

未經審核之補充財務資料 Unaudited Supplementary Financial Information

1. 信貸、市場及操作風險的監管資本

就信貸風險、市場風險及操作風險計算監管資本的基準已於財務報表附註4.4中描述。

本補充財務資料第1至9部分以監管規定的綜合基礎編製。此等監管綜合基礎載於財務報表附註4.4(A)。

下表概述於該綜合基礎上計算之信貸、市場及操作風險監管資本。

1. REGULATORY CAPITAL FOR CREDIT, MARKET AND OPERATIONAL RISKS

The bases of regulatory capital calculation for credit risk, market risk and operational risk are described in Note 4.4 to the Financial Statements.

Sections 1 to 9 of the supplementary financial information have been prepared on a consolidated basis for regulatory purposes. The basis of regulatory consolidation is set out in Note 4.4(A) to the Financial Statements.

The table below summarises the regulatory capital computed on the same consolidation basis for credit, market, and operational risks.

		2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
信貸風險	Credit risk	16,280,473	13,388,317
市場風險	Market risk	59,658	48,993
操作風險	Operational risk	1,010,377	980,405
		17,350,508	14,417,715

有關本集團之資本管理及資本比率詳情，請見財務報表附註4.4。

For details of capital management and capital ratios of the Group, please refer to Note 4.4 to the Financial Statements.

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2. 信貸風險資本規定

下表列示《銀行業(資本)規則》就各類別和子類別的信貸風險承擔的資本規定。

2. CAPITAL REQUIREMENTS FOR CREDIT RISK

The tables below show the capital requirements for each class and subclass of credit risk exposures as specified in the Banking (Capital) Rules.

		2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
內部評級基準計算法下的風險承擔 所需資本	Capital required for exposures under the IRB approach		
企業	Corporate		
監管分類準則計算法下的	Specialised lending under supervisory		
專門性借貸	slotting criteria approach		
— 項目融資	— Project finance	65,683	62,440
中小企業	Small-and-medium sized corporates	960,445	1,103,646
其他企業	Other corporates	9,340,296	6,642,704
銀行	Bank		
銀行	Banks	3,682,242	3,164,542
證券公司	Securities firms	8,282	—
零售	Retail		
住宅按揭貸款	Residential mortgages		
— 個人	— Individuals	181,081	141,256
— 空殼公司	— Property-holding shell companies	9,758	8,526
合資格循環零售	Qualifying revolving retail	—	—
其他個人零售	Other retail to individuals	300,650	269,898
零售小企業	Small business retail	12,844	12,840
其他	Others		
現金項目	Cash items	—	—
其他項目	Other items	659,807	669,864
信貸估值調整	Credit valuation adjustment	16,001	8,412
內部評級基準計算法下的風險承擔 所需資本規定總額	Total capital requirements for exposures under the IRB approach	15,237,089	12,084,128
標準(信貸風險)計算法下的風險承擔 所需資本	Capital required for exposures under the standardised (credit risk) approach		
資產負債表內風險承擔	On-balance sheet exposures		
官方實體	Sovereigns	26,598	45,740
公營單位	Public sector entities	43,047	11,001
銀行	Banks	66	2,630
企業	Corporates	229,952	574,545
監管零售	Regulatory retail	112,843	122,207
住宅按揭貸款	Residential mortgage loans	568,006	486,548
不屬逾期的其他風險承擔	Other exposures which are not past due	25,594	22,992
逾期風險承擔	Past due exposures	8,006	8,729
資產負債表外風險承擔	Off-balance sheet exposures		
除證券融資交易及衍生工具	Off-balance sheet exposures other than securities		
合約外的資產負債表外風險承擔	financing transactions and derivative contracts	28,438	28,727
證券融資交易及衍生工具合約	Securities financing transactions and derivative		
	contracts	834	1,070
標準(信貸風險)計算法下的風險承擔 所需資本規定總額	Total capital requirements for exposures under the standardised (credit risk) approach	1,043,384	1,304,189
信貸風險承擔所需資本規定總額	Total capital requirements for credit risk exposures	16,280,473	13,388,317

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3. 內部評級基準計算法下的信貸風險

3.1 內部評級系統及風險組成部分

為計算監管資本要求，本集團對大部分企業和銀行的風險承擔使用基礎內部評級基準計算法，對專門性借貸的項目融資使用監管分類準則計算法，對個人和小企業的零售風險承擔使用零售內部評級基準計算法。下表列出本集團各資產分類及子分類之風險承擔（除證券化類別風險承擔外）所採用的資本計算法。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH

3.1 The internal rating systems and risk components

The Group adopts the FIRB approach to calculate the regulatory capital requirements for most of the corporate and bank exposures, and adopts the supervisory slotting criteria approach to project finance exposures under specialised lending. The Group adopts retail IRB approach for retail exposures to individuals and small business. The following is the table showing the Group's different capital calculation approaches to each asset class and sub-classes of exposures (other than securitisation exposures).

資產分類 Asset class	子分類風險承擔 Exposure sub-class	資本計算法 Capital calculation approach
企業風險承擔 Corporate exposures	監管分類準則計算法下的專門性借貸（項目融資） Specialised lending under supervisory slotting criteria approach (project finance)	監管分類準則計算法 Supervisory Slotting Criteria Approach
	中小企業 Small-and-medium sized corporates	基礎內部評級基準計算法 FIRB Approach
	其他企業 Other corporates	
官方實體風險承擔 Sovereign exposures	官方實體 Sovereigns	標準（信貸風險）計算法 Standardised (credit risk) Approach
	屬官方實體非本地公營單位 Sovereign foreign public sector entities	
	多邊發展銀行 Multilateral development banks	
銀行風險承擔 Bank exposures	銀行 Banks	基礎內部評級基準計算法 FIRB Approach
	證券公司 Securities firms	
	公營單位（不包括屬官方實體非本地公營單位） Public sector entities (excluding sovereign foreign public sector entities)	標準（信貸風險）計算法 Standardised (credit risk) Approach
零售風險承擔 Retail exposures	個人住宅按揭貸款 Residential mortgages to individuals	零售內部評級基準計算法 Retail IRB Approach
	空殼公司住宅按揭貸款 Residential mortgages to property-holding shell companies	
	合資格循環零售 Qualifying revolving retail	
	其他個人零售 Other retail to individuals	
	零售小企業 Small business retail	
股權風險承擔 Equity exposures	-	標準（信貸風險）計算法 Standardised (credit risk) Approach
其他風險承擔 Other exposures	現金項目 Cash items	特定風險權重計算法 Specific Risk-weight Approach
	其他項目 Other items	

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3. 內部評級基準計算法下的信貸風險 (續)

3.1 內部評級系統及風險組成部分 (續)

(A) 內部評級系統結構及內部評級與外部評級對應關係

本集團使用的內部評級系統是一個兩維評級系統，分別提供借款人及交易特性的評估。於企業和銀行組合中，債務人評級維度反映借款人的違約風險，授信評級維度反映債務人一旦違約時影響損失嚴重程度的特定交易因素。

本集團使用統計模型以自行估算企業、銀行和零售債務人的違約概率(PD)，以及使用零售內部評級基準計算法下零售風險承擔的違約損失率(LGD)和違約風險承擔(EAD)。

本集團使用內部評級系統評估所有內部評級基準計算法下借款人的違約可能性。違約概率估算借款人一年期內的違約風險。借款人信貸級別反映在特定的具體評級標準下對某些信貸能力相似的借款人的分類，從而推算出違約概率平均值以計算風險加權資產。

在確定債務人評級的過程中，會對每個債務人最新的財務表現的變數、管理層質素、行業風險、關聯集團和預警性負面因素影響進行評估，並據此作為關鍵因素以預測在不同經濟條件下履行其合約責任的能力和意願。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.1 The internal rating systems and risk components (Cont'd)

(A) *The structure of internal rating systems and the relationship between internal ratings and external ratings*

The Group's internal rating system is a two dimensional rating system that provides separate assessment of borrower and transaction characteristics. For corporate and bank portfolios, the obligor rating dimension reflects exclusively the risk of borrower default and the facility rating dimension reflects transaction specific factors that affect the loss severity in the case of borrower default.

The Group uses statistical models to provide own estimated probability of default ("PD") for its corporate, bank and retail borrowers, and loss given default ("LGD") and exposure at default ("EAD") for retail exposures under retail IRB approach.

The Group uses internal rating system to assess the borrower's likelihood of default for all IRB portfolios. PD estimates the risk of borrower default over a one-year period. A borrower credit grade means a grouping of similar credit-worthiness to which borrowers are assigned on the basis of specified and distinct set of rating criteria, from which the average PD are derived for risk-weighted assets calculation.

In the process of obligor rating assignment, variables of latest financial performance, management quality, industry risks, group connection and negative warning signals of each obligor are assessed as critical factors to predict borrower's ability and willingness to meet with the contractual obligations under different economic conditions.

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3. 內部評級基準計算法下的信貸風險 (續)

3.1 內部評級系統及風險組成部分 (續)

(A) 內部評級系統結構及內部評級與外部評級對應關係 (續)

企業和銀行債務人及零售違約概率組別分為8個債務人評級，包括7個非違約債務人級別且細分至26個信貸級別和1個違約級別。而根據金管局指引規定，使用監管分類準則計算法的項目融資風險承擔，分為4個非違約級別和1個違約級別。對於零售內部評級基準計算法組合的分組估算，按債務人性質、授信類型、抵押品種類和逾期狀況分為不同違約概率、違約風險承擔和違約損失率組別。分組過程為個人住宅按揭貸款和空殼公司住宅按揭貸款、合資格循環零售風險承擔、其他個人零售風險承擔和零售小企業風險承擔的違約概率、違約損失率和違約風險承擔準確及一致的估算奠定了基礎。根據金管局指引規定，所有企業和銀行的信貸交易都需訂立授信評級（按照違約損失率程度）。違約損失率與違約概率相乘產出預期損失(EL)，用以對信貸風險進行量化評估。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.1 The internal rating systems and risk components (Cont'd)

(A) *The structure of internal rating systems and the relationship between internal ratings and external ratings (Cont'd)*

The obligors for corporate and bank, and retail PD pools are assigned into eight broad obligor ratings including seven grades for non-defaulted obligors with sub-divisions into 26 minor credit grades and one for defaulted obligors. In the supervisory slotting criteria approach for the project finance exposures, there are four grades for non-defaulted borrowers and one for defaulted borrowers in accordance with the HKMA guidance. The estimates for retail IRB portfolios are pooled by nature of obligors, facility types, collateral types and delinquency status into different PD, EAD and LGD pools. This pooling process provides the basis of accurate and consistent estimation for PD, LGD and EAD at the pool level for exposures arising from residential mortgages to both individuals and property-holding shell companies, qualifying revolving retail exposures and other retail exposures to individuals and small business retail exposures. All credit transactions for corporates and banks are assigned facility ratings (in terms of LGD) in accordance with the HKMA guidance. LGD estimates multiplied by the PD estimates produce the expected loss ("EL") estimates, which are used to assess credit risk quantitatively.

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3. 內部評級基準計算法下的信貸風險 (續)

3.1 內部評級系統及風險組成部分 (續)

(A) 內部評級系統結構及內部評級與外部評級對應關係 (續)

每個內部評級按違約風險程度和外部評級對應如下：

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.1 The internal rating systems and risk components (Cont'd)

(A) The structure of internal rating systems and the relationship between internal ratings and external ratings (Cont'd)

For each internal rating, the equivalent external rating in terms of default risk is as below:

內部信貸級別 Internal Credit Grades	內部評級定義	Definition of Internal Ratings	對應標準普爾評級 Standard & Poor's Equivalent
1	債務人級別「1」和「2」表示極低的違約風險。	The obligors in grades "1" and "2" have extremely low default risk.	AAA
2	債務人履行債務責任的能力非常強。	The obligor's capacity to meet its financial commitment on the obligation is extremely strong.	AA+ AA AA-
3	債務人級別「3」表示低違約風險，但在一定程度上有可能受不利市場環境和經濟條件影響，履行債務責任的能力尚強。	The obligors in grade "3" have low default risk but are somewhat susceptible to the adverse effects of changes in circumstances and economic conditions. However, the obligor's capacity to meet its financial commitment on the obligation is very strong.	A+ A A-
4	債務人級別「4」表示相對較低的違約風險且現在仍有足夠保障，但可能受不利經濟條件或環境變化影響而削弱其履行債務責任的能力。	The obligors in grade "4" have relatively low default risk and are currently under adequate protection. However, adverse economic conditions or changing circumstances are likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.	BBB+ BBB BBB-
5	債務人級別「5」表示中度違約風險，相對其他投機級別債務人較少出現脫期還款。 但面對重大、持續不確定性或不利業務、財務、經濟條件影響時，可能導致債務人償還能力不足以履行債務責任。	The obligors in grade "5" have medium default risk which are less vulnerable to nonpayment than other speculative obligors. However, they face major ongoing uncertainties or exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitment on the obligation.	BB+ BB BB-
6	債務人級別「6」表示顯著至很高違約風險及容易出現脫期還款。 債務人目前至短期內尚有履行債務責任，但不利的業務、財務或經濟條件變化將極可能導致無力或不願履行債務責任。	The obligors in grade "6" have significant to very high default risk and are vulnerable to nonpayment. The obligors currently and in the near term have the capacity to meet its financial commitment on the obligation but adverse business, financial, or economic conditions will very likely impair the obligor's capacity or willingness to meet its financial commitment on the obligation.	B+ B B-
7	債務人級別「7」表示極高違約風險且目前相當容易出現脫期還款；債務人能否履行債務責任，取決於是否有有利的業務、財務或經濟條件配合；一旦這些條件發生不利變化，即很可能無法履行債務責任。	The obligors in grade "7" have very high default risk and are currently quite vulnerable to nonpayment. The obligors' ability to meet their financial commitment and obligation are dependent upon favorable business, financial, and economic conditions. In the event of adverse business, financial, or economic conditions, these obligors are not likely to have the capacity to meet its financial commitment on the obligation.	CCC CC C
8	債務人級別「8」表示還款違約。	Obligors rated "8" are in payment default.	D

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3. 內部評級基準計算法下的信貸風險 (續)

3.1 內部評級系統及風險組成部分 (續)

(B) 內部估算值的用途

本集團除使用違約概率估算值於計算企業及銀行風險承擔的監管資本外，為加強日常所有信貸業務的管理，集團採用違約概率、違約損失率及違約風險承擔的估算結果，應用於信貸審批、信貸監控、信貸風險報告及分析等。

(C) 信貸風險緩釋工具之管理及確認程序

對於資本管理項下認可的抵押品，本集團在抵押品評估和管理上已制定明確的政策和程序，並符合《銀行業（資本）規則》對信貸風險緩釋認可抵押品的操作要求。

對於採用基礎內部評級基準計算法計算資本的信貸風險承擔，其認可擔保包括由風險權重較交易對手低的銀行、企業以及證券公司所提供的擔保。本集團在考慮認可抵押品的信貸風險緩釋作用後，確定淨信貸風險承擔和有效的違約損失率。

對於零售內部評級基準計算法計算的信貸風險承擔，信貸風險緩釋的作用按擔保和抵押品性質包含在違約概率或違約損失率的內部風險參數之中。

本集團所用信貸風險緩釋工具（用作資本計算的認可抵押品和認可擔保）的信貸風險集中性和市場風險集中性處於低水平。

截至報告日，在計算資本時，除了與有效雙邊淨額結算協議有關的衍生交易外，本集團並無使用任何其他資產負債表內或資產負債表外認可淨額計算作為信貸風險緩釋工具。本集團亦無使用任何認可信貸衍生工具合約作為信貸風險緩釋工具。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.1 The internal rating systems and risk components (Cont'd)

(B) Use of internal estimates

Besides using PD estimates for regulatory capital calculation in corporate and bank exposures, the Group uses the PD together with the LGD and EAD estimates in the credit approval, credit monitoring, reporting and analysis of credit risk information, etc., for the purpose of strengthening the daily management on all credit related matters.

(C) Process of managing and recognising credit risk mitigation

For collateral recognised under capital management, the Group has well-defined policies and procedures for collateral valuation and management which are compliant with the operational requirements for recognised collateral of credit risk mitigation as stated in the Banking (Capital) Rules.

For the credit exposures adopting FIRB approach for capital calculation purpose, the recognised eligible guarantees include the guarantees provided by banks, corporates and securities firms with a lower risk weights than the counterparty. The Group takes into account the credit risk mitigation effect of recognised collateral through its determination of the net credit exposures and the effective LGD.

For retail IRB approach, the effect of the credit risk mitigation is incorporated into the internal risk parameters of PD or LGD depending on the nature of the guarantees and collateral for calculating the risk exposures.

The credit and market risk concentrations within the credit risk mitigation (recognised collateral and guarantees for capital calculation) used by the Group are under a low level.

Up to the date of report, for capital calculation, except derivatives subject to valid bilateral netting agreements, the Group has not used any other on-balance sheet or off-balance sheet recognised netting for credit risk mitigation. The Group also has not used any recognised credit derivative contracts for credit risk mitigation.

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3. 內部評級基準計算法下的信貸風險 (續)

3.1 內部評級系統及風險組成部分 (續)

(D) 內部評級系統控制機制

本集團已建立了一套完善的控制機制，以確保評級系統（包括在日常業務流程使用風險組成部分以評估信貸風險）的完整性、準確性和一致性。

信貸管理委員會及董事會轄下的風險管理委員會審批所有內部評級基準計算法的風險計量模型。

為使風險評級結果達到合理、準確的程度，本集團建立了獨立於營銷和市場推廣單位的評級審批程序。由於內部評級是信貸決策的重要因素，故已實施監控機制以確保評級的完整性、準確性和一致性。對於批發類（企業及銀行）信貸組合，內部評級結果通常由獨立於營銷和市場推廣的信貸審核人員負責審批。個別交易在金額小和信貸風險低的情況下，信貸評級則由銷售和市場推廣單位負責評級核定及批准，並由風險管理單位定期進行貸後檢查。

零售組合的評級確定和風險量化過程高度自動化。作為日常信貸評估過程的組成部分，自動評級所需輸入數據的準確性和完整性由獨立於業務拓展功能的單位負責核實。

根據本集團信貸風險政策，債務人評級至少每年進行重檢。在債務人發生信貸事件的情況下，根據本集團信貸風險政策，須立即進行評級重檢。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.1 The internal rating systems and risk components (Cont'd)

(D) The control mechanisms used for internal rating systems

The Group has established a comprehensive control mechanism to ensure the integrity, accuracy and consistency of the rating systems including the processes for using the risk components in the day-to-day business to assess credit risk.

All of IRB risk models are approved by the Credit and Loans Management Committee and Risk Management Committee of the Board.

In order to achieve reasonably accurate risk ratings assignment, the Group has established a rating approval process which is independent from the sales and marketing units. Since internal rating is one of the key inputs to credit decision making, a control mechanism is put in place to ensure the integrity, accuracy and consistency of the rating assignment. For the wholesale (corporate and bank) credit portfolio, internal ratings are normally approved by credit officers who are functionally separated from the sales and marketing units. In some cases where the transactions are in small amount and of low credit risk, the credit ratings can be assigned and approved by the sales and marketing units, subject to the periodic post-approval review of ratings by Risk Management units.

The rating assignment and risk quantification process of retail portfolio are highly automated. As an integral part of the daily credit assessment process, the accuracy and completeness of data input for automatic rating assignment are verified by units independent from business development function.

The obligor rating is reviewed at least annually as required by the Group's credit risk policy. When credit events occur to the obligor, rating review is triggered promptly in accordance with the Group's credit risk policy.

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3. 內部評級基準計算法下的信貸風險 (續)

3.1 內部評級系統及風險組成部分 (續)

(D) 內部評級系統控制機制 (續)

本集團設定了評級推翻程序，允許信貸分析員考慮評級模型中未能包括的其他相關信貸信息，但從保守及謹慎原則出發，通過評級推翻程序調低債務人評級的幅度不設下限，但調升評級的幅度則有限制，最多不超過2個子級別，且調升理據須限制在事先設定的適當理由清單之內。所有推翻評級需由更高一級的信貸審批授權人簽認。內部評級政策設定評級推翻觸動點為評級個案的10%。模型維護單位將評級推翻的使用和推翻原因的分析作為檢查內部評級模型表現的一部分。

本集團對內部評級系統的表現進行持續定期監察。管理層定期審查內部評級系統的表現及預測能力。內部評級系統及程序的有效性由獨立管控單位負責。模型維護單位對內部評級系統的識別能力、準確性及穩定性進行評估，而模型驗證單位對內部評級系統作全面檢查。內部審計對內部評級系統和相關的信貸風險管控部門的運作進行檢討，檢查結果定期向董事會和管理層匯報。

模型驗證團隊獨立於模型開發單位和評級單位，定期利用定性和定量分析進行模型驗證。本集團制定了模型驗收標準以確保評級系統的識別能力、準確性和穩定性符合監管及管理要求。如模型的表現能力大幅下降到超出預設容忍限度，則會啟動評級模型重檢。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.1 The internal rating systems and risk components (Cont'd)

(D) The control mechanisms used for internal rating systems (Cont'd)

Rating override is designed to allow credit analyst to include any other relevant credit information that has not yet been captured by rating models. For reasons of conservatism and prudential considerations, overrides are unlimited in terms of downgrades but more restricted for upgrades. All upgrades will be limited to a maximum of two sub-grades supported by a very narrowly pre-defined list of appropriate reasons. All overrides need to be signed off by a higher level of credit approval authority. The internal rating policy sets a trigger point of 10% overrides on rating cases. The use of overrides and override reasons are analysed by the model maintenance unit as part of performance review on IRB rating models.

The performance of internal rating system is put under ongoing periodic monitoring. The Management periodically reviews the performance and predictive ability of the internal rating system. The effectiveness of the internal rating system and processes are reviewed by independent control functions. The model maintenance unit conducts assessment on the discriminatory power, accuracy and stability of the rating systems while the validation unit performs comprehensive review of the internal rating system. Internal audit reviews the internal rating system and the operations of the related credit risk control units. The results of the review are reported to the Board and the Management regularly.

A model validation team which is independent from the model development unit and rating assignment units, conducts periodic model validations using both qualitative and quantitative analysis. Model acceptance standards are established to ensure the discriminatory power, accuracy and stability of the rating systems meet regulatory and management requirements. Review of a rating model will be triggered if the performance of the model deteriorates materially against pre-determined tolerance limit.

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3. 內部評級基準計算法下的信貸風險 (續)

3.1 內部評級系統及風險組成部分 (續)

(E) 減值準備方法

減值準備方法與本集團會計政策一致，詳情請見財務報表附註2.14「金融資產減值」。

3.2 內部評級基準計算法下的風險承擔

下表列示本集團除證券化類別風險承擔外採用各種內部評級基準計算法計算的風險承擔（包括資產負債表內及資產負債表外的違約風險承擔）。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.1 The internal rating systems and risk components (Cont'd)

(E) Approach for determining provisions

The approach in determining provisions is in line with the Group's accounting policies. For details, please refer to Note 2.14 "Impairment of financial assets" to the Financial Statements.

3.2 Exposures by IRB calculation approach

The tables below show the Group's exposures other than securitisation exposures (including the EAD of on-balance sheet exposures and off-balance sheet exposures) by each IRB calculation approach.

		基礎內部 評級基準 計算法 FIRB Approach 港幣千元 HK\$'000		監管分類 準則計算法 Supervisory Slotting Criteria Approach 港幣千元 HK\$'000	2016 零售內部 評級基準 計算法 Retail IRB Approach 港幣千元 HK\$'000	特定風險 權重計算法 Specific Risk-weight Approach 港幣千元 HK\$'000	總風險承擔 Total exposures 港幣千元 HK\$'000
企業	Corporate	174,662,875	817,797	–	–	175,480,672	
銀行	Bank	104,772,723	–	–	–	104,772,723	
零售	Retail						
個人及空殼公司 住宅按揭貸款	Residential mortgages to individuals and property-holding shell companies	–	–	14,163,528	–	14,163,528	
合資格循環零售	Qualifying revolving retail	–	–	–	–	–	
其他個人零售	Other retail to individuals	–	–	10,599,737	–	10,599,737	
零售小企業	Small business retail	–	–	1,827,857	–	1,827,857	
其他	Others	–	–	–	8,578,906	8,578,906	
		279,435,598	817,797	26,591,122	8,578,906	315,423,423	

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3. 內部評級基準計算法下的信貸風險 (續)

3.2 內部評級基準計算法下的風險承擔 (續)

		基礎內部 評級基準 計算法 FIRB Approach 港幣千元 HK\$'000	監管分類 準則計算法 Supervisory Slotting Criteria Approach 港幣千元 HK\$'000	2015		總風險承擔 Total exposures 港幣千元 HK\$'000
				零售內部 評級基準 計算法 Retail IRB Approach 港幣千元 HK\$'000	特定風險 權重計算法 Specific Risk-weight Approach 港幣千元 HK\$'000	
企業	Corporate	140,842,881	971,346	–	–	141,814,227
銀行	Bank	98,528,118	–	–	–	98,528,118
零售	Retail					
個人及空殼公司 住宅按揭貸款	Residential mortgages to individuals and property-holding shell companies	–	–	13,506,028	–	13,506,028
合資格循環零售	Qualifying revolving retail	–	–	–	–	–
其他個人零售	Other retail to individuals	–	–	8,892,267	–	8,892,267
零售小企業	Small business retail	–	–	1,890,509	–	1,890,509
其他	Others	–	–	–	12,405,053	12,405,053
		239,370,999	971,346	24,288,804	12,405,053	277,036,202

3.3 內部評級基準計算法下監管規定估算的風險承擔

下表列示本集團採用內部評級基準計算法下受監管規定估算的總違約風險承擔 (包括監管分類準則計算法下的專門性借貸)。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.2 Exposures by IRB calculation approach (Cont'd)

		基礎內部 評級基準 計算法 FIRB Approach 港幣千元 HK\$'000	監管分類 準則計算法 Supervisory Slotting Criteria Approach 港幣千元 HK\$'000	2015		總風險承擔 Total exposures 港幣千元 HK\$'000
				零售內部 評級基準 計算法 Retail IRB Approach 港幣千元 HK\$'000	特定風險 權重計算法 Specific Risk-weight Approach 港幣千元 HK\$'000	
企業	Corporate	140,842,881	971,346	–	–	141,814,227
銀行	Bank	98,528,118	–	–	–	98,528,118
零售	Retail					
個人及空殼公司 住宅按揭貸款	Residential mortgages to individuals and property-holding shell companies	–	–	13,506,028	–	13,506,028
合資格循環零售	Qualifying revolving retail	–	–	–	–	–
其他個人零售	Other retail to individuals	–	–	8,892,267	–	8,892,267
零售小企業	Small business retail	–	–	1,890,509	–	1,890,509
其他	Others	–	–	–	12,405,053	12,405,053
		239,370,999	971,346	24,288,804	12,405,053	277,036,202

3.3 Exposures subject to supervisory estimates under the IRB approach

The table below shows the total EAD of the Group's exposures subject to supervisory estimates under the use of IRB approach (including the specialised lending subject to the supervisory slotting criteria approach).

		2016		2015 港幣千元 HK\$'000
		港幣千元 HK\$'000	港幣千元 HK\$'000	
企業	Corporate	175,480,672	141,814,227	
銀行	Bank	104,772,723	98,528,118	
其他	Others	8,578,906	12,405,053	
		288,832,301	252,747,398	

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3. 內部評級基準計算法下的信貸風險 (續)

3.4 受信貸風險緩釋工具保障的風險承擔

(A) 受認可抵押保障的風險承擔

下表列示本集團採用基礎內部評級基準計算法下，並按照《銀行業(資本)規則》的規定作出扣減後受認可抵押保障的風險承擔(已計及任何資產負債表內或資產負債表外認可淨額計算法的影響)。此等風險承擔並不包括證券融資交易及衍生工具合約。

		2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
企業	Corporate	27,000,557	26,051,399
銀行	Bank	355,873	6,931
		27,356,430	26,058,330

(B) 受認可擔保保障的風險承擔

下表列示本集團按照《銀行業(資本)規則》的規定作出扣減後受認可擔保保障的風險承擔(已計及任何資產負債表內或資產負債表外認可淨額計算法的影響)。此等風險承擔並不包括證券融資交易及衍生工具合約。

		2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
企業	Corporate	42,716,697	29,319,782
銀行	Bank	3,842,178	6,031,455
		46,558,875	35,351,237

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.4 Exposures covered by credit risk mitigation used

(A) Exposures covered by recognised collateral

The table below shows the Group's exposures under the use of FIRB approach (after the effect of any on-balance sheet or off-balance sheet recognised netting) which are covered by recognised collateral after the application of haircuts required under the Banking (Capital) Rules. These exposures exclude securities financing transactions and derivative contracts.

(B) Exposures covered by recognised guarantees

The table below shows the Group's exposures (after the effect of any on-balance sheet or off-balance sheet recognised netting) which are covered by recognised guarantees after the application of haircuts required under the Banking (Capital) Rules. These exposures exclude securities financing transactions and derivative contracts.

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3. 內部評級基準計算法下的信貸風險 (續)

3.5 內部評級基準計算法下企業及銀行風險承擔的風險評估

下表列示本集團於12月31日各債務人等級的風險承擔加權平均風險權重和風險承擔加權平均違約概率之企業及銀行總違約風險承擔。

以下企業及銀行之違約風險承擔及違約概率已計及認可抵押、認可淨額計算及認可擔保的影響，而本集團並無任何認可信貸衍生工具合約。

有關各債務人等級的定義，請見第241頁。

(A) 企業風險承擔 (不包括採用監管分類準則計算法的專門性借貸)

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.5 Risk assessment for corporate and bank exposures under IRB approach

The tables below detail the Group's total EAD of corporate and bank exposures by exposure-weighted average risk-weight and exposure-weighted average PD for each obligor grade as at 31 December.

The EAD and PD disclosed below in respect of corporate and bank exposures have taken into account the effect of recognised collateral, recognised netting and recognised guarantees. The Group did not have any recognised credit derivative contracts.

For definition of each obligor grade, please refer to page 241.

(A) Corporate exposures (other than specialised lending under supervisory slotting criteria approach)

內部信貸級別	Internal Credit Grades	2016		
		違約風險承擔 Exposure at default 港幣千元 HK\$'000	風險承擔加權 平均風險權重 Exposure- weighted average risk- weight %	風險承擔加權 平均違約概率 Exposure- weighted average PD %
級別1	Grade 1	–	0.00	0.00
級別2	Grade 2	2,265,603	15.85	0.04
級別3	Grade 3	19,224,777	25.64	0.07
級別4	Grade 4	48,413,585	46.51	0.26
級別5	Grade 5	78,263,927	82.94	1.16
級別6	Grade 6	25,432,073	108.62	4.13
級別7	Grade 7	412,209	209.78	24.93
級別8/違約	Grade 8/Default	650,701	39.73	100.00
		174,662,875		

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3. 內部評級基準計算法下的信貸風險 (續)

3.5 內部評級基準計算法下企業及銀行風險承擔的風險評估 (續)

(A) 企業風險承擔 (不包括採用監管分類準則計算法的專門性借貸) (續)

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.5 Risk assessment for corporate and bank exposures under IRB approach (Cont'd)

(A) Corporate exposures (other than specialised lending under supervisory slotting criteria approach) (Cont'd)

內部信貸級別	Internal Credit Grades	2015		
		違約風險承擔 Exposure at default 港幣千元 HK\$'000	風險承擔加權 平均風險權重 Exposure- weighted average risk- weight %	風險承擔加權 平均違約概率 Exposure- weighted average PD %
級別1	Grade 1	–	0.00	0.00
級別2	Grade 2	295,203	18.44	0.03
級別3	Grade 3	14,642,595	26.12	0.07
級別4	Grade 4	40,599,750	44.25	0.25
級別5	Grade 5	72,146,362	77.07	1.09
級別6	Grade 6	12,487,428	105.51	4.95
級別7	Grade 7	82,519	194.25	28.48
級別8/違約	Grade 8/Default	589,024	95.56	100.00
		<u>140,842,881</u>		

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3. 內部評級基準計算法下的信貸風險 (續)

3.5 內部評級基準計算法下企業及銀行風險承擔的風險評估 (續)

(B) 企業風險承擔 (採用監管分類準則計算法的專門性借貸)

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.5 Risk assessment for corporate and bank exposures under IRB approach (Cont'd)

(B) Corporate exposures (specialised lending under supervisory slotting criteria approach)

監管評級級別	Supervisory Rating Grades	2016		2015	
		風險承擔加權 平均風險權重	Exposure-weighted average risk-weight	風險承擔加權 平均風險權重	Exposure-weighted average risk-weight
		違約風險承擔 Exposure at default 港幣千元 HK\$'000	違約風險承擔 Exposure at default 港幣千元 HK\$'000	違約風險承擔 Exposure at default 港幣千元 HK\$'000	違約風險承擔 Exposure at default 港幣千元 HK\$'000
優	Strong	257,259	61.69	443,946	60.96
良	Good	72,342	75.24	527,400	88.30
尚可	Satisfactory	488,196	115.00	–	0.00
欠佳	Weak	–	0.00	–	0.00
違約	Default	–	0.00	–	0.00
		817,797		971,346	

專門性借貸的監管評級級別及風險權重乃根據《銀行業 (資本) 規則》第158條的規定而釐定。

The supervisory rating grades and risk-weights of specialised lending are determined in accordance with section 158 of the Banking (Capital) Rules.

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3. 內部評級基準計算法下的信貸風險 (續)

3.5 內部評級基準計算法下企業及銀行風險承擔的風險評估 (續)

(C) 銀行風險承擔

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.5 Risk assessment for corporate and bank exposures under IRB approach (Cont'd)

(C) Bank exposures

內部信貸級別	Internal Credit Grades	2016		
		違約風險承擔 Exposure at default 港幣千元 HK\$'000	風險承擔加權 平均風險權重 Exposure- weighted average risk- weight %	風險承擔加權 平均違約概率 Exposure- weighted average PD %
級別1	Grade 1	–	0.00	0.00
級別2	Grade 2	8,442,503	22.21	0.04
級別3	Grade 3	53,445,806	29.12	0.06
級別4	Grade 4	34,719,232	56.19	0.22
級別5	Grade 5	7,809,309	84.12	0.81
級別6	Grade 6	–	0.00	0.00
級別7	Grade 7	355,873	0.00	18.00
級別8/違約	Grade 8/Default	–	0.00	0.00
		104,772,723		

內部信貸級別	Internal Credit Grades	2015		
		違約風險承擔 Exposure at default 港幣千元 HK\$'000	風險承擔加權 平均風險權重 Exposure- weighted average risk- weight %	風險承擔加權 平均違約概率 Exposure- weighted average PD %
級別1	Grade 1	–	0.00	0.00
級別2	Grade 2	14,541,766	22.47	0.04
級別3	Grade 3	48,928,810	28.33	0.06
級別4	Grade 4	31,425,420	55.79	0.23
級別5	Grade 5	3,632,122	73.09	0.79
級別6	Grade 6	–	0.00	0.00
級別7	Grade 7	–	0.00	0.00
級別8/違約	Grade 8/Default	–	0.00	0.00
		98,528,118		

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3. 內部評級基準計算法下的信貸風險 (續)

3.6 內部評級基準計算法下零售風險承擔的風險評估

下表列示於12月31日按預期損失百分比組合的零售風險承擔。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.6 Risk assessment for retail exposures under IRB approach

The tables below show breakdown of retail exposures on a pool basis by expected loss percentage (EL%) range as at 31 December.

住宅按揭貸款	Residential mortgages	2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
最多至1%	Up to 1%	14,140,049	13,474,453
>1%	>1%	15,697	29,401
違約	Default	7,782	2,174
		14,163,528	13,506,028

合資格循環零售	Qualifying revolving retail	2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
最多至10%	Up to 10%	–	–
>10%	>10%	–	–
違約	Default	–	–
		–	–

其他個人零售	Other retail to individuals	2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
最多至2%	Up to 2%	9,813,941	8,665,952
>2%	>2%	784,595	220,943
違約	Default	1,201	5,372
		10,599,737	8,892,267

零售小企業	Small business retail	2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
最多至1%	Up to 1%	1,757,092	1,823,740
>1%	>1%	28,575	23,344
違約	Default	42,190	43,425
		1,827,857	1,890,509

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3. 內部評級基準計算法下的信貸風險 (續)

3.7 實際損失及估算值的分析

下表按風險承擔類別列示實際損失。實際損失是指年內內部評級基準計算法下各個風險承擔類別提撥的淨撥備 (包括撇銷及個別評估減值準備)。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.7 Analysis of actual loss and estimates

The table below shows the actual losses broken down by class of risk exposure, which represent the net charges (including write-offs and individually assessed impairment allowances) made by each class of exposures under the internal ratings-based approach for the year.

		2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
企業	Corporate	474,854	761,668
銀行	Bank	-	-
個人及空殼公司住宅按揭貸款	Residential mortgages to individuals and property-holding shell companies	-	-
合資格循環零售	Qualifying revolving retail	-	-
其他個人零售	Other retail to individuals	(551)	829
零售小企業	Small business retail	(9,042)	16,365
		465,261	778,862

企業暴露貸款減值撥備的減少，主要因2016年之新增特定分類貸款或減值貸款金額減少。

Decrease in the loan impairment charge of corporate exposures was mainly due to the decrease in the amount of new classified or impaired loans in 2016.

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3. 內部評級基準計算法下的信貸風險 (續)

3.7 實際損失及估算值的分析 (續)

下表按風險承擔類別列示預期損失。預期損失是指債務人就有關風險承擔於一年期內可能因違約引致的估計損失。

		2015年 12月31日 預期損失 Expected loss at 31 December 2015 港幣千元 HK\$'000	2014年 12月31日 預期損失 Expected loss at 31 December 2014 港幣千元 HK\$'000
企業	Corporate	1,366,578	999,302
銀行	Bank	76,536	58,265
個人及空殼公司住宅按揭貸款	Residential mortgages to individuals and property-holding shell companies	4,685	5,018
合資格循環零售	Qualifying revolving retail	-	-
其他個人零售	Other retail to individuals	53,126	45,257
零售小企業	Small business retail	14,843	29,691
		1,515,768	1,137,533

下表是各組合的實際違約率與估算違約概率的對比。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.7 Analysis of actual loss and estimates (Cont'd)

The table below shows the expected loss broken down by class of risk exposure, which is the estimated loss likely to be incurred arising from the potential default of the obligors in respect of the exposure over a one-year period.

		2016年間 實際違約率 Actual default rate during 2016 %	2015年12月31日 估算違約概率 Estimated PD at 31 December 2015 %
企業	Corporate	0.65	1.73
銀行	Bank	-	0.29
個人及空殼公司住宅按揭貸款	Residential mortgages to individuals and property-holding shell companies	0.05	0.48
合資格循環零售	Qualifying revolving retail	-	-
其他個人零售	Other retail to individuals	0.28	0.78
零售小企業	Small business retail	1.11	1.11

The tables below set out the actual default rate compared against the estimated PD of the respective portfolio.

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3. 內部評級基準計算法下的信貸風險 (續)

3.7 實際損失及估算值的分析 (續)

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.7 Analysis of actual loss and estimates (Cont'd)

		2015年間 實際違約率 Actual default rate during 2015 %	2014年12月31日 估算違約概率 Estimated PD at 31 December 2014 %
企業	Corporate	1.68	1.90
銀行	Bank	–	0.25
個人及空殼公司住宅按揭貸款	Residential mortgages to individuals and property-holding shell companies	0.02	0.52
合資格循環零售	Qualifying revolving retail	–	–
其他個人零售	Other retail to individuals	0.17	0.77
零售小企業	Small business retail	1.14	1.31

預期損失和實際損失採用不同的方法進行量度和計算，以符合相關的監管規定和會計準則，因此未必可作直接相比較。此限制主要源於對「損失」的定義的基本差異。預期損失在巴塞爾資本協定是測算債務人違約的潛在經濟損失，並已考慮金錢的時間值及包括催收過程中與收回信貸風險承擔相關的直接及間接成本；而實際損失是指於年度內根據會計準則按個別評估計算的減值準備淨撥備及核銷。

實際違約率的量度是使用違約的債務人數目（批發風險承擔）或賬戶數目（零售風險承擔）；而估算違約概率則是一個經濟週期的長期平均違約率的估算，並從評級日預計一年期內的預期違約概率。

It should be noted that expected loss and actual loss are measured and calculated using different methodologies compliant with relevant regulatory and accounting standards, which therefore may not be directly comparable. The limitation arises mainly from the fundamental differences in the definition of "loss". The expected loss under Basel Accord which estimates the economic loss arising from the potential default of the obligor by taking into account the time value of money and including the direct and indirect costs associated with the recoveries on the credit exposures during the workout process, while actual loss is the net charge of individually assessed impairment allowances and write-offs made during the year in accordance with the accounting standards.

The actual default rate is measured by using the number of obligors (for wholesale exposures) or number of accounts (for retail exposures) defaulted whereas the estimated PD is an estimate of the long run average default rate over an economic cycle and is the estimated one-year forward-looking PD from the date of rating assignment.

未經審核之補充財務資料 Unaudited Supplementary Financial Information

3. 內部評級基準計算法下的信貸風險 (續)

3.7 實際損失及估算值的分析 (續)

因此，由於經濟情況圍繞週期性平均水平而上下波動，某年的（「特定時點」）實際違約率通常會不同於貫穿週期的估算違約率。

各資產類別的估算違約率較實際違約率保守。

4. 標準（信貸風險）計算法下的信貸風險

4.1 外部信貸評估機構(ECAI)評級的使用

本集團採用標準（信貸風險）計算法並以外外部信用評級為依據，確定經金管局審批同意豁免使用基礎內部評級基準計算法之小部分信貸風險承擔以及以下資產分類之風險承擔的信貸風險權重：

- 官方實體
- 公營單位
- 多邊發展銀行

本集團按《銀行業（資本）規則》第4部分規定的對應標準，使用外部信貸評估機構發行人評級對應銀行賬的風險承擔。本集團認可的外部信貸評估機構包括標準普爾、穆迪和惠譽。

4.2 信貸風險緩解

對於採用標準（信貸風險）計算法的信貸風險承擔，非逾期風險承擔的主要認可抵押品類型包括現金存款、債務證券及股票。此外，房地產可作為逾期信貸風險承擔的認可抵押品。本集團對認可押品的處理符合《銀行業（資本）規則》中綜合法計算信貸風險緩解效應的要求。按標準（信貸風險）計算法計算信貸風險承擔資本要求時，認可擔保人包括由風險權重較交易對手低的官方實體、公營單位、多邊發展銀行或已被豁免使用基礎內部評級基準計算法計算信貸風險承擔範圍內的銀行及具有外部信貸評估機構發行人評級的企業。此外，以認可淨額計算的信貸風險緩解包括具有有效雙邊淨額結算協議的衍生工具交易。

3. CREDIT RISK UNDER THE INTERNAL RATINGS-BASED APPROACH (Cont'd)

3.7 Analysis of actual loss and estimates (Cont'd)

Hence, actual default rate in a particular year ("point-in-time") will typically differ from the estimated PD which is the "through-the-cycle" estimates as economies move above or below the cyclical norms.

The estimated PD is more conservative than the actual default rate for all asset classes.

4. CREDIT RISK UNDER THE STANDARDISED (CREDIT RISK) APPROACH

4.1 Use of ratings from External Credit Assessment Institutions ("ECAI")

The Group adopts STC approach based on external credit rating to determine the risk weight of the small residual credit exposures that was approved by the HKMA to be exempted from FIRB approach and the following asset classes of exposures:

- Sovereign
- Public sector entity
- Multilateral development bank

The Group performs the ECAI issuer ratings mapping to its exposures in banking book in accordance with Part 4 of the Banking (Capital) Rules. The ECAIs recognised by the Group include Standard & Poor's, Moody's and Fitch.

4.2 Credit risk mitigation

For credit exposures adopting STC approach, the main types of recognised collateral include cash deposits, debt securities and equities for non-past due exposures. In addition, real estate collateral is also recognised for past due exposures. The treatment of recognised collateral is compliant with the comprehensive approach for credit risk mitigation as mentioned in the Banking (Capital) Rules. For credit exposures under STC approach, the recognised guarantees for capital calculation include the guarantees given by sovereigns, public sector entities, multilateral development banks, or banks and corporates with ECAI issuer ratings both exempted from FIRB approach for credit exposures, that have lower risk weights than the counterparty. Besides, the recognised netting for credit risk mitigation includes derivatives subject to valid bilateral netting agreements.

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4. 標準（信貸風險）計算法下的信貸風險（續）

4.3 除證券化類別風險承擔外標準（信貸風險）計算法下的信貸風險承擔

4. CREDIT RISK UNDER THE STANDARDISED (CREDIT RISK) APPROACH (Cont'd)

4.3 Credit risk exposures other than securitisation exposures under the standardised (credit risk) approach

		2016						認可抵押品 涵蓋部分 Total	認可擔保 涵蓋部分 Total
		風險承擔 總額 Total exposures 港幣千元 HK\$'000	信貸風險緩釋後金額* Exposures after CRM*		風險加權數額 Risk-weighted amount		exposures covered by recognised collateral 港幣千元 HK\$'000	exposures covered by recognised guarantees 港幣千元 HK\$'000	
			獲評級 Rated 港幣千元 HK\$'000	不獲評級 Unrated 港幣千元 HK\$'000	獲評級 Rated 港幣千元 HK\$'000	不獲評級 Unrated 港幣千元 HK\$'000			
資產負債表內風險承擔	On-balance sheet exposures								
官方實體	Sovereigns	39,780,312	39,780,312	-	332,470	-	-	-	
公營單位	Public sector entities	2,796,228	2,800,385	-	538,086	-	-	-	
多邊發展銀行	Multilateral development banks	1,924,311	1,924,311	-	-	-	-	-	
銀行	Banks	4,151	4,151	-	830	-	-	-	
證券公司	Securities firms	-	-	-	-	-	-	-	
企業	Corporates	2,905,378	-	2,874,404	-	2,874,404	30,974	-	
現金項目	Cash items	-	-	-	-	-	-	-	
監管零售	Regulatory retail	1,942,218	-	1,880,714	-	1,410,536	61,504	-	
住宅按揭貸款	Residential mortgage loans	14,206,562	-	14,200,162	-	7,100,081	2,243	4,157	
不屬逾期的其他風險承擔	Other exposures which are not past due	449,072	-	310,772	-	319,923	138,300	-	
逾期風險承擔	Past due exposures	81,301	-	81,301	-	100,081	43,741	-	
資產負債表內風險承擔總額	Total on-balance sheet exposures	64,089,533	44,509,159	19,347,353	871,386	11,805,025	276,762	4,157	
資產負債表外風險承擔	Off-balance sheet exposures								
除證券融資交易及衍生 工具合約外的資產 負債表外風險承擔	Off-balance sheet exposures other than securities financing transactions and derivative contracts	541,371	199,557	341,814	39,911	315,568	-	3,746	
證券融資交易 及衍生工具合約	Securities financing transactions and derivative contracts	256,076	-	256,076	-	10,419	245,392	-	
資產負債表外風險承擔總額	Total off-balance sheet exposures	797,447	199,557	597,890	39,911	325,987	245,392	3,746	
非證券化類別風險承擔總額	Total non-securitisation exposures	64,886,980	44,708,716	19,945,243	911,297	12,131,012	522,154	7,903	
1,250%風險權重的 風險承擔總額	Exposures that are risk-weighted at 1,250%	-							

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4. 標準（信貸風險）計算法下的信貸風險（續）

4.3 除證券化類別風險承擔外標準（信貸風險）計算法下的信貸風險承擔（續）

4. CREDIT RISK UNDER THE STANDARDISED (CREDIT RISK) APPROACH (Cont'd)

4.3 Credit risk exposures other than securitisation exposures under the standardised (credit risk) approach (Cont'd)

		2015						認可抵押品 涵蓋部分 Total exposures covered by recognised collateral HK\$'000	認可擔保 涵蓋部分 Total exposures covered by recognised guarantees 港幣千元 HK\$'000
		風險承擔 總額 Total exposures 港幣千元 HK\$'000	信貸風險緩釋後金額* Exposures after CRM* 獲評級 Rated 港幣千元 HK\$'000		風險加權數額 Risk-weighted amount 獲評級 Rated 港幣千元 HK\$'000				
			不獲評級 Unrated 港幣千元 HK\$'000	獲評級 Rated 港幣千元 HK\$'000	不獲評級 Unrated 港幣千元 HK\$'000				
資產負債表內風險承擔	On-balance sheet exposures								
官方實體	Sovereigns	34,997,144	–	–	571,753	–	–	–	
公營單位	Public sector entities	1,648,325	–	–	137,507	–	–	73,342	
多邊發展銀行	Multilateral development banks	1,500,101	–	–	–	–	–	–	
銀行	Banks	159,679	–	–	32,873	–	–	–	
證券公司	Securities firms	–	–	–	–	–	–	–	
企業	Corporates	7,200,215	–	7,181,808	–	7,181,808	18,407	–	
現金項目	Cash items	442	–	442	–	–	–	–	
監管零售	Regulatory retail	2,117,320	–	2,036,780	–	1,527,585	80,540	–	
住宅按揭貸款	Residential mortgage loans	12,166,871	–	12,163,694	–	6,081,847	–	3,177	
不屬逾期的其他風險承擔	Other exposures which are not past due	396,777	–	278,248	–	287,398	118,529	–	
逾期風險承擔	Past due exposures	84,207	–	84,207	–	109,117	34,387	–	
資產負債表內風險承擔總額	Total on-balance sheet exposures	60,271,081	38,308,427	21,745,179	742,133	15,187,755	251,863	76,519	
資產負債表外風險承擔	Off-balance sheet exposures								
除證券融資交易及衍生 工具合約外的資產 負債表外風險承擔	Off-balance sheet exposures other than securities financing transactions and derivative contracts	472,850	99,480	373,370	19,896	339,192	–	3,669	
證券融資交易 及衍生工具合約	Securities financing transactions and derivative contracts	16,506	–	16,506	–	13,371	–	–	
資產負債表外風險承擔總額	Total off-balance sheet exposures	489,356	99,480	389,876	19,896	352,563	–	3,669	
非證券化類別風險承擔總額	Total non-securitisation exposures	60,760,437	38,407,907	22,135,055	762,029	15,540,318	251,863	80,188	
1,250%風險權重的 風險承擔總額	Exposures that are risk-weighted at 1,250%	–							

* 認可信貸風險緩釋符合《銀行業（資本）規則》訂定的要求及條件。

* Recognised credit risk mitigation satisfying the requirements and conditions set out in the Banking (Capital) Rules.

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5. 交易對手信貸風險相關承擔

本集團在交易賬及銀行賬下來自衍生工具合約及證券融資交易之交易對手信貸風險的風險管理架構，與財務報表附註4所述一致。本集團通過一般信貸審批程序核定交易對手之信貸額度以控制衍生工具交易結算前信貸風險，及結算額度以控制在交易賬及銀行賬下與外匯交易有關的結算風險。本集團採用現行風險承擔及潛在風險承擔方法監察因市場變動產生風險承擔。風險管理單位密切和及時地識別與監控任何例外及超額情況。

交易對手信貸風險承擔的信貸等值數額及資本要求按監管資本規定而決定。目前，本集團採用現行風險承擔方法計量相關信貸等值數額，包括現行風險承擔和潛在風險承擔。相關交易對手違約風險資本要求按基礎內部評級基準計算法／標準（信貸風險）計算法計算。另外，本集團採用標準信貸估值調整方法，計算相關交易對手信貸估值調整資本要求。

本集團已為證券融資交易下之抵押債務證券制定審慎的認可準則及抵押折扣率。

5. COUNTERPARTY CREDIT RISK-RELATED EXPOSURES

The Group's counterparty credit risk arising from derivative contracts and securities financing transactions both in trading and banking book is subject to the same risk management framework as mentioned in Note 4 to the Financial Statements. The Group establishes credit limit of counterparties through formal credit approval procedures to control the pre-settlement credit risk arising from derivative transactions and settlement limit to control the settlement risk arising from foreign exchange-related transactions for counterparties in both the trading book and banking book. The Group monitors the risk exposure due to fluctuations in the market by using the current exposure and the potential exposure value of the transactions. Exceptions or excesses are timely and closely identified and monitored by risk management units.

Credit equivalent amount and capital charge for the relevant counterparty credit exposures are determined following the regulatory capital requirements. Currently, the Group has adopted the Current Exposure Method to measure the relevant credit equivalent amount, which comprises current exposures and potential future exposures. The relevant counterparty default risk capital charge is calculated under the FIRB/STC (credit risk) approach. In addition, the Group has adopted standardised credit valuation adjustment ("CVA") method to calculate the relevant counterparty CVA capital charge.

The Group establishes prudent eligibility criteria and haircut policy of debt securities being pledged as collateral for securities financing transactions.

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5. 交易對手信貸風險相關承擔 (續)

本集團根據交易對手的違約概率及逾期時間制定了授信資產分類政策。若有客觀證據證明一項資產減值損失已出現，將根據香港財務報告準則及監管要求進行資產減值準備。

在錯向風險(交易對手的違約概率與由交易市價帶動的信貸風險承擔呈正向關係的風險)的管理與監察上，原則上不允許做存在特定錯向風險的交易，並制定措施透過壓力測試識別潛在一般錯向風險的交易對手進行監控。

5. COUNTERPARTY CREDIT RISK-RELATED EXPOSURES (Cont'd)

The Group formulates policy for classification of credit assets according to the PD of counterparties and the period of overdue. If there is objective evidence that an impairment loss has been incurred, impairment allowance will be provided according to HKFRS and regulatory requirements.

In controlling and monitoring of wrong-way risk (risk of existence of positive correlation between the PD of a counterparty and credit exposures driven by mark-to-market value of the underlying transactions), specific wrong-way risk transactions are generally not allowed and monitoring measures have been formulated for those counterparties identified by stress testing that would be exposed to potential general wrong-way risk.

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5. 交易對手信貸風險相關承擔 (續)

5.1 內部評級基準計算法下的交易對手信貸風險承擔

下表概述本集團採用現行風險承擔方法計算與對手進行證券融資交易及衍生工具合約所產生的風險承擔，並且沒有有效跨產品淨額結算協議的影響。

5. COUNTERPARTY CREDIT RISK-RELATED EXPOSURES (Cont'd)

5.1 Counterparty credit risk exposures under the internal ratings-based approach

The following table summarises the Group's exposures to counterparty credit risk arising from securities financing transactions and derivative contracts calculated using the Current Exposure Method. There is no effect of valid cross-product netting agreements on these exposures.

		2016		2015	
		證券融資交易 Securities financing transactions 港幣千元 HK\$'000	衍生工具合約 Derivative contracts 港幣千元 HK\$'000	證券融資交易 Securities financing transactions 港幣千元 HK\$'000	衍生工具合約 Derivative contracts 港幣千元 HK\$'000
總正數公允值	Gross total positive fair value		543,088		373,984
已將有效雙邊淨額結算協議的影響計算在內之違約風險的風險承擔	Default risk exposures after the effect of valid bilateral netting agreements	941,587	1,040,952	2,384,183	686,116
減：認可抵押品	Less: Value of recognised collateral				
— 債券	— Debt securities	—	—	(339,774)	—
— 其他	— Others	(889,830)	(3)	(472,002)	—
已將有效雙邊淨額結算協議的影響計算在內之違約風險的扣減認可抵押品後風險承擔	Default risk exposures after the effect of valid bilateral netting agreements net of recognised collateral	51,757	1,040,949	1,572,407	686,116
以交易對手類別分類之違約風險的風險承擔	Default risk exposures by counterparty type				
企業	Corporate	—	91,683	—	70,209
銀行	Bank	941,587	949,269	2,384,183	615,907
		941,587	1,040,952	2,384,183	686,116
以交易對手類別分類之風險加權數額	Risk-weighted amounts by counterparty type				
企業	Corporate	—	104,036	—	63,226
銀行	Bank	30,951	335,746	683,839	184,081
		30,951	439,782	683,839	247,307
提供信貸保障的認可信貸衍生工具合約的名義數額	Notional amounts of recognised credit derivative contracts that provide credit protection	—	—	—	—

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5. 交易對手信貸風險相關承擔 (續)

5.2 標準 (信貸風險) 計算法下的交易對手信貸風險承擔

下表概述本集團採用現行風險承擔方法計算與對手進行衍生工具合約所產生的風險承擔，並且沒有有效跨產品淨額結算協議的影響。

5. COUNTERPARTY CREDIT RISK-RELATED EXPOSURES (Cont'd)

5.2 Counterparty credit risk exposures under the standardised (credit risk) approach

The following table summarises the Group's exposures to counterparty credit risk arising from derivative contracts calculated using the Current Exposure Method. There is no effect of valid cross-product netting agreements on these exposures.

		2016		2015	
		證券融資交易 Securities financing transactions 港幣千元 HK\$'000	衍生工具合約 Derivative contracts 港幣千元 HK\$'000	證券融資交易 Securities financing transactions 港幣千元 HK\$'000	衍生工具合約 Derivative contracts 港幣千元 HK\$'000
總正數公允值	Gross total positive fair value		344,245		322,282
已將有效雙邊淨額結算協議的影響計算在內之違約風險的風險承擔	Default risk exposures after the effect of valid bilateral netting agreements	-	256,076	-	16,506
減：認可抵押品	Less: Value of recognised collateral				
— 債券	— Debt securities	-	-	-	-
— 其他	— Others	-	(245,392)	-	-
已將有效雙邊淨額結算協議的影響計算在內之違約風險的扣減認可抵押品後風險承擔	Default risk exposures after the effect of valid bilateral netting agreements net of recognised collateral	-	10,684	-	16,506

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5. 交易對手信貸風險相關承擔 (續)

5. COUNTERPARTY CREDIT RISK-RELATED EXPOSURES (Cont'd)

5.2 標準 (信貸風險) 計算法下的交易對手信貸風險承擔 (續)

5.2 Counterparty credit risk exposures under the standardised (credit risk) approach (Cont'd)

		2016		2015	
		證券融資交易 Securities financing transactions 港幣千元 HK\$'000	衍生工具合約 Derivative contracts 港幣千元 HK\$'000	證券融資交易 Securities financing transactions 港幣千元 HK\$'000	衍生工具合約 Derivative contracts 港幣千元 HK\$'000
以交易對手類別分類之 違約風險的風險承擔	Default risk exposures by counterparty type				
官方實體	Sovereigns	-	-	-	-
公營單位	Public sector entities	-	-	-	-
企業	Corporates	-	9,341	-	3,948
監管零售	Regulatory retail	-	58,586	-	12,542
不屬逾期的其他 風險承擔	Other exposures which are not past due	-	188,149	-	16
逾期風險承擔	Past due exposures	-	-	-	-
		-	256,076	-	16,506
以交易對手類別分類之 風險加權數額	Risk-weighted amounts by counterparty type				
官方實體	Sovereigns	-	-	-	-
公營單位	Public sector entities	-	-	-	-
企業	Corporates	-	9,341	-	3,948
監管零售	Regulatory retail	-	797	-	9,407
不屬逾期的其他 風險承擔	Other exposures which are not past due	-	281	-	16
逾期風險承擔	Past due exposures	-	-	-	-
		-	10,419	-	13,371
提供信貸保障的認可信 貸衍生工具合約的 名義數額	Notional amounts of recognised credit derivative contracts that provide credit protection	-	-	-	-

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6. 資產證券化

本集團作為一家投資機構，於2016年12月31日並無資產證券化（2015年：無）。

6. ASSETS SECURITISATION

There was no assets securitisation for which the Group is an investing institution at 31 December 2016 (2015: Nil).

7. 市場風險資本要求

7. CAPITAL CHARGE FOR MARKET RISK

		2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
在標準（市場風險）計算法下	Under the standardised (market risk) approach		
外匯風險承擔（淨額）	Foreign exchange exposures (net)	–	–
利率風險承擔	Interest rate exposures		
– 非證券化類別風險承擔	– Non-securitisation exposure	–	–
商品風險承擔	Commodity exposures	–	–
股權風險承擔	Equity exposures	–	–
在內部模式計算法下	Under the internal models approach		
外匯及利率的一般風險 承擔	General foreign exchange and interest rate exposures	59,658	48,993
市場風險資本要求	Capital charge for market risk	59,658	48,993

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7. 市場風險資本要求 (續)

為符合《2011年銀行業(資本)(修訂)規則》，市場風險監管資本要求需包括計算受壓風險值資本要求。下表列出本集團以內部模式計算法計算一般市場風險持倉的內部模式計算法風險值及受壓風險值¹。

7. CAPITAL CHARGE FOR MARKET RISK (Cont'd)

Market risk regulatory capital charge is calculated under the Banking (Capital) (Amendment) Rules 2011 to incorporate capital charge for stressed VAR. The following table sets out the IMM VAR and stressed VAR¹ for the general market risk exposure calculated under the IMM approach of the Group.

		年份	於12月 31日 At 31 December 港幣千元 HK\$'000	全年 最低數值 Minimum for the year 港幣千元 HK\$'000	全年 最高數值 Maximum for the year 港幣千元 HK\$'000	全年 平均數值 Average for the year 港幣千元 HK\$'000
外匯及利率風險之內部模式 計算法風險值	IMM VAR for foreign exchange and interest rate risk	2016	5,563	1,089	9,782	4,843
		2015	2,657	1,686	4,080	2,613
外匯風險之內部模式計算 法風險值	IMM VAR for foreign exchange risk	2016	5,524	1,185	9,558	4,633
		2015	2,644	1,299	4,355	2,608
利率風險之內部模式計算 法風險值	IMM VAR for interest rate risk	2016	921	201	3,457	1,020
		2015	370	89	810	353
外匯及利率風險之受壓 風險值	Stressed VAR for foreign exchange and interest rate risk	2016	10,523	6,044	40,128	14,869
		2015	15,020	4,740	32,445	16,227
外匯風險之受壓風險值	Stressed VAR for foreign exchange risk	2016	6,977	1,122	8,814	5,491
		2015	7,101	1,924	8,600	6,734
利率風險之受壓風險值	Stressed VAR for interest rate risk	2016	5,269	3,432	36,574	11,197
		2015	11,201	1,897	27,852	11,653

註：

1. 市場風險監管資本的內部模式計算法風險值及受壓風險值利用了99%置信水平及10天持有期來計算。受壓風險值採用與風險值模型相同的方法，利用集團組合在連續12個月壓力市況下的歷史市場數據來計算。

Note:

1. IMM VAR and stressed VAR measures used for market risk regulatory capital purposes are calculated to a 99% confidence level and use a 10-day holding period. The stressed VAR uses the same methodology as the VAR model and is generated with inputs calibrated to the historical market data from a continuous 12-month period of significant financial stress relevant to the Group's portfolio.

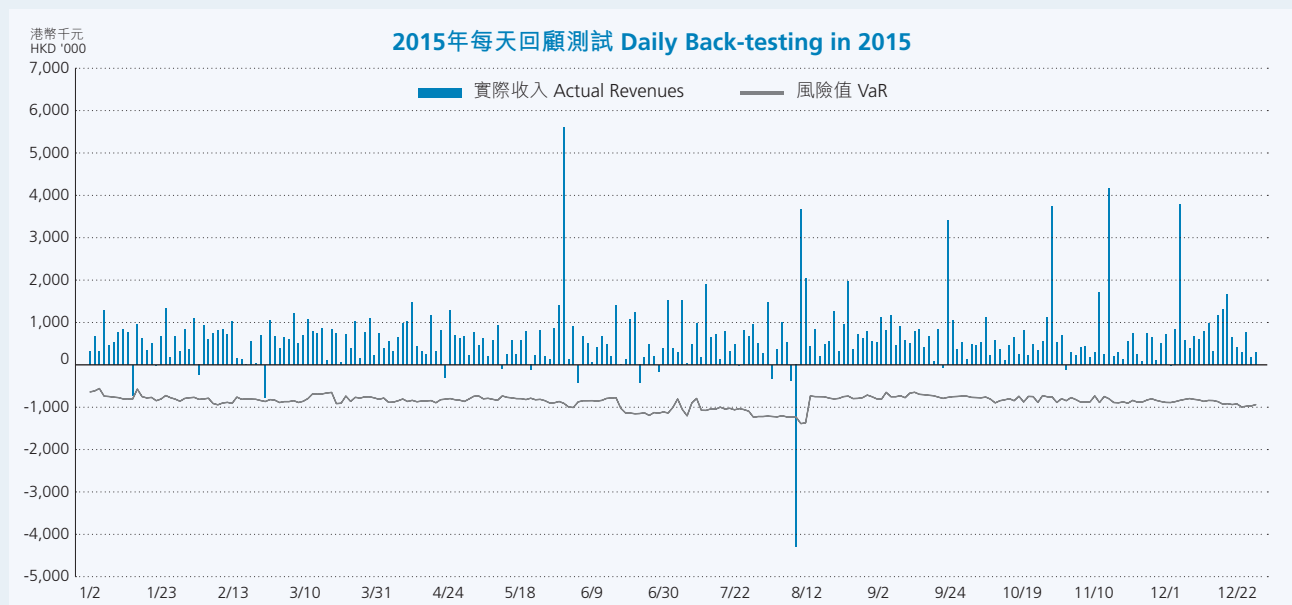
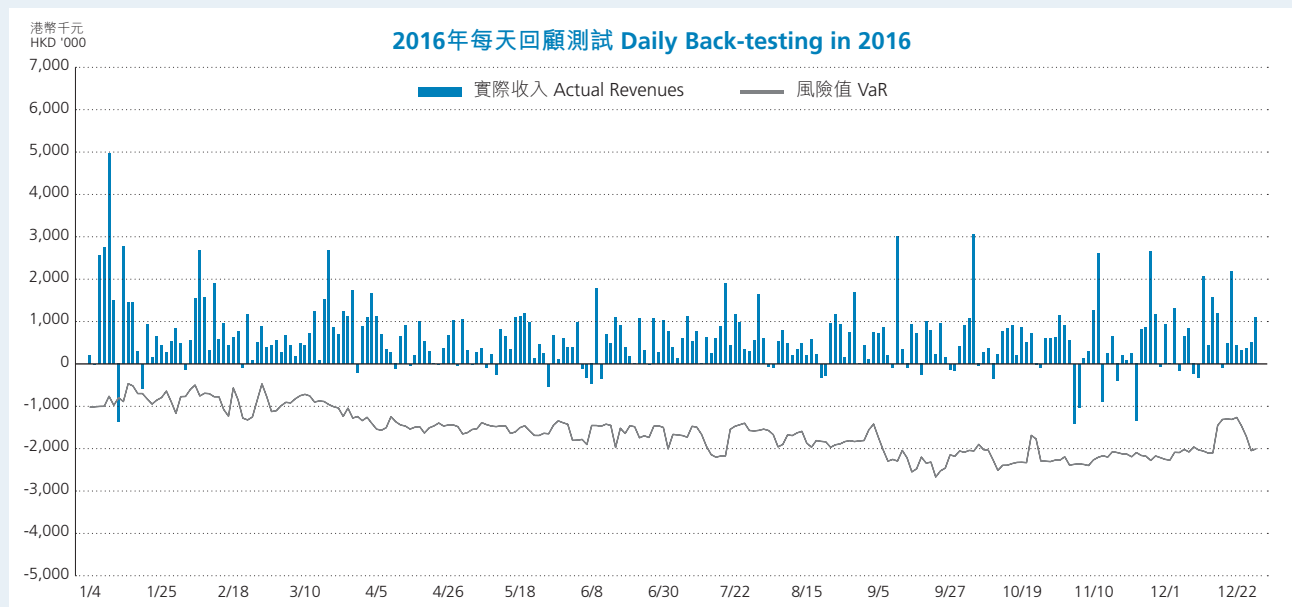
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7. 市場風險資本要求 (續)

下圖列示內部模式計算法下的本集團市場風險的監管回顧測試結果。

7. CAPITAL CHARGE FOR MARKET RISK (Cont'd)

The graphs below show the regulatory back-testing result of the Group's market risk under IMM approach.



2016年內回顧測試結果顯示，本集團有一次實際交易損失超過風險值的情況（2015年：一次實際交易損失超過風險值）。

There was 1 actual loss exceeding the VAR for the Group in 2016 as shown in the back-testing results (2015: 1 actual loss exceeding the VAR).

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8. 操作風險資本要求

8. CAPITAL CHARGE FOR OPERATIONAL RISK

		2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
操作風險資本要求	Capital charge for operational risk	1,010,377	980,405

本集團採用標準（業務操作風險）計算法計算操作風險資本要求。

The Group uses the standardised (operational risk) approach to calculate its operational risk capital charge.

9. 銀行賬的股權風險承擔

9. EQUITY EXPOSURES IN BANKING BOOK

持有其他企業的股權乃是根據獲取該等股權的初始意圖入賬。因關係及策略性理由而持有的股權與因其他理由（包括資本增值）而持有的股權將以不同的分類入賬。擬持續持有的股權投資（不包括對聯營公司、合資企業或附屬公司的投資）歸類為可供出售證券，並於資產負債表內的「金融投資」列示。

Equity holdings in other entities are accounted for in accordance with the underlying intentions of holdings at the inception of acquisition. The classifications for equity holdings taken for relationship and strategic purposes will be separated from those taken for other purposes (including capital appreciation). Investments in equity shares which are intended to be held on a continuing basis, but which do not comprise investments in associates, joint venture or subsidiaries, are classified as available-for-sale securities and are reported in the balance sheet as "Financial investments".

本集團採用與詳列於財務報表附註2.8(4)、2.11、2.12和2.14相同之會計處理及估值方法處理銀行賬中除附屬公司以外的股權風險承擔，對其估值之進一步資料列示於財務報表附註5.1「以公允價值計量的金融工具」。若其後增加對有關股權的投資，並引致一項股權投資成為聯營公司、合資企業或附屬公司，該項投資將會根據本集團的會計政策重新分類入賬。

For equity exposures in banking book other than subsidiaries, the Group applies the same accounting treatment and valuation methodologies as detailed in the Notes 2.8(4), 2.11, 2.12 and 2.14 to the Financial Statements, further details on their valuation are outlined in Note 5.1 "Financial instruments measured at fair value" to the Financial Statements. If additional investment is made subsequently such that an investee becomes an associate, joint venture or subsidiary, then the investment is reclassified in accordance with the Group's accounting policies.

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9. 銀行賬的股權風險承擔 (續)

與股權風險承擔有關之收益或虧損概述如下：

		2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
出售產生的已實現收益	Realised gains from sales	-	71,892
於儲備而非收益表中確認 之未實現重估收益	Unrealised gains on revaluation recognised in reserves but not through income statement	3,847	4,363

10. 風險管理

總覽

本集團業務的主要內在風險包括信貸風險、利率風險、市場風險、流動資金風險、操作風險、信譽風險、法律及合規風險及策略風險。本集團的風險管理目標是在提高股東價值的同時，確保風險控制在可接受的水平之內。

風險管理架構

本銀行董事會對本集團的整體風險管理負最終責任，並負責訂定風險管理的策略性目標及風險管理架構。

為達至本集團風險管理目標，董事會下設風險管理委員會，並有獨立非執行董事擔任成員，負責監察本集團的各類風險及審批高層次風險管理政策。另外，風險管理委員會下設信貸審批委員會，負責審批超行政總裁權限或指定權限之授信申請及組合限額。

行政總裁轄下的多個管理委員會及有關部門，根據董事會訂立的風險管理策略，負責制訂及定期檢討風險管理政策及監控程序。

9. EQUITY EXPOSURES IN BANKING BOOK (Cont'd)

Gains or losses related to equity exposures are summarised below:

		2016 港幣千元 HK\$'000	2015 港幣千元 HK\$'000
出售產生的已實現收益	Realised gains from sales	-	71,892
於儲備而非收益表中確認 之未實現重估收益	Unrealised gains on revaluation recognised in reserves but not through income statement	3,847	4,363

10. RISK MANAGEMENT

The Overview

The principal types of risk inherent in the Group's businesses are credit risk, interest rate risk, market risk, liquidity risk, operational risk, reputation risk, legal and compliance risk, and strategic risk. The Group's risk management objective is to enhance shareholder value by maintaining risk exposures within acceptable levels.

Risk Management Structure

The Bank's Board of Directors (the "Board") holds the ultimate responsibility for the Group's overall risk management. It determines the risk management strategies and the risk management structure.

To achieve the Group's goals in risk management, the Board sets up the Risk Management Committee, which comprises of Independent Non-executive Directors, to oversee the Group's various types of risks and approve the high-level risk management policies. Also, Credit Approval Committee is set up under the Risk Management Committee to approve credit applications and portfolio limit exceeding the Chief Executive's authority or as required by the policy.

According to the risk management strategies established by the Board, risk management policies and controls are devised and reviewed regularly by relevant departments and respective management committees set up by the Chief Executive.

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10. 風險管理 (續)

風險管理架構 (續)

風險管理單位負責制訂識別、量度、監察及控制信貸風險、市場風險、操作風險、信譽風險、法律及合規風險、利率風險、流動資金風險及策略風險的政策及程序，設定適當的風險限額，持續監察有關風險。

稽核部獨立查核風險管理政策和監控措施是否足夠及有效，以確保本集團依據該等既定政策、程序及限額營運。

獨立性是施行有效風險管理的關鍵。為保證風險管理部及稽核部的獨立性，風險管理部和稽核部分別直接向風險管理委員會及稽核委員會匯報，該兩個委員會均為董事會下設的專責委員會，全部委員由本銀行董事擔任。

(i) 信貸風險管理

信貸風險管理詳情載於財務報表附註4內。

(ii) 流動資金風險管理

流動資金風險管理詳情載於財務報表附註4內。

(iii) 市場風險管理

市場風險管理詳情載於財務報表附註4內。

(iv) 操作風險管理

操作風險是指由不完善或有問題的內部程序、人員、系統，以及外部事件所造成損失的風險。操作風險隱藏於業務操作的各個環節，是集團在日常操作活動中面對的風險。

10. RISK MANAGEMENT (Cont'd)

Risk Management Structure (Cont'd)

The risk management units develop policies and procedures for identifying, measuring, monitoring and controlling credit risk, market risk, operational risk, reputation risk, legal and compliance risk, interest rate risk, liquidity risk and strategic risk; set appropriate risk limits; and continually monitor risks.

The Audit Department conducts independent reviews on the adequacy and effectiveness of risk management policies and controls to ensure that the Group is operating according to the established policies, procedures and limits.

Independence is crucial to effective risk management. To ensure the independence of the Risk Management Department and the Audit Department, they report directly to the Risk Management Committee and the Audit Committee respectively. Both committees are specialised committees set up by the Board and all members are directors of the Bank.

(i) Credit risk management

Details of credit risk management are set out in Note 4 to the Financial Statements.

(ii) Liquidity risk management

Details of liquidity risk management are set out in Note 4 to the Financial Statements.

(iii) Market risk management

Details of market risk management are set out in Note 4 to the Financial Statements.

(iv) Operational risk management

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and system, or from external events. The risk is inherent in every aspect of business operations and confronted by the Group in its day-to-day operational activities.

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10. 風險管理 (續)

風險管理架構 (續)

(iv) 操作風險管理 (續)

集團實施操作風險管理「三道防線」體系：所有部門或功能單位為第一道防線，是操作風險管理的第一責任人，通過自我評估與自我提升來履行業務經營過程中自我風險控制職能。操作風險及法規處連同一些與操作風險管理相關的專門職能單位包括人力資源處、業務規劃及流程優化處、事務處、財務管理處、會計處（統稱為「專門職能單位」）為第二道防線，負責評估和監控第一道防線操作風險狀況，對其工作提供指導。獨立於業務單位的操作風險及法規處，負責協助管理層管理本集團的操作風險，包括制訂和重檢操作風險管理政策和框架、設計操作風險的管理工具和匯報機制、評估及向管理層和風險管理委員會匯報總體操作風險狀況；專門職能單位對操作風險的一些特定的範疇或與其相關事項，履行第二道防線的牽頭管理責任，除負責本單位操作風險管理外，亦須就指定的操作風險管理範疇向其他單位提供專業意見／培訓並履行集團整體的操作風險牽頭管理。稽核部為第三道防線，對操作風險管理框架的有效性與充足性作獨立評估，需定期稽查集團各部門或功能單位操作風險管理工作的合規性和有效性，並提出整改意見。

10. RISK MANAGEMENT (Cont'd)

Risk Management Structure (Cont'd)

(iv) Operational risk management (Cont'd)

The Group has implemented the "Three Lines of Defence" for its operational risk management. All departments or functional units as the first line of defence are the first parties responsible for operational risk management, and carry out the duties and functions of self-risk control in the process of business operation through self-assessment and self-enhancement. The Operational Risk, Legal and Compliance Division together with certain specialist functional units in relation to operational risk management within the Group, including the Human Resources Division, Business Planning & Optimization Division, Administration Division, Financial Management Division and Accounting Division (collectively known as "specialist functional units"), are the second line of defence. They are responsible for assessing and monitoring the operational risk conditions in the first line of defence, and providing them with guidance. The Operational Risk, Legal and Compliance Division, being independent from the business units, is responsible for assisting the Management in managing the Group's operational risk, including the establishment and review of the operational risk management policy and framework, designing the operational risk management tools and reporting mechanism, and assessing and reporting the overall operational risk position to the Management and Risk Management Committee. Specialist functional units are required to carry out their managerial duties of the second line of defence with respect to some specific aspects of operational risk and its related issues. Besides taking charge of operational risk management in their own units, these units are also required to provide other units with professional advice/training in respect of certain operational risk categories and to lead the Group-wide operational risk management. Audit Department is the third line of defence which provides independent assessment to the effectiveness and adequacy of the operational risk management framework and is required to conduct periodic audit of the operational risk management activities of various departments or functional units within the Group regarding their compliance and effectiveness and to put forward recommendations for remedial actions.

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10. 風險管理 (續)

風險管理架構 (續)

(iv) 操作風險管理 (續)

集團建立了有效的內部控制程序，對所有重大活動訂下政策及監控措施。設置適當的職責分工和授權乃集團緊守的基本原則。集團採用關鍵風險指標、自我評估、操作風險事件匯報及檢查等不同的操作風險管理工具或方法來識別、評估、監察及控制潛在於業務活動及產品內的風險，同時透過購買保險將未能預見的操作風險減低。對支援緊急或災難事件時的業務運作備有持續業務運作計劃，並維持充足的後備設施及定期進行演練。

(v) 信譽風險管理

信譽風險指因與本集團業務經營有關的負面報導（不論是否屬實），可能引致客戶基礎縮小、成本高昂的訴訟或收入減少等風險。信譽風險隱藏於其他風險及各業務運作環節，涉及層面廣泛。

為減低信譽風險，本集團制訂並遵循信譽風險管理政策。此政策的目的是當信譽風險事件發生時本集團能夠盡早識別和積極防範。鑒於信譽風險往往是由各種可能令公眾對本集團信任受損的操作及策略失誤所引發，本集團建立關鍵控制自我評估機制，包括相關風險評估工具，以評估各主要風險可能對本集團造成的嚴重影響，包括對本集團信譽的損害程度。

此外，本集團建立完善機制持續監測金融界所發生的信譽風險事件，以有效管理、控制及減低信譽風險事件的潛在負面影響。集團亦借助健全有效機制及時向利益相關者披露信息，由此建立公眾信心及樹立本集團良好公眾形象。

10. RISK MANAGEMENT (Cont'd)

Risk Management Structure (Cont'd)

(iv) Operational risk management (Cont'd)

The Group has put in place an effective internal control process which requires the establishment of policies and control procedures for all the key activities. The Group adheres to the fundamental principle of proper segregation of duties and authorisation. The Group adopts various operational risk management tools or methodologies such as key risk indicators, self-assessment, operational risk events reporting and review to identify, assess, monitor and control the risks inherent in business activities and products, as well as purchase of insurance to mitigate unforeseeable operational risks. Business continuity plans are established to support business operations in the event of an emergency or disaster. Adequate backup facilities are maintained and periodic drills are conducted.

(v) Reputation risk management

Reputation risk is the risk that negative publicity about the Group's business practices, whether genuine or not, will cause a potential decline in the customer base, or lead to costly litigation or revenue decrease. Reputation risk is inherent in other types of risk and every aspect of business operation and covers a wide spectrum of issues.

In order to mitigate reputation risk, the Group has formulated and duly followed its Reputation Risk Management Policy. The policy aims to identify and prevent reputation risk proactively at an early stage when an incident occurs. Since reputation risk is often caused by various types of operational and strategic issues that negatively impact the trust and perception of the Group, all operational and key risks identified are assessed through the established Key Control Self-Assessment framework, including risk assessment tools, to evaluate the severity of their impact on the Group, including the damage to reputation.

In addition, the Group has put in place a comprehensive framework to continuously monitor reputation risk incidents in the financial industry. This continuous monitoring enables the Group to effectively manage, control and mitigate any potential adverse impact from an incident. The Group also adopts robust disclosure practices to keep our stakeholders informed at all times, which helps build confidence in the Group and establish a strong public image.

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10. 風險管理 (續)

風險管理架構 (續)

(vi) 法律及合規風險管理

法律風險指因不可執行合約、訴訟或不利判決而可能使本集團運作或財務狀況出現混亂或負面影響的風險。合規風險指因未有遵守所有適用法例及規則，而可能導致本集團須承受遭法律或監管機構制裁、引致財務損失或信譽損失的風險。法律及合規風險由操作風險及法規處管理。所有法律事務均由操作風險及法規處處理。法律及合規風險管理政策是集團公司治理架構的組成部分，由董事會屬下的風險管理委員會審批。

(vii) 策略風險管理

策略風險指本集團在實施各項策略，包括宏觀戰略與政策，以及為執行戰略與政策而制訂各項具體的計劃、方案和制度時，由於在策略制訂、實施及調整過程中失當，從而使本集團的盈利、資本、信譽和市場地位受到影響的風險。董事會檢討和審批策略風險管理政策。重點戰略事項均得到管理層與董事會的充分評估與適當的審批。

本集團會因應最新市場情況及發展，定期檢討業務策略。

10. RISK MANAGEMENT (Cont'd)

Risk Management Structure (Cont'd)

(vi) Legal and compliance risk management

Legal risk is the risk that unenforceable contracts, lawsuits or adverse judgments may disrupt or otherwise negatively affect the operations or financial conditions of the Group. Compliance risk is the risk of legal or regulatory sanctions, financial losses or losses in reputation the Group may suffer as a result of its failure to comply with all applicable laws and regulations. Legal and compliance risks are managed by the Operational Risk, Legal and Compliance Division. All legal matters are handled by the Operational Risk, Legal and Compliance Division. As part of the Group's corporate governance framework, the policy for the management of legal and compliance risk is approved by the Risk Management Committee as delegated by the Board.

(vii) Strategic risk management

Strategic risk generally refers to the risks that may cause current or future negative impacts on the earnings, or capital or reputation or market position of the Group because of poor business decisions, improper implementation of strategies and inadequacies in the response to the changing market condition. The Board reviews and approves the strategic risk management policy. Key strategic issues have to be fully evaluated and properly endorsed by the Management and the Board.

The Group regularly reviews its business strategies to cope with the latest market situation and developments.