; and • managed on a stand-alone basis with no reliance on any Group entity (unless pre-committed) or central bank unless this represents routine established business-as-usual market practice.
Market risk		
Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios.	• Exposure to market risk is separated into two portfolios: trading and non-trading. Market risk exposures arising from our insurance operations are discussed on the following page.	Market risk is: • measured in terms of value at risk (‘VaR’), which measures the potential losses on risk positions over a specified time horizon for a given level of confidence, and assessed using stress testing; • monitored using VaR, stress testing and other measures including the sensitivity of net interest income and the sensitivity of structural foreign exchange; and • managed using risk limits approved by the RMM for the group and the various global businesses.
Operational risk		
Operational risk is the risk to achieving our strategy or objectives as a result of inadequate or failed internal processes, people and systems or from external events.	• Operational risk arises from day-to-day operations or external events, and is relevant to every aspect of our business. • Regulatory compliance risk and financial crime risk are discussed below.	Operational risk is: • measured using the risk and control assessment process, which assesses the level of risk and effectiveness of controls; • monitored using key indicators and other internal control activities; and • managed primarily by global business and functional managers who identify and assess risks, implement controls to manage them and monitor the effectiveness of these controls using the operational risk management framework.
Regulatory compliance risk		
Regulatory compliance risk is the risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, and incur fines and penalties and suffer damage to our business as a consequence.	• Regulatory compliance risk is part of operational risk, and arises from the risks associated with breaching our duty to clients and other counterparties, inappropriate market conduct and breaching other regulatory requirements.	Regulatory compliance risk is: • measured by reference to identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our regulatory compliance teams; • monitored against the first line of defence risk and control assessments, the results of the monitoring and control assurance activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.

Description of risks – banking operations (continued)

(Audited)

Risks	Arising from	Measurement, monitoring and management of risk
Financial crime risk		
Financial crime risk is the risk that we knowingly or unknowingly help parties to commit or to further potentially illegal activity through HSBC.	• Financial crime risk is part of operational risk and arises from day-to-day banking operations.	Financial crime risk is: • measured by reference to identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our financial crime risk teams; • monitored against our financial crime risk appetite statements and metrics, the results of the monitoring and control activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and • managed by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.
Other material risks		
Reputational risk		
Reputational risk is the risk of failure to meet stakeholders' expectations as a result of any event, behaviour, action or inaction, either by HSBC itself, our employees or those with whom we are associated.	• Primary reputational risks arise directly from an action or inaction by HSBC, its employees or associated parties that are not the consequence of another type of risk. Secondary reputational risks are those arising indirectly and are a result of a failure to control any other risks.	Reputational risk is: • measured by reference to our reputation as indicated by our dealings with all relevant stakeholders, including media, regulators, customers and employees; • monitored through a reputational risk management framework that is integrated into the group's broader risk management framework; and • managed by every member of staff and is covered by a number of policies and guidelines. There is a clear structure of committees and individuals charged with mitigating reputational risk.
Pension risk		
Pension risk is the risk of increased costs to HSBC from offering post-employment benefit plans to its employees.	• Pension risk arises from investments delivering an inadequate return, adverse changes in interest rates or inflation, or members living longer than expected. Pension risk includes operational and reputational risks of sponsoring pension plans.	Pension risk is: • measured in terms of the schemes' ability to generate sufficient funds to meet the cost of their accrued benefits; • monitored through a specific risk appetite; and • managed through the appropriate pension risk governance structure and ultimately the RMM.
Sustainability risk		
Sustainability risk is the risk that financial services provided to customers by the group indirectly result in unacceptable impacts on people or on the environment.	• Sustainability risk arises from the provision of financial services to companies or projects which indirectly result in unacceptable impacts on people or on the environment.	Sustainability risk is: • measured assessing the potential sustainability effect of a customer's activities and assigning a sustainability risk rating to all high risk transactions; • monitored by the RMM and by the group's sustainability risk function; and • managed using sustainability risk policies covering project finance lending and sector-based sustainability policies for sectors and themes with potentially high environmental or social impact.

Our insurance manufacturing subsidiaries are separately regulated from our banking operations. Risks in the insurance entities are managed using methodologies and processes appropriate to insurance manufacturing operations, but remain subject to oversight at group level. Our insurance operations are also subject to some of the same risks as our banking operations, which are covered by the group's respective risk management processes.

Description of risks – insurance manufacturing operations

(Audited)

Risks	Arising from	Measurement, monitoring and management of risk
Insurance risk		
Insurance risk is the risk that, over time, the cost of acquiring and administering an insurance contract and paying claims and benefits may exceed the total amount of premiums and investment income received.	• The cost of claims and benefits can be influenced by many factors, including mortality and morbidity experience, as well as lapse and surrender rates.	Insurance risk is: • measured in terms of life insurance liabilities and economic capital allocated to insurance underwriting risk; • monitored through a framework of approved limits and delegated authorities; and • managed through a robust risk control framework which outlines clear and consistent policies, principles and guidance. This includes using product design, underwriting, reinsurance and claims-handling procedures.
Financial risk		
Our ability to effectively match the liabilities arising under insurance contracts with the asset portfolios that back them is contingent on the management of financial risks and the extent to which these risks are borne by the policyholders.	Exposure to financial risks arises from: • market risk of changes in the fair values of financial assets or their future cash flows; • credit risk; and • liquidity risk of entities being unable to make payments to policyholders as they fall due.	Financial risk is: • measured separately for each type of risk: – market risks are measured in terms of exposure to fluctuations in key financial variables; – credit risk is measured as the amount which could be lost if a counterparty fails to make repayments; and – liquidity risk is measured using internal metrics including stressed operational cash flow projections; • monitored within a framework of approved limits and delegated authorities; and • managed through a robust risk control framework which outlines clear and consistent policies, principles and guidance. This includes using product design, asset liability matching and bonus rates.

Top and emerging risks

(Unaudited)

Our approach to identifying and monitoring top and emerging risks is described on page 13. During 2018, we made a number of changes to our top and emerging risks to reflect our assessment of the issues facing HSBC. Our current top and emerging risks are as follows:

- Economic outlook and capital flows;
- Geopolitical risk;
- The credit cycle;
- Cyber-threat and unauthorised access to systems;
- Regulatory developments including conduct, with adverse impact on business model and profitability;
- Financial crime risk environment;
- Ibor transition;
- Risks associated with workforce capability, capacity and environmental factors with potential impact on growth; and
- Risks arising from the receipt of services from third parties.

Economic outlook and capital flows

Economic activity diverged across the global economy during 2018. The US benefited from a fiscal stimulus that helped to drive GDP growth above its long-term trend. The growth rate in trade-dependent regions like the European Union ('EU') declined on the back of a slowing Chinese economy, and trade and geopolitical tensions. Tightening global financial conditions alongside the tapering off of fiscal stimulus in the US is expected to lead to more moderate growth in global economic activity in 2019. Oil prices will likely remain volatile as contrasting supply and demand factors prevail in turn.

The stand-off between the US and China on a variety of economic and technological issues is likely to continue in 2019, although further liberalising initiatives in a vein similar to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership ('CPTPP') and the EU-Japan trade deal, as well as some re-organisation of global supply chains, could partly offset rising protectionism. Nevertheless, the net impact on trade flows could be negative, and may damage HSBC's traditional lines of business.

Emerging markets are set to face challenging cross-currents. The reduction in global liquidity and consequent increase in the cost of external funding could expose vulnerabilities that spread more broadly. However, China has pledged to enact some stimulus to offset the effects of tariff hikes. This should help emerging markets achieve reasonable growth rates even in the face of headwinds, though downside risks abound.

Mitigating actions

- We actively assess the impact of economic developments in key markets on specific customer segments and portfolios and take appropriate mitigating actions. These actions include revising risk appetite and/or limits, as circumstances evolve.
- We use internal stress testing and scenario analysis, as well as regulatory stress test programmes, to evaluate the potential impact of macroeconomic shocks on our businesses and portfolios. Our approach to stress testing is described on pages 13-14.

Geopolitical risk

Our operations and portfolios are exposed to risks associated with political instability, civil unrest and military conflict, which could lead to disruption to our operations, physical risk to our staff and/or physical damage to our assets. In addition, rising protectionism and the increasing trend of using trade and investment policies as diplomatic tools may also adversely affect global trade flows.

Geopolitical risk remained heightened throughout 2018. In Asia, US-China competition and confrontation across multiple dimensions will likely continue, including economic power and technology leadership. US investment and export restrictions on Chinese imports could disrupt investment decisions, leading to a slow decoupling of US and Chinese technology sectors.

Mitigating actions

- We continually monitor the geopolitical outlook, in particular in countries where we have material exposures and/or a physical presence. We have also established dedicated forums to monitor geopolitical developments.
- We use internal stress tests and scenario analysis as well as regulatory stress test programmes, to adjust limits and exposures to reflect our risk appetite and mitigate risks as appropriate. Our internal credit risk ratings of sovereign counterparties take into account geopolitical developments that could potentially disrupt our portfolios and businesses.
- We have taken steps to enhance physical security in those geographical areas deemed to be at high risk from terrorism and military conflicts.

The credit cycle

Steadily rising US interest rates and the looming end of the European Central Bank's ('ECB') quantitative easing programme, alongside the uncertainty caused by trade and geopolitical tensions, caused a correction in stock indices and a widening in corporate bond spreads in in the fourth quarter of 2018. The Bank for International Settlements ('BIS') estimates that 80% of US leveraged loans are 'covenant-lite'. Pressures in this segment could come to a head and spill over to other asset classes. The International Monetary Fund deems that thin liquidity coverage ('LCRs') and stable funding ('SFRs') ratios for international banks' US dollar positions could cause offshore dollar liquidity to tighten abruptly during periods of high volatility, possibly affecting HSBC's positions.

After reining in excess leverage during 2018, China has pledged renewed stimulus in 2019 to counter various adverse effects on economic activity. This could lead to renewed global concerns about Chinese debt levels. Following sharp foreign exchange ('FX') depreciations in Turkey and Argentina in 2018, there currently appear to be no major emerging market currency misalignments. However, debt servicing burdens are high in some major countries, making them vulnerable to shocks.

Mitigating actions

- We closely monitor economic developments in key markets and sectors and undertake scenario analysis. This helps enable us to take portfolio actions where necessary, including enhanced monitoring, amending our risk appetite and/or reducing limits and exposures.
- We stress test portfolios of particular concern to identify sensitivity to loss under a range of scenarios, with management actions being taken to rebalance exposures and manage risk appetite where necessary.
- We undertake regular reviews of key portfolios to help ensure that individual customer or portfolio risks are understood and our ability to manage the level of facilities offered through any downturn is appropriate.

Cyber threat and unauthorised access to systems

The group and other organisations continue to operate in an increasingly hostile cyber threat environment which requires ongoing investment in business and technical controls to defend against these threats.

Key threats include unauthorised access to online customer accounts, advanced malware attacks and distributed denial of service ('DDOS') attacks.

Destructive malware (including ransomware), DDOS attacks and organised cyber criminals targeting payments are increasingly dominant threats across the industry. In 2018, the Group was subjected to a small number of DDOS attacks on our external facing websites, which were successfully mitigated across the Group with no destructive malware (including ransomware) or payment infrastructure attacks reported.

Mitigating actions

- We continue to strengthen and significantly invest in both business and technical controls in order to prevent, detect and respond to an increasingly hostile cyber threat environment. We continue to evaluate the threat environment for the most prevalent attack types and their potential outcomes to determine the most effective controls to mitigate those threats.
- Specifically, we continue to enhance our controls to protect against advanced malware, data leakage, infiltration of payment systems and denial of service attacks as well as enhance our ability to quickly detect and respond to increasingly sophisticated cyber-attacks. Ensuring our staff continue to be 'cyber aware' is a key element of our defence strategy.
- Cyber risk is a priority area for the Board and is routinely reported at Board level to ensure appropriate visibility, governance and executive support for our ongoing cybersecurity programme.

Regulatory developments including conduct, with adverse impact on business model and profitability

Financial service providers continue to face stringent regulatory and supervisory requirements, particularly in the areas of capital and liquidity management, conduct of business, financial crime, internal control frameworks, the use of models and the integrity of financial services delivery. The competitive landscape in which the group operates may be significantly altered by future regulatory changes and government intervention. Regulatory changes may affect the activities of the group as a whole, or of some or all of its principal subsidiaries.

In September 2017, HSBC Holdings plc ('HSBC Holdings') and HSBC North America Holdings Inc. ('HNAH') consented to a civil money penalty order with the US Federal Reserve Board ('FRB') in connection with its investigation into HSBC's foreign exchange activities. Under the terms of the order, HSBC Holdings and HNAH agreed to undertake certain remedial steps and to pay a civil money penalty to the FRB.

In January 2018, HSBC Holdings entered into a three-year deferred prosecution agreement with the US Department of Justice ('DoJ') ('FX DPA'), regarding fraudulent conduct in connection with two particular transactions in 2010 and 2011. This concluded the DoJ's investigation into HSBC's historical foreign exchange activities.

Under the terms of the FX DPA, HSBC has a number of ongoing obligations, including continuing to cooperate with authorities and implementing enhancements to its internal controls and procedures in its Global Markets business, which will be the subject of annual reports to the DoJ. In addition, HSBC agreed to pay a financial penalty and restitution.

Mitigating actions

- We are fully engaged, wherever possible with governments and regulators in the countries in which we operate, to help ensure that new requirements are considered properly by regulatory authorities and the financial sector and can be implemented effectively.
- We have invested significant resources and have taken, and will continue to take, a number of steps to improve our compliance systems and controls relating to our activities in global markets. This included enhancements to trade, voice and audio surveillance and implementation of algorithmic trading for benchmark orders.

Financial crime risk environment

Financial institutions remain under considerable regulatory scrutiny regarding their ability to prevent and detect financial crime. Financial crime threats continue to evolve, often in tandem with geopolitical developments. The highly speculative, volatile and opaque nature of virtual currencies as well as the pace of new currencies and associated technological developments, create challenges in effectively managing financial crime risks. The evolving regulatory landscape continues to present execution challenge. An increasing trend towards greater data privacy requirements may affect our ability to effectively manage financial crime risks.

In December 2012, among other agreements, HSBC Holdings consented to a cease-and-desist order with the FRB and agreed to an undertaking with the UK Financial Conduct Authority ('FCA') to comply with certain forward-looking anti-money laundering ('AML') and sanctions-related obligations. HSBC Holdings also agreed to retain an independent compliance monitor - who is for FCA purposes a 'Skilled Person' under section 166 of the Financial Services and Markets Act, and for FRB purposes an 'Independent Consultant' - to produce annual assessments of the Group's AML and sanctions compliance programme. HSBC Holdings entered into an agreement with the Office of Foreign Assets Control ('OFAC') regarding historical transactions involving parties subject to OFAC sanctions. The Skilled Person/Independent Consultant will continue to conduct country reviews and provide periodic reports for a period of time at the FCA's and FRB's discretion.

Mitigating actions

- We continued to enhance our financial crime risk management capabilities. We are investing in the next generation of tools to fight financial crime through the application of advanced analytics and artificial intelligence.
- We are developing procedures and controls to manage the risks associated with direct and indirect exposure to virtual currencies.
- We continue to work with jurisdictions and relevant international bodies to address data privacy challenges through international standards, guidance, and legislation to enable effective management of financial crime risk.
- We continue to to take steps designed to ensure that the reforms we have put in place are both effective and sustainable over the long term.

Ibor transition

Interbank offered rates ('Ibors') are used to set interest rates on hundreds of trillions of US dollars' worth of different types of financial transactions and are used extensively for valuation purposes, risk measurement and performance benchmarking.

Following the recommendations of the Financial Stability Board, a fundamental review and reform of the major interest rates benchmarks, including Ibors, are underway across the world's largest financial markets. In some cases, the reform will include replacing interest rate benchmarks with alternative risk free rates ('RFRs'). This replacement process is at different stages, and is progressing at different speeds, across several major currencies. There is therefore uncertainty as to the basis, method and timing of transition and their implications on the participants in the financial markets.

The group has identified a number of potential prudential, conduct and systemic risks associated with the transition.

Mitigating actions

- We have established a global programme across all of our global businesses to coordinate HSBC's transition activities and to assess the potential risks and impacts of any transition.
- We will continue to engage with industry participants and the official sector to support an orderly transition.

Risks associated with workforce capability, capacity and environmental factors with potential impact on growth

Our success in delivering our strategic priorities, as well as proactively managing the regulatory environment, depends on the development and retention of our leadership and high-performing employees. The ability to continue to attract, train, motivate and retain highly qualified professionals in an employment market where expertise is often mobile and in short supply is critical, particularly as our business lines execute their strategic business outlooks. This may be affected by external and environmental factors, such as changes to immigration policies and regulations and tax reforms in key markets that require active responses.

Mitigating actions

- HSBC University is focused on developing opportunities and tools for current and future skills, personal skills and leaders to create an environment for success.
- We continue to develop succession plans for key management roles, with actions agreed and reviewed on a regular basis.
- We actively respond to immigration changes through the global immigration programme. Other political and regulatory challenges are being closely monitored to minimise the impact on the attraction and retention of talent and key performers.
- HSBC is building the healthiest human system where colleagues can thrive. A number of initiatives have been launched to improve our ways of working and encourage an open and positive culture (e.g. simplifying processes and governance, and adopting new behaviours). We also promote a diverse and inclusive workforce and provide active support across a wide range of health and well-being activities.

Risks arising from the receipt of services from third parties

We utilise third parties for the provision of a range of services, in common with other financial service providers. Risks arising from the use of third-party service providers may be less transparent and therefore more challenging to manage or influence. It is critical that we ensure that we have appropriate risk management policies, processes and practices. This includes adequate control over the selection, governance and oversight of third parties, particularly for key processes and controls that could affect operational resilience. Any deficiency in our management of risks arising from the use of third parties could affect our ability to meet strategic, regulatory or client expectations.

Mitigating actions

- We continue to embed our delivery model in the first line of defence through a dedicated team. Processes, controls and technology to assess third party service providers against key criteria and associated control monitoring, testing and assurance have been deployed.
- A dedicated oversight forum in the second line of defence monitors the embedding of policy requirements and performance against risk appetite. In the fourth quarter of 2018, second line of defence oversight capabilities were established.

Credit Risk

(Audited)

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract. Credit risk arises principally from direct lending, trade finance and leasing business, but also from certain other products, such as guarantees and derivatives.

Credit risk generates the largest regulatory capital requirement of the risks we incur. The group has standards, policies and procedures dedicated to controlling and monitoring risk from all such activities. The group's principal credit risk management procedures and policies, which follow policies established by HSBC Group Head Office, include the following:

- Formulating credit policies which are consistent with the Group credit policy and documenting these in detail in dedicated manuals.
- Establishing and maintaining the group's large credit exposure policy. This policy delineates the group's maximum exposures to individual customers, customer groups and other risk concentrations.
- Establishing and complying with lending guidelines on the group's attitude towards, and appetite for, lending to specified market sectors and industries.
- Undertaking an objective assessment of risk. All commercial non-bank credit facilities originated by the group in excess of designated limits are subject to review prior to the facilities being committed to customers.
- Controlling exposures to banks and other financial institutions. The group's credit and settlement risk limits to counterparties in the finance and government sectors are designed to optimise the use of credit availability and avoid excessive risk concentration.
- Managing exposures to debt securities by establishing controls in respect of the liquidity of securities held for trading and setting issuer limits for financial investments. Separate portfolio limits are established for asset-backed securities and similar instruments.
- Controlling cross-border exposures to manage country and cross-border risk through the imposition of country limits, with sub-limits by maturity and type of business.
- Controlling exposures to selected industries. When necessary, restrictions are imposed on new business, or exposures in the group's operating entities are capped.

- Maintaining and developing risk ratings in order to categorise exposures meaningfully and facilitate focused management of the attendant risks. Rating methodology is based upon a wide range of financial analytics together with market data-based tools which are core inputs to the assessment of counterparty risk. Although automated risk-rating processes are increasingly used for the larger facilities, ultimate responsibility for setting risk grades rests in each case with the final approving executive. Risk grades are reviewed frequently and amendments, where necessary, are implemented promptly.

Both the group's Risk Management Meeting ('RMM') and HSBC Group Head Office receive regular reports on credit exposures. These include information on large credit exposures, concentrations, industry exposures, levels of impairment provisioning and country exposures.

RMM has the responsibility for risk approval authorities and approving definitive risk policies and controls. It monitors risk inherent to the financial services business, receives reports, determines action to be taken and reviews the efficacy of the risk management framework.

The Executive Committee ('EXCO') and RMM are supported by a dedicated group risk function headed by the Chief Risk Officer, who is a member of both EXCO and RMM and reports to the Chief Executive.

The Risk Committee also has responsibility for oversight and advice to the Board on risk matters. The key responsibilities of the Risk Committee in this regard include preparing advice to the Board on the overall risk appetite tolerance and strategy within the group, and seeking such assurance as it may deem appropriate that account has been taken of the current and prospective macroeconomic and financial environment. The Risk Committee is also responsible for the periodic review of the effectiveness of the internal control and risk management frameworks and advising the Board on all high level risk matters. The Risk Committee approves the appointment and removal of the group's Chief Risk Officer.

Maximum exposure to credit risk

(Audited)

Our credit exposure is spread across a broad range of asset classes, including those measured at amortised cost and fair value, and off-balance sheet financial instruments. The following table presents the maximum exposure to credit risk from balance sheet and off-balance sheet financial instruments, before taking account of any collateral held or other credit enhancements (unless such credit enhancements meet accounting offsetting requirements). For financial assets recognised on the balance sheet, the maximum exposure to credit risk equals their carrying amount; for financial guarantees and similar contracts granted, it is the maximum amount that we would have to pay if the guarantees were called upon. For loan commitments and other credit-related commitments, it is generally the full amount of the committed facilities.

Maximum exposure to credit risk before collateral held or other credit enhancements

	2018	2017
	HK$m	HK$m
Cash and sight balances at central banks	**205,660**	208,073
Items in the course of collection from other banks	**25,380**	25,714
Hong Kong Government certificates of indebtedness	**280,854**	267,174
Trading assets	**439,363**	389,133
Derivatives	**292,869**	300,243
Financial assets designated at fair value	**33,023**	18,656
Reverse repurchase agreements – non-trading	**406,327**	330,890
Placings with and advances to banks	**338,151**	433,005
Loans and advances to customers	**3,528,702**	3,328,980
Financial investments	**1,865,168**	1,711,598
Amounts due from Group companies	**70,455**	227,729
Other assets	**159,483**	93,610
Financial guarantees and other similar contracts[1]	**291,915**	288,779
Loan and other credit-related commitments	**2,879,365**	2,779,845
At 31 Dec	**10,816,715**	10,403,429

1 *Performance and other guarantees were included. Comparatives have been represented to conform to the current year presentation.*

Total exposure to credit risk remained broadly unchanged in 2018 with loans and advances continuing to be the largest element.

Summary of credit risk

(Audited)

The group has adopted the requirements of HKFRS 9 from 1 January 2018. The scope of impairment under HKFRS 9 covers amortised cost financial assets, loan commitments and financial guarantees, as well as debt instruments measured at Fair Value through Other Comprehensive Income ('FVOCI'). Impairment is calculated in three stages and financial instruments are allocated into one of the three stages, where the transfer mechanism depends on whether there is a significant increase in credit risk between its first recognition and the relevant reporting period, or there is objective evidence of impairment and therefore considered to be in default or otherwise credit-impaired. After the allocation, the measurement of expected credit loss ('ECL'), which is the product of probability of default ('PD'), loss given default ('LGD') and exposure at default ('EAD'), will reflect the change in risk of default occurring over the remaining life of the instruments.

The table below presents the gross carrying/nominal amount of financial instruments to which the impairment requirements in HKFRS 9 are applied and the associated allowance for expected credit losses ('ECL'). Due to the forward-looking nature of HKFRS 9, the scope of financial instruments on which ECL are recognised is greater than the scope of HKAS 39.

Summary of financial instruments to which the impairment requirements in HKFRS 9 are applied

	Gross carrying/ nominal amount	Allowance for ECL[1]
At 31 Dec 2018	**HK$m**	**HK$m**
Loans and advances to customers at amortised cost	**3,545,258**	**(16,556)**
Placings with and advances to banks at amortised cost	**338,177**	**(26)**
Other financial assets measured at amortised cost	**1,436,433**	**(167)**
– cash and sight balances at central banks	**205,660**	**–**
– items in the course of collection from other banks	**25,380**	**–**
– Hong Kong Government certificates of indebtedness	**280,854**	**–**
– reverse repurchase agreements – non-trading	**406,327**	**–**
– financial investments	**367,521**	**(120)**
– prepayments, accrued income and other assets	**150,691**	**(47)**
Amounts due from Group companies	**58,631**	**–**
Loans and other credit related commitments	**1,490,711**	**(376)**
Financial guarantee	**50,307**	**(280)**

	Fair value	Allowance for ECL
	HK$m	**HK$m**
At 31 Dec 2018		
Debt instruments measured at Fair Value through Other Comprehensive Income ('FVOCI')[2]	**1,497,767**	**(44)**

1 For retail overdrafts and credit cards, the total ECL is recognised against the financial asset unless the total ECL exceeds the gross carrying amount of the financial asset, in which case the ECL is recognised against the loan commitment.

2 Debt instruments measured at FVOCI continue to be measured at fair value with the allowance for ECL as a memorandum item. Change in ECL is recognised in 'Change in expected credit losses and other credit impairment charges' in the income instatement.

The following table provides an overview of the group's credit risk by stage, and the associated ECL coverage. The financial assets recorded in each stage have the following characteristics:

Stage 1:	Unimpaired and without significant increase in credit risk on which a 12-month allowance for ECL is recognised.
Stage 2:	A significant increase in credit risk has been experienced since initial recognition on which a lifetime ECL is recognised.
Stage 3:	Objective evidence of impairment, and are therefore considered to be in default or otherwise credit-impaired on which a lifetime ECL is recognised.
POCI:	Purchased or originated at a deep discount that reflects the incurred credit losses on which a lifetime ECL is recognised.

Summary of credit risk (excluding debt instruments measured at FVOCI) by stage distribution and ECL coverage by industry sector

	Gross carrying/nominal amount					Allowance for ECL					ECL coverage %				
	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total	Stage 1	Stage 2	Stage 3	POCI	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	%	%	%	%	%
At 31 Dec 2018															
Loans and advances to customers	3,345,371	180,142	19,024	721	3,545,258	(3,014)	(3,713)	(9,549)	(280)	(16,556)	0.1	2.1	50.2	38.8	0.5
– personal	1,219,173	42,395	5,431	–	1,266,999	(1,625)	(2,763)	(1,412)	–	(5,800)	0.1	6.5	26.0	–	0.5
– corporate[1]	1,919,264	131,234	13,407	721	2,064,626	(1,297)	(920)	(8,017)	(280)	(10,514)	0.1	0.7	59.8	38.8	0.5
– financial institutions[2]	206,934	6,513	186	–	213,633	(92)	(30)	(120)	–	(242)	0.0	0.5	64.5	–	0.1
Placings with and advances to banks	337,079	1,098	–	–	338,177	(24)	(2)	–	–	(26)	0.0	0.2	–	–	0.0
Other financial assets	1,427,193	9,170	70	–	1,436,433	(140)	(27)	–	–	(167)	0.0	0.3	–	–	0.0
Loan and other credit-related commitments	1,464,749	25,847	115	–	1,490,711	(275)	(101)	–	–	(376)	0.0	0.4	–	–	0.0
– personal	1,024,061	8,102	4	–	1,032,167	(1)	(3)	–	–	(4)	0.0	0.0	–	–	0.0
– corporate[1]	384,855	15,559	111	–	400,525	(262)	(97)	–	–	(359)	0.1	0.6	–	–	0.1
– financial institutions[2]	55,833	2,186	–	–	58,019	(12)	(1)	–	–	(13)	0.0	0.0	–	–	0.0
Financial guarantee	43,261	6,349	697	–	50,307	(26)	(33)	(221)	–	(280)	0.1	0.5	31.7	–	0.6
– personal	4,562	1	5	–	4,568	–	–	(1)	–	(1)	–	–	20.0	–	0.0
– corporate[1]	34,978	6,254	692	–	41,924	(25)	(33)	(220)	–	(278)	0.1	0.5	31.8	–	0.7
– financial institutions[2]	3,721	94	–	–	3,815	(1)	–	–	–	(1)	0.0	–	–	–	0.0

The above table does not include balances due from Group companies.

1 *Includes corporate and commercial.*
2 *Includes non-bank financial institutions.*

Unless identified at an earlier stage, all financial assets are deemed to have suffered a significant increase in credit risk when they are 30 days past due ('DPD') and are transferred from stage 1 to stage 2. The table below presents the ageing of stage 2 loans and advances to customers by those less than 30 and greater than 30 days past due and therefore presents those amounts classified as stage 2 due to ageing (30 days past due) and those identified at an earlier stage (less than 30 days past due).

Stage 2 days past due analysis for loans and advances to customers

	Gross carrying amount			Allowance for ECL			ECL coverage %		
		Of which:	*Of which:*		*Of which:*	*Of which:*		*Of which:*	*Of which:*
	Stage 2	*1 to 29 DPD*	*30 and > DPD*	Stage 2	*1 to 29 DPD*	*30 and > DPD*	Stage 2	*1 to 29 DPD*	*30 and > DPD*
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	%	%	%
At 31 Dec 2018									
Loans and advances to customers at amortised cost	180,142	7,632	3,733	(3,713)	(270)	(332)	2.1	3.5	8.9
– personal	42,395	6,366	3,443	(2,763)	(229)	(310)	6.5	3.6	9.0
– corporate and commercial	131,234	1,264	80	(920)	(41)	(22)	0.7	3.2	27.5
– non-bank financial institutions	6,513	2	210	(30)	–	–	0.5	–	–

Measurement uncertainty and sensitivity analysis of ECL estimates

(Audited)

ECL impairment allowances recognised in the financial statements reflect the effect of a range of possible economic outcomes, calculated on a probability-weighted basis, based on the economic scenarios described below. The recognition and measurement of ECL involves the use of significant judgement and estimation. It is necessary to formulate multiple forward-looking economic forecasts and incorporate them into the ECL estimates. HSBC uses a standard framework to form economic scenarios to reflect assumptions about future economic conditions, supplemented with the use of management judgement, which may result in using alternative or additional economic scenarios and/or management adjustments.

Methodology

The group has adopted the use of three scenarios, representative of our view of forecast economic conditions, sufficient to calculate unbiased expected loss in most economic environments. They represent a 'most likely outcome' (the Central scenario), and two, less likely 'outer' scenarios, referred to as the Upside and Downside scenarios. Each outer scenario is consistent with a probability of 10%, while the Central scenario is assigned the remaining 80%, according to the decision of the group's senior management. This weighting scheme is deemed appropriate for the unbiased estimation of ECL in most circumstances. Key scenario assumptions are set using the average of forecasts of external economists, helping to ensure that the HKFRS 9 scenarios are unbiased and maximise the use of independent information. The Central, Upside and Downside scenarios selected with reference to external forecast distributions using the above approach are termed the 'consensus economic scenarios'.

For the Central scenario, the Group sets key assumptions such as GDP growth, inflation, unemployment and policy interest rates, using either the average of external forecasts (commonly referred to as consensus forecasts) for most economies, or market prices. An external provider's global macro model, conditioned to follow the consensus forecasts, projects the other paths required as inputs to credit models. This external provider is subject to HSBC's risk governance framework, with oversight by a specialist internal unit.

The Upside and Downside scenarios are designed to be cyclical, in that GDP growth, inflation and unemployment usually revert back to the Central scenario after the first three years for major economies. The Group determines the maximum divergence of GDP growth from the Central scenario using the 10^{th} and the 90^{th} percentile of the entire distribution of forecast outcomes for major economies. While key economic variables are set with reference to external distributional forecasts, the Group also aligns the overall narrative of the scenarios to the macroeconomic risks described in HSBC's 'Top and emerging risks'. This ensures that scenarios remain consistent with the more qualitative assessment of these risks. The Group projects additional variable paths using the external provider's global macro model.

The Upside and Downside scenarios are generated at the year-end and are only updated during the year if economic conditions change significantly. The Central scenario is generated every quarter.

The group recognises that the consensus economic scenario approach, using three scenarios, will be insufficient in certain economic environments. Additional analysis may be requested at management's discretion. This may result in a change in the weighting scheme assigned to the three scenarios or the inclusion of extra scenarios. The group anticipates that there will be only limited instances when the standard approach will not apply. We invoked this additional step during 2018 to make a management adjustment in respect of trade and tariff-related tensions. See 'Global trade war scenario' below.

Description of Consensus Economic Scenarios

The economic assumptions presented in this section have been formed internally by HSBC specifically for the purpose of calculating ECL.

The consensus Central scenario

The group's central scenario is one of moderate growth over the forecast period 2019–2023. Global GDP growth is expected to be 2.9% on average over the period, which is marginally higher than the average growth rate over the period 2013–2017. Across the key markets, we note:

- Expected average rates of GDP growth over the 2019–2023 period are lower than average growth rates achieved over the 2013–2017 period for mainland China and Hong Kong. For mainland China, it is consistent with the theme of ongoing rebalancing from an export-oriented economy to deeper domestic consumption.
- The average unemployment rate over the projection horizon is expected to remain at or below the averages observed in the 2013–2017 period across all of our major markets.
- Inflation is expected to be stable despite steady GDP growth and strong labour markets and will remain close to central bank targets in our core markets over the forecast period.
- Major central banks are expected to gradually raise their main policy interest rate. The US Federal Reserve Board ('FRB') will continue to reduce the size of its balance sheet. The Chinese Central Bank is expected to continue to rely on its toolkit of measures to control capital flows and manage domestic credit growth.
- The West Texas Intermediate oil price is forecast to average US$63 per barrel over the projection period.

The following table describes key macroeconomic variables and the probabilities assigned in the Consensus Central scenario.

Central scenario (average 2019–2023)

	Hong Kong	Mainland China
GDP growth rate (%)	2.6	5.9
Inflation (%)	2.3	2.5
Unemployment (%)	3.1	4.0
Short term interest rate (%)	2.6	4.0
10Y treasury bond yields (%)	3.1	N/A
Property price growth (%)	1.0	5.8
Equity price growth (%)	3.8	9.6
Probability (%)	80.0	80.0

Note: N/A – not required in credit models.

The consensus Upside scenario

Globally, real GDP growth rises in the first two years of the Upside scenario before converging to the Central scenario. Increased confidence, de-escalation of trade tensions and removal of trade barriers, expansionary fiscal policy, stronger oil prices as well as calming of geopolitical tensions are the risk themes that support the 2018 year-end Upside scenario.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Upside scenario.

Upside scenario (average 2019-2023)

	Hong Kong	Mainland China
GDP growth rate (%)	2.9	6.1
Inflation (%)	2.6	2.7
Unemployment (%)	2.9	3.7
Short term interest rate (%)	2.6	4.1
10Y treasury bond yields (%)	3.3	N/A
Property price growth (%)	1.4	7.3
Equity price growth (%)	7.1	13.6
Probability (%)	10.0	10.0

Note: N/A – not required in credit models.

The Downside scenarios

The consensus Downside scenario

Globally, real GDP growth declines for two years in the Downside scenario before recovering to the Central scenario. House price growth either stalls or contracts and equity markets correct abruptly in our major markets. The global slowdown in demand drives commodity prices lower and results in an accompanying fall in inflation. Central Banks remain accommodative. This is consistent with the key risk themes of the downside, such as an intensification of global protectionism and trade barriers, faster than expected tightening of Fed policy rate, China choosing to rebalance with stringent measures, and weaker commodity prices.

The following table describes key macroeconomic variables and the probabilities assigned in the consensus Downside scenario.

Downside scenario (average 2019-2023)

	Hong Kong	Mainland China
GDP growth rate (%)	2.2	5.8
Inflation (%)	1.9	2.2
Unemployment (%)	3.5	4.2
Short term interest rate (%)	0.6	3.6
10Y treasury bond yields (%)	1.6	N/A
Property price growth (%)	(0.8)	3.3
Equity price growth (%)	(1.6)	2.0
Probability (%)	5.0	5.0

Note: N/A – not required in credit models.

Global trade war Downside scenario

Continued escalation of trade- and tariff-related tensions throughout 2018 resulted in management modelling deeper effects of a trade war scenario than currently captured by the consensus Downside scenario for key Asia-Pacific economies. This additional trade war scenario models the effects of a significant escalation in global tensions, stemming from trade disputes but going beyond increases in tariffs to affect non-tariff barriers, cross-border investment flows and threatens the international trade architecture. This scenario assumes actions that lie beyond currently enacted and proposed tariffs and has been modelled as an addition to the three consensus-driven scenarios for these economies. This scenario has been assigned a 5% weight, leaving 5% assigned to the consensus Downside scenario, and has been used in addition to the consensus economic scenarios for eight Asia-Pacific markets, including the group's major markets of Hong Kong and mainland China.

Key macro-economic variables are shown in the table below:

Global Trade War scenario (average 2019-2023)

	Hong Kong	Mainland China
GDP growth rate (%)	1.5	5.4
Inflation (%)	1.6	2.1
Unemployment (%)	4.7	4.3
Short term interest rate (%)	1.0	3.1
10Y treasury bond yields (%)	2.0	N/A
Property price growth (%)	(2.0)	2.9
Equity price growth (%)	(3.5)	1.1
Probability (%)	5.0	5.0

Note: N/A – not required in credit models.

The conditions that resulted in departure from the consensus economic forecasts will be reviewed regularly as economic conditions change in future to determine whether these adjustments continue to be necessary.

How economic scenarios are reflected in the wholesale calculation of ECL

The Group has developed a globally consistent methodology for the application of forward economic guidance into the calculation of ECL by incorporating forward economic guidance into the estimation of the term structure of probability of default ('PD') and loss given default ('LGD'). For PDs, we consider the correlation of forward economic guidance to default rates for a particular industry in a country. For LGD calculations we consider the correlation of forward economic guidance to collateral values and realisation rates for a particular country and industry. PDs and LGDs are estimated for the entire term structure of each instrument.

For impaired loans, LGD estimates take into account independent recovery valuations provided by external consultants where available, or internal forecasts corresponding to anticipated economic conditions and individual company conditions. In estimating the ECL on impaired loans that are individually considered not to be significant, the group incorporates forward economic guidance proportionate to the probability-weighted outcome and the Central scenario outcome for non-stage 3 populations.

How economic scenarios are reflected in the retail calculation of ECL

The Group has developed and implemented a globally consistent methodology for incorporating forecasts of economic conditions into ECL estimates. The impact of economic scenarios on PD is modelled at a portfolio level. Historic relationships between observed default rates and macro-economic variables are integrated into HKFRS 9 ECL estimates by leveraging economic response models. The impact of these scenarios on PD is modelled over a period equal to the remaining maturity of underlying asset or assets. The impact on LGD is modelled for mortgage portfolios by forecasting future loan-to-value ('LTV') profiles for the remaining maturity of the asset by leveraging national level forecasts of the house price index and applying the corresponding LGD expectation.

Economic scenarios sensitivity analysis of ECL estimates

The ECL outcome is sensitive to judgement and estimations made with regards to the formulation and incorporation of multiple forward-looking economic conditions described above. As a result, management assessed and considered the sensitivity of the ECL outcome against the forward-looking economic conditions as part of the ECL governance process by recalculating the ECL under each scenario described above for selected portfolios, applying a 100% weighting to each scenario in turn. The weighting is reflected in both the determination of significant increase in credit risk as well as the measurement of the resulting ECL.

The economic scenarios are generated to capture HSBC's view of a range of possible forecast economic conditions that is sufficient for the calculation of unbiased and probability-weighted ECL. Therefore, the ECL calculated for each of the scenarios represent a range of possible outcomes that have been evaluated to estimate ECL. As a result, the ECL calculated for the Upside and Downside scenarios should not be taken to represent the upper and lower limits of possible actual ECL outcomes. A wider range of possible ECL outcomes reflects uncertainty about the distribution of economic conditions and does not necessarily mean that credit risk on the associated loans is higher than for loans where the distribution of possible future economic conditions is narrower. The recalculated ECL for each of the scenarios should be read in the context of the sensitivity analysis as a whole and in conjunction with the narrative disclosures provided below.

Under certain economic conditions, economic factors can influence ECL in counter-intuitive ways (for example an increase in GDP growth accompanied by rising interest rates resulting in an increase in PDs) and it may be necessary to apply management judgement to the output, which following management review of the calculated ECL sensitivities, may require modelled output adjustments.

ECL under each scenario is given as a percentage of the probability-weighted ECL impairment allowance as at 31 December 2018.

Wholesale analysis

HKFRS 9 ECL sensitivity to future economic conditions [1]

	Hong Kong	Mainland China
ECL coverage of loans and advances to customers at 31 December 2018		
Reported ECL (HK$m)	1,267	647
Drawn Amount (HK$m)	2,542,747	526,996
Reported ECL Coverage	0.05%	0.12%
Coverage ratios by scenario:		
Consensus Central scenario	0.05%	0.12%
Consensus Upside scenario	0.05%	0.12%
Consensus Downside scenario	0.05%	0.13%
Global trade war scenario	0.17%	0.23%

1 *Excludes ECL and drawn amounts related to defaulted obligors.*

ECL coverage rates reflect the underlying observed credit defaults, the sensitivity to economic environment, extent of security and the effective maturity of the book. Hong Kong is typically a short-dated book with low defaults, which is reflected in the low ECL coverage ratio.

Retail analysis

HKFRS 9 ECL sensitivity to future economic conditions

	Hong Kong	Mainland China
ECL coverage of loans and advances to customers at 31 December 2018		
Reported ECL (HK$m)	2,671	60
Drawn Amount (HK$m)	723,351	72,039
Reported ECL Coverage	0.37%	0.08%
Coverage ratios by scenario:		
Consensus Central scenario	0.37%	0.08%
Consensus Upside scenario	0.35%	0.08%
Consensus Downside scenario	0.37%	0.09%
Global trade war scenario	0.43%	0.09%

ECL coverage rates for retail are reflective of the portfolio quality and sensitivity to the economic environment. The economic uncertainty in Hong Kong increases the ECL by 6bp. This is reflective of the nature of book, which is primarily comprised of mortgage portfolio with low LTVs.

Overall, as the level of uncertainty in economy or historical economic variable correlations or credit quality changes, corresponding changes in the ECL sensitivity would occur.

Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees

The table below provides a reconciliation by stage of the group's gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees.

The transfers of financial instruments represents the impact of stage transfers upon the gross carrying/nominal amount and associated allowance for ECL. The net remeasurement of ECL arising from stage transfers represents the increase or decrease due to these transfers, for example, moving from a 12-month (stage 1) to a lifetime (stage 2) ECL measurement basis. Net remeasurement excludes the underlying CRR/PD movements of the financial instruments transferring stage. This is captured, along with other credit quality movements in the 'changes in risk parameters - credit quality' line item.

The 'Net new and further lending/repayments' represent the gross carrying/nominal amount and associated allowance ECL impact from volume movements within the group's lending portfolio.

Reconciliation of changes in gross carrying/nominal amount and allowances for placings with and advances to banks and loans and advances to customers, including loan commitments and financial guarantees

(Audited)

	Stage 1		Stage 2		Stage 3		POCI		Total	
	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL	Gross carrying/ nominal amount	Allowance for ECL
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 1 Jan 2018	4,852,623	(3,365)	280,319	(4,277)	17,713	(9,239)	1,231	(185)	5,151,886	(17,066)
Transfers of financial instruments:	(33,980)	(2,276)	21,399	3,214	12,581	(938)	–	–	–	–
– transfers from stage 1 to stage 2	(324,248)	789	324,248	(789)	–	–	–	–	–	–
– transfers from stage 2 to stage 1	295,728	(3,109)	(295,728)	3,109	–	–	–	–	–	–
– transfers to stage 3	(5,481)	50	(8,862)	1,064	14,343	(1,114)	–	–	–	–
– transfers from stage 3	21	(6)	1,741	(170)	(1,762)	176	–	–	–	–
Net remeasurement of ECL arising from transfer of stage	–	1,819	–	(1,800)	–	(262)	–	–	–	(243)
Net new and further lending/ repayments	466,876	(872)	(83,068)	173	(5,105)	2,434	(500)	11	378,203	1,746
Changes in risk parameters - credit quality	–	1,170	–	(1,177)	–	(7,040)	–	(114)	–	(7,161)
Changes to model used for ECL calculation	–	–	–	–	–	–	–	–	–	–
Assets written off	–	–	–	–	(4,974)	4,973	(6)	6	(4,980)	4,979
Foreign exchange and other	(95,123)	185	(5,216)	18	(379)	300	(4)	3	(100,722)	506
At 31 Dec 2018	5,190,396	(3,339)	213,434	(3,849)	19,836	(9,772)	721	(279)	5,424,387	(17,239)
ECL release/(charge) for the year										(5,658)
Recoveries										940
Others										(21)
Total ECL charge for the year										(4,739)

Credit quality of financial instruments

(Audited)

We assess the credit quality of all financial instruments that are subject to credit risk. The credit quality of financial instruments is a point in time assessment of the probability of default of financial instruments, whereas HKFRS 9 stages 1 and 2 are determined based on relative deterioration of credit quality since initial recognition. Accordingly, for non-credit impaired financial instruments, there is no direct relationship between the credit quality assessment and HKFRS 9 stages 1 and 2, though typically the lower credit quality bands exhibit a higher proportion in stage 2. The five credit quality classifications defined below each encompass a range of granular internal credit rating grades assigned to wholesale and retail lending businesses and the external ratings attributed by external agencies to debt securities, as shown in the table below. Under HKAS 39, retail lending credit quality was disclosed based on expected-loss percentages. Under HKFRS 9 retail lending credit quality is now disclosed based on a 12-month probability-weighted PD. The credit quality classifications for wholesale lending are unchanged and are based on internal credit risk ratings.

Credit quality classification

	Debt securities and other bills	Wholesale lending		Retail lending	
	External credit rating	Internal credit rating	12-month Basel probability of default %	Internal credit rating	12-month probability-weighted PD %
Credit quality classification					
Strong	A- and above	CRR1 to CRR2	0.000–0.169	Band 1 and 2	0.000–0.500
Good	BBB+ to BBB-	CRR3	0.170–0.740	Band 3	0.501–1.500
Satisfactory	BB+ to B and unrated	CRR4 to CRR5	0.741–4.914	Band 4 and 5	1.501–20.000
Sub-standard	B- to C	CRR6 to CRR8	4.915–99.999	Band 6	20.001–99.999
Credit-impaired	Default	CRR9 to CRR10	100.000	Band 7	100.000

Quality classification definitions

'Strong' exposures demonstrate a strong capacity to meet financial commitments, with negligible or low probability of default.
'Good' exposures demonstrate a good capacity to meet financial commitments, with low default risk.
'Satisfactory' exposures require closer monitoring and demonstrate an average to fair capacity to meet financial commitments, with moderate default risk.
'Sub-standard' exposures require varying degrees of special attention and default risk is of greater concern.
'Credit-impaired' exposures have been assessed as impaired.

Distribution of financial instruments by credit quality

(Audited)

	Gross carrying/notional amount							
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total	Allowance for ECL	Net
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
In-scope for HKFRS 9 impairment								
Loans and advances to customers held at amortised cost	1,867,142	881,026	758,398	19,123	19,569	3,545,258	(16,556)	3,528,702
– personal	1,052,365	116,821	88,755	3,627	5,431	1,266,999	(5,800)	1,261,199
– corporate and commercial	713,295	702,871	619,057	15,451	13,952	2,064,626	(10,514)	2,054,112
– non-bank financial institutions	101,482	61,334	50,586	45	186	213,633	(242)	213,391
Placings with and advances to banks held at amortised cost	311,304	22,434	4,439	–	–	338,177	(26)	338,151
Cash and sight balances at central banks	200,977	3,890	793	–	–	205,660	–	205,660
Items in the course of collection from other banks	25,380	–	–	–	–	25,380	–	25,380
Hong Kong Government certificates of indebtedness	280,854	–	–	–	–	280,854	–	280,854
Reverse repurchase agreements – non-trading	294,944	68,872	42,511	–	–	406,327	–	406,327
Other financial assets held at amortised cost	321,495	41,044	4,982	–	–	367,521	(120)	367,401
Prepayments, accrued income and other assets	83,748	32,197	34,283	393	70	150,691	(47)	150,644
Debt instruments measured at fair value through other comprehensive income[1]	1,422,307	67,108	9,111	–	–	1,498,526	(44)	1,498,482
Out-of-scope for HKFRS 9 impairment								
Trading assets	381,629	37,719	19,717	298	–	439,363	–	439,363
Other financial assets designated and otherwise mandatorily measured at fair value through profit or loss	22,286	3,183	3,159	–	–	28,628	–	28,628
Derivatives	165,327	43,362	5,011	159	–	213,859	–	213,859
At 31 Dec 2018	5,377,393	1,200,835	882,404	19,973	19,639	7,500,244	(16,793)	7,483,451
Percentage of total credit quality	72.0%	16.0%	12.0%	0.0%	0.0%	100%	–	–
Loan and other credit related commitments[2]	2,139,267	261,579	145,681	2,248	115	2,548,890	(376)	2,548,514
Financial guarantee and similar contracts	97,697	104,379	69,593	1,628	1,169	274,466	(314)	274,152

The above table does not include balances due from Group companies.

1 *For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset, before adjusting for any loss allowance. As such the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.*

2 *Revocable loan and other commitments of HK$1,058bn which are out-of-scope of HKFRS 9 are presented within the strong credit quality classification.*

Distribution of financial instruments to which the impairment requirements in HKFRS 9 are applied, by credit quality and stage allocation

	Gross carrying/notional amount							
	Strong	Good	Satisfactory	Sub-standard	Credit impaired	Total	Allowance for ECL	Net
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Placings with and advances to banks at amortised cost	311,304	22,434	4,439	–	–	338,177	(26)	338,151
– stage 1	311,012	22,022	4,045	–	–	337,079	(24)	337,055
– stage 2	292	412	394	–	–	1,098	(2)	1,096
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
Loans and advances to customers at amortised cost	1,867,142	881,026	758,398	19,123	19,569	3,545,258	(16,556)	3,528,702
– stage 1	1,861,473	840,372	639,812	3,714	–	3,345,371	(3,014)	3,342,357
– stage 2	5,669	40,654	118,586	15,233	–	180,142	(3,713)	176,429
– stage 3	–	–	–	–	19,024	19,024	(9,549)	9,475
– POCI	–	–	–	176	545	721	(280)	441
Other financial assets measured at amortised cost	1,207,398	146,003	82,569	393	70	1,436,433	(167)	1,436,266
– stage 1	1,204,886	143,493	78,720	94	–	1,427,193	(140)	1,427,053
– stage 2	2,512	2,510	3,849	299	–	9,170	(27)	9,143
– stage 3	–	–	–	–	70	70	–	70
– POCI	–	–	–	–	–	–	–	–
Loan and other credit-related commitments	1,081,090	261,578	145,681	2,247	115	1,490,711	(376)	1,490,335
– stage 1	1,078,356	250,973	134,399	1,021	–	1,464,749	(275)	1,464,474
– stage 2	2,734	10,605	11,282	1,226	–	25,847	(101)	25,746
– stage 3	–	–	–	–	115	115	–	115
– POCI	–	–	–	–	–	–	–	–
Financial guarantees	14,791	19,700	14,675	444	697	50,307	(280)	50,027
– stage 1	14,370	18,051	10,779	61	–	43,261	(26)	43,235
– stage 2	421	1,649	3,896	383	–	6,349	(33)	6,316
– stage 3	–	–	–	–	697	697	(221)	476
– POCI	–	–	–	–	–	–	–	–
At 31 Dec 2018	**4,481,725**	**1,330,741**	**1,005,762**	**22,207**	**20,451**	**6,860,886**	**(17,405)**	**6,843,481**
Debt instruments at FVOCI[1]								
– stage 1	1,422,307	67,108	9,110	–	–	1,498,525	(44)	1,498,481
– stage 2	–	–	1	–	–	1	–	1
– stage 3	–	–	–	–	–	–	–	–
– POCI	–	–	–	–	–	–	–	–
At 31 Dec 2018	**1,422,307**	**67,108**	**9,111**	**–**	**–**	**1,498,526**	**(44)**	**1,498,482**

The above table does not include balances due from Group companies.

1 *For the purposes of this disclosure, gross carrying value is defined as the amortised cost of a financial asset, before adjusting for any loss allowance. As such the gross carrying value of debt instruments at FVOCI as presented above will not reconcile to the balance sheet as it excludes fair value gains and losses.*

Collateral and other credit enhancements

(Audited)

Although collateral can be an important mitigant of credit risk, it is the group's general practice to lend on the basis of the customer's ability to meet their obligations out of their cash flow resources rather than rely on the value of security offered. Depending on the customer's standing and the type of product, facilities may be provided unsecured. For other lending, a charge over collateral is obtained and considered in determining the credit decision and pricing. In the event of default, the bank may use the collateral as a source of repayment.

Depending on its form, collateral can have a significant financial effect in mitigating our exposure to credit risk. The tables below provide a quantification of the value of fixed charges we hold over a borrower's specific asset (or assets) where we have a history of enforcing, and are able to enforce the collateral in satisfying a debt in the event of the borrower failing to meet its contractual obligations, and can be realised by sale in an established market or where the collateral is cash. The collateral valuation in the tables below excludes any adjustments for obtaining and selling the collateral.

We may also manage our risk by employing other types of collateral and credit risk enhancements, such as second charges, other liens and unsupported guarantees, but the valuation of such mitigants is less certain and their financial effect has not been quantified. In particular, loans shown in the tables below as not collateralised may benefit from such credit mitigants.

Certain credit mitigants are used strategically in portfolio management activities. While single name concentrations arise in portfolios managed by Global Banking and Corporate Banking, it is only in Global Banking that their size requires the use of portfolio level credit mitigants. Across Global Banking, risk limits and utilisations, maturity profiles and risk quality are monitored and managed pro-actively. This process is key to the setting of risk appetite for these larger, more complex, geographically distributed customer groups. While the principal form of risk management continues to be at the point of exposure origination, through the lending decision-making process, Global Banking also utilises loan sales and credit default swap ('CDS') hedges to manage concentrations and reduce risk. These transactions are the responsibility of a dedicated Global Banking portfolio management team. Hedging activity is carried out within agreed credit parameters, and is subject to market risk limits and a robust governance structure. CDS mitigants are held at portfolio level and are not reported in the presentation below.

Collateral on loans and advances

The collateral measured in the following tables consists of fixed first charges on real estate, and charges over cash and marketable financial instruments. The values in the tables represent the expected market value on an open market basis; no adjustment has been made to the collateral for any expected costs of recovery. Marketable securities are measured at their fair value. The loan-to-value ('LTV') ratios presented are calculated by directly associating loans and advances with the collateral that individually and uniquely supports each facility. When collateral assets are shared by multiple loans and advances, whether specifically or, more generally, by way of an all monies charge, the collateral value is pro-rated across the loans and advances protected by the collateral.

Other types of collateral such as unsupported guarantees and floating charges over the assets of a customer's business are not measured in the tables below. While such mitigants have value, often providing rights in insolvency, their assignable value is not sufficiently certain and they are therefore assigned no value for disclosure purposes.

For credit impaired loans, the collateral values cannot be directly compared with impairment allowances recognised. The loan-to-value ('LTV') figures use open market values with no adjustments. Impairment allowances are calculated on a different basis, by considering other cash flows and adjusting collateral values for costs of realising collateral.

Personal lending

The table below shows residential mortgage lending, including off-balance sheet loan commitments, by level of collateral. The collateral included in the table below consists of fixed first charges on real estate.

Residential mortgages including loan commitments by level of collateral

	Gross carrying/ nominal amount	ECL coverage
	HK$m	%
Stage 1		
Fully collateralised	**965,164**	**0.0**
LTV ratio:		
– less than 70%	**859,476**	**0.0**
– 71% to 90%	**89,821**	**0.0**
– 91% to 100%	**15,867**	**0.1**
Partially collateralised (A):	**3,121**	**0.0**
– *collateral value on A*	**2,792**	
Total	**968,285**	**0.0**
Stage 2		
Fully collateralised	**20,638**	**0.4**
LTV ratio:		
– less than 70%	**15,913**	**0.2**
– 71% to 90%	**4,277**	**0.7**
– 91% to 100%	**448**	**2.9**
Partially collateralised (B):	**93**	**4.3**
– *collateral value on B*	***83***	
Total	**20,731**	**0.4**
Stage 3		
Fully collateralised	**1,694**	**9.3**
LTV ratio:		
– less than 70%	**1,210**	**4.9**
– 71% to 90%	**371**	**16.4**
– 91% to 100%	**113**	**32.7**
Partially collateralised (C):	**88**	**43.2**
– *collateral value on C*	***80***	
Total	**1,782**	**10.9**
At 31 Dec 2018	**990,798**	**0.0**

The LTV ratio is calculated as the gross on-balance sheet carrying amount of the loan and any off-balance sheet loan commitment at the balance sheet date divided by the value of collateral. The methodologies for obtaining residential property collateral values vary throughout the group, but are typically determined through a combination of professional appraisals, house price indices or statistical analysis. Valuations are updated on a regular basis and, as a minimum, at intervals of every three years. Valuations are conducted more frequently when market conditions or portfolio performance are subject to significant change or where a loan is identified and assessed as impaired.

Other personal lending

Other personal lending consists primarily of personal loans, overdrafts and credit cards, all of which are generally unsecured, except lending to private banking customers which are generally secured.

Corporate, commercial and non-bank financial institutions lending

Collateral held is analysed below separately for commercial real estate and for other corporate, commercial and non-bank financial institutions lending. This reflects the difference in level of collateral held on the portfolios. In each case, the analysis includes off-balance sheet loan commitments, primarily undrawn credit lines.

Commercial real estate loans and advances including loan commitments by level of collateral

	Gross carrying/ nominal amount	ECL coverage
	HK$m	%
Stage 1		
Not collateralised	**352,258**	**0.0**
Fully collateralised	**363,729**	**0.1**
Partially collateralised (A):	**31,107**	**0.1**
– *collateral value on A*	***17,246***	
Total	**747,094**	**0.0**
Stage 2		
Not collateralised	**10,228**	**0.2**
Fully collateralised	**19,440**	**0.6**
Partially collateralised (B):	**1,235**	**0.8**
– *collateral value on B*	***702***	
Total	**30,903**	**0.5**
Stage 3		
Not collateralised	**—**	**—**
Fully collateralised	**129**	**0.8**
Partially collateralised (C):	**—**	**—**
– *collateral value on C*	**—**	
Total	**129**	**0.8**
POCI		
Not collateralised	**—**	**—**
Fully collateralised	**—**	**—**
Partially collateralised (D):	**—**	**—**
– *collateral value on D*	**—**	
Total	**—**	**—**
At 31 Dec 2018	**778,126**	**0.1**

The collateral included in the table above consist of fixed first charges on real estate and charges over cash for the commercial real estate sector. The table includes lending to major property developers which is typically secured by guarantees or is unsecured.

The value of commercial real estate collateral is determined through a combination of professional and internal valuations and physical inspection. Due to the complexity of collateral valuations for commercial real estate, local valuation policies determine the frequency of review based on local market conditions. Revaluation are sought with greater frequency where, as part of the regular credit assessment of the obligor, material concerns arise in relation to the transaction which may reflect on the underlying performance of the collateral, or in circumstances where an obligor's credit quality has declined sufficiently to cause concern that the principal payment source may not fully meet the obligation (i.e. the obligor's credit quality classification indicates it is at the lower end e.g. sub-standard, or approaching impaired).

Commercial real estate lending includes the financing of corporate, institutional and high net worth customers who are investing primarily in income-producing assets and, to a lesser extent, in their construction and development. The group has aligned the definition of commercial real estate to reflect the internal risk management view, and the comparatives presented on page 31, have been represented.

Other corporate, commercial and non-bank financial institutions loans and advances including loan commitments by level of collateral

	Gross carrying/ nominal amount HK$m	ECL coverage %
Stage 1		
Not collateralised	**2,082,196**	**0.0**
Fully collateralised	**352,225**	**0.1**
Partially collateralised (A):	**260,184**	**0.1**
– *collateral value on A*	***108,264***	
Total	**2,694,605**	**0.1**
Stage 2		
Not collateralised	**144,940**	**0.4**
Fully collateralised	**34,740**	**0.6**
Partially collateralised (B):	**27,608**	**0.4**
– *collateral value on B*	***10,987***	
Total	**207,288**	**0.5**
Stage 3		
Not collateralised	**8,339**	**69.1**
Fully collateralised	**2,536**	**34.8**
Partially collateralised (C):	**3,361**	**51.6**
– *collateral value on C*	***1,237***	
Total	**14,236**	**58.9**
POCI		
Not collateralised	**204**	**20.1**
Fully collateralised	**243**	**0.8**
Partially collateralised (D):	**274**	**86.5**
– *collateral value on D*	***269***	
Total	**721**	**38.8**
At 31 Dec 2018	**2,916,850**	**0.4**

The collateral used in the assessment of the above primarily includes first legal charges over real estate and charges over cash in the commercial and industrial sector, and charges over cash and marketable financial instruments in the financial sector.

It should be noted that the table above excludes other types of collateral which are commonly taken for corporate and commercial lending such as unsupported guarantees and floating charges over the assets of a customer's business. While such mitigants have value, and often provide rights in insolvency, their assignable value is insufficiently certain. They are assigned no value for disclosure purposes.

As with commercial real estate, the value of real estate collateral included in the table above is generally determined through a combination of professional and internal valuations and physical inspection. The frequency of revaluation is undertaken on a similar basis to commercial real estate loans and advances; however, for lending activities that are not predominantly commercial real estate-oriented, collateral value is not as strongly correlated to principal repayment performance. Collateral values will generally be refreshed when an obligor's general credit performance deteriorates and it is necessary to assess the likely performance of secondary sources of repayment should reliance upon them prove necessary. For this reason, the table above reports values only for customers with CRR 8 to 10, reflecting that these loans and advances generally have valuations which are comparatively recent. For the purposes of the table above, cash is valued at its nominal value and marketable securities at their fair value.

Derivatives

The International Swaps and Derivatives Association ('ISDA') Master Agreement is our preferred agreement for documenting derivatives activity. It provides the contractual framework within which dealing activity across a full range of over the counter ('OTC') products is conducted, and contractually binds both parties to apply close-out netting across all outstanding transactions covered by an agreement if either party defaults or another pre-agreed termination event occurs. It is common, and our preferred practice, for the parties to execute a Credit Support Annex ('CSA') in conjunction with the ISDA Master Agreement. Under a CSA, collateral is passed between the parties to mitigate the counterparty risk inherent in outstanding positions. The majority of our CSAs are with financial institution clients. Please refer to Note 32 'Offsetting of financial assets and liabilities' for further details.

Other credit risk exposures

In addition to collateralised lending described above, other credit enhancements are employed and methods used to mitigate credit risk arising from financial assets. These are described in more detail below.

Government, bank and other financial institution-issued securities may benefit from additional credit enhancement, notably through government guarantees that reference these assets. Corporate-issued debt securities are primarily unsecured. Debt securities issued by banks and financial institutions include asset-backed securities ('ABS') and similar instruments, which are supported by underlying pools of financial assets. Credit risk associated with ABS is reduced through the purchase of credit default swap ('CDS') protection.

The group's maximum exposure to credit risk includes financial guarantees and similar arrangements that it issues or enters into, and loan commitments to which it is irrevocably committed. Depending on the terms of the arrangement, the group may have recourse to additional credit mitigation in the event that a guarantee is called upon, or a loan commitment is drawn and subsequently defaults. Further information about these arrangements is provided in note 30 'Contingent liabilities and commitments'.

2017 credit risk disclosures

(Unaudited)

The disclosures below were included in our 2017 external reports and do not reflect the adoption of HKFRS 9. As these tables are not directly comparable to the current 2018 credit risk tables, which are disclosed on an HKFRS 9 basis, these 2017 disclosures have been shown below and not adjacent to 2018 tables.

Distribution of financial instruments by credit quality

	Neither past due nor impaired							
	Strong	Good	Satisfactory	Sub-standard	Past due not impaired	Impaired	Impairment allowances	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2017								
Items in the course of collection from other banks	24,420	219	1,075	—	—	—	—	25,714
Trading assets	324,060	27,258	37,216	599				389,133
Derivatives	253,480	38,202	7,855	706				300,243
Financial assets designated at fair value	17,032	855	767	2				18,656
Reverse repurchase agreements – non-trading	249,043	50,103	31,744	—	—	—	—	330,890
Placings with and advances to banks held at amortised cost	401,097	28,366	3,433	109	—	—	—	433,005
Loans and advances to customers held at amortised cost	1,772,405	805,145	696,882	20,136	29,878	17,579	(13,045)	3,328,980
– personal	992,682	101,938	56,398	641	18,930	4,686	(2,106)	1,173,169
– corporate and commercial	666,138	649,775	604,638	19,139	8,742	12,695	(10,728)	1,950,399
– non-bank financial institutions	113,585	53,432	35,846	356	2,206	198	(211)	205,412
Financial investments	1,628,709	40,980	41,909	—	—	—	—	1,711,598
Other assets	40,817	19,582	31,945	593	486	187	—	93,610
Total	4,711,063	1,010,710	852,826	22,145	30,364	17,766	(13,045)	6,631,829

1 *The above table does not include balances due from Group companies.*

Ageing analysis of past due but not impaired financial instruments

	Up to 29 days	30-59 days	60-89 days	90-180 days	Over 180 days	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2017						
Loans and advances to customers held at amortised cost[1]	24,976	3,572	1,326	4	—	29,878
– personal	15,272	2,704	954	—	—	18,930
– corporate and commercial	7,498	868	372	4	—	8,742
– non-bank financial institutions	2,206	—	—	—	—	2,206
Other assets	98	35	54	59	240	486
Total	25,074	3,607	1,380	63	240	30,364

1 *The majority of the loans and advances to customers that are operating within revised terms following restructuring are excluded from this table.*

Impairment allowances as a percentage of gross loans and advances to customers

	Hong Kong	Rest of Asia-Pacific	Total
	HK$m	HK$m	HK$m
At 31 Dec 2017			
Gross loans and advances to customers			
Individually assessed impaired gross loans and advances	6,284	9,259	15,543
Collectively assessed	2,101,416	1,225,066	3,326,482
– impaired loans and advances	673	1,363	2,036
– non-impaired loans and advances	2,100,743	1,223,703	3,324,446
Total gross loans and advances to customers	2,107,700	1,234,325	3,342,025
Impairment allowances	(5,669)	(7,376)	(13,045)
– individually assessed	(3,429)	(4,800)	(8,229)
– collectively assessed	(2,240)	(2,576)	(4,816)
Net loans and advances to customers	2,102,031	1,226,949	3,328,980
Fair value of collateral which has been taken into account in respect of individually assessed impaired loans and advances to customers	2,666	4,806	7,472
Individually assessed impaired gross loans and advances to customers as a percentage of gross loans and advances to customers	0.3%	0.8%	0.5%
Total allowances as a percentage of total gross loans and advances to customers	0.3%	0.6%	0.4%

Movement in impairment allowances on loans and advances to customers

	Individually assessed	Collectively assessed	Total
	HK$m	HK$m	HK$m
At 1 Jan 2017	8,059	4,633	12,692
Amounts written off	(2,189)	(2,806)	(4,995)
Recoveries of loans and advances written off in previous years	180	713	893
Net charge to income statement	2,194	2,136	4,330
Unwinding of discount of loan impairment	(235)	(17)	(252)
Exchange and other adjustments	220	157	377
At 31 Dec 2017	8,229	4,816	13,045

Residential mortgages including loan commitments by level of collateral

	HK$m
Unimpaired loans	
Fully collateralised	905,997
Partially collateralised	
– greater than 100% LTV (A)	420
– *collateral value on A*	378
Not collateralised	44
Total	906,461
Impaired loans	
Fully collateralised	2,223
– less than 70% LTV	1,635
– 71% to 90% LTV	498
– 91% to 100% LTV	90
Partially collateralised	
– greater than 100% LTV (B)	80
– *collateral value on B*	69
Not collateralised	1
Total	2,304
At 31 Dec 2017	908,765

Commercial real estate loans and advances including loan commitments by level of collateral[1]

	HK$m
Rated CRR/EL 1 to 7	597,335
Not collateralised	288,424
Fully collateralised	293,069
Partially collateralised (A)	15,842
– *collateral value on A*	8,297
Rated CRR/EL 8	1
Not collateralised	—
Fully collateralised	1
Partially collateralised (B)	—
– *collateral value on B*	—
Rated CRR/EL 9 to 10	133
Not collateralised	10
Fully collateralised	123
Partially collateralised (C)	—
– *collateral value on C*	—
At 31 Dec 2017	597,469

1 *Comparatives have been restated to align the definition of commercial real estate to reflect the internal risk management view.*

Other corporate, commercial and non-bank financial institutions loans and advances rated CRR/EL 8 to 10 only, including loan commitments, by level of collateral[1]

	HK$m
Rated CRR/EL 8	1,494
Not collateralised	331
Fully collateralised	70
Partially collateralised (A)	1,093
– *collateral value on A*	97
Rated CRR/EL 9 to 10	12,769
Not collateralised	7,236
Fully collateralised	2,807
Partially collateralised (B)	2,726
– *collateral value on B*	1,658
At 31 Dec 2017	14,263

1 *Comparatives have been restated to align the definition of commercial real estate to reflect the internal risk management view.*

Liquidity and Funding Risk

(Audited)

Strategies and processes in the management of liquidity risk

HSBC has an internal liquidity and funding risk management framework ('LFRF') which aims to allow it to withstand very severe liquidity stresses. It is designed to be adaptable to changing business models, markets and regulations. The management of liquidity and funding is primarily undertaken locally (by country) in our operating entities in compliance with the Group's LFRF and local regulations, and with practices and limits set by the Group Management Board ('GMB') through the group's RMM and approved by the Board. Our general policy is that each defined operating entity should be self-sufficient in funding its own activities.

Structure and organisation of the liquidity risk management function

The Group Treasurer, who reports to the Group CFO, has responsibility for the oversight of the LFRF. Asset, Liability and Capital Management ('ALCM') teams are responsible for the application of the LFRF at a local operating entity level.

The elements of the LFRF are underpinned by a robust governance framework, the two major elements of which are:

- Asset and Liability Management Committees ('ALCOs') at the group and entity level; and
- annual internal liquidity adequacy assessment ('ILAA') used to validate risk tolerance and set risk appetite.

The Board is ultimately responsible for determining the types and magnitude of liquidity risk that the group is able to take and ensuring that there is an appropriate organisation structure for managing this risk. Under authorities delegated by the Board, the group ALCO is responsible for managing all ALCM issues including liquidity and funding risk management.

The group ALCO delegates to the group Tactical Asset and Liability Management Committee ('TALCO') the task of reviewing various analyses of the group pertaining to sites' liquidity and funding. TALCO's primary responsibilities include but are not limited to:

- reviewing the funding structure of operating entities and the allocation of liquidity among them; and
- monitoring liquidity and funding limit breaches and providing direction to those operating entities that have not been able to rectify breaches on a timely basis.

Compliance with liquidity and funding requirements is monitored by local ALCO who report to the RMM and Executive Committee on a regular basis. This process includes:

- maintaining compliance with relevant regulatory requirements of the operating entity;
- projecting cash flows under various stress scenarios and considering the level of liquid assets necessary in relation thereto;
- monitoring liquidity and funding ratios against internal and regulatory requirements;
- maintaining a diverse range of funding sources with adequate back-up facilities;
- managing the concentration and profile of term funding;
- managing contingent liquidity commitment exposures within pre-determined limits;
- maintaining debt financing plans;
- monitoring of depositor concentration in order to avoid undue reliance on large individual depositors and ensuring a satisfactory overall funding mix; and
- maintaining liquidity and funding contingency plans. These plans identify early indicators of stress conditions and describe actions to be taken in the event of difficulties arising from systemic or other crises, while minimising adverse long-term implications for the business.

Along with ALCM, the Balance Sheet Management teams form the first line of defence in the management of liquidity risk, ensuring continuous compliance with the firm's risk appetite operating within their risk mandates.

Liquidity risk assurance is provided by Risk. Second line liquidity risk assurance performs the following activities:

- reviews and challenges assumptions of current liquidity and funding risk management framework;
- reviews and challenges methods and calculation processes of all aspects of liquidity and funding risk;
- reviews results of liquidity and funding metrics against limits and proposed limit changes prior to approval at governance forums; and
- reviews risk items that require escalation.

Scope and nature of liquidity risk reporting and measurement

Where possible, the group maintains standardised platforms utilising common data feeds in order to ensure consistency of standard internal and regulatory reporting and flexibility to deliver ad hoc requests.

Hedging and mitigating liquidity risk at HSBC

HSBC's business strategy and overall liquidity risk profile

The key aspects of the internal LFRF which is used to ensure that HSBC maintains an appropriate overall liquidity risk profile are:

- stand-alone management of liquidity and funding by operating entity;
- minimum liquidity coverage ratio ('LCR') requirement, including by currency, for each operating entity;
- minimum net stable funding ratio ('NSFR') requirement for each operating entity;
- legal entity depositor concentration limit;
- three-month and 12-month cumulative rolling term contractual maturity limits covering deposits from banks, deposits from non-bank financial institutions and securities issued;
- annual ILAA by operating entity;
- intra-day liquidity;
- liquidity funds transfer pricing; and
- forward-looking funding assessments.

Management of liquidity and funding risk

Liquidity coverage ratio

(Unaudited)

The LCR aims to ensure that a bank has sufficient unencumbered high-quality liquid assets ('HQLA') to meet its liquidity needs in a 30 calendar day liquidity stress scenario. HQLA consist of cash or assets that can be converted into cash at little or no loss of market value.

At 31 December 2018, all the group's principal operating entities were well above regulatory minimums and above the internally expected levels established by the Board.

Net stable funding ratio

(Unaudited)

The NSFR measures stable funding relative to required stable funding, and reflects a bank's long-term funding profile (funding with a term of more than a year). It is designed to complement the LCR.

At 31 December 2018, all the group's principal operating entities were within the NSFR risk tolerance level established by the Board and applicable under the LFRF.

Liquid assets of HSBC's principal operating entities

(Unaudited)

Liquid assets are held and managed on a stand-alone operating entity basis. They include those held directly by each operating entity's BSM department, primarily for the purpose of managing liquidity risk in line with the LFRF, and any unencumbered liquid assets held outside BSM departments for any other purpose. The LFRF gives ultimate control of all unencumbered assets and sources of liquidity to BSM.

Overall adequacy of liquidity risk management at HSBC

(Unaudited)

All operating entities are required to manage liquidity risk and funding risks on a standalone basis in accordance with the LFRF, which includes the preparation of an ILAA document, in order to ensure that:

- liquidity resources are adequate, both as to the amount and quality;
- there is no significant risk that liabilities cannot be met as they fall due;
- a prudent structural funding profile is maintained;
- adequate liquidity resources continue to be maintained; and
- the operating entity's liquidity risk framework is adequate and robust.

The key objectives of the ILAA process are to:

- demonstrate that all material liquidity and funding risks are captured within the internal framework;
- validate the operating entity's risk tolerance/appetite by demonstrating that reverse stress testing scenarios are acceptably remote and vulnerabilities have been assessed through the use of severe stress scenarios; and
- provide review and challenge of the operating entity's ILAA document.

Concentration of funding and liquidity sources

Depositor concentration and term funding maturity concentration

(Unaudited)

The LCR metric assume a stressed outflow based on a portfolio of depositors within retail, corporate and financial deposit segment. The validity of these assumptions is challenged if the portfolio of depositors is not large enough to avoid depositor concentration.

Operating entities are exposed to term re-financing concentration risk if the current maturity profile results in future maturities being overly concentrated in any defined period.

At 31 December 2018, all the group’s principal operating entities were within the risk tolerance levels set for depositor concentration and term funding maturity concentration. These risk tolerances were established by the Board and applicable under the LFRF.

Sources of funding

(Audited)

Our primary sources of funding are customer current accounts and customer savings deposits payable on demand or at short notice. We issue wholesale securities (secured and unsecured) to supplement our customer deposits and change the currency mix, maturity profile or location of our liabilities.

Currency mismatch in the LCR

(Unaudited)

In time of stress it cannot automatically be assumed that one currency can always be converted for another, even if those currencies are ‘hard’ currencies. LCR must therefore be assessed by currency, if the currency is material.

In some currencies, convertibility is restricted by regulators and central banks and this restriction results in local currency not being convertible offshore or even onshore.

The LFRF requires all operating entities to monitor material single currency LCR. Limits are approved and monitored by local ALCO.

Liquidity and funding risk profile

(Unaudited)

The Banking (Liquidity) Rules (‘BLR’) were introduced by the HKMA in 2014 and became effective from 1 January 2015. The group is required to calculate its LCR on a consolidated basis in accordance with rule 11(1) of the BLR. During 2018 the group is required to maintain an LCR of not less than 90%, increasing to not less than 100% from January 2019. Effective from 1 January 2018, the group is also required to calculate its NSFR on a consolidated basis in accordance with rule 11(1) of the BLR and maintain an NSFR of not less than 100%.

The average LCRs for the period are as follows:

	Quarter ended	
	31 Dec 2018	31 Dec 2017
	%	%
Average LCRs	**161.0**	153.6

The liquidity position of the group remained strong in 2018. The average LCR increased by 7.4% from 153.6% for the quarter ended 31 December 2017 to 161.0% for the quarter ended 31 December 2018, mainly as a result of the growth in customer deposits.

The majority of HQLA included in the LCR are Level 1 assets as defined in the BLR, which consist mainly of government debt securities.

The total weighted amount of HQLA for the period are as follows:

	Weighted amount (average value) at quarter ended	
	31 Dec 2018	31 Dec 2017
	HK$m	HK$m
Level 1 assets	**1,489,744**	1,405,999
Level 2A assets	**67,333**	65,248
Level 2B assets	**9,638**	20,071
Total	**1,566,715**	1,491,318

The NSFRs for the period are as follows:

	Quarter ended	
	31 Dec 2018	31 Dec 2017
	%	**%**
Net stable funding ratio	**149.7**	N/A

The funding position of the group remained robust in 2018. The NSFR was 149.7% for the quarter ended 31 December 2018, highlighting a surplus of stable funding relative to the required stable funding requirement. The NSFR requirements have been implemented with effect from 2018 and accordingly the NSFR for the quarter ended 31 December 2017 is not shown.

Interdependent assets and liabilities included in the group's NSFR are certificates of indebtedness held and legal tender notes issued.

Additional contractual obligations

(Unaudited)

Under the terms of our current collateral obligations under derivative contracts (which are ISDA compliant CSA contracts), the additional collateral required to post in the event of one-notch and two-notch downgrade in credit ratings is immaterial.

Further details of the group’s liquidity information disclosures can be viewed in the Banking Disclosure Statement 2018, which will be available in the Regulatory Disclosure Section of our website: www.hsbc.com.hk.

Market Risk

(Audited)

Market risk is the risk that movements in market factors, including foreign exchange rates and commodity prices, interest rates, credit spreads and equity prices, will reduce our income or the value of our portfolios.

There were no significant changes to our policies and practices for the management of market risk in 2018.

Exposure to market risk

Exposure to market risk is separated into two portfolios:

- Trading portfolios comprise positions arising from market-making and warehousing of customer-derived positions.
- Non-trading portfolios comprise positions that primarily arise from the interest rate management of our retail and commercial banking assets and liabilities, financial investments designated as available-for-sale and held-to-maturity, and exposures arising from our insurance operations.

The diagram below illustrates the main business areas where trading and non-trading market risks reside and market risk measures to monitor and limit exposures.

	Trading risk	Non-trading risk
Risk types	• Foreign exchange and commodities • Interest rates • Credit spreads • Equities	• Structural foreign exchange • Interest rates • Credit spreads
Global business	GB&M incl BSM	GB&M, BSM, GPB, CMB and RBWM
Risk measure	VaR | Sensitivity | Stress Testing	VaR | Sensitivity | Stress Testing

Note–Balance Sheet Management ('BSM'), for external reporting purposes, forms part of Corporate Centre while daily operations and risk are managed within GB&M.

Where appropriate, the group applies similar risk management policies and measurement techniques to both trading and non-trading portfolios. The group's objective is to manage and control market risk exposures in order to optimise return on risk while maintaining a market profile consistent with our established risk appetite.

The nature of the hedging and risk mitigation strategies performed across the group corresponds to the market risk management instruments available within each operating jurisdiction. These strategies range from the use of traditional market instruments, such as interest rate swaps, to more sophisticated hedging strategies to address a combination of risk factors arising at portfolio level.

Market risk governance

(Unaudited)

Market risk is managed and controlled through limits approved by the Risk Management Meeting of the Group Management Board ('GMB') for HSBC Holdings plc and the various global businesses. These limits are allocated across business lines and to the group's legal entities. The management of market risk is principally undertaken in Global Markets through risk limits. Value at Risk ('VaR') limits are set for portfolios, products, and risk types, with market liquidity being the primary factors in determining the level of limits set.

Each major operating entity has an independent market risk management and control function which is responsible for measuring market risk exposures in accordance with the policies defined by Group Risk, and monitoring and reporting these exposures against the prescribed limits on a daily basis. Each operating entity is required to assess the market risks arising on each product in its business and to transfer them to either its local GB&M unit for management, or to separate books managed under the supervision of the local Asset and Liability Management Committee ('ALCO').

Our aim is to ensure that all market risks are consolidated within operations that have the necessary skills, tools, management and governance to manage them. In certain cases where the market risks cannot be fully transferred, we identify the impact of varying scenarios on valuations or on net interest income resulting from any residual risk positions.

The Regional Markets Model Oversight Committee ('MOC') is a formal governance committee established to provide oversight on model risk management related matters for traded risk models used in the region. The Regional Markets MOC is responsible for overseeing, monitoring, and escalating model risk management related matters within Traded risk. It supports accountable individual model approvers in the oversight of model risk. The Regional Markets MOC is accountable to the Global Markets MOC which oversees all traded risk models at Group level. The Regional MOC informs the Regional Risk Management Meeting about material model risks and model related issues.

Our control of market risk in the trading and non-trading portfolios is based on a policy of restricting individual operations to trading within a list of permissible instruments authorised for each site by Group Risk, of enforcing new product approval procedures, and of restricting trading in the more complex derivative products only to sites with appropriate levels of product expertise and robust control systems.

Market risk measures

(Audited)

Monitoring and limiting market risk exposures

Our objective is to manage and control market risk exposures while maintaining a market profile consistent with our risk appetite. We use a range of tools to monitor and limit market risk exposures including sensitivity analysis, VaR and stress testing.

Sensitivity analysis

(Unaudited)

Sensitivity analysis measures the impact of individual market factor movements on specific instruments or portfolios including interest rates, foreign exchange rates and equity prices, for example, the impact of a one basis point change in yield. We use sensitivity measures to monitor the market risk positions within each risk type.

Sensitivity limits are set for portfolios, products and risk types, with the depth of the market being one of the principal factors in determining the level of limits set.

Value at risk

VaR is a technique that estimates the potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and is calculated for all trading positions regardless of how we capitalise those exposures. Where there is no approved internal model, we use the appropriate local rules to capitalise exposures.

In addition, we calculate VaR for non-trading portfolios in order to have a complete picture of market risk. Where VaR is not calculated explicitly, alternative tools are used as summarised in the Market Risk stress testing section below.

Our models are predominantly based on historical simulation which incorporate the following features:

- historical market rates and prices are calculated with reference to foreign exchange rates and commodity prices, interest rates, equity prices and the associated volatilities;
- potential market movements utilised for VaR are calculated with reference to data from the past two years; and
- VaR measures are calculated to a 99% confidence level and use a one-day holding period.

The models also incorporate the effect of the option features on the underlying exposures. The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR without any changes in the underlying positions.

VaR model limitations

Although a valuable guide to risk, VaR should always be viewed in the context of its limitations. For example:

- the use of historical data as a proxy for estimating future events may not encompass all potential events, particularly those which are extreme in nature;
- the use of a holding period assumes that all positions can be liquidated or the risks offset during that period. This may not fully reflect the market risk arising at times of severe illiquidity, when the holding period may be insufficient to liquidate or hedge all positions fully;
- the use of a 99% confidence level, by definition does not take into account losses that might occur beyond this level of confidence; and
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not necessarily reflect intra-day exposures.

Back-testing

We routinely validate the accuracy of our VaR models by back-testing them against both actual and hypothetical profit and loss against the trading VaR numbers. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenues of intra-day transactions.

The actual number of profits or losses in excess of VaR over this period can therefore be used to gauge how well the models are performing. We back-test VaR at various levels which reflects the full legal entity scope of the group, including entities that do not have local permission to use VaR for regulatory purposes. Back-testing using the regulatory hierarchy includes entities which have approval to use VaR in the calculation of market risk regulatory capital requirement.

Risk not in VaR framework

(Unaudited)

The risks not in VaR ('RNIV') framework aims to capture and capitalise material market risks that are not adequately covered in the VaR model, such as the LIBOR tenor basis.

Risk factors are reviewed on a regular basis and are either incorporated directly in the VaR models, where possible, or quantified through the VaR-based RNIV approach or a stress test approach within the RNIV framework. A stressed VaR RNIV is computed for the risk factors considered in the VaR-based RNIV approach. Stress-type RNIVs are also included where appropriate.

Stress testing

(Audited)

Stress testing is an important tool that is integrated into our market risk management framework to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such scenarios, losses can be much greater than those predicted by VaR modelling.

Stress testing is implemented at the legal entity, regional, sites and the overall group levels. A standard set of scenarios is utilised consistently across all sites within the group. Scenarios are tailored to capture the relevant potential events or market movements at each level. The risk appetite around potential stress losses for the region is set and monitored against referral limits.

Market risk reverse stress tests are undertaken based upon the premise that there is a fixed loss. The stress testing process identifies which scenarios lead to this loss. The rationale behind the reverse stress test is to understand scenarios which are beyond normal business settings that could have contagion and systemic implications.

Stressed VaR and stress testing, together with reverse stress testing, provide management with insights regarding the 'tail risk' beyond VaR for which the group's appetite is limited.

Market risk in 2018

(Unaudited)

Market sentiment in 2018 remained fragile with short term market volatilities amid the sustained US-China trade tensions. The prospect of rising USD interest rates and tightening USD liquidity have brought volatility to emerging markets in Asia and also increased the cost of USD funding. US-China trade talk outcome, geopolitical events including the evolving situation in the Korean Peninsula, the US policy priorities as well as the key elections in Asia are among the key drivers for market volatility in 2019.

Trading portfolios

(Audited)

Value at risk of the trading portfolios

Trading VaR predominantly resides within Global Markets. This was slightly lower at 31 December 2018 compared to 31 December 2017 due to the reduction in the credit trading VaR and interest rate trading VaR, which was driven by reduction in the inventory position under the fixed income business.

The trading VaR for the year is shown in the table below.

Trading value at risk, 99% 1 day[1]

	Foreign exchange and commodity	Interest rate	Equity	Credit spread	Portfolio diversification[2]	Total
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2018						
Year end	**43**	**123**	**51**	**42**	**(123)**	**136**
Average	**35**	**150**	**30**	**33**		**163**
Maximum	**59**	**199**	**58**	**75**		**222**
At 31 Dec 2017						
Year end	48	128	19	69	(123)	141
Average	48	118	13	28		111
Maximum	84	202	25	73		189

1 *Trading portfolios comprise positions arising from the market-making and warehousing of customer-derived positions.*
2 *Portfolio diversification is the market risk dispersion effect of holding a portfolio containing different risk types. It represents the reduction in unsystematic market risk that occurs when combining a number of different risk types, for example, interest rate, equity and foreign exchange, together in one portfolio. It is measured as the difference between the sum of the VaR by individual risk type and the combined total VaR. A negative number represents the benefit of portfolio diversification. As the maximum and minimum occur on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.*

Non-trading portfolios

(Unaudited)

Banking book interest rate risk is the risk of an adverse impact to earnings or capital due to changes in market interest rates. The risk arises from timing mismatches in the repricing of non-traded assets and liabilities and is the potential adverse impact of changes in interest rates on earnings and capital. In its management of the risk, the group aims to mitigate the impact of future interest rate movements which could reduce future net interest income, while balancing the cost of hedging activities to the current revenue stream. Monitoring the sensitivity of projected net interest income under varying interest rate scenarios is a key part of this.

In order to manage structural interest rate risk, non-traded assets and liabilities are transferred to Balance Sheet Management ('BSM') based on their repricing and maturity characteristics. For assets and liabilities with no defined maturity or repricing characteristics, behaviouralisation is used to assess the interest rate risk profile. BSM manages the banking book interest rate positions transferred to it within the approved limits. Local ALCOs are responsible for monitoring and reviewing their overall structural interest rate risk position. Interest rate behaviouralisation policies have to be formulated in line with the Group's behaviouralisation policies and approved at least annually by local ALCOs.

Sensitivity of net interest income

A principal part of our management of non-traded interest rate risk is to monitor the sensitivity of expected net interest income at least quarterly under varying interest rate scenarios (simulation modelling), where all other economic variables are held constant.

Sensitivity of net interest income reflects the group's sensitivity of earnings due to changes in market interest rates. Entities forecast net interest income sensitivities across a range of interest rate scenarios based on a static balance sheet assumption. Sites include business line interest rate pass-on assumptions, re-investment of maturing assets and liabilities at market rates per shock scenario and prepayment risk. BSM is modelled based on no management actions i.e. the risk profile at the month end is assumed to remain constant throughout the forecast horizon.

Structural foreign exchange exposures

(Unaudited)

Structural foreign exchange exposures represent net investments in subsidiaries, branches and associates, the functional currencies of which are currencies other than the HK dollar. An entity's functional currency is normally that of the primary economic environment in which the entity operates.

Exchange differences on structural exposures are recognised in 'Other comprehensive income'.

Our structural foreign exchange exposures are managed with the primary objective of ensuring, where practical, that our consolidated capital ratios and the capital ratios of individual banking subsidiaries are largely protected from the effect of changes in exchange rates. We hedge structural foreign exchange exposures only in limited circumstances.

The group had the following structural foreign currency exposures that were not less than 10% of the total net structural foreign currency positions:

	LCYm	HK$m equivalent
At 31 Dec 2018		
Renminbi	**189,054**	**215,266**
At 31 Dec 2017		
Renminbi	181,740	218,262

Operational Risk

(Unaudited)

Operational risk is the risk to achieving our strategy or objectives as a result of inadequate or failed internal processes, people and systems or from external events. Responsibility for minimising operational risk lies with HSBC's staff. All staff are required to manage the operational risks of the business and operational activities for which they are responsible.

Operational risk management framework

HSBC's Operational Risk Management Framework ('ORMF') is our overarching approach for managing operational risk, the purpose of which is to:

- identify and manage our operational risks in an effective manner;
- remain within the operational risk appetite, which helps the organisation to understand the level of risk it is willing to accept; and
- drive forward-looking risk awareness and assist management focus.

Business and functional managers throughout the organisation are responsible for maintaining an acceptable level of internal control commensurate with the scale and nature of operations, and for identifying and assessing risks, designing controls and monitoring the effectiveness of these controls. The ORMF helps managers to fulfil these responsibilities by defining a standard risk assessment methodology and providing a tool for the systematic reporting of operational loss data.

A Group-wide risk management system is used to record the results of the operational risk management process. Operational risk and control self-assessments, long with issue and action plans, are entered and maintained by business units. Business and functional management monitor the progress of documented action plans to address shortcomings. To help ensure that operational risk losses are consistently reported and monitored at group level, all group companies are required to report individual losses when the net loss is expected to exceed US$10,000, and to aggregate all other operational risk losses under US$10,000. Losses are entered into the Group-wide risk management system and reported to the group's Risk Management Meeting on a monthly basis.

Activities to strengthen our risk culture and better embed the approach, particularly the three lines of defence model, continued to be a key focus in 2018. The ORMF sets our roles and responsibilities for managing operational risk on a daily basis.

Operational risk exposures in 2018

(Unaudited)

In 2018, we continued our ongoing work to strengthen those controls that manage our most material risks. Among other measures, we:

- further enhanced our controls to help ensure that we know our customers, ask the right questions, monitor transactions and escalate concerns to detect, prevent and deter financial crime risk;
- implemented a number of initiatives to raise our standards in relation to the conduct of our business;
- increased monitoring and enhanced detective controls to manage those fraud risks which arise from new technologies and new ways of banking;
- strengthened internal security controls to prevent cyber-attacks;
- improved controls and security to protect customers when using digital channels;
- enhanced our third-party risk management capability to help enable the consistent risk assessment of any third-party service; and
- enhanced controls associated with IT privileged access.

Regulatory Compliance Risk

(Unaudited)

Overview

The Regulatory Compliance ('RC') function provides independent, objective oversight and challenge and promotes a compliance-oriented culture, supporting the business in delivering fair outcomes for customers, maintaining the integrity of financial markets and achieving HSBC's strategic objectives.

Key risk management processes

We regularly review our policies and procedures. Global policies and procedures require the prompt identification and escalation of any actual or potential regulatory breach to RC. Reportable events are escalated to the RMM and the Risk Committee, as appropriate.

Conduct of business

In 2018, we continued to take steps to raise our standards relating to conduct, which included:

- delivering further global mandatory conduct training to all employees in 2018;
- incorporating the assessment of expected values and behaviours as key determinants in recruitment, performance appraisal and remuneration processes;
- improving our group-wide market surveillance capability;
- introducing policies and procedures to strengthen support for potentially vulnerable customers;
- enhancing the quality and depth of conduct management information and how it is used across the group;
- implementing an assessment process to check the effectiveness of our conduct initiatives across the group; and
- assessing conduct standards and practices within our key third-party suppliers and distributors.

Financial Crime Risk

(Unaudited)

Overview

HSBC continued to embed a sustainable financial crime risk management capability across the Group. We are making good progress with enhancing our financial crime control framework with the three-year programme that began in 2017 to further strengthen the management of anti-bribery and corruption risk. We continue to take further steps to refine and strengthen our defences against financial crime by applying advanced analytics and artificial intelligence.

Key Developments in 2018

During 2018, we continued to increase its efforts to assist with keeping financial crime out of the financial system. We integrated into our day-to-day operations the majority of the financial crime risk core capabilities delivered through the Global Standards programme, which we set up in 2013 to enhance our risk management policies, processes and systems. The programme infrastructure is expected to close in 2019.

We began several initiatives to define the next phase of financial crime risk management. We invested in the use of artificial intelligence and advanced analytics techniques to achieve an intelligence-led financial crime risk management framework for the future.

Working in partnership is vital to managing financial crime risk. HSBC is a strong proponent of public-private partnerships and information-sharing initiatives. During 2018, Financial Crime Risk created new alliances in Hong Kong and Singapore and continued to develop existing partnerships which includes Australia in order to bring further benefit to the group by enhancing the understanding of financial crime risks.

Key risk management processes

We continued to deliver against our anti-bribery and corruption transformation programme to further enhance the policies and controls around identifying and managing the risks of bribery and corruption across our business. We also introduced a transformation programme to strengthen the anti-fraud capabilities of the group and have deployed anti-tax evasion controls. We continue to strengthen our governance and policy frameworks and improve our management information on standardised financial crime controls. We are investing in the next generation of capabilities to fight financial crime by applying advanced analytics and artificial intelligence. Our commitment to enhance our risk assessment capabilities remains, aiming to deliver more proactive risk management and improve the customer experience.

Skilled Person / Independent Consultant

Following expiration in December 2017 of the AML Deferred Prosecution Agreement entered into with the US Department of Justice ('DoJ'), the then Monitor has continued to work under the Direction issued by the UK Financial Conduct Authority ('FCA') in 2012 in his capacity as a Skilled Person under section 166 of the Financial Services and Markets Act. He has also continued to work in his capacity as an Independent Consultant under the 2012 Cease and Desist Order issued by the US Federal Reserve Board ('FRB'). The Skilled Person and the Independent Consultant will continue working for a period of time at the FCA's and FRB's discretion.

The Skilled Person has assessed HSBC's progress towards being able to effectively manage its financial risk on a business as usual basis. The Skilled Person has issued five country reports and two quarterly reports in 2018. The Skilled Person has noted that HSBC continues to make material progress towards its financial crime risk target end state in terms of key systems, processes and people. Nonetheless, the Skilled Person has identified some areas that require further work before HSBC reaches a business as usual state. The Skilled Person has not highlighted potential instances of financial crime.

The Independent Consultant completed his fifth annual assessment. The Independent Consultant concluded that HSBC continues to make significant strides toward establishing an effective sanctions compliance programme, commending HSBC on a largely successful affiliates remediation exercise. He has, however, determined that that certain areas within HSBC's sanctions compliance programme require further work and, as such, HSBC's sanctions programme does not yet operate in a business-as-usual state. The Independent Consultant has commenced his sixth annual assessment which is due to conclude in March 2019.

Reputational Risk

(Unaudited)

Overview

Reputational risk is the risk of failing to meet stakeholder expectations as a result of any event, behaviour, action or inaction, either by HSBC, our employees or those with whom we are associated. Stakeholders' expectations change constantly, and so reputational risk is dynamic and varies between geographical regions, groups and individuals. We have an unwavering commitment to operating at the high standards we set for ourselves in every jurisdiction. Any material lapse in standards of integrity, compliance, customer service or operating efficiency may represent a potential reputational risk.

Key developments in 2018

In the second half of 2018, as part of a revised enterprise risk management framework, it was agreed that reputational risk would be classified as a 'transverse' risk, which spans both financial and non-financial risk categories. It was also agreed that the overall risk stewardship for reputational risk would be transferred to a single risk steward, the Group Chief Risk Officer. As a result, the reputational risk policy will be revised and updated in 2019. The governance structure, however, remains unchanged.

Governance and structure

The development of policies and an effective control environment for the identification, assessment, management and mitigation of reputational risk, are considered by the Group Reputational Risk Committee which is chaired by the Group Chief Risk Officer. It is the highest decision-making forum in the Group for dealing with matters arising from clients or transactions that either present a serious potential reputational risk to the Group or merit a Group-led decision to ensure a consistent risk management approach across the regions, global businesses and global functions. The committee is responsible for keeping the RMM apprised of areas and activities presenting significant reputational risk and, where appropriate, for making recommendations to the RMM to mitigate such risk.

Key risk management processes

Our Reputational Risk and Client Selection team oversees the identification, management and control of significant reputational risks across the group. It is responsible for monitoring policies for the group's reputational risk management, implementing strategies to protect against reputational risk, and advising the global businesses and global functions to help them identify, assess and mitigate such risks, where possible. Each global business has an established reputational risk management governance process. The global functions manage and escalate reputational risks within established operational risk frameworks.

Our policies set out our risk appetite and operational procedures for all areas of reputational risk, including financial crime prevention, regulatory compliance, conduct-related concerns, environmental impacts, human rights matters and employee relations.

Risks of insurance manufacturing operations

(Audited)

The majority of the risk in our insurance business derives from manufacturing activities and can be categorised as financial risk and insurance risk. Financial risks include market risk, credit risk and liquidity risk. Insurance risk is the risk, other than financial risk, of loss transferred from the holder of the insurance contract to the issuer (HSBC).

HSBC's bancassurance model

We operate an integrated bancassurance model which provides insurance products principally for customers with whom we have a banking relationship. The insurance contracts we sell relate to the underlying needs of our banking customers, which we can identify from our point-of-sale contacts and customer knowledge. The majority of sales are of savings and investment products.

By focusing largely on personal and small and medium-sized enterprise businesses, we are able to optimise volumes and diversify individual insurance risks.

We choose to manufacture these insurance products in HSBC subsidiaries based on an assessment of operational scale and risk appetite. Manufacturing insurance allows us to retain the risks and rewards associated with writing insurance contracts by keeping part of the underwriting profit and investment income within the group. It also reduces distribution costs for our products by using our established branch network, and enables us to control the quality of the sale process and the products themselves to ensure our customers receive products which address their specific needs at the best value. We have life insurance manufacturing operations in six locations: mainland China, Hong Kong, India, Macau, Malaysia and Singapore.

Where we do not have the risk appetite or operational scale to be an effective insurance manufacturer, we engage with a handful of leading external insurance companies in order to provide insurance products to our customers through our banking network and direct channels. These arrangements are generally structured with our exclusive strategic partners and earn the group a combination of commissions, fees and a share of profits. We distribute insurance products in all of our geographical regions. Insurance products are sold through all global businesses, but predominantly by RBWM and CMB through our branches and direct channels.

Risk management of insurance manufacturing operations

Governance

Insurance risks are managed to a defined risk appetite, which is aligned to the Group's risk appetite and risk management framework, including the Group's 'Three lines of defence' model. The group's Insurance Risk Management Meeting oversees the control framework globally and is accountable to the RBWM Risk Management Meeting on risk matters relating to insurance business.

The monitoring of the risks within the insurance operations is carried out by the Insurance Risk teams. Specific risk functions, including wholesale credit & market risk, operational risk, information security risk and financial crime compliance, support insurance risk teams in their respective areas of expertise.

Measurement

The risk profile of our insurance manufacturing businesses is measured using an economic capital approach. Assets and liabilities are measured on a market value basis and a capital requirement is defined to ensure that there is a less than one-in-200 chance of insolvency over a one-year time horizon, given the risks that the businesses are exposed to. The methodology for the economic capital calculation is largely aligned to the pan-European Solvency II insurance capital regulation. The economic capital coverage ratio (economic net asset value divided by the economic capital requirement) is a key risk appetite measure.

The business has a current appetite to remain above 140% with a tolerance of 110%. In addition to economic capital, the regulatory solvency ratio is also a metric used to manage risk appetite on an entity basis.

The tables below show the composition of assets and liabilities by contract type. 92% (2017: 91%) of both assets and liabilities are derived from Hong Kong.

Balance sheet of insurance manufacturing subsidiaries by type of contract

	Non-linked	Unit-linked	Shareholders' assets and liabilities	Total
	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2018				
Financial assets:	**447,459**	**41,325**	**34,503**	**523,287**
– financial assets designated and otherwise mandatorily measured at fair value	**82,266**	**40,106**	**1,206**	**123,578**
– derivatives	**912**	**—**	**1**	**913**
– financial investments measured at amortised cost	**347,894**	**547**	**32,023**	**380,464**
– financial investments measured at fair value through other comprehensive income	**3,444**	**—**	**—**	**3,444**
– other financial assets	**12,943**	**672**	**1,273**	**14,888**
Reinsurance assets	**19,045**	**39**	**—**	**19,084**
PVIF	**—**	**—**	**48,522**	**48,522**
Other assets and investment properties	**14,879**	**—**	**3,230**	**18,109**
Total assets	**481,383**	**41,364**	**86,255**	**609,002**
Liabilities under investment contracts designated at fair value	**30,420**	**6,218**	**—**	**36,638**
Liabilities under insurance contracts	**433,668**	**34,921**	**—**	**468,589**
Deferred tax	**224**	**109**	**7,890**	**8,223**
Other liabilities	**—**	**—**	**15,109**	**15,109**
Total liabilities	**464,312**	**41,248**	**22,999**	**528,559**
Total equity	**—**	**—**	**80,443**	**80,443**
Total equity and liabilities	**464,312**	**41,248**	**103,442**	**609,002**
At 31 Dec 2017				
Financial assets:	415,609	54,807	32,680	503,096
– financial assets designated at fair value	66,497	53,408	2,278	122,183
– derivatives	1,336	1	2	1,339
– financial investments – held-to-maturity	274,909	—	26,034	300,943
– financial investments – available-for-sale	49,268	—	695	49,963
– other financial assets	23,599	1,398	3,671	28,668
Reinsurance assets	15,974	155	—	16,129
PVIF	—	—	44,621	44,621
Other assets and investment properties	8,279	4	4,026	12,309
Total assets	439,862	54,966	81,327	576,155
Liabilities under investment contracts designated at fair value	30,364	7,905	—	38,269
Liabilities under insurance contracts	391,348	46,669	—	438,017
Deferred tax	409	—	7,668	8,077
Other liabilities	—	—	12,330	12,330
Total liabilities	422,121	54,574	19,998	496,693
Total equity	—	—	79,462	79,462
Total equity and liabilities	422,121	54,574	99,460	576,155

Stress and scenario testing

Stress testing forms a key part of the risk management framework for the insurance business. We participate in local and Group-wide regulatory stress tests, including the Bank of England stress test of the banking system, the Hong Kong Monetary Authority stress test, and individual country insurance regulatory stress tests. These have highlighted that a key risk scenario for the insurance business is a prolonged low interest rate environment. In order to mitigate the impact of this scenario, the insurance operations have a range of strategies that could be employed including the hedging of investment risk, repricing current products to reflect lower interest rates, improving risk diversification, moving towards less capital intensive products, and developing investment strategies to optimise the expected returns against the cost of economic capital.

Key Risk Types

The key risks for our insurance operations are market risks (in particular interest rate and equity) and credit risks, followed by insurance underwriting risks and operational risks. Liquidity risk, while significant for the bank, is minor for our insurance operations.

Market risk (insurance)

Market risk is the risk of changes in market factors affecting capital or profit. Market factors include interest rates, equity and growth assets and foreign exchange rates.

Our exposure varies depending on the type of contract issued. Our most significant life insurance products are contracts with discretionary participating features ('DPF') issued in Hong Kong. These products typically include some form of capital guarantee or guaranteed return, on the sums invested by the policyholders, to which discretionary bonuses are added if allowed by the overall performance of the funds. These funds are primarily invested in bonds with a proportion allocated to other asset classes, to provide customers with the potential for enhanced returns.

DPF products expose HSBC to the risk of variation in asset returns, which will impact our participation in the investment performance. In addition, in some scenarios the asset returns can become insufficient to cover the policyholders' financial guarantees, in which case the shortfall has to be met by HSBC. Reserves are held against the cost of such guarantees, calculated by stochastic modelling.

For unit-linked contracts, market risk is substantially borne by the policyholders, but some market risk exposure typically remains as fees earned are related to the market value of the linked assets.

All our insurance manufacturing subsidiaries have market risk mandates which specify the investment instruments in which they are permitted to invest and the maximum quantum of market risk which they may retain. They manage market risk by using, among others, some or all of the techniques listed below, depending on the nature of the contracts written:

- For products with DPF, adjusting bonus rates to manage the liabilities to policyholders. The effect is that a significant portion of the market risk is borne by the policyholders.
- Asset and liability matching where asset portfolios are structured to support projected liability cash flows. The group manages its assets using an approach that considers asset quality, diversification, cash flow matching, liquidity, volatility and target investment return. It is not always possible to match asset and liability durations due to uncertainty over the receipt of all future premiums and the timing of claims; and because the forecast payment dates of liabilities may exceed the duration of the longest dated investments available. We use models to assess the effect of a range of future scenarios on the values of financial assets and associated liabilities, and ALCOs employ the outcomes in determining how best to structure asset holdings to support liabilities.
- Using derivatives to protect against adverse market movements or better match liability cash flows.
- For new products with investment guarantees, considering the cost when determining the level of premiums or the price structure.
- Periodically reviewing products identified as higher risk, which contain investment guarantees and embedded optionality features linked to savings and investment products for active management.
- Designing new products to mitigate market risk, such as changing the investment return sharing portion between policyholders and the shareholder.
- Exiting, to the extent possible, investment portfolios whose risk is considered unacceptable.
- Repricing premiums charged to policyholders.

The following table illustrates the effects of selected interest rate, equity price and foreign exchange rate scenarios on our profit for the year and the total equity of our insurance manufacturing subsidiaries.

	31 Dec 2018		31 Dec 2017	
	Impact on profit after tax for the year	**Impact on total equity**	Impact on profit after tax for the year	Impact on total equity
	HK$m	**HK$m**	HK$m	HK$m
+100 basis points parallel shift in yield curves	**(229)**	**(547)**	97	(4,525)
-100 basis points parallel shift in yield curves	**81**	**399**	(651)	4,976
10% increase in equity prices	**1,433**	**1,433**	1,534	1,643
10% decrease in equity prices	**(1,366)**	**(1,366)**	(1,560)	(1,669)
10% increase in USD exchange rate compared to all currencies	**267**	**267**	177	177
10% decrease in USD exchange rate compared to all currencies	**(267)**	**(267)**	(177)	(177)

Where appropriate, the effects of the sensitivity tests on profit after tax and total equity incorporate the impact of the stress on the PVIF. The relationship between the profit and total equity and the risk factors is non-linear; therefore the results disclosed should not be extrapolated to measure sensitivities to different levels of stress. For the same reason, the impact of the stress is not symmetrical on the upside and downside. The sensitivities reflect the established risk sharing mechanism with policyholders for participating products, and are stated before allowance for management actions which may mitigate the effect of changes in the market environment. The sensitivities presented allow for adverse changes in policyholders' behaviour that may arise in response to changes in market rates.

Interest rate movements have a greater impact on total equity as changes in market value of FVOCI and available-for-sale bonds are not recognised in profit after tax.

Credit risk (insurance)

Credit risk is the risk of financial loss if a customer or counterparty fails to meet their obligation under a contract. It arises in two main areas for our insurance manufacturers:

- risk associated with credit spread volatility and default by debt security counterparties after investing premiums to generate a return for policyholders and shareholders; and
- risk of default by reinsurance counterparties and non-reimbursement for claims made after ceding insurance risk.

The amounts outstanding at the balance sheet date in respect of these items are shown in the table on page 39.

Our insurance manufacturing subsidiaries are responsible for the credit risk, quality and performance of their investment portfolios. Our assessment of the creditworthiness of issuers and counterparties is based primarily upon internationally recognised credit ratings and other publicly available information. Investment credit exposures are monitored against limits by our local insurance manufacturing subsidiaries, and are aggregated and reported to Group Insurance Credit Risk and Group Credit Risk functions. Stress testing is performed by Group Insurance on investment credit exposures using credit spread sensitivities and default probabilities.

We use tools to manage and monitor credit risk. These include a credit report containing a watch-list of investments with current credit concerns, primarily investments that may be at risk of future impairment or where high concentrations to counterparties are present in the investment portfolio. The report is circulated monthly to senior management in Group Insurance and the individual country Chief Risk Officers to identify investments which may be at risk of future impairment.

Credit risk on assets supporting unit-linked liabilities is predominantly borne by the policyholders; therefore our exposure is primarily related to liabilities under non-linked insurance and investment contracts and shareholders' funds. The credit quality of insurance financial assets is included in the table on page 25.

The credit quality of the reinsurers' share of liabilities under insurance contracts is assessed as 'strong' or 'good' (as defined on page 25), with 100% of the exposure being neither past due nor impaired (2017: 100%).

Liquidity risk (insurance)

Liquidity risk is the risk that an insurance operation, though solvent, either does not have sufficient financial resources available to meet its obligations when they fall due, or can secure them only at excessive cost.

Risk is managed by cashflow matching and maintaining sufficient cash resources; investing in high-credit-quality investments with deep and liquid markets, monitoring investment concentrations and restricting them where appropriate, and establishing committed contingency borrowing facilities. Insurance manufacturing subsidiaries are required to complete quarterly liquidity risk reports for Group Insurance Risk function and an annual review of the liquidity risks to which they are exposed.

The following table shows the expected undiscounted cash flows for insurance contract liabilities at 31 December 2018. The liquidity risk exposure is wholly borne by the policyholders in the case of unit-linked business and is shared with the policyholders for non-linked insurance. The remaining contractual maturity of investment contract liabilities is included in the table on page 95.

Expected maturity of insurance contract liabilities

	Expected cash flows (undiscounted)				
	Within 1 year	1-5 years	5-15 years	Over 15 years	Total
	HK$m	HK$m	HK$m	HK$m	HK$m
At 31 Dec 2018					
Non-linked insurance contracts	**42,868**	**144,817**	**291,726**	**383,026**	**862,437**
Unit-linked	**6,999**	**19,350**	**16,285**	**11,040**	**53,674**
	49,867	**164,167**	**308,011**	**394,066**	**916,111**
At 31 Dec 2017					
Non-linked insurance contracts	37,445	133,236	268,173	291,343	730,197
Unit-linked	4,523	20,357	32,084	48,606	105,570
	41,968	153,593	300,257	339,949	835,767

Insurance risk

Insurance risk is the risk of loss through adverse experience, in either timing or amount, of insurance underwriting parameters (non-economic assumptions). These parameters include mortality, morbidity, longevity, lapses and unit costs.

The principal risk we face is that, over time, the cost of the contract, including claims and benefits may exceed the total amount of premiums and investment income received. The table on page 40 analyses our life insurance risk exposures by type of contract.

HSBC Insurance primarily manages and mitigates its insurance risk through asset and liability management, product design, pricing and overall proposition management (e.g. management of lapses by introducing surrender charges), underwriting policy, claims management process and reinsurance which cedes risks above our acceptable thresholds to an external reinsurer thereby limiting our exposure.

Present value of in-force long-term insurance business

In calculating PVIF, expected cash flows are projected after adjusting for a variety of assumptions made by each insurance operation to reflect local market conditions and management's judgement of future trends, and after applying risk margins to reflect any uncertainty in the underlying assumptions. Variations in actual experience and changes to assumptions can contribute to volatility in the results of the insurance business.

Actuarial Control Committees for each key insurance entity meet on a quarterly basis to review and approve assumptions proposed for use in the determination of the PVIF. All changes to non-economic assumptions, economic assumptions that are not observable and model methodology must be approved by the Actuarial Control Committee.

Economic assumptions are either set in a way that is consistent with observable market values or, in certain markets, long-term economic assumptions are used. Setting such assumptions involves the projection of long-term interest rates and the time horizon over which observable market rates trend towards these long-term assumptions. The assumptions are informed by relevant historical data and by research and analysis performed by the Group's Economic Research team and external experts, including regulatory bodies. The valuation of PVIF will be sensitive to any changes in these long-term assumptions in the same way that it is sensitive to observed market movements, and the impact of such changes is included in the sensitivities presented below.

The group sets the risk discount rate applied to the PVIF calculation by starting from a risk-free rate curve and adding explicit allowances for risks not reflected in the cash flow modelling. Where shareholders provide options and guarantees to policyholders, the cost of these options and guarantees is an explicit reduction to PVIF.

The following table shows the impact on the PVIF from changes in the risk-free rate at 31 December, across all insurance manufacturing subsidiaries.

	Impact on PVIF	
	2018	2017
	HK$m	HK$m
+100 basis points shift in risk-free rate	**228**	166
-100 basis points shift in risk-free rate	**3,136**	1,513

The impact on PVIF shown above, as well as the impact on profit after tax and net assets shown below, are illustrative only and employ simplified scenarios. It should be noted that the effects may not be linear and, therefore, the results cannot be extrapolated. The sensitivities reflect the established risk sharing mechanism with policyholders for participating products, but do not incorporate other actions that could be taken by management to mitigate effects, nor do they take account of consequential changes in policyholders' behaviour.

Non-economic assumptions

The table below shows the sensitivity of profit and total equity to reasonably possible changes in non-economic assumptions across all our insurance manufacturing subsidiaries.

	2018	2017
	HK$m	HK$m
Effect on profit after tax and total equity at 31 Dec		
10% increase in mortality and/or morbidity rates	**(448)**	(454)
10% decrease in mortality and/or morbidity rates	**454**	459
10% increase in lapse rates	**(408)**	(434)
10% decrease in lapse rates	**468**	495
10% increase in expense rates	**(304)**	(328)
10% decrease in expense rates	**297**	315

Mortality and morbidity risk is typically associated with life insurance contracts. The effect on profit of an increase in mortality or morbidity depends on the type of business being written. Sensitivity to lapse rates depends on the type of contracts being written. In general, for life insurance contracts a policy lapse has two offsetting effects on profits, which are the loss of future income on the lapsed policy and the existence of surrender charge recouped at policy lapse. The net impact depends on the relative size of these two effects which varies with the type of contracts.

Expense rates risk is the exposure to a change in the cost of administering insurance contracts. To the extent that increased expenses cannot be passed on to policyholders, an increase in expense rates will have a negative effect on our profits.

EXHIBIT C

FURTHER INFORMATION ON CREDIT RATINGS

These are guidelines issued by Moody's and S&P on what each of their investment– grade ratings means as of the date immediately preceding the date of this base listing document. While we have correctly extracted and reproduced such information and take responsibility for such extraction and reproduction, there can be no assurance that the meaning of any such rating will not be revised by the relevant rating agency in the future and we have no responsibility to notify you of such change. If you are unsure about any information provided under this Exhibit C and/or what a credit rating means, you should seek independent professional advice.

A credit rating is an assessment by a credit rating agency of a company's overall financial capacity to pay its debts. The focus is on the company's capacity to pay its debts as they become due. The rating does not necessarily apply to any specific obligation.

These are guidelines issued by Moody's and S&P on what each of their investment-grade ratings means as of the date immediately preceding the date of this base listing document.

Moody's long-term ratings definitions

Aaa

Obligations rated Aaa are judged to be of the highest quality, subject to the lowest level of credit risk.

Aa

Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.

A

Obligations rated A are judged to be upper-medium grade and are subject to low credit risk.

Baa

Obligations rated Baa are judged to be medium-grade and subject to moderate credit risk and as such may possess certain speculative characteristics.

Modifiers "1", "2" and "3"

Moody's appends numerical modifiers 1, 2 and 3 to each of the above generic rating classifications (except for Aaa). The modifiers 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

Please refer to *https://www.moodys.com/Pages/amr002002.aspx* (in English language version only) for further details. If you do not understand what these credit ratings mean, you should obtain independent advice.

S&P long-term issuer credit ratings definitions

AAA

An obligor rated 'AAA' has extremely strong capacity to meet its financial commitments. 'AAA' is the highest issuer credit rating assigned by S&P.

AA

An obligor rated 'AA' has very strong capacity to meet its financial commitments. It differs from the highest-rated obligors only to a small degree.

A

An obligor rated 'A' has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.

BBB

An obligor rated 'BBB' has adequate capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to weaken the obligor's capacity to meet its financial commitments.

Plus (+) or minus (-)

The above ratings (except for 'AAA') may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories.

Please refer to *http://www.spratings.com/en_US/understanding-ratings?rd=understandingratings.com* (in English language version only) for further details. If you do not understand what these credit ratings mean, you should obtain independent advice.

Rating outlooks

A rating outlook indicates the direction a rating is likely to move over the medium term. The most common categories of rating outlooks assigned by Moody's and S&P are positive, negative or stable.

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