

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. General Information

Hong Kong Exchanges and Clearing Limited (HKEX) and its subsidiaries (collectively, the Group) own and operate the only stock exchange and futures exchange in Hong Kong and their related clearing houses. The Group also operates a clearing house for clearing over-the-counter derivatives contracts in Hong Kong, and an exchange and a clearing house for the trading and clearing of base metals futures and options contracts operating in the United Kingdom (UK).

HKEX is a limited company incorporated and domiciled in Hong Kong. The address of its registered office is 12th Floor, One International Finance Centre, 1 Harbour View Street, Central, Hong Kong.

These consolidated financial statements were approved for issue by the Board of Directors (Board) on 2 March 2016.

2. Principal Accounting Policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

(a) Statement of compliance

These consolidated financial statements have been prepared in accordance with Hong Kong Financial Reporting Standards (HKFRSs), which include all applicable individual Hong Kong Financial Reporting Standards, Hong Kong Accounting Standards (HKASs) and interpretations issued by the Hong Kong Institute of Certified Public Accountants (HKICPA), and accounting principles generally accepted in Hong Kong. These consolidated financial statements also comply with the applicable disclosure requirements of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (Main Board Listing Rules) and the applicable requirements of the Hong Kong Companies Ordinance (Chapter 622).

(b) Basis of preparation

These consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of certain financial assets and financial liabilities measured at fair value.

The preparation of financial statements in conformity with HKFRSs requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. The areas involving a higher degree of judgement, or areas where assumptions and estimates are significant to the consolidated financial statements, are disclosed in note 3.

Adoption of new/revised HKFRSs

In 2015, the Group has adopted the following new/revised HKFRSs which were effective for accounting periods beginning on or after 1 January 2015:

Amendments to HKAS 27 Equity Method in Separate Financial Statements

Annual Improvements to HKFRSs 2010 – 2012 Cycle

2. Principal Accounting Policies (continued)

(b) Basis of preparation (continued)

Adoption of new/revised HKFRSs (continued)

Amendments to HKAS 27 provide an accounting policy choice to allow entities to apply the equity method to account for the investments in subsidiaries, joint ventures and associates in their separate financial statements. The adoption of the amendments to HKAS 27 does not have any financial impact to HKEX as HKEX elects to continue accounting for its investments in subsidiaries and the joint venture at cost in its separate financial statements.

The Annual Improvements to HKFRSs 2010-2012 Cycle include a number of amendments to various HKFRSs. Of these, the following two amendments are pertinent to the Group's operations:

| | |
|-----------------------|--|
| Amendments to HKFRS 8 | Operating Segments – Aggregation of Operating Segments, and Reconciliation of the Total Reportable Segment Assets to the Entity's Assets |
| Amendments to HKAS 24 | Related Party Disclosures – Key Management Personnel |

The amendments to HKFRS 8 require disclosure of the judgement made by management in aggregating operating segments. The amendments also clarify that a reconciliation of the total of the reportable segment assets to the entity's assets is required only if this information is regularly reported to the chief operating decision-maker. The adoption of the amendments to HKFRS 8 does not have any financial impact to the Group as no operating segments are aggregated and segment assets are not regularly reported to the chief operating decision-maker.

The amendments to HKAS 24 expand the definition of a “related party” to include a management entity that provides key management personnel services to the reporting entity, and require the disclosure of the amounts incurred for obtaining the key management personnel services provided by the management entity. The adoption of the amendments to HKAS 24 does not have any impact on the Group's related party disclosures as there is no such management entity providing services to the Group.

Apart from those disclosed above, other new/revised HKFRSs that are effective for accounting periods beginning on 1 January 2015 do not have any impact on the Group.

New Hong Kong Companies Ordinance (Chapter 622)

The requirements of Part 9 “Accounts and Audit” of the new Hong Kong Companies Ordinance (Chapter 622) (new CO) came into operation during the financial year. As a result, there are changes to presentation and disclosures of certain information in the consolidated financial statements.

2. Principal Accounting Policies (continued)

(b) Basis of preparation (continued)

New/revised HKFRSs issued before 31 December 2015 but not yet effective and not early adopted

The Group has not applied the following new/revised HKFRSs which were issued before 31 December 2015 and are pertinent to its operations but not yet effective:

| | |
|----------------------|---|
| HKFRS 9 (2014) | Financial Instruments ¹ |
| HKFRS 15 | Revenue from Contracts with Customers ¹ |
| Amendments to HKAS 1 | Presentation of Financial Statements – Disclosure Initiative ² |

¹ Effective for accounting periods beginning on or after 1 January 2018

² Effective for accounting periods beginning on or after 1 January 2016

The adoption of the amendments to HKAS 1 is not expected to have any impact on the Group's consolidated financial statements. The Group is in the process of making an assessment on the impact of HKFRS 9 (2014) and HKFRS 15.

There are no other new/revised HKFRSs that are not yet effective that would be expected to have an impact on the Group.

(c) Subsidiaries

(i) Consolidation

Subsidiaries are entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has the rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases. All material intra-group transactions and balances have been eliminated on consolidation.

Accounting policies of subsidiaries have been aligned on consolidation to ensure consistency with the policies adopted by the Group.

Changes in ownership interests in subsidiaries without change of control

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions (ie, as transactions with the owners in their capacity as owners). The difference between the fair value of any consideration paid/received and the relevant share acquired/disposed of the carrying value of net assets of the subsidiary is recorded in retained earnings. Gains or losses on disposals to non-controlling interests are also recorded in retained earnings.

(ii) Separate financial statements

In HKEX's statement of financial position, investments in subsidiaries are stated at cost less provision for impairment, if necessary. The results of subsidiaries are accounted for by HKEX on the basis of dividends received and receivable.

Impairment testing of the investment in a subsidiary is required upon receiving a dividend from that subsidiary if the dividend exceeds the total comprehensive income of the subsidiary concerned in the period the dividend is declared or if the carrying amount of the subsidiary in HKEX's statement of financial position exceeds the carrying amount of the subsidiary's net assets including goodwill in the consolidated statement of financial position.

2. Principal Accounting Policies (continued)

(d) Structured entity

HKEX controls a structured entity, The HKEx Employees' Share Award Scheme (HKEX Employee Share Trust), which is set up solely for the purpose of purchasing, administering and holding HKEX shares for an employees' share award scheme. As HKEX has the power to direct the relevant activities of the HKEX Employee Share Trust and it has the ability to use its power over the HKEX Employee Share Trust to affect its exposure to returns, the assets and liabilities of HKEX Employee Share Trust are included in HKEX's statement of financial position and the HKEX shares held by the HKEX Employee Share Trust are presented as a deduction in equity as Shares held for Share Award Scheme.

(e) Joint arrangements

A joint arrangement is an arrangement which operates under a contractual arrangement between the Group and other parties, where the contractual arrangement establishes that the Group and other parties have joint control of the arrangement.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

An interest in a joint venture is accounted for in the consolidated financial statements under the equity method. Under the equity method, the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the Group's share of net assets of the investee and any impairment loss relating to the investment. The consolidated income statement includes the Group's share of post-acquisition profit or loss and any impairment loss of the investment, and the Group's share of post-acquisition movements of other comprehensive income of the investee is recognised in the consolidated statement of comprehensive income.

Unrealised gains and losses resulting from transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in the joint ventures. The accounting policies of the joint ventures are the same as the policies adopted by the Group.

In HKEX's statement of financial position, interests in joint ventures are stated at cost less provision for impairment losses, if necessary. The results of the joint ventures are accounted for in the HKEX's separate financial statements on the basis of dividends received and receivable.

(f) Revenue and other income recognition

Revenue and other income exclude value added tax or other sales tax, and are recognised in the consolidated income statement on the following basis:

- (i) Trading fees and trading tariff are recognised on a trade date basis.
- (ii) Initial listing fees for initial public offering (IPO) are recognised upon the listing of an applicant, cancellation of the application or six months after submission of the application, whichever is earlier. Initial listing fees for warrants, callable bull/bear contracts (CBBCs) and other securities are recognised upon the listing of the securities. Income from annual listing fees is recognised on a straight-line basis over the period covered by the respective fees received in advance.

2. Principal Accounting Policies (continued)

(f) Revenue and other income recognition (continued)

- (iii) Fees for clearing and settlement of trades between Participants in eligible securities transacted on The Stock Exchange of Hong Kong Limited (Stock Exchange) are recognised in full on T+1, ie, on the day following the trade day, upon acceptance of the trades. Fees for clearing and settlement of trades in eligible securities transacted on the Shanghai Stock Exchange (A shares) through the Shanghai-Hong Kong Stock Connect (Stock Connect) are recognised in full on the trade day upon acceptance of the trades. Fees for clearing and settlement of trades in respect of base metals futures and options contracts transacted on The London Metal Exchange (LME) are recognised on the trade day (or trade match day, if later). Fees for other settlement transactions are recognised upon completion of the settlement.
- (iv) Custody fees for securities held in the Central Clearing and Settlement System (CCASS) depository are calculated and accrued on a monthly basis. Portfolio fees for A shares held or recorded in the CCASS depository and for Hong Kong listed securities held by China Securities Depository and Clearing Corporation Limited (ChinaClear) are calculated and accrued on a daily basis. Income on registration and transfer fees on nominee services are calculated and accrued on the book close dates of the relevant stocks during the financial year.
- (v) Market data fees and other fees are recognised when the related services are rendered.
- (vi) Interest income on investments represents gross interest income from bank deposits and securities and is recognised on a time apportionment basis using the effective interest method.

Interest income on impaired loans is recognised using the original effective interest rate.

- (vii) Cash dividends held by HKSCC Nominees Limited which have remained unclaimed for a period of more than seven years are forfeited and recognised as sundry income.

(g) EBITDA

EBITDA is defined as earnings before interest expenses and other finance costs, taxation, depreciation and amortisation. It excludes the Group's share of results of the joint venture. EBITDA is a non-HKFRS measure used by management for monitoring business performance.

(h) Net investment income

Net investment income comprises interest income (net of interest rebates to Participants), net fair value gains/losses on financial assets and financial liabilities and dividend income.

(i) Interest expenses and interest rebates to Participants

Interest expenses and interest rebates to Participants are charged to the consolidated income statement and recognised on a time apportionment basis, taking into account the principal outstanding and the applicable interest rates using the effective interest method.

2. Principal Accounting Policies (continued)

(j) Employee benefit costs

(i) Equity compensation benefits

The Group operates the HKEX Share Award Scheme (Share Award Scheme), which is an equity-settled shared-based compensation plan under which share awards are granted under the Share Award Scheme (Awarded Shares) to employees as part of their remuneration package.

The amount to be expensed as share-based compensation expenses is determined by reference to the fair value of the Awarded Shares granted, taking into account all non-vesting conditions associated with the grants on grant date. The total expense is recognised over the relevant vesting periods (or on the grant date if the shares vest immediately), with a corresponding credit to an employee share-based compensation reserve under equity (note 41(b)).

For those Awarded Shares which are amortised over the vesting periods, the Group revises its estimates of the number of Awarded Shares that are expected to ultimately vest based on the vesting conditions at the end of each reporting period. Any resulting adjustment to the cumulative fair value recognised in prior years is charged/credited to employee share-based compensation expense in the current year, with a corresponding adjustment to the employee share-based compensation reserve.

In HKEX's financial statements, for Awarded Shares granted to the employees of HKEX Investment (UK) Limited, LME Holdings Limited (LMEH), LME and LME Clear Limited (LME Clear) (collectively, LME Group), the fair value of employees services received, measured by reference to the grant date fair value, is recognised over the vesting periods as an increase to investment in subsidiaries, with a corresponding credit to employee share-based compensation reserve. Any reimbursement receivable from the LME Group is offset against the investment in subsidiaries.

(ii) Retirement benefit costs

Contributions to the defined contribution plans are expensed as incurred.

(k) Operating leases

Leases where substantially all the rewards and risks of ownership of assets remain with the lessor are accounted for as operating leases. Rentals under such operating leases net of any incentives received from the lessor are charged to the income statement on a straight-line basis over the lease term.

(l) Finance leases

Leases where substantially all the rewards and risks of ownership are transferred to the Group are accounted for as finance leases. Government land leases in Hong Kong are classified as finance leases as the present value of the minimum lease payments (ie, transaction price) of the land amounted to substantially all of the fair value of the land as if it were freehold. Finance leases are capitalised at the commencement of the leases at the lower of the fair values of the leased assets and the present values of the minimum lease payments.

2. Principal Accounting Policies (continued)

(m) Fixed assets

Tangible fixed assets (including leasehold land classified as finance lease) are stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the assets.

Tangible fixed assets are depreciated when they are available for use. They are depreciated at rates sufficient to write off their costs net of expected residual values over their estimated useful lives on a straight-line basis. The residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

The useful lives of major categories of fixed assets are as follows:

| | |
|--|---|
| Leasehold land classified as finance lease | Over the remaining lives of the leases |
| Leasehold buildings | Up to 35 years or remaining lives of the leases if shorter |
| Leasehold improvements | Over the remaining lives of the leases but not exceeding 10 years |
| Computer trading and clearing systems | |
| – hardware and software | Up to 5 years |
| Other computer hardware and software | 3 years |
| Furniture, equipment and motor vehicles | Up to 5 years |
| Data centre facilities and equipment | Up to 20 years |

Expenditure incurred in the construction of leasehold buildings and other directly attributable costs are capitalised when it is probable that future economic benefits associated with the expenditure will flow to the Group and the costs can be measured reliably. Other costs such as relocation costs and administration and other overhead costs are charged to the income statement during the year in which they are incurred.

Qualifying software system development expenditure and related directly attributable costs are capitalised and recognised as a fixed asset if the software forms an integral part of the hardware on which it operates.

Subsequent costs and qualifying development expenditure incurred after the completion of a system are included in the asset's carrying amount or recognised as a separate asset only when it is probable that future economic benefits associated with that item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance costs and other subsequent expenditure are charged to the income statement during the year in which they are incurred.

(n) Lease premium for land

Leasehold land premiums are up-front payments to acquire medium-term interests in non-Hong Kong Government leasehold land classified as operating leases. The premiums are stated at cost and are amortised over the period of the lease on a straight-line basis. The amortisation is capitalised as part of leasehold buildings under fixed assets during the construction period of the building, and charged to the income statement thereafter.

2. Principal Accounting Policies (continued)

(o) Intangible assets

(i) Goodwill

Goodwill arising on the acquisition of subsidiaries is carried at cost as established at the date of acquisition less accumulated impairment losses, if any.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash generating units (CGU(s)), or groups of CGUs, that is expected to benefit from the synergies of the combination. Each CGU or group of CGUs to which the goodwill is allocated represents the lowest level within the entity (ie, operating segment level) at which the goodwill is monitored for internal management purposes.

Goodwill is not amortised but impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of goodwill is compared to the recoverable amount, which is the higher of value-in-use and the fair value less costs to sell. Any impairment is recognised immediately in the income statement and is not subsequently reversed.

(ii) Tradenames

Tradenames acquired in a business combination are recognised at fair value at the acquisition date. The fair value is based on the discounted estimated royalty payments that are expected to be avoided as a result of the tradenames being owned. Tradenames arising from the acquisition of the LME Group have indefinite useful lives and are carried at cost less accumulated impairment losses, if any. Tradenames are reviewed annually to determine whether events and circumstances continue to support the indefinite useful life assessment.

(iii) Customer relationships

Customer relationships acquired in a business combination are recognised at fair value at the acquisition date. The fair value is determined using the multi-period excess earnings method, whereby the asset is valued after deducting a fair return on all other assets that are part of creating the related cash flows. The customer relationships have finite useful lives and are carried at cost less accumulated amortisation and impairment losses, if any. Amortisation is calculated using the straight-line method over the expected lives of the customer relationships, which are determined to be 20 to 25 years.

(iv) Computer software systems

Development costs that are directly attributable to the design and testing of identifiable and unique software products controlled by the Group are recognised as intangible assets if the related software does not form an integral part of the hardware on which it operates and when the following criteria are met:

- It is technically feasible to complete the software product so that it will be available for use;
- Management intends to complete the software product and use or sell it;
- There is an ability to use or sell the software product;
- It can be demonstrated how the software product will generate probable future economic benefits;

2. Principal Accounting Policies (continued)

(o) Intangible assets (continued)

(iv) Computer software systems (continued)

- Adequate technical, financial and other resources to complete the development and to use or sell the software product are available; and
- The expenditure attributable to the software product during its development can be reliably measured.

Other development expenditures that do not meet these criteria are recognised in the income statement as incurred. Development costs previously recognised in the income statement are not recognised as an asset in a subsequent period.

Qualifying software system development expenditure and related directly attributable costs capitalised as intangible assets are amortised when they are available for use. They are amortised at rates sufficient to write off their costs net of residual values over their estimated useful lives on a straight-line basis, which do not exceed five years. The residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

Costs associated with maintaining computer systems and software programmes are recognised in the income statement as incurred.

(p) Impairment of non-financial assets

Assets that have an indefinite useful life, which include goodwill and tradenames (note 2(o)), are not subject to amortisation and are tested at least annually for impairment. Assets that are subject to amortisation are reviewed for impairment whenever there is any indication that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount (ie, the higher of an asset's fair value less costs to sell and value-in-use). Such impairment losses are recognised in the income statement. An impairment loss other than goodwill is reversed if the circumstances and events leading to the impairment cease to exist.

(q) Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants

The Group receives margin deposits from the Clearing Participants of The SEHK Options Clearing House Limited (SEOCH), HKFE Clearing Corporation Limited (HKCC), OTC Clearing Hong Kong Limited (OTC Clear) and LME Clear for covering their open positions in derivatives contracts. Margin deposits and cash collateral are also received from Clearing Participants of Hong Kong Securities Clearing Company Limited (HKSCC) for covering their open positions in respect of Stock Exchange trades. Mainland security and settlement deposits are received from HKSCC Clearing Participants for covering their open positions in respect of the Shanghai Stock Exchange trades through Stock Connect.

2. Principal Accounting Policies (continued)

- (q) Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants (continued)

The obligation to refund the margin deposits, Mainland security and settlement deposits, and cash collateral is disclosed as Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants under current liabilities. Non-cash collateral received from Clearing Participants is not recognised on the consolidated statement of financial position.

- (r) Participants' contributions to Clearing House Funds

The Group receives contributions to Clearing House Funds from Clearing Participants of HKSCC, SEOCH, HKCC, OTC Clear and LME Clear.

Participants' contributions to Clearing House Funds are included under current liabilities. Non-cash collateral received from Clearing Participants is not recognised on the consolidated statement of financial position.

- (s) Derivative financial instruments

Derivative financial instruments include forward foreign exchange, futures and options contracts, as well as the outstanding derivatives contracts of LME Clear, which acts as a central counterparty to the base metals futures and options contracts traded on the LME. Derivatives are initially recognised at fair value on trade date and subsequently remeasured at their fair values. Except where outstanding derivatives contracts are held in the capacity as a central counterparty, derivatives are categorised as held for trading with changes in fair value recognised in the income statement. All derivatives outstanding on the reporting date are classified as financial assets measured at fair value through profit or loss when their fair values are positive and as financial liabilities at fair value through profit or loss when their fair values are negative.

- (t) Financial assets

- (i) Classification

Financial assets of the Group include Corporate Funds, base metals derivatives contracts, cash prepayments for A shares, Clearing House Funds and Margin Funds received from the Participants.

Investments and other financial assets of the Group are classified under the following categories:

Financial assets measured at amortised cost

Investments are classified under this category if they satisfy both of the following conditions:

- the assets are held within a business model whose objective is to hold assets in order to collect contractual cash flows for managing liquidity and generating income on the investments, but not for the purpose of realising fair value gains; and

2. Principal Accounting Policies (continued)

(t) Financial assets (continued)

(i) Classification (continued)

Financial assets measured at amortised cost (continued)

- the contractual terms of the financial assets give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, with interest being the consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and are unleveraged.

The nature of any derivatives embedded in the financial assets is considered in determining whether the cash flows are solely payment of principal and interest on the principal outstanding and are not accounted for separately.

Bank deposits, trade and accounts receivable and other deposits are also classified under this category.

Financial assets measured at fair value through profit or loss

Investments and other financial assets are classified under this category if they do not meet the conditions to be measured at amortised cost.

Securities or bank deposits with embedded derivatives whose cash flows are not solely payments of principal and interest on the principal amount outstanding or the interest rate does not reflect only consideration for the time value of money and credit risk are classified in their entirety as measured at fair value through profit or loss.

The Group will reclassify all affected investments when and only when its business model for managing these assets changes.

Financial assets of Clearing House Funds and Margin Funds are classified as current assets as they will be liquidated whenever liquid funds are required.

Other financial assets, which include those held for trading purpose, are classified as current assets unless they are non-trading assets that are expected to mature or be disposed of after twelve months from the end of the reporting period, in which case, they are included in non-current assets. For equities and mutual funds, which have no maturity date, they are included in current assets if they are held for trading or are expected to be disposed of within twelve months at the end of the reporting period.

(ii) Recognition and initial measurement

Purchases and sales of financial assets are recognised on the trade date. Assets classified as financial assets measured at fair value through profit or loss are initially recognised at fair value with transaction costs recognised as expenses in the income statement. Financial assets measured at amortised cost are initially recognised at fair value plus transaction costs.

2. Principal Accounting Policies (continued)

(t) Financial assets (continued)

(iii) Derecognition

Financial assets are derecognised when the rights to receive cash flows from the assets have expired or the Group has transferred substantially all the risks and rewards of ownership of the assets.

(iv) Gains or losses on subsequent measurement, interest income and dividend income

Financial assets measured at fair value through profit or loss

- Financial assets under this category are investments carried at fair value. Gains and losses arising from changes in fair value are included in the income statement in the period in which they arise.
- Interest income is recognised in the income statement using the effective interest method and included in net fair value gains/(losses) and interest income from these financial assets.
- Dividend income is recognised when the right to receive a dividend is established and included under “others” in net investment income.

Financial assets measured at amortised cost

- Financial assets under this category are carried at amortised cost using the effective interest method less provision for impairment.
- Interest income is recognised in the income statement using the effective interest method and disclosed as interest income.

(v) Fair value measurement principles

Fair values of quoted investments are based on the most representative prices within the bid-ask spreads which are currently considered as the bid-prices. For unlisted securities or financial assets without an active market, the Group establishes the fair value by using valuation techniques including the use of recent arm's length transactions, reference to other instruments that are substantially the same and discounted cash flow analysis.

2. Principal Accounting Policies (continued)

(t) Financial assets (continued)

(vi) Impairment of financial assets measured at amortised cost

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. Impairment losses are incurred if and only if there is objective evidence of impairment as a result of one or more loss events that have occurred after the initial recognition of the financial assets and have an impact on their estimated future cash flows that can be reliably estimated. Objective evidence that a financial asset or group of assets is impaired includes observable data that comes to the attention of the Group about the following loss events:

- significant financial difficulty of the debtor or obligor;
- fees receivable that have been outstanding for over 180 days;
- it is becoming probable that the debtor or obligor will enter into bankruptcy or other financial reorganisation;
- the disappearance of an active market for that financial asset because of financial difficulties; or
- observable data indicating that there is a measurable decrease in the estimated future cash flows from a group of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the Group.

The Group first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant, and individually or collectively for financial assets that are not individually significant.

For the purposes of a collective evaluation of impairment, financial assets are grouped on the basis of similar credit risk characteristics relevant to the estimation of future cash flows. These financial assets are collectively assessed based on historical loss experience on each type of assets and management judgement of the current economic and credit environment.

If there is objective evidence that an impairment loss has been incurred, the loss is measured as the difference between the assets' carrying amounts and the present values of estimated future cash flows discounted at the financial assets' original effective interest rates. The carrying amounts of the assets are reduced through the use of a doubtful debt allowance account and the amount of the loss is recognised in the income statement.

If, in a subsequent period, the amount of impairment loss decreases and the decrease can be shown to relate objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed by adjusting the doubtful debt allowance account. The amount of reversal is recognised in the income statement.

2. Principal Accounting Policies (continued)

(u) Financial liabilities

(i) Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss comprise base metals derivatives contracts held by LME Clear in its capacity as a central counterparty and financial liabilities held for trading.

Liabilities under this category are initially recognised at fair value on trade date and subsequently remeasured at their fair values. Changes in fair value of the liabilities are recognised in the income statement.

(ii) Financial guarantee contracts

Financial guarantee contracts are initially recognised at fair value. Subsequently, such contracts are measured at the higher of the best estimate of the amount required to settle the guarantee and the amount initially recognised less, where appropriate, cumulative amortisation over the life of the guarantee on a straight-line basis.

Financial guarantee contracts issued by HKEX to guarantee borrowings of subsidiaries are eliminated on consolidation.

(iii) Other financial liabilities

Financial liabilities, other than financial liabilities at fair value through profit or loss and financial guarantee contracts, are initially recognised at fair value and subsequently carried at amortised cost using the effective interest method.

(v) Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the consolidated statement of financial position 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 legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the company or the counterparty.

For base metals derivatives contracts cleared through LME Clear, the asset and liability positions of LME Clear arising through its activities as a central counterparty are matched. Therefore, the same amounts are recorded for both assets and liabilities with the fair value gains and losses recognised, but offset, in the consolidated income statement.

2. Principal Accounting Policies (continued)

(w) Recognition of receivables and payables under the Continuous Net Settlement (CNS) basis

Upon acceptance of Stock Exchange trades for settlement in CCASS under the CNS basis, HKSCC interposes itself between the HKSCC Clearing Participants as the settlement counterparty to the trades through novation. The CNS money obligations due by/to HKSCC Clearing Participants on the Stock Exchange trades are recognised as receivables and payables when they are confirmed and accepted on T+1.

For a trade in A shares transacted for Stock Exchange Participants, the rights and obligations of the parties to the trade will be transferred to ChinaClear, which becomes the sole settlement counterparty of the buyer and seller of such trade. At the same time as such transfer of rights and obligations to ChinaClear, a market contract between HKSCC and the relevant HKSCC Participant is created through novation. The CNS money obligations due by/to HKSCC Clearing Participants and ChinaClear are recognised as receivables and payables when they are confirmed on the trade day.

(x) Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the income statement as interest expense over the period of the borrowings using the effective interest method.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent that there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a prepayment for liquidity services and amortised over the period of the facility to which it relates. When the facility is cancelled, the unamortised fees paid are charged to the income statement.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least twelve months after the end of the reporting period.

2. Principal Accounting Policies (continued)

(y) Convertible bonds

Convertible bonds with conversion options which are settled by exchanging a fixed amount of cash for a fixed number of HKEX shares comprise an equity component and a liability component.

The liability component is measured at amortised cost. The interest expense recognised in the income statement on the liability component is calculated using the effective interest method. The liability component is classified as current unless the Group has an unconditional right to defer settlement of the liability for at least twelve months after the end of the reporting period.

The equity component (the convertible bond reserve) is not remeasured subsequent to initial recognition until the convertible bonds are converted.

Upon conversion of the convertible bonds, the carrying amount of the liability component at the time of conversion and part of the convertible bond reserve are transferred to share capital as consideration for shares issued (which is equal to the principal amount of the convertible bonds). The convertible bond reserve transferred to share capital represents the difference between the consideration of shares issued and the carrying amount of the liability component of the convertible bond at the time of conversion. The remaining convertible bond reserve is transferred to retained earnings.

(z) Put options arrangement on non-controlling interests

The potential cash payments related to put options issued by HKEX for the non-voting ordinary shares of a subsidiary held by non-controlling interests are accounted for as financial liabilities, which are initially recognised at fair value as “written put options to non-controlling interests” within borrowings with a corresponding charge directly to equity under “reserve relating to written put options to non-controlling interests”.

The written put option financial liabilities are subsequently measured at amortised cost, using the effective interest rate method, in order to accrete the liabilities up to the amount payable under the options at the date at which they first become exercisable. The charge arising is recorded under finance costs in the consolidated income statement.

In HKEX’s statement of financial position, the initial fair value of the written put options is accounted for as an investment in subsidiaries with a corresponding credit to financial liabilities at fair value through profit or loss under other financial liabilities. Subsequent changes in fair value of the financial liabilities are recognised in HKEX’s income statement.

2. Principal Accounting Policies (continued)

(aa) Current and deferred tax

Tax charge for the period comprises current and deferred tax. Tax is recognised in the income statement, except to the extent that it relates to items recognised directly in equity, in which case, the tax is also recognised directly in equity.

(i) Current tax

The current tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period in the countries where HKEX's subsidiaries operate and generate taxable income. Provisions are established where appropriate on the basis of amounts expected to be paid to the tax authorities.

(ii) Deferred tax

Deferred tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements, except that deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill. Deferred tax is determined using tax rates that have been enacted or substantively enacted by the end of the reporting period and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences or the current tax losses can be utilised.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

(ab) Deferred revenue

Deferred revenue mainly comprises listing fees received in advance and payments received in advance for services in relation to the sales of market data. They are recognised as revenue over the period to which the services relate.

(ac) Provisions and contingent liabilities

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made. The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period.

2. Principal Accounting Policies (continued)

(ac) Provisions and contingent liabilities (continued)

A contingent liability is a possible obligation that arises from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. It can also be a present obligation arising from past events that is not recognised because it is not probable that outflow of economic resources will be required or the amount of obligation cannot be measured reliably.

A contingent liability is not recognised but is disclosed in the notes to the consolidated financial statements. When a change in the probability of an outflow occurs so that outflow is probable or when the amount of obligation becomes reliably measurable, it will then be recognised as a provision.

(ad) Foreign currency translation

(i) Functional and presentation currency

Items included in the financial statements of 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 consolidated financial statements are presented in Hong Kong Dollar (HKD), which is the Group's presentation currency and HKEX's functional and presentation currency.

(ii) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement.

Translation differences on non-monetary financial assets that are classified as financial assets measured at fair value through profit or loss are reported as part of the fair value gain or loss.

(iii) Group companies

The results and financial position of all the Group entities that have a non-HKD functional currency are translated into HKD as follows:

- assets and liabilities (including goodwill and fair value adjustments arising on the acquisition of foreign subsidiaries) for each statement of financial position presented are translated at the closing rate at the end of the reporting period;
- income and expenses for each income statement are translated at the exchange rates approximating the foreign exchange rates ruling at the dates of the transactions; and
- all resulting currency translation differences are recognised in other comprehensive income and accumulated separately in the exchange reserve under equity.

2. Principal Accounting Policies (continued)

(ae) Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, bank balances and other short-term highly liquid investments that are readily convertible into known amounts of cash and are subject to an insignificant risk of changes in value (mainly reverse repurchase investments, government bonds and time deposits), with original maturities of three months or less.

For the purpose of the consolidated statement of cash flows, cash and cash equivalents comprise cash and cash equivalents available for the disposition of the Group and exclude cash and cash equivalents held for specific purposes such as those held for the purpose of the Margin Funds, Clearing House Funds and cash prepayments for A shares.

(af) Share capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction from the proceeds.

(ag) Shares held for Share Award Scheme

Where HKEX shares are acquired by the Share Award Scheme from the market or by electing for scrip in lieu of cash dividends, the total consideration of shares acquired from the market (including any directly attributable incremental costs) or under the scrip dividend scheme is presented as Shares held for Share Award Scheme and deducted from total equity.

Upon vesting, the related costs of the vested Awarded Shares purchased from the market and shares acquired under the scrip dividend scheme (dividend shares) are credited to Shares held for Share Award Scheme, with a corresponding decrease in employee share-based compensation reserve for Awarded Shares, and decrease in retained earnings for dividend shares.

For vesting of forfeited or unallocated shares regranted, the related costs of the forfeited or unallocated shares regranted are credited to Shares held for Share Award Scheme, and the related fair value of the shares regranted are debited to employee share-based compensation reserve. The difference between the cost and the fair value of the shares regranted is credited to share capital if the fair value is higher than the costs, or debited against retained earnings if the fair value is less than the cost.

(ah) Operating segments

Operating segments are reported in a manner consistent with the internal management reports provided to the chief operating decision-maker (note 4). The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as HKEX's Chief Executive. Information relating to segment assets and liabilities is not disclosed as such information is not regularly reported to the chief operating decision-maker.

2. Principal Accounting Policies (continued)

(ai) Dividends

Dividends disclosed in note 20 to the consolidated financial statements represent interim dividend paid and final dividend proposed for the year (based on the issued share capital less the number of shares held for the Share Award Scheme at the end of the reporting period).

Dividends declared are recognised as liabilities in the financial statements in the period in which the dividends are approved by the shareholders or directors, where appropriate.

3. Critical Accounting Estimates and Assumptions

The Group makes estimates and assumptions concerning the future when the consolidated financial statements are prepared. The resulting accounting estimates may differ from the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below:

(a) Goodwill and tradenames

The Group tests in the year of acquisition and annually whether goodwill and tradenames have suffered any impairment in accordance with the accounting policy stated in note 2(p).

The recoverable amounts of relevant CGUs have been determined based on value-in-use calculations. These calculations require the use of estimates and significant judgement by management (note 29).

Changes in facts and circumstances may result in revisions to estimates of recoverable amounts and to the conclusion as to whether an indication of impairment exists, which could affect the income statement in future years.

(b) Valuation of investments

The Group has a significant amount of investments that are not classified as Level 1 investments under HKFRS 13. Except for an investment in an unlisted company held by a subsidiary at 31 December 2014, the valuations have been determined based on quotes from market makers or alternative pricing sources supported by observable inputs.

At 31 December 2015, the financial assets that were not classified as Level 1 investments (excluding the base metals futures and options contracts cleared through by LME Clear that did not qualify for netting under the current accounting standards) under HKFRS 13 amounted to \$3,087 million (31 December 2014: \$2,764 million).

As the valuation of investments reflects movements in their market prices, fair value gains or losses may fluctuate or reverse until the investments are sold or mature. The potential impact of the fair value change of such investments on the Group's consolidated income statement is disclosed in note 52(a)(iv).

4. Operating Segments

The Group determines its operating segments based on the reports that are used to make strategic decisions reviewed by the chief operating decision-maker.

The Group has five reportable segments (“Corporate Items” is not a reportable segment). The segments are managed separately as each segment offers different products and services and requires different information technology systems and marketing strategies. The operations in each of the Group’s reportable segments are as follows:

The **Cash** segment covers all equity products traded on the Cash Market platforms and the Shanghai Stock Exchange through Stock Connect, sales of market data relating to these products and other related activities. The major sources of revenue of the segment are trading fees, trading tariff, listing fees of equity products and market data fees.

The **Equity and Financial Derivatives** segment refers to derivatives products traded on Hong Kong Futures Exchange Limited (Futures Exchange) and the Stock Exchange and other related activities. These include the provision and maintenance of trading platforms for a range of equity and financial derivatives products, such as stock and equity index futures and options, derivative warrants (DWs), CBBCs and warrants and sales of market data relating to these products. The major sources of revenue are trading fees, trading tariff and listing fees of derivatives products and market data fees.

The **Commodities** segment refers to the operations of the LME, which operates an exchange in the UK for the trading of base metals futures and options contracts. It also covers the Asia Commodities contracts traded on the Futures Exchange. The major sources of revenue of the segment are trading fees, commodity market data fees and fees generated from other ancillary operations.

The **Clearing** segment refers to the operations of the five clearing houses, namely HKSCC, SEOCH, HKCC, OTC Clear and LME Clear, which are responsible for clearing, settlement and custodian activities of the Stock Exchange, the Futures Exchange and the Shanghai Stock Exchange through Stock Connect, clearing and settlement of over-the-counter derivatives contracts, and clearing and settlement of base metals futures and options contracts traded on the LME. Its principal sources of revenue are derived from providing clearing, settlement, depository, custody and nominee services and net investment income earned on the Margin Funds and Clearing House Funds.

The **Platform and Infrastructure** segment refers to all services in connection with providing users with access to the platform and infrastructure of the Group. Its major sources of revenue are network, terminal user, dataline and software sub-license fees, trading booth user fees and hosting services fees.

Central income (including net investment income of Corporate Funds) and central costs (costs of central support functions that provide services to all of the operating segments, finance costs and other costs not directly related to any of the operating segments) are included as “Corporate Items”.

4. Operating Segments (continued)

The chief operating decision-maker assesses the performance of the operating segments principally based on their EBITDA. An analysis by operating segment of the Group's EBITDA, profit before taxation and other selected financial information for the year is as follows:

| | 2015 | | | | | | |
|---|-------------|---|--------------------|-----------------|--|---------------------------|--------------|
| | Cash \$m | Equity and Financial Derivatives \$m | Commodities \$m | Clearing \$m | Platform and Infrastructure \$m | Corporate Items \$m | Group \$m |
| Revenue from external customers | 3,433 | 2,178 | 1,735 | 4,383 | 499 | 5 | 12,233 |
| Net investment income | - | - | - | 604 | - | 74 | 678 |
| Gain on disposal of a leasehold property | - | - | - | - | - | 445 | 445 |
| Sundry income | 2 | 1 | - | 15 | - | 1 | 19 |
| Revenue and other income | 3,435 | 2,179 | 1,735 | 5,002 | 499 | 525 | 13,375 |
| Operating expenses | (531) | (446) | (546) | (692) | (148) | (927) | (3,290) |
| Reportable segment EBITDA | 2,904 | 1,733 | 1,189 | 4,310 | 351 | (402) | 10,085 |
| Depreciation and amortisation | (85) | (87) | (275) | (148) | (43) | (46) | (684) |
| Finance costs | - | - | - | - | - | (114) | (114) |
| Share of loss of a joint venture | - | (9) | - | - | - | - | (9) |
| Reportable segment profit before taxation | 2,819 | 1,637 | 914 | 4,162 | 308 | (562) | 9,278 |
| Other segment information: | | | | | | | |
| Interest income | - | - | - | 615 | - | 71 | 686 |
| Interest rebates to Participants | - | - | - | (24) | - | - | (24) |
| Other material non-cash items: | | | | | | | |
| Forfeiture of unclaimed cash dividends held by HKSCC Nominees Limited | - | - | - | 11 | - | - | 11 |
| Employee share-based compensation expenses | (27) | (21) | (25) | (38) | (2) | (70) | (183) |
| Gain on disposal of other fixed assets | 2 | 1 | - | 4 | - | 1 | 8 |
| (Provision for)/reversal of provision for impairment losses | (1) | - | - | 77 | - | - | 76 |

4. Operating Segments (continued)

| | 2014 | | | | | | |
|--|-------------|---|--------------------|-----------------|--|---------------------------|--------------|
| | Cash \$m | Equity and Financial Derivatives \$m | Commodities \$m | Clearing \$m | Platform and Infrastructure \$m | Corporate Items \$m | Group \$m |
| Revenue from external customers | 2,761 | 1,666 | 1,274 | 2,956 | 465 | 5 | 9,127 |
| Net investment income | - | - | - | 532 | - | 175 | 707 |
| Sundry income | - | - | - | 15 | - | - | 15 |
| Revenue and other income | 2,761 | 1,666 | 1,274 | 3,503 | 465 | 180 | 9,849 |
| Operating expenses | (461) | (400) | (568) | (586) | (152) | (791) | (2,958) |
| Reportable segment EBITDA | 2,300 | 1,266 | 706 | 2,917 | 313 | (611) | 6,891 |
| Depreciation and amortisation | (89) | (64) | (322) | (98) | (46) | (28) | (647) |
| Finance costs | - | - | - | - | - | (196) | (196) |
| Share of loss of a joint venture | - | (10) | - | - | - | - | (10) |
| Reportable segment profit before taxation | 2,211 | 1,192 | 384 | 2,819 | 267 | (835) | 6,038 |
| Other segment information: | | | | | | | |
| Interest income | - | - | - | 517 | - | 77 | 594 |
| Interest rebates to Participants | - | - | - | (6) | - | - | (6) |
| Other material non-cash items: | | | | | | | |
| Forfeiture of unclaimed cash dividends held by HKSCC Nominees Limited | - | - | - | 15 | - | - | 15 |
| Employee share-based compensation expenses | (21) | (16) | (14) | (29) | (2) | (55) | (137) |
| Reversal of provision for/(provision for) impairment losses | 1 | - | (2) | 77 | - | - | 76 |

(a) The accounting policies of the reportable segments are the same as the Group's accounting policies described in note 2. Taxation charge/credit is not allocated to reportable segments.

(b) Geographical information

(i) Revenue

The Group's revenue from external customers is derived from its operations in the following geographical location:

| | 2015 \$m | 2014 \$m |
|-------------------------------|-------------|-------------|
| Hong Kong (place of domicile) | 9,757 | 7,644 |
| United Kingdom | 2,476 | 1,483 |
| | 12,233 | 9,127 |

4. Operating Segments (continued)

(b) Geographical information (continued)

(ii) Non-current assets

The Group's non-current assets (excluding financial assets and deferred tax assets) by geographical location are detailed below:

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|-------------------------------|--------------------------|--------------------------|
| Hong Kong (place of domicile) | 2,059 | 2,140 |
| United Kingdom | 17,481 | 17,465 |
| Mainland China | 3 | 5 |
| | 19,543 | 19,610 |

(c) Information about major customers

In 2015 and 2014, the revenue from the Group's largest customer amounted to less than 10 per cent of the Group's total revenue.

5. Trading Fees and Trading Tariff

| | 2015 \$m | 2014 \$m |
|--|--------------|--------------|
| Trading fees and trading tariff were derived from: | | |
| Securities traded on the Stock Exchange (excluding stock options contracts) and the Shanghai Stock Exchange through Stock Connect | 3,013 | 2,033 |
| Futures and options contracts traded on the Stock Exchange and the Futures Exchange | 1,052 | 799 |
| Base metals futures and options contracts traded on the LME | 1,404 | 928 |
| | 5,469 | 3,760 |

6. Stock Exchange Listing Fees

| | 2015 | | | | 2014 | | | |
|--|----------------------|------------|----------------------------------|--------------|----------------------|------------|----------------------------------|--------------|
| | Equity | | CBBCs, DWs & others \$m | Total \$m | Equity | | CBBCs, DWs & others \$m | Total \$m |
| | Main Board \$m | GEM \$m | | | Main Board \$m | GEM \$m | | |
| Stock Exchange Listing Fees | | | | | | | | |
| Annual listing fees | 557 | 31 | 3 | 591 | 502 | 27 | 3 | 532 |
| Initial and subsequent issue listing fees | 82 | 15 | 418 | 515 | 89 | 11 | 462 | 562 |
| Other listing fees | 6 | 2 | – | 8 | 6 | 2 | – | 8 |
| Total | 645 | 48 | 421 | 1,114 | 597 | 40 | 465 | 1,102 |

Listing fees are primarily fees paid by issuers to enable them to gain access to the Stock Exchange and enjoy the privileges and facilities by being admitted, listed and traded on the Stock Exchange.

7. Other Revenue

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| Network, terminal user, dataline and software sub-license fees | 389 | 356 |
| Commodities stock levies and warehouse listing fees | 102 | 117 |
| Hosting services fees | 105 | 98 |
| Participants' subscription and application fees | 73 | 69 |
| Brokerage on direct IPO allotments | 6 | 34 |
| Trading booth user fees | 5 | 11 |
| Accommodation income (note (a)) | 72 | 28 |
| Sales of Trading Rights | 11 | 6 |
| Post-liquidation interest arising from a Participant's default on market contracts (note (b)) | 38 | – |
| Miscellaneous revenue | 61 | 54 |
| | 862 | 773 |

- (a) Accommodation income mainly comprises income from Participants on securities deposited as alternatives to cash deposits of Margin Funds and interest shortfall collected from LME Clear Participants on cash collateral where the investment return on the collateral is below the benchmarked interest rates stipulated in the clearing rules of LME Clear.
- (b) In 2015, the liquidators of Lehman Brothers Securities Asia Limited (LBSA) paid a post-liquidation interest of \$38 million on LBSA's debts arising from its default on market contracts. An equal amount was appropriated to the HKSCC Guarantee Fund reserve from retained earnings during the year (note 42).

8. Net Investment Income

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| Gross interest income from financial assets measured at amortised cost | 686 | 594 |
| Interest rebates to Participants | (24) | (6) |
| Net interest income | 662 | 588 |
| Net fair value gains including interest income on financial assets mandatorily measured at fair value through profit or loss and financial liabilities at fair value through profit or loss | 49 | 109 |
| Others | (33) | 10 |
| Net investment income | 678 | 707 |

9. Gain on Disposal of a Leasehold Property

In 2015, the Group sold a leasehold property to a third party at a consideration of \$509 million. The gain on disposal of the leasehold property, after deducting related selling expenses, amounted to \$445 million and was recognised in the consolidated income statement.

10. Sundry Income

| | 2015 \$m | 2014 \$m |
|--|-------------|-------------|
| Gain on disposal of other fixed assets | 8 | – |
| Forfeiture of unclaimed dividends (note (a)) | 11 | 15 |
| | 19 | 15 |

- (a) In accordance with CCASS Rule 1109, the Group exercised its forfeiture right to appropriate cash dividends of \$11 million (2014: \$15 million) held by HKSCC Nominees Limited, which had remained unclaimed for a period of more than seven years and recognised these as sundry income. The Group has, however, undertaken to honour all forfeited claims amounting to \$157 million at 31 December 2015 (31 December 2014: \$146 million) if adequate proof of entitlement is provided by the beneficial owner claiming any dividends forfeited.

11. Staff Costs and Related Expenses

Staff costs and related expenses comprised the following:

| | 2015 \$m | 2014 \$m |
|--|--------------|--------------|
| Salaries and other short-term employee benefits | 1,686 | 1,446 |
| Employee share-based compensation benefits of Share Award Scheme (note 41) | 183 | 137 |
| Termination benefits | 14 | 12 |
| Retirement benefit costs (note (a)): | | |
| – ORSO Plan | 103 | 92 |
| – MPF Scheme | 2 | 1 |
| – LME Pension Scheme | 32 | 28 |
| | 2,020 | 1,716 |

(a) Retirement Benefit Costs

The Group has sponsored a defined contribution provident fund scheme (ORSO Plan) which is registered under the Occupational Retirement Schemes Ordinance (ORSO) and a Mandatory Provident Fund scheme (MPF Scheme) for the benefits of its employees in Hong Kong. The Group contributes 12.5 per cent of the employee's basic salary to the ORSO Plan if an employee contributes 5 per cent. If the employee chooses not to contribute, the Group will contribute 10 per cent of the employee's salary to the ORSO Plan. Contributions to the MPF Scheme are in accordance with the statutory limits prescribed by the MPF Ordinance (ie, 5 per cent of the employee's relevant income subject to a maximum contribution, which has been adjusted from \$1,250 to \$1,500 per month with effect from 1 June 2014). Forfeited contributions of the provident fund for employees who leave before the contributions are fully vested are not used to offset existing contributions but are credited to a reserve account of that provident fund, and are available for distribution to the provident fund members at the discretion of the trustees. Assets of the provident fund and the MPF Scheme are held separately from those of the Group, are independently administered and are not included in the consolidated statement of financial position.

The Group has also sponsored a defined contribution pension scheme for all employees of the LME Group (LME Pension Scheme). For all employees who joined the LME Group before 1 May 2014, the Group contributes 15 per cent to 17 per cent of the employee's basic salary to the LME Pension Scheme.

In line with Auto enrolment legislation in the UK, for all employees who joined the LME Group on or after 1 May 2014, they are auto enrolled into the LME Pension Scheme on a matched contribution basis and may choose a personal contribution level ranging from 3 per cent to 5 per cent of their basic salaries, which is matched by the Group's contribution ranging from 6 per cent to 10 per cent of their basic salaries. Staff may opt-out of the scheme if they wish.

There are no forfeited contributions for the LME Pension Scheme as the contributions are fully vested to the employees upon payment to the scheme. Assets of the LME Pension Scheme are held separately from those of the Group and are independently administered.

12. Information Technology and Computer Maintenance Expenses

| | 2015 \$m | 2014 \$m |
|-------------------------------------|-------------|-------------|
| Costs of services and goods: | | |
| – consumed by the Group | 445 | 429 |
| – directly consumed by Participants | 72 | 81 |
| | 517 | 510 |

13. Other Operating Expenses

- (a) In prior years, the Group lodged claims with the liquidators of Lehman Brothers Securities Asia Limited in respect of the losses of approximately \$160 million previously recognised in the Group's results. During the year ended 31 December 2015, the liquidators declared dividends of \$77 million (2014: \$77 million), and these were recognised in the Group's consolidated income statement, as a reversal of a provision for impairment losses recognised in prior years. Following the receipt of the dividends in 2015, the full amount of the claim lodged has now been recovered.

The amount recovered of \$77 million, together with an interim dividend declared in December 2014 but received in January 2015 of \$23 million, were appropriated to the HKSCC Guarantee Fund reserve from retained earnings during the year ended 31 December 2015 (2014: \$54 million) (note 42).

- (b) Others

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| Insurance | 14 | 9 |
| Financial data subscription fees | 26 | 21 |
| Custodian and fund management fees | 31 | 13 |
| Bank charges | 50 | 36 |
| Repairs and maintenance expenses | 66 | 45 |
| License fees | 27 | 20 |
| Communication expenses | 15 | 16 |
| Travel expenses | 41 | 34 |
| Security expenses | 17 | 14 |
| Premises cleaning expenses | 9 | 7 |
| Contribution to Financial Reporting Council | 7 | 5 |
| Other miscellaneous expenses | 93 | 67 |
| | 396 | 287 |

14. Operating Profit

| | 2015 \$m | 2014 \$m |
|--|-------------|-------------|
| Operating profit is stated after (charging)/crediting: | | |
| Amortisation of intangible assets (note 29) | (445) | (405) |
| Auditor's remuneration | | |
| – audit fees | (13) | (12) |
| – other non-audit fees | (8) | (5) |
| Depreciation of fixed assets (note 30) | (239) | (242) |
| Operating lease rentals | | |
| – land and buildings | (203) | (209) |
| – computer systems and equipment | (28) | (23) |
| Net foreign exchange (losses)/gains on financial assets and liabilities (excluding financial assets and financial liabilities measured at fair value through profit or loss) | (37) | 2 |

15. Finance Costs

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| Interest expenses: | | |
| – Bank borrowings (note 37(a)) | 23 | 33 |
| – Convertible bonds (note 37(b)) | 42 | 113 |
| – Notes (note 37(c)) | 44 | 42 |
| – Written put options to non-controlling interests (note 37(d)) | 7 | 7 |
| Net foreign exchange (gains)/losses on financing activities | (2) | 1 |
| | 114 | 196 |

16. Directors' Emoluments and Interests of Directors

All Directors, including one Executive Director (HKEX's Chief Executive), received emoluments during the years ended 31 December 2015 and 31 December 2014. The aggregate emoluments paid and payable to the Directors during the year were as follows:

| | 2015 \$'000 | 2014 \$'000 |
|---|----------------|----------------|
| Executive Director: | | |
| Salaries and other short-term employee benefits | 9,178 | 8,817 |
| Performance bonus | 15,000 | 10,095 |
| Retirement benefit costs | 1,125 | 1,081 |
| | 25,303 | 19,993 |
| Employee share-based compensation benefits (note (a)) | 19,917 | 20,915 |
| | 45,220 | 40,908 |
| Non-executive Directors: | | |
| Fees | 15,526 | 13,896 |
| | 60,746 | 54,804 |

16. Directors' Emoluments and Interests of Directors (continued)

- (a) Employee share-based compensation benefits represent the fair value of Awarded Shares issued under the Share Award Scheme (note 41(b)) amortised to the consolidated income statement during the year.
- (b) The emoluments of all Directors, including HKEX's Chief Executive who is an ex-officio member, for the years ended 31 December 2015 and 31 December 2014 are set out below. The amounts represent emoluments paid or receivable in respect of a person's services as a director.

| Name of Director | 2015 | | | | | | | Total \$'000 |
|--------------------------------|----------------|------------------|---|--------------------------------|--|---------------------|---|-----------------|
| | Fees \$'000 | Salary \$'000 | Other benefits (note (i)) \$'000 | Performance bonus \$'000 | Retirement benefit costs (note (ii)) \$'000 | Sub-total \$'000 | Employee share-based compensation benefits \$'000 | |
| C K Chow | 3,137 | - | - | - | - | 3,137 | - | 3,137 |
| Charles X Li | - | 9,000 | 178 | 15,000 | 1,125 | 25,303 | 19,917 | 45,220 |
| T C Chan | 926 | - | - | - | - | 926 | - | 926 |
| Timothy G Freshwater | 957 | - | - | - | - | 957 | - | 957 |
| Anita Y M Fung (note (iii)) | 720 | - | - | - | - | 720 | - | 720 |
| Rafael Gil-Tienda (note (iii)) | 621 | - | - | - | - | 621 | - | 621 |
| John B Harrison | 2,601 | - | - | - | - | 2,601 | - | 2,601 |
| Fred Z Hu (note (iv)) | 799 | - | - | - | - | 799 | - | 799 |
| Stephen C C Hui (note (v)) | 203 | - | - | - | - | 203 | - | 203 |
| Bill C P Kwok | 1,417 | - | - | - | - | 1,417 | - | 1,417 |
| Vincent K H Lee | 991 | - | - | - | - | 991 | - | 991 |
| Michael T H Lee (note (v)) | 383 | - | - | - | - | 383 | - | 383 |
| Margaret M Y Leung Ko | 929 | - | - | - | - | 929 | - | 929 |
| John M M Williamson | 957 | - | - | - | - | 957 | - | 957 |
| Oscar S H Wong | 885 | - | - | - | - | 885 | - | 885 |
| Total | 15,526 | 9,000 | 178 | 15,000 | 1,125 | 40,829 | 19,917 | 60,746 |

| Name of Director | 2014 | | | | | | | Total \$'000 |
|-------------------------------|----------------|------------------|---|--------------------------------|--|---------------------|---|-----------------|
| | Fees \$'000 | Salary \$'000 | Other benefits (note (i)) \$'000 | Performance bonus \$'000 | Retirement benefit costs (note (ii)) \$'000 | Sub-total \$'000 | Employee share-based compensation benefits \$'000 | |
| C K Chow | 2,367 | - | - | - | - | 2,367 | - | 2,367 |
| Charles X Li | - | 8,653 | 164 | 10,095 | 1,081 | 19,993 | 20,915 | 40,908 |
| T C Chan | 784 | - | - | - | - | 784 | - | 784 |
| Timothy G Freshwater | 872 | - | - | - | - | 872 | - | 872 |
| John B Harrison | 2,508 | - | - | - | - | 2,508 | - | 2,508 |
| Fred Z Hu (note (iv)) | 99 | - | - | - | - | 99 | - | 99 |
| Stephen C C Hui (note (v)) | 785 | - | - | - | - | 785 | - | 785 |
| Bill C P Kwok | 1,007 | - | - | - | - | 1,007 | - | 1,007 |
| Vincent K H Lee | 1,007 | - | - | - | - | 1,007 | - | 1,007 |
| Michael T H Lee (note (v)) | 1,317 | - | - | - | - | 1,317 | - | 1,317 |
| Margaret M Y Leung Ko | 781 | - | - | - | - | 781 | - | 781 |
| John E Strickland (note (vi)) | 683 | - | - | - | - | 683 | - | 683 |
| John M M Williamson | 894 | - | - | - | - | 894 | - | 894 |
| Oscar S H Wong | 792 | - | - | - | - | 792 | - | 792 |
| Total | 13,896 | 8,653 | 164 | 10,095 | 1,081 | 33,889 | 20,915 | 54,804 |

16. Directors' Emoluments and Interests of Directors (continued)

(b) (continued)

- (i) Other benefits represented estimated money value of leave pay, insurance premium and club membership.
- (ii) Employees who retire before normal retirement age are eligible for 18 per cent of the employer's contribution to the provident fund after completion of two years of service. The rate of vested benefit increases at an annual increment of 18 per cent thereafter reaching 100 per cent after completion of seven years of service.
- (iii) Appointment effective 29 April 2015
- (iv) Appointment effective 10 November 2014
- (v) Retired on 29 April 2015
- (vi) Resigned on 31 October 2014

(c) Directors' material interests in transactions, arrangement or contracts

No significant transactions, arrangements and contracts in relation to HKEX's business to which HKEX was a party and in which a director of HKEX had a material interest, whether directly or indirectly, subsisted at the end of the year or at any time during the year.

17. Five Top-paid Employees

One (2014: one) of the five top-paid employees was a Director whose emoluments are disclosed in note 16. Details of the emoluments of the other four (2014: four) top-paid employees were as follows:

| | 2015 \$'000 | 2014 \$'000 |
|---|----------------|----------------|
| Salaries and other short-term employee benefits | 18,476 | 18,581 |
| Performance bonus | 26,136 | 20,473 |
| Retirement benefit costs | 2,682 | 2,714 |
| | 47,294 | 41,768 |
| Employee share-based compensation benefits (note (a)) | 17,571 | 10,358 |
| | 64,865 | 52,126 |

- (a) Employee share-based compensation benefits represent the fair value of Awarded Shares issued under the Share Award Scheme (note 41(b)) amortised to the consolidated income statement during the year.

17. Five Top-paid Employees (continued)

- (b) The emoluments of these four (2014: four) employees, including share-based compensation benefits, were within the following bands:

| | 2015 Number of employees | 2014 Number of employees |
|-----------------------------|--------------------------------|--------------------------------|
| \$11,500,001 – \$12,000,000 | – | 2 |
| \$13,500,001 – \$14,000,000 | – | 1 |
| \$14,500,001 – \$15,000,000 | 1 | 1 |
| \$15,500,001 – \$16,000,000 | 1 | – |
| \$16,500,001 – \$17,000,000 | 1 | – |
| \$17,500,001 – \$18,000,000 | 1 | – |
| | 4 | 4 |

The above employees included senior executives who were also Directors of the subsidiaries during the years. No Directors of the subsidiaries waived any emoluments.

18. Taxation

Hong Kong Profits Tax has been provided at the rate of 16.5 per cent (2014: 16.5 per cent) on the estimated assessable profit for the year. Taxation on overseas profits has been calculated on the estimated assessable profit at the rates of taxation prevailing in the countries in which the Group operates, with the average corporation tax rates applicable to the subsidiaries in the UK being 20.25 per cent (2014: 21.5 per cent).

- (a) Taxation charge/(credit) in the consolidated income statement represented:

| | 2015 \$m | 2014 \$m |
|--|-------------|-------------|
| Current tax – Hong Kong Profits Tax | | |
| – Provision for the year | 1,159 | 885 |
| – Overprovision in respect of prior years | (2) | – |
| | 1,157 | 885 |
| Current tax – Overseas Tax | | |
| – Provision for the year | 280 | 3 |
| – Under/(overprovision) in respect of prior years | 3 | (11) |
| | 283 | (8) |
| Total current tax | 1,440 | 877 |
| Deferred tax | | |
| – (Reversal)/origination of temporary differences | (28) | 23 |
| – Impact of changes in UK Corporation Tax rates (note (i)) | (65) | – |
| Total deferred tax (note 39(a)) | (93) | 23 |
| Taxation charge | 1,347 | 900 |

- (i) Through the enactment of the 2015 Finance Act in November 2015, the UK Corporation Tax rate will drop to 19 per cent effective from 1 April 2017 and 18 per cent effective from 1 April 2020. As a result of the reduction in UK Corporation Tax rates, the Group's net deferred tax liabilities decreased by approximately \$65 million.

18. Taxation (continued)

- (b) Taxation credited directly to retained earnings represented:

| | 2015 \$m | 2014 \$m |
|----------------------------|-------------|-------------|
| Current tax – Overseas Tax | (2) | – |
| Deferred tax (note 39(a)) | (1) | – |
| | (3) | – |

Under the tax rules in the UK, tax deduction on employee share awards is available at the time of vesting based on the prevailing market value. The tax credits above relate to tax deductions arising from increases in the value of Awarded Shares to employees of the LME Group under the Share Award Scheme since award date.

- (c) The taxation on the Group's profit before taxation differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated entities as follows:

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| Profit before taxation | 9,278 | 6,038 |
| Tax calculated at domestic tax rates applicable to profits in the respective countries (note (i)) | 1,554 | 970 |
| Income not subject to taxation | (190) | (102) |
| Expenses not deductible for taxation purposes | 33 | 41 |
| Remeasurement of deferred tax assets and liabilities arising from changes in UK Corporation Tax rates | (65) | – |
| Change in deferred tax arising from unrecognised tax losses and other deferred tax adjustments | 14 | 2 |
| Underprovision/(overprovision) in respect of prior years | 1 | (11) |
| Taxation charge | 1,347 | 900 |

- (i) The weighted average applicable tax rate was 16.7 per cent (2014: 16.1 per cent).

19. Earnings Per Share

The calculation of the basic and diluted earnings per share is as follows:

- (a) Basic earnings per share

| | 2015 | 2014 |
|--|-----------|-----------|
| Profit attributable to shareholders (\$m) | 7,956 | 5,165 |
| Weighted average number of shares in issue less shares held for Share Award Scheme (in '000) | 1,186,802 | 1,163,712 |
| Basic earnings per share (\$) | 6.70 | 4.44 |

19. Earnings Per Share (continued)

(b) Diluted earnings per share

| | 2015 | 2014 |
|---|------------------|-----------|
| Profit attributable to shareholders (\$m) | 7,956 | 5,165 |
| Interest expense on convertible bonds (net of tax) (\$m) | 41 | – |
| Adjusted profit attributable to shareholders (\$m) | 7,997 | 5,165 |
| Weighted average number of shares in issue less shares held for Share Award Scheme (in '000) | 1,186,802 | 1,163,712 |
| Effect of employee share options (in '000) | 6 | 350 |
| Effect of Awarded Shares (in '000) | 2,721 | 1,286 |
| Effect of convertible bonds (in '000) | 8,841 | – |
| Weighted average number of shares for the purpose of calculating diluted earnings per share (in '000) | 1,198,370 | 1,165,348 |
| Diluted earnings per share (\$) | 6.67 | 4.43 |

- (i) The effect of the outstanding convertible bonds was not included in the computation of diluted earnings per share for 2014 as it was anti-dilutive.

20. Dividends

| | 2015 \$m | 2014 \$m |
|---|--------------|-------------|
| Interim dividend paid: | | |
| \$3.08 (2014: \$1.83) per share | 3,688 | 2,136 |
| Less: Dividend for shares held by Share Award Scheme (note (a)) | (9) | (3) |
| | 3,679 | 2,133 |
| Final dividend proposed (note (b)): | | |
| \$2.87 (2014: \$2.15) per share based on issued share capital at 31 Dec | 3,468 | 2,511 |
| Less: Dividend for shares held by Share Award Scheme at 31 Dec (note (a)) | (9) | (6) |
| | 3,459 | 2,505 |
| | 7,138 | 4,638 |

- (a) The results and net assets of The HKEx Employees' Share Award Scheme are included in HKEX's financial statements. Therefore, dividends for shares held by The HKEx Employees' Share Award Scheme were deducted from the total dividends.
- (b) The final dividend proposed after 31 December is not recognised as a liability at 31 December. The 2014 final dividend paid was \$2,533 million, as \$28 million was paid for shares issued for conversion of convertible bonds and exercise of employee share options after 31 December 2014 and before the ex-dividend date.
- (c) The 2015 final dividend will be payable in cash with a scrip dividend alternative subject to the permission of the Securities and Futures Commission (SFC) of the listing of and permission to deal in the new shares to be issued.

21. Financial Assets

As part of its day to day operations, the Group receives cash prepayments for A shares (note 22), margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants (note 33), and Participants' contributions to Clearing House Funds (note 36). LME Clear, which acts as a central counterparty to the metals contracts traded on the LME, records the fair value of certain outstanding base metals futures and options contracts cleared through LME Clear that do not qualify for netting under HKAS 32 as financial assets. The Group classifies the corresponding assets into the following categories:

Margin Funds – the Margin Funds are established by cash received or receivable from the Clearing Participants in respect of margin deposits, Mainland security and settlement deposits, and cash collateral of the five clearing houses (ie, HKSCC, HKCC, SEOCH, OTC Clear and LME Clear) to cover their open positions. Part of the Mainland security and settlement deposits is used by HKSCC to satisfy its obligations as a clearing participant of ChinaClear in respect of trades transacted through Stock Connect. These funds are held in segregated accounts of the respective clearing houses for this specified purpose and cannot be used by the Group to finance any other activities.

Clearing House Funds – the Clearing House Funds are established under the Clearing House Rules. Assets contributed by the Clearing Participants and the Group are held by the respective clearing houses (ie, HKSCC, HKCC, SEOCH, OTC Clear and LME Clear) (together with the accumulated income less related expenses for the clearing houses in Hong Kong) expressly for the purpose of ensuring that the respective clearing houses are able to fulfil their counterparty obligations in the event that one or more of the Clearing Participants fail to meet their obligations to the clearing houses. The HKSCC Guarantee Fund also provides resources to enable HKSCC to discharge its liabilities and obligations if defaulting Clearing Participants deposit defective securities into CCASS. The amounts earmarked for contribution to the Rates and FX Guarantee Resources of OTC Clear and its accumulated investment income was also included in Clearing House Funds for presentation purpose. These funds are held in segregated accounts of the respective clearing houses for this specified purpose and cannot be used by the Group to finance any other activities.

Base metals derivatives contracts (note 23) include the fair value of the outstanding base metals futures and options contracts cleared through LME Clear that do not qualify for netting under HKAS 32, where LME Clear is acting in its capacity as a central counterparty to the contracts traded on the LME.

Cash prepayments for A shares (note 22) represent cash received by HKSCC from its Clearing Participants for releasing their allocated A shares for same day settlement. Such prepayments will be used to settle HKSCC's Continuous Net Settlement obligations payable on the next business day.

Financial assets belonging to the Group, which are funded by share capital and funds generated from operations (other than base metals derivatives contracts, amounts received for the Margin Funds, Clearing House Funds and cash prepayments for A shares), are classified as Corporate Funds (note 25).

The financial assets of Margin Funds, Clearing House Funds, base metals derivatives contracts, cash prepayments for A shares and Corporate Funds are invested in cash and cash equivalents (note 22), financial assets measured at fair value through profit or loss (note 23) and financial assets measured at amortised cost (note 24).

22. Cash and Cash Equivalents

| At 31 Dec 2015 | | | | | |
|---|---|---|--|-------------------------------------|--------------|
| | Clearing House Funds (notes (a) and 36) \$m | Margin Funds (notes (a) and 33) \$m | Cash prepayments for A shares (note (a)) \$m | Corporate Funds (note 25) \$m | Total \$m |
| Cash on hand and balances and deposits with banks | 5,067 | 35,812 | 129 | 11,308 | 52,316 |
| Reverse repurchase investments | 3,143 | 53,995 | – | 1,436 | 58,574 |
| | 8,210 | 89,807 | 129 | 12,744 | 110,890 |

| At 31 Dec 2014 | | | | | |
|---|---|---|--|-------------------------------------|--------------|
| | Clearing House Funds (notes (a) and 36) \$m | Margin Funds (notes (a) and 33) \$m | Cash prepayments for A shares (note (a)) \$m | Corporate Funds (note 25) \$m | Total \$m |
| Cash on hand and balances and deposits with banks | 5,763 | 47,350 | 619 | 7,209 | 60,941 |
| Reverse repurchase investments | 4,426 | 65,978 | – | 858 | 71,262 |
| Government bonds | – | 4,575 | – | – | 4,575 |
| | 10,189 | 117,903 | 619 | 8,067 | 136,778 |

- (a) The cash and cash equivalents of Clearing House Funds, Margin Funds and cash prepayments for A shares are held for specific purposes and cannot be used by the Group to finance other activities. These balances are not included in cash and cash equivalents of the Group for cash flow purpose in the consolidated statement of cash flows.

23. Financial Assets Measured at Fair Value through Profit or Loss

| At 31 Dec 2015 | | | | |
|--|----------------------------------|-------------------------------------|--|--------------|
| | Margin Funds (note 33) \$m | Corporate Funds (note 25) \$m | Base metals derivatives contracts \$m | Total \$m |
| <u>Mandatorily measured at fair value</u> | | | | |
| Equity securities: | | | | |
| – listed in Hong Kong | – | 79 | – | 79 |
| – listed outside Hong Kong | – | 106 | – | 106 |
| | – | 185 | – | 185 |
| Debt securities: | | | | |
| – listed in Hong Kong | – | 712 | – | 712 |
| – listed outside Hong Kong | – | 1,000 | – | 1,000 |
| – unlisted | 5,844 | 478 | – | 6,322 |
| | 5,844 | 2,190 | – | 8,034 |
| Derivative financial instruments: | | | | |
| – forward foreign exchange contracts (note 52(b)) | – | 6 | – | 6 |
| – base metals futures and options contracts cleared through LME Clear | – | – | 64,480 | 64,480 |
| | – | 6 | 64,480 | 64,486 |
| | 5,844 | 2,381 | 64,480 | 72,705 |
| The expected recovery dates of the financial assets are analysed as follows: | | | | |
| Within twelve months (note (a)) | 5,844 | 2,381 | 64,480 | 72,705 |

23. Financial Assets Measured at Fair Value through Profit or Loss (continued)

| | At 31 Dec 2014 | | | |
|---|-------------------------------------|--|--|--------------|
| | Margin Funds (note 33) \$m | Corporate Funds (note 25) \$m | Base metals derivatives contracts \$m | Total \$m |
| <u>Mandatorily measured at fair value</u> | | | | |
| Equity securities: | | | | |
| – listed in Hong Kong | - | 117 | - | 117 |
| – listed outside Hong Kong | - | 126 | - | 126 |
| – unlisted | - | 156 | - | 156 |
| | - | 399 | - | 399 |
| Debt securities: | | | | |
| – listed in Hong Kong | - | 487 | - | 487 |
| – listed outside Hong Kong | - | 828 | - | 828 |
| – unlisted | 895 | 384 | - | 1,279 |
| | 895 | 1,699 | - | 2,594 |
| Derivative financial instruments: | | | | |
| – forward foreign exchange contracts (note 52(b)) | - | 14 | - | 14 |
| – base metals futures and options contracts cleared through LME Clear | - | - | 59,679 | 59,679 |
| | - | 14 | 59,679 | 59,693 |
| | 895 | 2,112 | 59,679 | 62,686 |
| The expected recovery dates of the financial assets are analysed as follows: | | | | |
| Within twelve months (note (a)) | 895 | 2,112 | 59,679 | 62,686 |

- (a) Includes financial assets maturing after twelve months of \$300 million (31 December 2014: \$895 million) attributable to the Margin Funds that could readily be liquidated to meet liquidity requirements of the Funds (note 52(b)).

24. Financial Assets Measured at Amortised Cost

| At 31 Dec 2015 | | | | |
|--|--|-------------------------------------|--|--------------|
| | Clearing House Funds (note 36) \$m | Margin Funds (note 33) \$m | Corporate Funds (note 25) \$m | Total \$m |
| Time deposits with original maturities over three months | 220 | 18,765 | 454 | 19,439 |
| Other financial assets | – | – | 57 | 57 |
| | 220 | 18,765 | 511 | 19,496 |
| The expected recovery dates of the financial assets are analysed as follows: | | | | |
| Within twelve months | 220 | 18,765 | 454 | 19,439 |
| More than twelve months | – | – | 57 | 57 |
| | 220 | 18,765 | 511 | 19,496 |
| At 31 Dec 2014 | | | | |
| | Clearing House Funds (note 36) \$m | Margin Funds (note 33) \$m | Corporate Funds (note 25) \$m | Total \$m |
| Time deposits with original maturities over three months | 100 | 10,071 | 28 | 10,199 |
| Other financial assets | – | – | 57 | 57 |
| | 100 | 10,071 | 85 | 10,256 |
| The expected recovery dates of the financial assets are analysed as follows: | | | | |
| Within twelve months | 100 | 10,071 | 28 | 10,199 |
| More than twelve months | – | – | 57 | 57 |
| | 100 | 10,071 | 85 | 10,256 |

- (a) The carrying amounts of short-term time deposits approximated their fair value. The fair values of other financial assets maturing after twelve months are disclosed in note 52(d)(ii).

25. Corporate Funds

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| Corporate Funds comprised the following instruments: | | |
| Cash and cash equivalents (note 22) | 12,744 | 8,067 |
| Financial assets measured at fair value through profit or loss (note 23) | 2,381 | 2,112 |
| Financial assets measured at amortised cost (note 24) | 511 | 85 |
| | 15,636 | 10,264 |

26. Accounts Receivable, Prepayments and Deposits

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| Receivable from ChinaClear, Exchange and Clearing Participants: | | |
| – Continuous Net Settlement money obligations | 13,529 | 20,410 |
| – transaction levy, stamp duty and fees receivable | 455 | 716 |
| – Settlement Reserve Fund and Settlement Guarantee Fund held by ChinaClear | 794 | 611 |
| – others | 6 | 115 |
| Other receivables, prepayments and deposits | 776 | 753 |
| Less: Provision for impairment losses of receivables (note (b)) | (4) | (82) |
| | 15,556 | 22,523 |

(a) The carrying amounts of short-term accounts receivable and deposits approximated their fair values.

(b) The movements in provision for impairment losses of receivables were as follows:

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| At 1 Jan | 82 | 158 |
| Reversal of provision for impairment losses of receivables under other operating expenses | (76) | (76) |
| Receivables written off during the year as uncollectible | (2) | – |
| At 31 Dec | 4 | 82 |

(c) Continuous Net Settlement money obligations receivable mature within two days after the trade date. Fees receivable are due immediately or up to 60 days depending on the type of services rendered. The majority of the remaining accounts receivable, prepayments and deposits were due within three months.

27. Subsidiaries and Controlled Structured Entity

(a) Subsidiaries

HKEX had direct or indirect interests in the following subsidiaries at 31 December 2015:

| Company | Place of incorporation and operation | Issued and fully paid up share/registered capital | Principal activities | Interest held by the Group |
|--|--------------------------------------|---|--|----------------------------|
| Direct subsidiaries: | | | | |
| The Stock Exchange of Hong Kong Limited | Hong Kong | 929 ordinary shares (\$929) | Operates the single Stock Exchange in Hong Kong | 100% |
| Hong Kong Futures Exchange Limited | Hong Kong | 230 ordinary shares (\$28,750,000) | Operates a futures and options exchange | 100% |
| Hong Kong Securities Clearing Company Limited | Hong Kong | 2 ordinary shares (\$2) | Operates a clearing house for securities traded on the Stock Exchange in Hong Kong and Shanghai Stock Exchange in Mainland China through Stock Connect and the central securities depository, and provides custody and nominee services for eligible securities listed in Hong Kong and Mainland China | 100% |
| OTC Clearing Hong Kong Limited (note (i)) | Hong Kong | 4,860 ordinary shares (\$614,600,001) 1,620 non-voting ordinary shares (\$340,200,000) | Operates a clearing house for over-the-counter derivatives | 75% |
| HKEx Hosting Services Limited (note (vi)) | Hong Kong | 2 shares (\$2) | Provision of hosting services | 100% |
| HKEx Property Limited (note (vi)) | Hong Kong | 2 ordinary shares (\$2) | Property holding | 100% |
| HKEx International Limited (note (vii)) | Hong Kong | 1 share (\$1) | Investment holding | 100% |
| HKEx (China) Limited (note (vi)) | Hong Kong | 2 shares (\$2) | Promotes HKEX products and services | 100% |
| Indirect subsidiaries: | | | | |
| The SEHK Options Clearing House Limited (note (iii)) | Hong Kong | 1,000,000 ordinary shares (\$1,000,000) | Operates a clearing house for stock options contracts traded on the Stock Exchange in Hong Kong | 100% |
| HKEx Information Services Limited (notes (iii) and (vi)) | Hong Kong | 100 shares (\$100) | Acts as agent for sales of market data for the Stock Exchange and the Futures Exchange | 100% |
| The Stock Exchange Club Limited (notes (iii) and (viii)) | Hong Kong | 8 shares (\$8) | Dormant | 100% |
| HKFE Clearing Corporation Limited (note (iii)) | Hong Kong | 1,000,000 ordinary shares (\$1,000,000) | Operates a clearing house for derivatives contracts traded on the Futures Exchange | 100% |
| HKSCC Nominees Limited | Hong Kong | 2 shares (\$20) | Acts as common nominee in respect of securities held in the CCASS depository | 100% |
| HK Conversion Agency Services Limited (note (iii)) | Hong Kong | 2 shares (\$2) | Conversion agency services | 100% |
| HKEX Investment (UK) Limited | United Kingdom | 1 ordinary share of £1 each | Investment holding | 100% |
| LME Holdings Limited | United Kingdom | 12,900,000 ordinary shares of 10 pence each | Investment holding | 100% |
| The London Metal Exchange | United Kingdom | 100 ordinary shares of £1 each | Operates an exchange for the trading of base metals futures and options contracts | 100% |
| LME Clear Limited | United Kingdom | 107,500,001 ordinary share of £1 each | Operates a clearing house for base metals futures and options contracts | 100% |

27. Subsidiaries and Controlled Structured Entity (continued)

(a) Subsidiaries (continued)

| Company | Place of incorporation and operation | Issued and fully paid up share/registered capital | Principal activities | Interest held by the Group |
|---|--------------------------------------|---|--|----------------------------|
| Indirect subsidiaries (continued): | | | | |
| Ganghui Financial Information Services (Shanghai) Limited (note (iv)) | Mainland China | US\$770,000 | Operates a market data hub in Mainland China | 100% |
| Gangsheng Information Services (Shanghai) Limited (note (iv)) | Mainland China | US\$820,000 | Provision of routing services of securities orders under Stock Connect | 100% |
| Gangyu Information Services (Shenzhen) Limited (notes (iv) and (v)) | Mainland China | RMB Nil | Dormant | 100% |

(i) Subsidiary with non-controlling interests

At 31 December 2015, the Group held 75 per cent interest of OTC Clear, while the remaining 25 per cent interest was held by non-controlling interests. The non-controlling interests do not have voting rights at general meetings of OTC Clear. The loss attributable to non-controlling interests during the year amounted to \$25 million (2014: \$27 million) and the accumulated non-controlling interests of OTC Clear at 31 December 2015 was \$146 million (31 December 2014: \$86 million). No summarised financial information of OTC Clear is presented as the non-controlling interests are not material to the Group.

(ii) Significant restrictions

Cash and saving deposits are held by subsidiaries in Mainland China and are subject to exchange control restrictions. The carrying amount of these restricted assets in the consolidated financial statements at 31 December 2015 was \$11 million (31 December 2014: \$9 million).

(iii) Internal reorganisation of subsidiaries

Subsequent to 31 December 2015, the Group completed an internal reorganisation of its subsidiaries on 22 January 2016. Following the internal reorganisation, HKFE Clearing Corporation Limited, The SEHK Options Clearing House Limited, The Stock Exchange Club Limited, HKEx Information Services Limited and HK Conversion Agency Services Limited, which were previously held by Hong Kong Futures Exchange Limited, The Stock Exchange of Hong Kong Limited and Hong Kong Securities Clearing Company Limited, became direct wholly-owned subsidiaries of HKEX.

(iv) These companies were established in Mainland China as wholly foreign owned enterprises.

(v) At 31 December 2015, the registered capital of RMB 5 million had not yet been paid to the subsidiary.

(vi) HKEx Hosting Services Limited, HKEx Property Limited, HKEx (China) Limited and HKEx Information Services Limited were renamed as HKEX Hosting Services Limited, HKEX Property Limited, HKEX (China) Limited and HKEX Information Services Limited respectively, effective on 18 February 2016.

(vii) HKEx International Limited was renamed as HKEX International Limited effective on 23 February 2016.

(viii) The Stock Exchange Club Limited was renamed as HKEX Investment (China) Limited effective on 29 February 2016.

27. Subsidiaries and Controlled Structured Entity (continued)

(b) Controlled structured entity

HKEX controls a structured entity which operates in Hong Kong, particulars of which are as follows:

| Structured entity | Principal activities |
|---|--|
| The HKEx Employees' Share Award Scheme (HKEX Employee Share Trust) | Purchases, administers and holds HKEX shares for the Share Award Scheme for the benefit of eligible HKEX employees (note 41(b)) |

As the HKEX Employee Share Trust is set up solely for the purpose of purchasing, administering and holding HKEX shares for the Share Award Scheme (note 41(b)), HKEX has the power to direct the relevant activities of the HKEX Employee Share Trust and it has the ability to use its power over the HKEX Employee Share Trust to affect its exposure to returns. Therefore, the assets and liabilities of HKEX Employee Share Trust are included in HKEX's statement of financial position and the HKEX shares it held are presented as a deduction in equity as Shares held for Share Award Scheme.

28. Interest in a Joint Venture

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| Share of net assets of a joint venture | 68 | 77 |

(a) Details of the joint venture at 31 December 2015 were as follows:

| Name | Place of business and country of incorporation | Principal activities | Issued and fully paid up share capital held | % of ownership interest | Measurement method |
|--|--|--|---|-------------------------------|-----------------------|
| China Exchanges Services Company Limited (CESC) | Hong Kong | Development of index- linked and equity derivatives products | 100,000,000 ordinary shares (\$100,000,000) | 33.33% | Equity |

In 2012, HKEX, the Shanghai Stock Exchange and the Shenzhen Stock Exchange (the three JV investors) established a joint venture, CESC, with an aim of developing financial products and related services. CESC is a strategic investment for the Group and it is expected to enhance the competitiveness of Hong Kong, help promote the development of Mainland China's capital markets and the internationalisation of the Group.

The three JV investors have an equal shareholding interest in CESC and have joint control over CESC as unanimous consent is required from all investors for all activities that significantly affect the returns of the arrangement. The joint arrangement also provides the three JV investors with rights to the net assets of CESC. Therefore, CESC is classified as a joint venture of the Group.

CESC is a private company and there is no quoted market price available for its shares.

No summarised financial information of CESC is presented as the joint venture is not material to the Group.

29. Goodwill and Other Intangible Assets

| | Other Intangible Assets | | | | Total \$m |
|--|-------------------------|-------------------|----------------------------------|----------------------------|--------------|
| | Goodwill \$m | Tradenames \$m | Customer Relationships \$m | Software Systems \$m | |
| Cost: | | | | | |
| At 1 Jan 2014 | 13,750 | 930 | 3,288 | 1,059 | 19,027 |
| Exchange differences | (580) | (39) | (176) | (25) | (820) |
| Additions | – | – | – | 416 | 416 |
| At 31 Dec 2014 | 13,170 | 891 | 3,112 | 1,450 | 18,623 |
| At 1 Jan 2015 | 13,170 | 891 | 3,112 | 1,450 | 18,623 |
| Exchange differences | (8) | (1) | (3) | (1) | (13) |
| Additions | – | – | – | 427 | 427 |
| At 31 Dec 2015 | 13,162 | 890 | 3,109 | 1,876 | 19,037 |
| Accumulated amortisation: | | | | | |
| At 1 Jan 2014 | – | – | 147 | 200 | 347 |
| Exchange differences | – | – | (14) | (16) | (30) |
| Amortisation | – | – | 136 | 269 | 405 |
| At 31 Dec 2014 | – | – | 269 | 453 | 722 |
| At 1 Jan 2015 | – | – | 269 | 453 | 722 |
| Exchange differences | – | – | (1) | (1) | (2) |
| Amortisation | – | – | 129 | 316 | 445 |
| At 31 Dec 2015 | – | – | 397 | 768 | 1,165 |
| Net book value: | | | | | |
| At 31 Dec 2015 | 13,162 | 890 | 2,712 | 1,108 | 17,872 |
| At 31 Dec 2014 | 13,170 | 891 | 2,843 | 997 | 17,901 |
| At 1 Jan 2014 | 13,750 | 930 | 3,141 | 859 | 18,680 |
| Cost of software systems under development: | | | | | |
| At 31 Dec 2015 | – | – | – | 336 | 336 |
| At 31 Dec 2014 | – | – | – | 373 | 373 |

Amortisation of \$445 million (2014: \$405 million) is included in “depreciation and amortisation” in the consolidated income statement.

Tradenames are regarded as having indefinite useful lives and there is no foreseeable limit to the period over which they are expected to generate cash flows for the Group as it is expected that their values will not be reduced through usage and there are no legal or similar limits on the period for their use.

29. Goodwill and Other Intangible Assets (continued)

Impairment tests for cash generating units containing intangible assets with indefinite useful lives

Goodwill and tradenames arose on the acquisition of the LME Group in 2012 are monitored by management at the operating segment level. They were allocated to the CGUs that are expected to benefit from synergies of combination with the acquired businesses, which were determined to be the Group's commodities and clearing segments (note 4).

A summary of the allocation of goodwill and tradenames to these operating segments is as follows:

| | At 31 Dec 2015 | | At 31 Dec 2014 | |
|---------------------|-----------------|-------------------|-----------------|-------------------|
| | Goodwill \$m | Tradenames \$m | Goodwill \$m | Tradenames \$m |
| Commodities segment | 10,306 | 697 | 10,312 | 698 |
| Clearing segment | 2,856 | 193 | 2,858 | 193 |
| | 13,162 | 890 | 13,170 | 891 |

The recoverable amounts of the CGUs are determined based on value-in-use calculations. These calculations use cash flow projections based on financial forecasts approved by management covering a five-year period. Cash flows beyond the five-year period are extrapolated using the estimated growth rate stated below. The key assumptions, EBITDA margin, growth rate and discount rate used for value-in-use calculations are as follows:

| | At 31 Dec 2015 | | At 31 Dec 2014 | |
|--|------------------------|---------------------|------------------------|---------------------|
| | Commodities segment | Clearing segment | Commodities segment | Clearing segment |
| EBITDA margin (average of next five years) | 62% | 66% | 68% | 71% |
| Growth rate | 3% | 3% | 3% | 3% |
| Discount rate | 9% | 9% | 10% | 10% |

Management determined the EBITDA margin based on past performance and its expectations regarding market development and fee increments relating to the products. The growth rate does not exceed the long-term average growth rate for the business in the countries in which each of the CGUs currently operates. The discount rate used is pre-tax and reflects specific risks relating to each CGU.

The recoverable amounts of the operating segments (including goodwill and tradenames) based on the estimated value-in-use calculations were higher than their carrying amounts at 31 December 2015 and 31 December 2014. Accordingly, no provision for impairment loss for goodwill or tradenames is considered necessary.

If the discount rate rose to 11 per cent (31 December 2014: 13 per cent), the recoverable amount of the commodities segment would be approximately equal to its carrying amount. Except for this, any reasonably possible changes in the other key assumptions used in the value-in-use assessment model would not affect management's view on impairment at 31 December 2015 and 31 December 2014.

30. Fixed Assets

| | Leasehold land under finance lease \$m | Leasehold buildings \$m | Computer trading and clearing systems \$m | Other computer hardware and software \$m | Data centre facilities and equipment \$m | Leasehold improvements, furniture, equipment and motor vehicles \$m | Total \$m |
|--|---|-------------------------------|--|---|---|---|--------------|
| Cost: | | | | | | | |
| At 1 Jan 2014 | 70 | 727 | 1,361 | 444 | 405 | 631 | 3,638 |
| Exchange differences | - | - | - | (3) | - | (1) | (4) |
| Additions | - | - | 3 | 17 | - | 81 | 101 |
| Disposals | - | - | (2) | (2) | - | (14) | (18) |
| Adjustments | - | (3) | - | - | (2) | - | (5) |
| At 31 Dec 2014 | 70 | 724 | 1,362 | 456 | 403 | 697 | 3,712 |
| At 1 Jan 2015 | 70 | 724 | 1,362 | 456 | 403 | 697 | 3,712 |
| Additions | - | - | 60 | 76 | 3 | 116 | 255 |
| Disposals | (70) | (16) | (11) | (20) | - | (19) | (136) |
| At 31 Dec 2015 | - | 708 | 1,411 | 512 | 406 | 794 | 3,831 |
| Accumulated depreciation: | | | | | | | |
| At 1 Jan 2014 | 12 | 51 | 1,192 | 256 | 34 | 340 | 1,885 |
| Depreciation | - | 29 | 42 | 72 | 26 | 73 | 242 |
| Disposals | - | - | (2) | (2) | - | (14) | (18) |
| At 31 Dec 2014 | 12 | 80 | 1,232 | 326 | 60 | 399 | 2,109 |
| At 1 Jan 2015 | 12 | 80 | 1,232 | 326 | 60 | 399 | 2,109 |
| Depreciation | - | 28 | 35 | 83 | 26 | 67 | 239 |
| Disposals | (12) | (15) | (11) | (20) | - | (19) | (77) |
| At 31 Dec 2015 | - | 93 | 1,256 | 389 | 86 | 447 | 2,271 |
| Net book value: | | | | | | | |
| At 31 Dec 2015 | - | 615 | 155 | 123 | 320 | 347 | 1,560 |
| At 31 Dec 2014 | 58 | 644 | 130 | 130 | 343 | 298 | 1,603 |
| At 1 Jan 2014 | 58 | 676 | 169 | 188 | 371 | 291 | 1,753 |
| Cost of fixed assets in the course of construction: | | | | | | | |
| At 31 Dec 2015 | - | - | 83 | 8 | - | 41 | 132 |
| At 31 Dec 2014 | - | - | 4 | 23 | - | 59 | 86 |

31. Lease Premium for Land

| | 2015 \$m | 2014 \$m |
|--------------------------|-------------|-------------|
| Net book value at 1 Jan | 23 | 23 |
| Amortisation | (1) | – |
| Net book value at 31 Dec | 22 | 23 |

32. Financial Liabilities at Fair Value through Profit or Loss

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| <u>Held by LME Clear in its capacity as a central counterparty</u> | | |
| Derivative financial instruments: | | |
| – base metals futures and options contracts cleared through LME Clear (note (a)) | 64,480 | 59,679 |
| <u>Held for trading</u> | | |
| Derivative financial instruments: | | |
| – forward foreign exchange contracts (note 52(b)) | 6 | 1 |
| | 64,486 | 59,680 |

- (a) The amount represents the fair value of outstanding base metals futures and options contracts of LME Clear that do not qualify for netting under HKAS 32, where LME Clear is acting in its capacity as a central counterparty to the contracts traded on the LME.

33. Margin Deposits, Mainland Security and Settlement Deposits, and Cash Collateral from Clearing Participants

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants comprised (notes (a) and 21): | | |
| SEOCH Clearing Participants' margin deposits | 6,773 | 8,964 |
| HKCC Clearing Participants' margin deposits | 45,123 | 42,356 |
| HKSCC Clearing Participants' margin deposits, Mainland security and settlement deposits, and cash collateral | 4,103 | 7,478 |
| OTC Clear Clearing Participants' margin deposits | 54 | 40 |
| LME Clear Clearing Participants' margin deposits | 59,160 | 70,646 |
| | 115,213 | 129,484 |
| The margin deposits, Mainland security and settlement deposits, and cash collateral were invested in the following instruments for managing the obligations of the Margin Funds: | | |
| Cash and cash equivalents (note 22) | 89,807 | 117,903 |
| Financial assets measured at fair value through profit or loss (note 23) | 5,844 | 895 |
| Financial assets measured at amortised cost (note 24) | 18,765 | 10,071 |
| Settlement Reserve Fund and Settlement Guarantee Fund held by ChinaClear | 794 | 611 |
| Margin receivable from Clearing Participants | 3 | 4 |
| | 115,213 | 129,484 |

- (a) Amounts excluded non-cash collateral received and utilised as alternative to cash collateral.

34. Accounts Payable, Accruals and Other Liabilities

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| Payable to ChinaClear, Exchange and Clearing Participants: | | |
| – Continuous Net Settlement money obligations | 13,658 | 21,029 |
| – others | 324 | 508 |
| Transaction levy payable to the SFC | 85 | 120 |
| Unclaimed dividends (note (b)) | 230 | 216 |
| Stamp duty payable to the Collector of Stamp Revenue | 172 | 338 |
| Other payables, accruals and deposits received | 816 | 638 |
| | 15,285 | 22,849 |

- (a) The carrying amounts of accounts payable and other liabilities approximated their fair values.
- (b) Unclaimed dividends represent dividends declared by listed companies which were held by HKSCC Nominees Limited (HKSN) but not yet claimed by shareholders of the companies concerned, and dividends declared by HKEX but not yet claimed by its shareholders. During the year, cash dividends held by HKSN which had remained unclaimed for a period of more than seven years amounting to \$11 million (2014: \$15 million) were forfeited and recognised as sundry income (note 10) and dividends declared by HKEX which were unclaimed over a period of six years from the date of payment amounting to \$18 million (2014: \$29 million) were forfeited and transferred to retained earnings in accordance with HKEX's Articles of Association (note 43).
- (c) Continuous Net Settlement money obligations payable mature within two days after the trade date. The majority of the remaining accounts payable, accruals and other liabilities would mature within three months.

35. Other Financial Liabilities

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|---|--------------------------|--------------------------|
| Financial liabilities of Clearing House Funds (note 36) | 22 | 64 |
| Financial liabilities of Corporate Funds: | | |
| Financial guarantee contract (note (a)) | 20 | 20 |
| | 42 | 84 |

- (a) The amount represents the carrying value of a financial guarantee provided by the Group to the Collector of Stamp Revenue, details of which are disclosed in note 46(b).

36. Clearing House Funds

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| The Clearing House Funds comprised (note 21): | | |
| Clearing Participants' cash contributions (note (a)) | 7,474 | 9,426 |
| Contribution to OTC Clear Rates and FX Guarantee Resources | 156 | 156 |
| Designated reserves (notes (b) and 42) | 778 | 643 |
| | 8,408 | 10,225 |
| The Clearing House Funds were invested in the following instruments for managing the obligations of the Funds: | | |
| Cash and cash equivalents (note 22) | 8,210 | 10,189 |
| Financial assets measured at amortised cost (note 24) | 220 | 100 |
| | 8,430 | 10,289 |
| Less: Other financial liabilities of Clearing House Funds (note 35) | (22) | (64) |
| | 8,408 | 10,225 |
| The Clearing House Funds comprised the following Funds: | | |
| HKSCC Guarantee Fund | 2,926 | 2,234 |
| SEIOCH Reserve Fund | 542 | 1,326 |
| HKCC Reserve Fund | 1,134 | 1,879 |
| OTC Clear Rates and FX Guarantee Fund | 505 | 203 |
| OTC Clear Rates and FX Guarantee Resources | 158 | 157 |
| LME Clear Default Fund | 3,143 | 4,426 |
| | 8,408 | 10,225 |

- (a) Amounts exclude non-cash collateral received and utilised as alternatives to cash contributions.
- (b) Designated reserves comprise contributions from the clearing houses and accumulated income net of expenses of the Clearing House Funds appropriated from retained earnings.

37. Borrowings

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|---|--------------------------|--------------------------|
| Bank borrowings (note (a)) | 1,585 | 1,585 |
| Convertible bonds (note (b)) | – | 3,701 |
| Notes (note (c)) | 1,516 | 1,515 |
| Written put options to non-controlling interests (note (d)) | 308 | 225 |
| Total borrowings | 3,409 | 7,026 |

37. Borrowings (continued)

The borrowings were repayable as follows:

| | Bank borrowings | | Other borrowings | |
|----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
| After 2 years but within 5 years | 793 | – | 1,824 | 5,441 |
| After 5 years | 792 | 1,585 | – | – |
| | 1,585 | 1,585 | 1,824 | 5,441 |

(a) Bank borrowings

At 31 December 2015, bank borrowings mature within 6 years (31 December 2014: 7 years). During the year, the bank borrowings bore average coupons of 1.4 per cent (2014: 1.8 per cent) per annum, and the average effective interest rate was 1.5 per cent (2014: 2.0 per cent) per annum.

(b) Convertible bonds

On 23 October 2012, HKEX issued convertible bonds (the Bonds) in the principal amount of US\$500 million (HK\$3,875 million). The Bonds paid interest at the rate of 0.50 per cent per annum and would mature on 23 October 2017. At any time between 3 December 2012 and 13 October 2017, the Bonds could be converted into ordinary shares of HKEX at an initial conversion price of HK\$160 per share (which was adjusted to HK\$157.62 per share from 26 April 2014) at the option of the holders of the Bonds. HKEX used the proceeds of the Bonds to fund part of the acquisition of the LME Group. During the year ended 31 December 2015, all of the Bonds were converted into HKEX's shares at the prevailing adjusted conversion price of HK\$157.62 per share and cancelled upon the exercise of the conversion rights by the bondholders. As a result, a total number of 24,594,225 shares in HKEX were issued and credited as fully paid.

With effect from 17 December 2012, HKEX has substituted in its place HKEx International Limited, a wholly-owned subsidiary of HKEX whose functional currency is United States Dollar (USD), as the issuer and the principal obligor under the Bonds (the Substitution); all payments due under the Bonds are unconditionally and irrevocably guaranteed by HKEX and HKEX remains obliged to issue and deliver HKEX shares on conversion of the Bonds.

After the Substitution, the Bonds comprised two elements and were accounted for as follows:

- The debt element was treated as a financial liability and measured at amortised cost and interest expense was recognised in profit or loss using the effective interest method.
- The share conversion option element was accounted for as convertible bond reserve under equity in the consolidated financial statements of the Group and will not be remeasured until the Bonds are converted.

37. Borrowings (continued)

(b) Convertible bonds (continued)

As the Bonds were fully converted during the year ended 31 December 2015, the convertible bond reserve was partly transferred to share capital (\$143 million, being the difference between the consideration of shares issued and the carrying amount of liability component of the Bonds at the time of conversion) (note 40) and partly transferred to retained earnings (\$266 million) (note 43).

The movements of the liability component of the Bonds are as follows:

| | 2015 \$m | 2014 \$m |
|--------------------------------------|-------------|-------------|
| At 1 Jan | 3,701 | 3,607 |
| Interest expenses (notes (i) and 15) | 42 | 113 |
| Interest paid | (7) | (19) |
| Exchange difference | (2) | – |
| Conversion of the Bonds | (3,734) | – |
| At 31 Dec | – | 3,701 |

- (i) The effective interest rate of the liability component up to the time of conversion was 3.1 per cent (2014: 3.1 per cent) per annum.

(c) Notes

In December 2013 and January 2014, HKEX issued US\$100 million (HK\$775 million) and US\$95 million (HK\$737 million) of fixed rate senior notes which will be due in December 2018 and January 2019 respectively.

The average effective interest rate of the senior notes was 2.9 per cent (2014: 2.9 per cent) per annum.

(d) Written put options to non-controlling interests

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| At 1 Jan | 225 | 218 |
| Issuance of written put options to non-controlling interests debited against related reserve under equity attributable to shareholders of HKEX (note (i)) | 76 | – |
| Interest expenses (notes (ii) and 15) | 7 | 7 |
| At 31 Dec | 308 | 225 |

- (i) In October 2013 and August 2015, OTC Clear issued 1,200 and 420 non-voting ordinary shares to certain third party shareholders at a consideration of \$252 million and \$88 million respectively. As part of the arrangement, put options were written by HKEX to the non-controlling interests of OTC Clear to sell part or all of their non-voting ordinary shares in OTC Clear to HKEX at the initial subscription price of \$210,000 per share less accumulated dividends received by the non-controlling interests. The put options are exercisable by the non-controlling interests at any time following the date falling five years after the shares were issued if the non-controlling interests can demonstrate to HKEX that they have used reasonable endeavours for at least three months to find a suitable purchaser for their shares at a price equal to or more than their fair market values. The carrying amount of written put options represents the present value of the amount payable by HKEX to acquire the non-controlling interests at the date at which the written put options first become exercisable.

- (ii) The effective interest rate of the liabilities was 3.0 per cent (2014: 3.0 per cent) per annum.

38. Provisions

| | Reinstatement costs \$m | Employee benefit costs \$m | Total \$m |
|-----------------------------|----------------------------|-------------------------------|--------------|
| At 1 Jan 2015 | 61 | 58 | 119 |
| Provision for the year | 13 | 80 | 93 |
| Amount used during the year | - | (68) | (68) |
| Amount paid during the year | (3) | (6) | (9) |
| At 31 Dec 2015 | 71 | 64 | 135 |

- (a) The provision for reinstatement costs represents the estimated costs of restoring the leased office premises to their original state upon the expiry of the leases. The leases are expected to expire within fifteen years.
- (b) The provision for employee benefit costs represents unused annual leave that has been accumulated at the end of the reporting period. It is expected to be fully utilised in the coming twelve months.

39. Deferred Taxation

Deferred taxation is calculated on temporary differences under the liability method.

- (a) The movements on the net deferred tax liabilities account were as follows:

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| At 1 Jan | 834 | 853 |
| Exchange differences | (1) | (42) |
| (Credited)/charged to the income statement (note 18(a)) | (93) | 23 |
| Credited directly to retained earnings (note 18(b)) | (1) | - |
| At 31 Dec (note (d)) | 739 | 834 |

- (b) Deferred tax assets are recognised for tax losses carried forward to the extent that realisation of the related tax benefit through future taxable profits is probable. The Group had unrecognised tax losses of \$666 million at 31 December 2015 (31 December 2014: \$596 million) that may be carried forward for offsetting against future taxable income indefinitely.
- (c) The movements on the net deferred tax liabilities/(assets) were as follows:

| | Accelerated tax depreciation | | Intangible assets | | Financial assets | | Tax losses | | Employee benefits | | Total | |
|--|------------------------------|-------------|-------------------|-------------|------------------|-------------|-------------|-------------|-------------------|-------------|-------------|-------------|
| | 2015 \$m | 2014 \$m | 2015 \$m | 2014 \$m | 2015 \$m | 2014 \$m | 2015 \$m | 2014 \$m | 2015 \$m | 2014 \$m | 2015 \$m | 2014 \$m |
| At 1 Jan | 141 | 139 | 747 | 816 | 31 | 22 | (70) | (117) | (15) | (7) | 834 | 853 |
| Exchange differences | - | - | (1) | (40) | - | (2) | - | - | - | - | (1) | (42) |
| Charged/(credited) to the income statement | 27 | 2 | (91) | (29) | (31) | 11 | 6 | 47 | (4) | (8) | (93) | 23 |
| Credited directly to retained earnings | - | - | - | - | - | - | - | - | (1) | - | (1) | - |
| At 31 Dec | 168 | 141 | 655 | 747 | - | 31 | (64) | (70) | (20) | (15) | 739 | 834 |

39. Deferred Taxation (continued)

- (d) Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when the deferred taxes relate to tax levied by the same taxation authority on the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis. The following amounts, determined after appropriate offsetting, are shown in the consolidated statement of financial position:

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--------------------------|--------------------------|--------------------------|
| Deferred tax assets | (22) | (5) |
| Deferred tax liabilities | 761 | 839 |
| | 739 | 834 |

- (e) The analysis of deferred tax (assets)/liabilities is as follows:

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| Deferred tax assets | | |
| Amounts to be recovered after more than 12 months | (14) | (4) |
| Amounts to be recovered within 12 months | (8) | (1) |
| | (22) | (5) |
| Deferred tax liabilities | | |
| Amounts to be recovered or settled after more than 12 months | 745 | 790 |
| Amounts to be recovered or settled within 12 months | 16 | 49 |
| | 761 | 839 |
| Net deferred tax liabilities | 739 | 834 |

40. Share Capital, Share Premium and Shares Held for Share Award Scheme

Issued and fully paid:

| | Number of shares '000 | Share capital \$m | Share premium \$m | Shares held for Share Award Scheme \$m | Total \$m |
|--|-----------------------------|-------------------------|-------------------------|--|--------------|
| At 1 Jan 2014 | 1,160,119 | 1,161 | 10,167 | (174) | 11,154 |
| Shares issued upon exercise of employee share options prior to 3 March 2014 (note (a)) | 121 | – | 2 | – | 2 |
| Transfer on 3 March 2014 upon adoption of the new CO (note (b)) | – | 10,169 | (10,169) | – | – |
| Shares issued upon exercise of employee share options on or after 3 March 2014 (note (a)) | 539 | 10 | – | – | 10 |
| Shares issued in lieu of cash dividends (note (c)) | 5,959 | 879 | – | (5) | 874 |
| Transfer from employee share-based compensation reserve upon exercise of employee share options on or after 3 March 2014 (note 41) | – | 3 | – | – | 3 |
| Shares purchased for Share Award Scheme (note (d)) | (2,299) | – | – | (405) | (405) |
| Vesting of shares of Share Award Scheme (note (e)) | 825 | 3 | – | 102 | 105 |
| At 31 Dec 2014 | 1,165,264 | 12,225 | – | (482) | 11,743 |
| At 1 Jan 2015 | 1,165,264 | 12,225 | – | (482) | 11,743 |
| Shares issued upon exercise of employee share options (note (a)) | 144 | 3 | – | – | 3 |
| Shares issued in lieu of cash dividends (note (c)) | 15,559 | 3,180 | – | (15) | 3,165 |
| Shares purchased for Share Award Scheme (note (d)) | (1,137) | – | – | (227) | (227) |
| Vesting of shares of Share Award Scheme (note (e)) | 853 | – | – | 134 | 134 |
| Conversion of the Bonds (note 37(b)) | 24,594 | 3,877 | – | – | 3,877 |
| At 31 Dec 2015 | 1,205,277 | 19,285 | – | (590) | 18,695 |

- (a) During the year, employee share options granted under the Post-Listing Share Option Scheme were exercised to subscribe for 144,000 shares (2014: 660,500 shares) in HKEX at a consideration of \$3 million (2014: \$12 million).
- (b) Pursuant to the adoption of the new CO on 3 March 2014, the balance of share premium was transferred to share capital.

40. Share Capital, Share Premium and Shares Held for Share Award Scheme (continued)

- (c) During the year, the following shares were issued to shareholders who elected to receive HKEX shares in lieu of cash dividends pursuant to the scrip dividend scheme:

| | 2015 | | | | |
|---|------------------|----------------|-------------------|--|-----------|
| | Number of shares | Scrip price \$ | Share capital \$m | Shares held for Share Award Scheme \$m | Total \$m |
| Issued as 2014 final scrip dividends: | | | | | |
| – total | 4,532,307 | 286.64 | 1,299 | – | 1,299 |
| – to Share Award Scheme | (21,660) | 286.64 | – | (6) | (6) |
| Issued as 2015 interim scrip dividends: | | | | | |
| – total | 11,100,157 | 169.40 | 1,881 | – | 1,881 |
| – to Share Award Scheme | (51,576) | 169.40 | – | (9) | (9) |
| | 15,559,228 | | 3,180 | (15) | 3,165 |

| | 2014 | | | | |
|---|------------------|----------------|-------------------|--|-----------|
| | Number of shares | Scrip price \$ | Share capital \$m | Shares held for Share Award Scheme \$m | Total \$m |
| Issued as 2013 final scrip dividends: | | | | | |
| – total | 5,098,366 | 140.22 | 715 | – | 715 |
| – to Share Award Scheme | (17,017) | 140.22 | – | (2) | (2) |
| Issued as 2014 interim scrip dividends: | | | | | |
| – total | 891,617 | 183.60 | 164 | – | 164 |
| – to Share Award Scheme | (13,913) | 183.60 | – | (3) | (3) |
| | 5,959,053 | | 879 | (5) | 874 |

- (d) During the year, the Share Award Scheme (note 41(b)) acquired 1,137,400 HKEX shares (2014: 2,298,700 shares) through purchases on the open market. The total amount paid to acquire the shares during the year was \$227 million (2014: \$405 million).
- (e) During the year, a total of 852,317 HKEX shares (comprising Awarded Shares and dividend shares) (2014: 825,261 shares) were vested. The total cost of the vested shares was \$134 million (2014: \$102 million). In 2014, \$3 million was credited to share capital in respect of vesting of certain shares whose fair values were higher than the costs.

41. Employee Share-based Arrangements

The movements of employee share-based compensation reserve were as follows:

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| At 1 Jan | 142 | 105 |
| Employee share-based compensation benefits (note 11) | 183 | 137 |
| Transfer to share capital upon exercise of employee share options (note 40) | – | (3) |
| Vesting of shares of Share Award Scheme | (126) | (97) |
| At 31 Dec | 199 | 142 |

The Group operates a share option scheme (HKEX Share Option Scheme) and a share award scheme (HKEX Share Award Scheme) as part of the benefits to its employees.

(a) HKEX Share Option Scheme

- (i) Under the terms of the HKEX Post-Listing Share Option Scheme (HKEX Post-Listing Scheme), share options were granted to employees during the period from May 2003 to January 2005 respectively. The share options vested progressively from the second to the fifth year after the grant provided that the relevant employee remained employed by the Group. Forfeited share options would be cancelled. Share options for the HKEX Post-Listing Scheme are exercisable up to 10 years after the grant date and expired in January 2015.

The estimated fair value of share options granted was determined at the date of the grant and is charged as an expense over the projected vesting period being the period for which the services from the employees were rendered with a corresponding credit to employee share-based compensation reserve.

Prior to the adoption of the new CO (note 40(b)), on exercising the share options, the consideration received was credited to share capital in respect of the nominal value of the shares issued with the balance credited to share premium; the original estimated fair value of the relevant share options was then transferred from employee share-based compensation reserve to share premium. Pursuant to the adoption of the new CO, on exercising the share options, the consideration received is credited to share capital, and the original estimated fair value of the relevant share options is then transferred from employee share-based compensation reserve to share capital.

- (ii) Movements in the number of shares issuable under options granted and their related weighted average exercise prices were as follows:

| | 2015 | | 2014 | |
|---------------------------------|-------------------------------------|--|-------------------------------------|--|
| | Average exercise price per share \$ | Number of shares issuable under options granted '000 | Average exercise price per share \$ | Number of shares issuable under options granted '000 |
| HKEX Post-Listing Scheme | | | | |
| Outstanding at 1 Jan | 19.25 | 144 | 18.32 | 804 |
| Exercised ¹ | 19.25 | (144) | 18.12 | (660) |
| Outstanding at 31 Dec | – | – | 19.25 | 144 |

1 The weighted average closing share price on the dates on which the options were exercised was \$177.01 (2014: \$137.34) per share.

At 31 December 2014, all outstanding options were vested and exercisable at an exercise price of \$19.25 per share, and their remaining contractual lives were 0.07 year.

41. Employee Share-based Arrangements (continued)

(b) HKEX Share Award Scheme

From September 2005, The HKEx Employees' Share Award Scheme (the Scheme) has been in effect. The terms of the Scheme provide for shares in HKEX to be awarded to employees of the Group (including the Executive Director) as part of their compensation package.

In 2013, the Board approved amendments to the rules and the related trust deed of the Scheme, effective 17 December 2013 to, among other things, (i) facilitate the participation of employees of the LME Group in the Scheme and (ii) allow the Board to make awards as long-term incentives for selected senior executives of the Group (Senior Executive Awards) in addition to any other awards (Employee Share Awards) which they may be eligible to receive under the Scheme.

In 2015, the Board further approved amendments to the rules and related trust deed of the Scheme, effective 17 June 2015, which include (i) extending the term of the Scheme and the trust deed to 31 December 2025, (ii) provisions to permit vesting of shares in the employees who suffer from permanent disability or are made redundant or are deemed to be "good leavers", and (iii) provisions to permit the Board, the Remuneration Committee or the Chief Executive to amend any vesting terms and conditions of Employee Share Awards.

Following the Board's decision to award an award sum (Awarded Sum) for the purchase of Awarded Shares to eligible employees and/or selected senior executives, the Awarded Shares are either purchased from the market or are awarded by regranting the forfeited or unallocated shares held by the Scheme. Before vesting, the Awarded Shares are held in a trust set up by the Scheme.

Further shares are derived from dividends payable on the Awarded Shares held in the Scheme from scrip shares received under the scrip dividend scheme (dividend shares), and the amount is debited to Shares held for Share Award Scheme. The dividend shares are allocated to the awardees on a pro rata basis and have the same vesting periods as the related Awarded Shares.

(i) Employee Share Awards

Employee Share Awards vest progressively over the vesting period after the awards are granted, provided that the relevant awardee (i) remains employed by the Group (ii) is made redundant or (iii) is deemed to be a "good leaver", and Employee Share Awards vest immediately if the relevant awardee retires on reaching normal retirement age or suffers from permanent disability. Unless otherwise determined by the Board, the Remuneration Committee or the Chief Executive, the vesting period of Employee Share Awards granted on or after 13 May 2010 was 3 years, and the shares would be vested in two equal tranches from the second to the third year after the shares are granted.

For awardees who do not meet the vesting criteria, the unvested shares are forfeited. The forfeited shares are held by the trustee of the Scheme who may award such shares to the awardees, taking into consideration recommendations of the Board.

The fair value of the Awarded Shares at the date of the grant is charged to staff costs and related expenses over the projected vesting period being the period for which the services from the employees are rendered with a corresponding credit to employee share-based compensation reserve.

41. Employee Share-based Arrangements (continued)

(b) HKEX Share Award Scheme (continued)

(i) Employee Share Awards (continued)

Upon vesting and transfer to the awardees, the related costs of the shares are credited to Shares held for Share Award Scheme, and the related fair value of the shares are debited to employee share-based compensation reserve. The difference between the cost and the fair value of the shares is credited to share capital if the fair value is higher than the cost or debited against retained earnings if the fair value is less than the cost. The related cost of dividend shares are credited to Shares held for Share Award Scheme with a corresponding decrease in retained earnings.

Details of Awarded Shares awarded during 2014 and 2015

| Date of award | Number of Awarded Shares awarded | Average fair value per share \$ | Vesting period |
|---------------|----------------------------------|---------------------------------|---------------------------|
| 3 Dec 2014 | 4,530 | 178.54 | 15 Apr 2015 – 15 Apr 2016 |
| 3 Dec 2014 | 60,734 | 178.54 | 25 Apr 2015 – 25 Apr 2016 |
| 3 Dec 2014 | 66,972 | 178.54 | 1 May 2015 – 1 May 2016 |
| 3 Dec 2014 | 7,629 | 178.54 | 10 Jun 2015 – 10 Jun 2016 |
| 3 Dec 2014 | 6,245 | 178.54 | 1 Aug 2015 – 1 Aug 2016 |
| 3 Dec 2014 | 1,480 | 178.54 | 14 Oct 2015 – 14 Oct 2016 |
| 3 Dec 2014 | 782,610 ^{1,2} | 178.54 | 9 Dec 2015 – 9 Dec 2016 |
| 3 Dec 2014 | 1,790 | 178.54 | 6 Jan 2016 – 6 Jan 2017 |
| 3 Dec 2014 | 4,782 | 178.54 | 20 Jan 2016 – 20 Jan 2017 |
| 2 Jan 2015 | 1,386,492 ^{1,2} | 171.89 | 15 Dec 2016 – 15 Dec 2017 |
| 18 Nov 2015 | 17,364 | 209.67 | 23 Nov 2015 – 1 May 2016 |
| 18 Nov 2015 | 8,941 | 209.67 | 9 Dec 2015 – 9 Dec 2016 |
| 18 Nov 2015 | 10,749 | 209.67 | 19 Jan 2017 – 19 Jan 2018 |
| 18 Nov 2015 | 14,658 | 209.67 | 1 Mar 2017 – 1 Mar 2018 |
| 18 Nov 2015 | 3,908 | 209.67 | 13 Apr 2017 – 13 Apr 2018 |
| 18 Nov 2015 | 4,177 | 209.67 | 7 Oct 2017 – 7 Oct 2018 |
| 26 Nov 2015 | 1,900 | 211.14 | 23 Nov 2017 – 23 Nov 2018 |
| 31 Dec 2015 | 1,179,457 ^{1,2} | 199.07 | 9 Dec 2017 – 9 Dec 2018 |

1 48,681, 88,345 and 60,429 shares were awarded to HKEX's Chief Executive on 3 December 2014, 2 January 2015 and 31 December 2015 respectively.

2 92,469, 98,608 and 160,685 shares were awarded by re-granting the forfeited or unallocated shares held by the Scheme on 3 December 2014, 2 January 2015 and 31 December 2015 respectively.

Details of Awarded Shares vested during 2014 and 2015

During the year, 813,851 HKEX shares (2014: 773,155 shares) were vested at an aggregate fair value of \$126 million (2014: \$97 million), of which 59,618 shares (2014: 70,526 shares) were for HKEX's Chief Executive.

41. Employee Share-based Arrangements (continued)

(b) HKEX Share Award Scheme (continued)

(i) Employee Share Awards (continued)

Dividend shares

During the year, 73,236 HKEX shares (2014: 30,930 shares) were issued to the Scheme in lieu of cash dividends at a total consideration of \$15 million (2014: \$5 million), of which 69,945 shares (2014: 27,849 shares) were subsequently allocated to awardees.

During the year, 38,466 dividend shares (2014: 52,106 shares), including 3,334 shares (2014: 4,761 shares) for HKEX's Chief Executive, at a cost of \$8 million (2014: \$8 million) were vested.

Movements in number of Awarded Shares awarded and dividend shares

| | 2015 | 2014 |
|--|--|--|
| | Number of Awarded Shares and dividend shares | Number of Awarded Shares and dividend shares |
| Outstanding at 1 Jan | 1,348,090 | 1,304,160 |
| Awarded ³ | 2,627,646 | 936,772 |
| Forfeited | (166,034) | (91,204) |
| Vested | (813,851) | (773,155) |
| Dividend shares: | | |
| – allocated to awardees | 69,945 | 27,849 |
| – allocated to awardees but subsequently forfeited | (2,146) | (4,226) |
| – vested | (38,466) | (52,106) |
| Outstanding at 31 Dec | 3,025,184 | 1,348,090 |

3 Average fair value per share was \$184.98 (2014: \$178.54)

Remaining vesting periods of Awarded Shares awarded and dividend shares outstanding at 31 December

| | At 31 Dec 2015 | | At 31 Dec 2014 | |
|-------------------|--------------------------|--|--------------------------|--|
| | Remaining vesting period | Number of Awarded Shares and dividend shares outstanding | Remaining vesting period | Number of Awarded Shares and dividend shares outstanding |
| Shares awarded in | | | | |
| 2012 | N/A | – | 0.01 year to 0.92 year | 384,027 |
| 2013 | 0.00 year to 0.02 year | 9,650 | 0.00 year to 1.02 years | 19,300 |
| 2014 | 0.02 year to 1.05 years | 430,578 | 0.29 year to 2.05 years | 924,085 |
| 2015 | 0.33 year to 2.94 years | 2,534,945 | N/A | – |
| Dividend shares | 0.00 year to 1.96 years | 50,011 | 0.00 year to 1.02 years | 20,678 |
| | | 3,025,184 | | 1,348,090 |

41. Employee Share-based Arrangements (continued)

(b) HKEX Share Award Scheme (continued)

(i) Employee Share Awards (continued)

Forfeited or unallocated shares held by the Scheme

At 31 December 2015, 11,033 forfeited or unallocated shares (31 December 2014: 116 shares) were held by the Scheme and would be regranted to eligible employees in future.

Vested shares held by the Scheme

At 31 December 2015, 2,466 shares (31 December 2014: Nil) were vested but had not yet been transferred to the awardees.

(ii) Senior Executive Awards

The actual number of shares to be transferred to the awardees under the Senior Executive Awards is conditional on the satisfaction of performance conditions set by the Board. These may relate to the performance of the senior executive concerned and/or the Group, the achievement or contribution by the senior executives to certain business or strategic development objectives or other initiatives, and contributions relative to the performance of other comparator group companies. The Board has full discretion to determine the actual amount of award to be paid at the end of a performance assessment period (which shall normally be a period of at least three financial years) in accordance with these criteria.

The vesting of Senior Executive Awards is not affected by the awardees ceasing employment with the Group before the end of the performance assessment period. In accordance with prevailing accounting standards, the Senior Executive Awards are considered to be vested immediately upon grant and the performance conditions are considered as non-vesting conditions.

The fair value of the Awarded Shares at the date of grant, after taking into account all non-vesting conditions, is charged to staff costs and related expenses immediately on the grant date with a corresponding credit to employee share-based compensation reserve.

Upon transfer to the awardees, the related costs of the Awarded Shares transferred are credited to Shares held for Share Award Scheme, and the amount that has been previously credited to employee share-based compensation reserve is reversed. The difference between these two amounts is credited to share capital or debited against retained earnings. The related costs of the dividend shares are credited to Shares held for Share Award Scheme with a corresponding decrease in retained earnings.

41. Employee Share-based Arrangements (continued)

(b) HKEX Share Award Scheme (continued)

(ii) Senior Executive Awards (continued)

Details of Senior Executive Awards awarded during 2014 and 2015

| Date of award | Number of Awarded Shares awarded | Average fair value per share \$ | Total fair value \$m | Performance period |
|---------------|---|--|----------------------------|-----------------------|
| 3 Dec 2014 | 23,733 | 133.91 | 3 | 2013 – 2015 |
| 3 Dec 2014 | 47,467 | 133.91 | 7 | 2014 – 2016 |
| 2 Jan 2015 | 95,100 | 128.92 | 12 | 2015 – 2017 |
| 31 Dec 2015 | 56,800 | 149.30 | 8 | 2016 – 2018 |

All of the Senior Executive Awards were awarded to the HKEX's Chief Executive. The fair value per share is determined by taking into account various factors including the probability of the performance conditions being satisfied.

42. Designated Reserves

Clearing House Funds reserves (note 36(b))

| | HKSCC Guarantee Fund reserve \$m | SEOC Reserve Fund reserve \$m | HKCC Reserve Fund reserve \$m | OTC Clear Rates and FX Guarantee Fund reserve \$m | OTC Clear Rates and FX Guarantee Resources reserve \$m | Total \$m |
|---|--|---|---|--|---|--------------|
| At 1 Jan 2014 | 127 | 107 | 352 | – | – | 586 |
| Surplus/(deficit) of net investment income net of expenses of Clearing House Funds transferred from/(to) retained earnings | 3 | (4) | 1 | 2 | 1 | 3 |
| Surplus of reversal of provision for closing-out losses by a defaulting Clearing Participant (note 13(a)) | 54 | – | – | – | – | 54 |
| Transfer from/(to) retained earnings (note 43) | 57 | (4) | 1 | 2 | 1 | 57 |
| At 31 Dec 2014 | 184 | 103 | 353 | 2 | 1 | 643 |
| At 1 Jan 2015 | 184 | 103 | 353 | 2 | 1 | 643 |
| (Deficit)/surplus of net investment income net of expenses of Clearing House Funds transferred (to)/from retained earnings | (4) | 1 | (2) | 1 | 1 | (3) |
| Post-liquidation interest arising from a Participant's default on market contracts (note 7(b)) transferred from retained earnings | 38 | – | – | – | – | 38 |
| Surplus of reversal of provision for closing-out losses by a defaulting Clearing Participant (note 13(a)) | 100 | – | – | – | – | 100 |
| Transfer from/(to) retained earnings (note 43) | 134 | 1 | (2) | 1 | 1 | 135 |
| At 31 Dec 2015 | 318 | 104 | 351 | 3 | 2 | 778 |

43. Retained Earnings

| | 2015 \$m | 2014 \$m |
|--|-------------|-------------|
| At 1 Jan | 8,800 | 7,800 |
| Profit attributable to shareholders | 7,956 | 5,165 |
| Transfer to Clearing House Funds reserves (note 42) | (135) | (57) |
| Dividends: | | |
| 2014/2013 final dividend | (2,533) | (1,996) |
| 2015/2014 interim dividend | (3,679) | (2,133) |
| Unclaimed HKEX dividends forfeited (note 34(b)) | 18 | 29 |
| Vesting of dividend shares of Share Award Scheme | (8) | (8) |
| Tax credit relating to Share Award Scheme (note 18(b)) | 3 | - |
| Transfer from convertible bond reserve upon conversion of convertible bonds (note 37(b)) | 266 | - |
| Changes in ownership interests in a subsidiary (note 48) | 3 | - |
| At 31 Dec | 10,691 | 8,800 |

44. Notes to the Consolidated Statement of Cash Flows

Reconciliation of profit before taxation to net cash inflow from operating activities:

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| Profit before taxation | 9,278 | 6,038 |
| Adjustments for: | | |
| Net interest income | (662) | (588) |
| Dividend income | (5) | (8) |
| Net fair value gains including interest income on financial assets mandatorily measured at fair value through profit or loss and financial liabilities at fair value through profit or loss | (49) | (109) |
| Forfeiture of unclaimed cash dividends held by HKSCC Nominees Limited | (11) | (15) |
| Finance costs | 114 | 196 |
| Amortisation of lease premium for land under premises expenses | 1 | - |
| Depreciation and amortisation | 684 | 647 |
| Employee share-based compensation benefits | 183 | 137 |
| Gain on disposal of a leasehold property and other fixed assets | (453) | - |
| Reversal of provision for impairment losses of receivables | (76) | (76) |
| Share of loss of a joint venture | 9 | 10 |
| Changes in provisions | 6 | 13 |
| Net decrease/(increase) in financial assets of Margin Funds | 14,268 | (89,695) |
| Net (decrease)/increase in financial liabilities of Margin Funds | (14,271) | 89,691 |
| Net decrease/(increase) in Clearing House Fund financial assets | 1,859 | (5,662) |
| Net (decrease)/increase in Clearing House Fund financial liabilities | (1,994) | 5,605 |
| Decrease/(increase) in cash prepayments for A shares | 490 | (619) |
| Net (increase)/decrease in financial assets measured at fair value through profit or loss less financial liabilities at fair value through profit or loss | (467) | 8 |
| Decrease/(increase) in accounts receivable, prepayments and deposits | 7,226 | (10,910) |
| (Decrease)/increase in other current liabilities | (7,404) | 10,259 |
| Net cash inflow from operations | 8,726 | 4,922 |
| Dividends received | 5 | 8 |
| Interest received from bank deposits | 686 | 593 |
| Interest received from financial assets measured at fair value through profit or loss | 55 | 59 |
| Interest paid to Participants | (24) | (6) |
| Income tax paid | (1,127) | (903) |
| Net cash inflow from operating activities | 8,321 | 4,673 |

45. Commitments

(a) Commitments in respect of capital expenditures:

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|------------------------------------|--------------------------|--------------------------|
| Contracted but not provided for: | | |
| – fixed assets | 4 | 17 |
| – intangible assets | 43 | 60 |
| Authorised but not contracted for: | | |
| – fixed assets | 264 | 175 |
| – intangible assets | 650 | 322 |
| | 961 | 574 |

The Group's capital expenditure commitments were mainly related to the development and upgrade of various trading and clearing systems including cash and commodities trading and clearing systems and trading and clearing systems to facilitate mutual stock market access between Mainland China and Hong Kong.

(b) Commitments for total future minimum lease payments under non-cancellable operating leases:

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| Land and buildings | | |
| – within one year | 186 | 203 |
| – in the second to fifth years | 438 | 547 |
| – after the fifth year | 213 | – |
| | 837 | 750 |
| Computer systems, software and equipment | | |
| – within one year | 16 | 16 |
| – in the second to fifth years | 23 | 35 |
| | 39 | 51 |
| | 876 | 801 |

At 31 December 2015 and 31 December 2014, the Group did not have any purchase options in respect of computer systems, software and equipment.

(c) Commitments in respect of financial contributions to Financial Reporting Council

The Financial Reporting Council (FRC) is an independent statutory body established to receive and investigate complaints concerning irregularities of auditors and reporting accountants of listed companies and non-compliances in the financial reports of listed companies. Since the establishment of the FRC in 2006, the Group has been contributing to the funding of the FRC's operations.

Under a memorandum of understanding signed in November 2014, the Group has agreed to make recurrent contributions to the FRC from 2015 to 2019. The first contribution for 2015 was \$7 million and the contribution for 2016 will also be \$7 million, while the contributions during 2017 to 2019 will be \$8 million per annum.

46. Contingent Liabilities

At 31 December 2015, the Group's material contingent liabilities were as follows:

- (a) The Group had a contingent liability in respect of potential calls to be made by the SFC to replenish all or part of compensation less recoveries paid by the Unified Exchange Compensation Fund established under the Securities Ordinance up to an amount not exceeding \$71 million (31 December 2014: \$71 million). Up to 31 December 2015, no calls had been made by the SFC in this connection.
- (b) The Group had undertaken to indemnify the Collector of Stamp Revenue against any underpayment of stamp duty by its Participants of up to \$200,000 for each Participant (note 35(a)). In the unlikely event that all of its 515 trading Participants covered by the indemnity at 31 December 2015 (31 December 2014: 500) defaulted, the maximum contingent liability of the Group under the indemnity would amount to \$103 million (31 December 2014: \$100 million).
- (c) HKEX has given an undertaking in favour of HKSCC to contribute up to \$50 million in the event of HKSCC being wound up while it is a wholly-owned subsidiary of HKEX or within one year after HKSCC ceases to be a wholly-owned subsidiary of HKEX, for payment of the liabilities of HKSCC contracted before HKSCC ceases to be a wholly-owned subsidiary of HKEX, and for the costs of winding up.
- (d) US litigation

In 2013, the LME, LMEH and HKEX were named as defendants in aluminium warehousing litigation alleging anti-competitive behaviour in the United States (US). Following vigorous defence by the Group, the US District Court for the Southern District of New York (District Court) dismissed all the claims in a series of orders. In 2014, plaintiffs classified as "consumer end users" and "commercial end users" filed appeals against the District Court's decisions but the appeals were all dismissed by the US Court of Appeals in July 2015 with the agreement of the plaintiffs. While the direct action plaintiffs and plaintiffs classified as "first level" purchasers do not currently have a right to appeal against the District Court's decisions, they may do so after their claims against the other non-HKEX Group defendants have concluded or if the court grants them permission to appeal in the meantime. It is not clear when the litigation against the non-HKEX Group defendants will conclude but to date, no application to appeal has been filed by any of the direct action plaintiffs or the "first level" purchasers against the District Court's decisions.

47. Future Operating Lease Receipts

At 31 December, the future aggregate minimum lease receipts under non-cancellable operating leases of the Group were as follows:

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|---|--------------------------|--------------------------|
| Trading booths, media booths and related facilities | | |
| – within one year | 6 | 6 |
| – in the second to fifth years | 5 | 10 |
| Total | 11 | 16 |

48. Transactions with Non-Controlling Interests

(a) Acquisition of additional interest in a subsidiary

On 23 February 2015, OTC Clear issued 1,260 ordinary shares to HKEX at a consideration of \$265 million. After the issue, the Group's interest in OTC Clear increased to 80.2 per cent while the interest held by non-controlling interests dropped to 19.8 per cent. The effect of changes in ownership interest of OTC Clear on the equity attributable to HKEX's shareholders is summarised as follows:

| | \$m |
|--|-------|
| Carrying amount of non-controlling interests acquired | 230 |
| Consideration paid | (265) |
| Excess of consideration paid debited against retained earnings | (35) |

(b) Disposal of interest in a subsidiary without loss of control

On 24 August 2015, OTC Clear issued 420 non-voting ordinary shares to the non-controlling interests at a consideration of \$88 million. After the issue, the Group's interest in OTC Clear dropped to 75 per cent while the interest held by non-controlling interests increased to 25 per cent. The effect of changes in ownership interest of OTC Clear on the equity attributable to HKEX's shareholders is summarised as follows:

| | \$m |
|--|------|
| Consideration received from non-controlling interests | 88 |
| Less: carrying amount of non-controlling interests disposed of | (50) |
| Gain on disposal credited to retaining earnings | 38 |

(c) Effects of transactions with non-controlling interests on retained earnings

| | \$m |
|--|------|
| Changes in retained earnings arising from: | |
| – Acquisition of additional interests in subsidiary (note (a)) | (35) |
| – Disposal of interests in subsidiary without loss of control (note (b)) | 38 |
| Net amount credited to retained earnings (note 43) | 3 |

(d) Written put options to non-controlling interests

Put options were written by HKEX to the non-controlling interests of OTC Clear to sell some or all of their non-voting ordinary shares in OTC Clear to HKEX, details of which are disclosed in note 37(d).

49. Connected Transactions and Material Related Party Transactions

(a) Connected transactions and material related party transactions

Certain Directors of HKEX may be directors and/or shareholders of (i) Stock Exchange Participants and Futures Exchange Participants (Exchange Participants) and Clearing Participants of HKSCC, HKCC and SEOCH (Clearing Participants); (ii) companies listed on the Stock Exchange; and (iii) Exchange Participants for buying shares on behalf of HKSCC. Securities and derivatives contracts traded by, and fees levied on, these Exchange Participants and Clearing Participants, fees levied on these listed companies and fees paid to these Exchange Participants for buying shares on behalf of HKSCC are all undertaken in the ordinary course of business of the Group on the standard terms and conditions applicable to all other Exchange Participants, Clearing Participants, listed companies and Exchange Participants for buying shares on behalf of HKSCC.

(b) Material related party transactions

In addition to the above and those disclosed elsewhere in these consolidated financial statements, the Group entered into the following material related party transactions:

(i) Key management personnel compensation

| | 2015 \$m | 2014 \$m |
|---|-------------|-------------|
| Salaries and other short-term employee benefits | 184 | 152 |
| Employee share-based compensation benefits | 68 | 47 |
| Retirement benefit costs | 9 | 9 |
| | 261 | 208 |

(ii) Post-retirement benefit plans

The Group has sponsored an ORSO Plan, a MPF Scheme and the LME Pension Scheme as its post-retirement benefit plans (note 11(a)).

The retirement benefit costs charged to the consolidated income statement represent contributions paid and payable by the Group to the ORSO Plan, the MPF Scheme and the LME Pension Scheme and related fees. At 31 December 2015, the contributions payable to the LME Pension Scheme and MPF Scheme by the Group were \$3 million (31 December 2014: \$3 million) and below \$1 million (31 December 2014: \$Nil), and there was no contribution payable to the ORSO Plan.

(iii) Transactions and balance with a joint venture

| | 2015 \$m | 2014 \$m |
|--------------------------------|-----------------------------------|-----------------------------------|
| Management fee charged to CESC | 3 | 3 |
| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
| Amount due from CESC | 5 | 3 |

The amount due from CESC is unsecured, interest-free and repayable on demand.

(iv) Save as aforesaid, the Group has entered into other transactions in the ordinary course of business with companies that are related parties but the amounts were immaterial.

50. Pledge of Assets

LME Clear receives securities as collateral for margins posted by its Clearing Participants. It also holds securities as collateral in respect of its investments in overnight triparty reverse repurchase agreements under which it is obliged to return equivalent securities to the counterparties at maturity of the reverse repurchase agreements. The fair value of this collateral was US\$9,926 million (HK\$76,928 million) at 31 December 2015 (31 December 2014: US\$10,251 million (HK\$79,495 million)).

This non-cash collateral, which was not recorded on the consolidated statement of financial position of the Group at 31 December 2015, together with certain financial assets amounting to US\$639 million (HK\$4,953 million) at 31 December 2015 (31 December 2014: US\$590 million (HK\$4,575 million)), have been repledged to LME Clear's investment agent and custodian banks under first floating charge and security arrangements for the settlement and depository services they provide in respect of the collateral and investments held. The floating charge could convert to a fixed charge in the event of contract termination, or default or insolvency of LME Clear.

51. Capital Management

The Group's objectives when managing capital are:

- To safeguard the Group's ability to continue as a going concern, so that it continues to provide returns for shareholders and benefits for other stakeholders;
- To support the Group's stability and growth;
- To provide capital for the purpose of strengthening the Group's risk management capability; and
- To ensure that the Group's regulated entities comply with their respective regulatory capital requirements.

The Group actively and regularly reviews and manages its capital structure to ensure an optimal capital structure and shareholder returns. The Group takes into consideration the expected capital requirements and capital efficiency, regulatory capital requirements of its regulated entities, prevailing and projected profitability, projected operating cash flows, projected capital expenditures and projected strategic investment opportunities.

51. Capital Management (continued)

The Group has a number of regulated entities that are subject to capital requirements set by the respective regulators. The regulatory capital requirements of the Group's subsidiaries at 31 December 2015 are summarised as follows:

| Subsidiaries | Regulatory authority | Regulatory capital requirements |
|----------------------------------|---------------------------------|---|
| Stock Exchange, Futures Exchange | SFC, Hong Kong | Maintain at all times net current assets funded by equity sufficient to cover its projected total operating expenses for at least the following six months (approximately \$1,082 million), and net current assets funded by equity or long-term loans from HKEX sufficient to cover its projected total operating expenses for at least the following twelve months (approximately \$2,168 million). |
| HKSCC, HKCC, SEOCH, OTC Clear | SFC, Hong Kong | Maintain at all times net current assets funded by equity sufficient to cover its projected total operating expenses for at least the following six months (approximately \$507 million), and net current assets funded by equity or long-term loans from HKEX sufficient to cover its projected total operating expenses for at least the following twelve months (approximately \$1,022 million). Compliance with these requirements will also meet the related regulatory requirements for a Recognised Clearing House under the Principles for Financial Market Infrastructures published by the Committee on Payment and Settlement Systems and the Technical Committee of the International Organization of Securities Commissions. |
| LME | Financial Conduct Authority, UK | Maintain at all times liquid financial assets amounting to at least six months' operating costs plus a risk based capital charge (approximately US\$55 million (HK\$426 million)), and net capital of at least this amount. |
| LME Clear | Bank of England, UK | Maintain cash or highly liquid financial instruments with minimal market and credit risk, amounting to US\$73.7 million (HK\$571 million), plus 10 per cent minimum reporting threshold of US\$7.4 million (HK\$57 million) and US\$18.4 million (HK\$143 million) financial resources available to set off losses in the event of default. Capital resources must be in the form of share capital, retained earnings and reserves, reduced by intangible assets and retained losses. |

At 31 December 2015, the Group had set aside \$4,000 million (31 December 2014: \$4,000 million) of shareholders' funds for the purpose of supporting the risk management regime of the clearing houses in their roles as central counterparties.

All regulated entities of the Group had adequate capital to meet their regulatory requirements at 31 December 2015 and 31 December 2014.

The Group adopts a dividend policy of providing shareholders with regular dividends with a normal target payout ratio of 90 per cent of the Group's profit of the year. The Group also offered a scrip dividend alternative to shareholders. The consideration of share capital issued under the scrip dividend scheme, together with the 10 per cent of the profit not declared as dividends, are retained as capital of the Group for future use.

The Group monitors capital on the basis of its gross gearing ratio (ie, gross debt divided by adjusted capital) and net gearing ratio (ie, net debt divided by adjusted capital). For this purpose, the Group defines gross debt as total borrowings, net debt as total borrowings less cash and cash equivalents of Corporate Funds, and adjusted capital as all components of equity attributable to shareholders of HKEX other than designated reserves. The Group's strategy is to maintain the ratios at less than 50 per cent.

51. Capital Management (continued)

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|--|--------------------------|--------------------------|
| Total borrowings | 3,409 | 7,026 |
| Less: cash and cash equivalents of Corporate Funds (note 22) | (12,744) | (8,067) |
| Net debt (note (a)) | – | – |
| Equity attributable to shareholders of HKEX | 29,816 | 21,273 |
| Less: designated reserves | (778) | (643) |
| Adjusted capital | 29,038 | 20,630 |
| Gross gearing ratio | 12% | 34% |
| Net gearing ratio | 0% | 0% |

- (a) Net debt is zero when the amount of cash and cash equivalents of Corporate Funds is higher than total borrowings.

52. Financial Risk Management

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk, equity price risk and interest rate risk), liquidity risk and credit risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's performance.

- (a) Market risk management

Market risk is the risk of loss arising from movements in observable market variables such as foreign exchange rates, equity prices and interest rates. The Group is exposed to market risk primarily through its financial assets and financial liabilities (including borrowings).

Financial assets of the Group are maintained for the Corporate Funds, Clearing House Funds, Margin Funds and cash prepayments for A shares received from Participants.

The Group's investment policy is to prudently invest all funds managed by the Group in a manner which will satisfy liquidity requirements, safeguard financial assets and manage risks while optimising return on investments.

Investment and fund management by HKEX and the Group's subsidiaries is governed by the HKEX Investment Policy, Restrictions and Guidelines, which is approved by the Board and reviewed regularly and at least once every three years. Investment restrictions and guidelines form an integral part of risk control. Fund-specific restrictions and guidelines are set according to the investment objectives of each fund. Investments are diversified to minimise risks and no investments are made for speculative purposes. In addition, specific limits are set for each fund to control risks (eg, permissible asset type, asset allocation, liquidity, credit requirement, counterparty concentration, maturity, foreign exchange exposures and interest rate risks) of the investments.

An Investment Advisory Committee, comprised of Non-executive Directors of HKEX, advises the Board on portfolio management and monitors the risk and performance of HKEX's investments. A Treasury team in the Finance Division is dedicated to the day-to-day management and investment of the funds. External fund managers have also been appointed to manage part of the Corporate Funds since July 2001. The external fund managers are stable and financially strong financial institutions and each has a worldwide aggregate fund size of a minimum of US\$10 billion under management.

52. Financial Risk Management (continued)

(a) Market risk management (continued)

(i) Foreign exchange risk management

Foreign exchange risk is the risk that the value or cash flows of an asset, liability or highly probable forecast transaction denominated in foreign currency (ie, a currency other than the functional currency of the entity to which the transactions relate) will fluctuate because of changes in foreign exchange rates. In respect of its funds available for investment in Hong Kong, the Group may invest in non-HKD securities from time to time. Forward foreign exchange contracts and foreign currency bank deposits have been used to hedge the currency exposure of the Group's non-HKD securities and liabilities to mitigate risks arising from fluctuations in exchange rates.

Under the HKEX Investment Policy, Restrictions and Guidelines, the investment in non-HKD instruments is subject to the following restrictions:

- up to 20 per cent of the externally-managed Corporate Funds may be invested in non-HKD and non-USD investments without economic hedging;
- For internally-managed Corporate Funds, Clearing House Funds, Margin Funds and cash prepayments for A shares, unhedged investments in currencies other than HKD or USD must fully match the respective liabilities or forecast payments for the funds. Unhedged investments in USD may not exceed 20 per cent of the respective funds. Holdings in Renminbi (RMB) are permitted if the currencies have been received in connection with the trading, clearing, settlement or services in respect of the Group's RMB products (including products traded through Stock Connect).

The Group's non-HKD borrowings by the Hong Kong entities are denominated in USD, which is pegged against HKD, and are not therefore subject to significant foreign currency risks.

The functional currency of the LME and LME Clear is USD as the majority of their income is denominated in USD. As a result, the LME Group is exposed to foreign currency risk arising from expenditure (predominantly in Pound Sterling (GBP)) and bank deposits denominated in foreign currencies (mainly GBP). Its risk management policy is to forecast and monitor the amount of future GBP payments and to retain some GBP bank deposits or convert from USD to GBP as soon as deemed appropriate. Forward foreign exchange contracts may also be used to hedge the currency exposure resulting from its USD revenue against GBP payments.

For LME Clear, investments of the Margin Fund and Default Fund will generally take place in the currency in which cash was received.

The following table details the Group's financial assets and financial liabilities denominated in a currency other than the functional currency of the entity to which they relate and the net open foreign currency positions (ie, gross positions less forward foreign exchange contracts and other offsetting exposures (economic hedges)), at 31 December presented in HKD equivalents.

52. Financial Risk Management (continued)

(a) Market risk management (continued)

(i) Foreign exchange risk management (continued)

| | | At 31 Dec 2015 | | |
|---|------------------|----------------------------|------------------------|--------------------------|
| | Foreign currency | Gross open position \$m | Economic hedges \$m | Net open position \$m |
| Financial assets/(financial liabilities) | | | | |
| Cash and cash equivalents ^{1,2} | EUR | 4,527 | (4,525) | 2 |
| | GBP | 597 | (263) | 334 |
| | JPY | 2,333 | (2,328) | 5 |
| | RMB | 1,590 | (1,558) | 32 |
| | USD | 592 | (150) | 442 |
| Financial assets measured at fair value through profit or loss ^{1,3,4} | AUD | 126 | (100) | 26 |
| | CAD | 36 | (18) | 18 |
| | CHF | 10 | - | 10 |
| | EUR | 476 | (456) | 20 |
| | GBP | 114 | (97) | 17 |
| | JPY | 457 | (446) | 11 |
| | NZD | 63 | (33) | 30 |
| | RMB | 70 | (50) | 20 |
| | SEK | 1 | - | 1 |
| | SGD | 19 | (10) | 9 |
| | USD | 2,043 | (253) | 1,790 |
| Financial assets measured at amortised cost | USD | 1,720 | - | 1,720 |
| Accounts receivable and deposits ² | EUR | 1 | - | 1 |
| | GBP | 92 | - | 92 |
| | RMB | 1,560 | (1,560) | - |
| | USD | 6 | - | 6 |
| Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants ¹ | EUR | (4,525) | 4,525 | - |
| | GBP | (263) | 263 | - |
| | JPY | (2,328) | 2,328 | - |
| | RMB | (2,223) | 2,223 | - |
| | USD | (150) | 150 | - |
| Financial liabilities at fair value through profit or loss ⁴ | EUR | (442) | 442 | - |
| | GBP | (53) | 53 | - |
| | JPY | (446) | 446 | - |
| Accounts payable, accruals and other liabilities ² | GBP | (443) | - | (443) |
| | RMB | (901) | 895 | (6) |
| | USD | (66) | - | (66) |
| Borrowings | USD | (3,101) | - | (3,101) |
| Total net open positions for the Group | AUD | | | 26 |
| | CAD | | | 18 |
| | CHF | | | 10 |
| | EUR | | | 23 |
| | GBP | | | - |
| | JPY | | | 16 |
| | NZD | | | 30 |
| | RMB | | | 46 |
| | SEK | | | 1 |
| | SGD | | | 9 |
| | USD | | | 791 |
| | | | | 970 |

1 Foreign currency margin deposits and Mainland security and settlement deposits received by the Group are economically hedged by investments in the same currencies.

2 RMB exposure of Continuous Net Settlement receivable and cash prepayments for A shares fully offset the Continuous Net Settlement payable.

3 Forward foreign exchange contracts have been used as economic hedges for the currency exposures of the Group's investments by external fund managers.

4 Foreign currency exposures of base metals futures and options contracts under financial assets measured at fair value through profit or loss and financial liabilities at fair value through profit or loss fully offset each other.

52. Financial Risk Management (continued)

(a) Market risk management (continued)

(i) Foreign exchange risk management (continued)

| | | At 31 Dec 2014 | | |
|---|---------------------|----------------------------------|---------------------------|--------------------------------|
| | Foreign currency | Gross open position \$m | Economic hedges \$m | Net open position \$m |
| Financial assets/(financial liabilities) | | | | |
| Cash and cash equivalents ^{1,2} | EUR | 710 | (708) | 2 |
| | GBP | 1,994 | (1,385) | 609 |
| | JPY | 2,927 | (2,926) | 1 |
| | NZD | 3 | - | 3 |
| | RMB | 3,247 | (3,245) | 2 |
| | USD | 1,404 | (46) | 1,358 |
| Financial assets measured at fair value through profit or loss ^{1,3,4} | AUD | 123 | (94) | 29 |
| | CAD | 28 | (27) | 1 |
| | CHF | 9 | - | 9 |
| | EUR | 742 | (555) | 187 |
| | GBP | 108 | (105) | 3 |
| | JPY | 560 | (557) | 3 |
| | NZD | 61 | (54) | 7 |
| | RMB | 156 | (78) | 78 |
| | SGD | 21 | (13) | 8 |
| | USD | 1,435 | (205) | 1,230 |
| Financial assets measured at amortised cost | RMB | 26 | - | 26 |
| Accounts receivable and deposits ² | GBP | 45 | - | 45 |
| | RMB | 1,350 | (1,350) | - |
| | USD | 4 | - | 4 |
| Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants ¹ | EUR | (708) | 708 | - |
| | GBP | (1,385) | 1,385 | - |
| | JPY | (2,926) | 2,926 | - |
| | RMB | (3,241) | 3,241 | - |
| | USD | (46) | 46 | - |
| Financial liabilities at fair value through profit or loss ⁴ | EUR | (479) | 479 | - |
| | GBP | (35) | 35 | - |
| | JPY | (547) | 547 | - |
| Accounts payable, accruals and other liabilities ² | EUR | (1) | - | (1) |
| | GBP | (236) | - | (236) |
| | RMB | (1,366) | 1,354 | (12) |
| | USD | (169) | - | (169) |
| Borrowings | USD | (3,100) | - | (3,100) |
| Total net open positions for the Group | AUD | | | 29 |
| | CAD | | | 1 |
| | CHF | | | 9 |
| | EUR | | | 188 |
| | GBP | | | 421 |
| | JPY | | | 4 |
| | NZD | | | 10 |
| | RMB | | | 94 |
| | SGD | | | 8 |
| | USD | | | 677 |
| | | | | 1,441 |

1 Foreign currency margin deposits and Mainland security and settlement deposits received by the Group are economically hedged by investments in the same currencies.

2 RMB exposure of Continuous Net Settlement receivable and cash prepayments for A shares fully offset the Continuous Net Settlement payable.

3 Forward foreign exchange contracts have been used as economic hedges for the currency exposures of the Group's investments by external fund managers.

4 Foreign currency exposures of base metals futures and options contracts under financial assets measured at fair value through profit or loss and financial liabilities at fair value through profit or loss fully offset each other.

52. Financial Risk Management (continued)

(a) Market risk management (continued)

(ii) Equity and commodity price risk management

The Group is exposed to equity price risk as mutual funds, equities, equity index futures and options contracts may be held as part of the externally-managed Corporate Funds' investments in Hong Kong. Equity price risk is capped by an asset allocation limit. The Group sets prudent investment limits and restrictions to control investment in equity securities. The Group was also exposed to equity price risk on the LME's investment in an unlisted company prior to its disposal in March 2015.

The Group is not exposed to commodity price risk as investment in commodities is not permitted under the Group's investment policy. The movements of fair value of base metals futures and options contracts held by LME Clear would not have any financial impact on the Group's results as the assets and liabilities will move by the same amount and fully offset each other.

(iii) Interest rate risk management

There are two types of interest rate risk:

- Fair value interest rate risk – the risk that the value of a financial instrument will fluctuate because of changes in market interest rates; and
- Cash flow interest rate risk – the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

The Group is exposed to both fair value and cash flow interest rate risks as the Group has significant assets and liabilities (including borrowings) which are interest-bearing. The Group manages its interest rate risks by setting limits on the residual maturity of the investments and on the fixed and floating rate mismatches of its assets and liabilities.

The contractual interest rates of the borrowings are disclosed in note 37 to the consolidated financial statements.

The following tables present the highest and lowest contractual interest rates of the financial assets held by the Group (excluding bank deposits held at savings and current accounts and zero coupon bonds purchased at discounts) at 31 December:

Fixed rate financial assets

| | At 31 Dec 2015 | At 31 Dec 2014 |
|------------------------------------|-------------------|-------------------|
| Highest contractual interest rates | 6.88% | 7.00% |
| Lowest contractual interest rates | 0.00% | 0.01% |

Floating rate financial assets

| | At 31 Dec 2015 | At 31 Dec 2014 |
|--|-------------------|-------------------|
| Highest contractual interest rates | 3.75% | 3.94% |
| Lowest contractual interest rates ¹ | -3.00% | 0.43% |

1 The contractual interest rates for certain reverse repurchase investments held by LME Clear are below 0 per cent.

52. Financial Risk Management (continued)

(a) Market risk management (continued)

(iv) Risk management techniques

Value-at-Risk (VaR) based on historical simulation and portfolio stress testing are used to identify, measure, monitor and control foreign exchange risk, equity price risk and interest rate risks of the Group's investments. VaR measures the expected maximum loss over a given time interval (a holding period of 10 trading days is used by the Group) at a given confidence level (95 per cent confidence interval is adopted by the Group) based on historical data (one year is used by the Group). VaR is monitored on a weekly basis and the Board sets a limit on total VaR for the Group, as well as individual limit for each fund under management (Clearing House Funds, Margin Funds and Corporate Funds).

VaR is a statistical measure of risks and has limitations associated with the assumptions employed. Historical simulation assumes that actual observed historical changes in market indices, such as interest rates, foreign exchange rates and equity prices, reflect possible future changes. This implies that the approach is vulnerable to sudden changes in market behaviour. The use of a 10-day holding period assumes that the positions can be unwound in 10 trading days and the holding period may be insufficient at times of severe illiquidity. Also, VaR does not necessarily reflect all aspects of risks that affect the price of financial instruments and may underestimate real market risk exposure. In addition, VaR does not factor in the possibility of catastrophic risk but the use of stress testing for abnormal market conditions can mitigate this limitation.

The VaR for each risk factor and the total VaR of the investments and related economic hedges of the Group at 31 December were as follows:

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|-----------------------|--------------------------|--------------------------|
| Foreign exchange risk | 13 | 3 |
| Equity price risk | 7 | 8 |
| Interest rate risk | 6 | 8 |
| Total VaR | 16 | 11 |

VaR for each risk factor is the independently derived largest potential loss due to fluctuations solely in that risk factor. The individual VaRs did not add up to the total VaR as there was diversification effect due to correlation amongst the risk factors.

52. Financial Risk Management (continued)

(b) Liquidity risk management

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset, and it results from amount and maturity mismatches of assets and liabilities.

The Group employs projected cash flow analysis to manage liquidity risk by forecasting the amount of cash required and monitoring the working capital of the Group to ensure that all liabilities due and known funding requirements could be met.

Surplus cash of the Group in Hong Kong is invested by the Treasury team, and the investments of the Group are kept sufficiently liquid to meet the operating needs, regulatory requirements of the regulated entities in Hong Kong, and possible liquidity requirements of the Clearing House Funds and Margin Funds. The Group also sets a limit on the minimum level of cash or bank deposits held for the Corporate Funds, and the minimum level of investments to be held that would mature the same day for the Clearing House Funds and Margin Funds.

The LME Group also employs prudent liquidity risk management which involves maintaining sufficient cash to meet ongoing operational commitments and its adherence to the regulatory requirements of the two regulated entities. As a recognised clearing house, LME Clear has to comply with stringent liquidity requirements set by the European Market Infrastructure Regulation. Surplus cash is invested in high quality short-term investments that are classified as financial assets measured at fair value through profit or loss or cash and cash equivalents and such investments are kept sufficiently liquid to meet operating needs and possible liquidity requirements of the LME Clear's Margin Fund and Default Fund.

The tables below analyse the financial assets into the relevant maturity buckets based on the following criteria:

- the expected amounts, subject to costs to liquidate that are expected to be immaterial, that could be realised from the investments, bank deposits and cash and cash equivalents within one month to meet cash outflows on financial liabilities if required are allocated to the up to 1 month bucket; and
- other financial assets are allocated based on their contractual maturity dates or the expected dates of disposal.

| | At 31 Dec 2015 | | | | Total \$m |
|--|--------------------------------------|--------------------------------|-------------------------------|------------------------------|--------------|
| | Up to 1 month ¹ \$m | >1 month to 3 months \$m | >3 months to 1 year \$m | >1 year to 5 years \$m | |
| Cash and cash equivalents | 110,890 | – | – | – | 110,890 |
| Financial assets measured at fair value through profit or loss ² | 8,225 | – | – | – | 8,225 |
| Financial assets measured at amortised cost | 19,439 | – | 1 | 56 | 19,496 |
| Accounts receivable and deposits ³ | 15,402 | 33 | 3 | – | 15,438 |
| | 153,956 | 33 | 4 | 56 | 154,049 |

52. Financial Risk Management (continued)

(b) Liquidity risk management (continued)

| | At 31 Dec 2014 | | | | Total \$m |
|--|--------------------------------------|--------------------------------|-------------------------------|------------------------------|--------------|
| | Up to 1 month ¹ \$m | >1 month to 3 months \$m | >3 months to 1 year \$m | >1 year to 5 years \$m | |
| Cash and cash equivalents | 136,778 | – | – | – | 136,778 |
| Financial assets measured at fair value through profit or loss ² | 2,851 | – | 156 | – | 3,007 |
| Financial assets measured at amortised cost | 10,199 | – | – | 57 | 10,256 |
| Accounts receivable and deposits ³ | 22,369 | 50 | 4 | – | 22,423 |
| | 172,197 | 50 | 160 | 57 | 172,464 |

1 Amounts included \$300 million (31 December 2014: \$895 million) of financial assets with contractual maturity over one year. They could readily be liquidated whenever liquid funds are required.

2 Amounts excluded fair value of base metals futures and options contracts of \$64,480 million (31 December 2014: \$59,679 million), which cannot be realised to meet cash outflows.

3 Amounts excluded prepayments of \$118 million (31 December 2014: \$100 million).

Apart from the borrowings used to fund the acquisition of the LME Group (note 37), banking facilities have been put in place for contingency purposes. At 31 December 2015, the Group's total available banking facilities for its daily operations amounted to \$17,012 million (31 December 2014: \$17,012 million), which included \$10,000 million (31 December 2014: \$10,000 million) of committed banking facilities and \$7,000 million (31 December 2014: \$7,000 million) of repurchase facilities.

The Group also put in place foreign exchange facilities for the RMB Equity Trading Support Facility to support the trading of RMB stocks listed on the Stock Exchange. At 31 December 2015, the amount of such facilities was RMB17,000 million (HK\$20,057 million) (31 December 2014: RMB17,000 million (HK\$21,202 million)).

In addition, the Group has arranged contingency banking facilities amounting to RMB13,000 million (HK\$15,338 million) (31 December 2014: RMB13,000 million (HK\$16,213 million)) for settling payment obligations to ChinaClear should there be events that disrupt normal settlement arrangements, eg, natural disasters or extreme weather conditions in Hong Kong.

The table below analyses the Group's financial liabilities (excluding forward foreign exchange contracts and outstanding base metals futures and options contracts cleared through LME Clear) at 31 December into relevant maturity buckets based on their contractual maturity dates. The amounts disclosed in the tables are the contractual undiscounted cash flows.

52. Financial Risk Management (continued)

(b) Liquidity risk management (continued)

| | At 31 Dec 2015 | | | | | Total \$m |
|--|-------------------------|--------------------------------|-------------------------------|------------------------------|-----------------|----------------|
| | Up to 1 month \$m | >1 month to 3 months \$m | >3 months to 1 year \$m | >1 year to 5 years \$m | >5 years \$m | |
| Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants | 115,213 | – | – | – | – | 115,213 |
| Accounts payable, accruals and other liabilities ⁴ | 15,153 | 12 | 104 | – | – | 15,269 |
| Other financial liabilities: | | | | | | |
| Other financial liabilities of Clearing House Funds | 22 | – | – | – | – | 22 |
| Other financial liabilities of Corporate Funds: | | | | | | |
| Financial guarantee contract (maximum amount guaranteed) (note 46(b)) | 103 | – | – | – | – | 103 |
| Participants' contributions to Clearing House Funds | 6,648 | 780 | 46 | – | – | 7,474 |
| Borrowings: | | | | | | |
| Bank borrowings | 2 | 4 | 16 | 877 | 800 | 1,699 |
| Notes | 11 | – | 31 | 1,606 | – | 1,648 |
| Written put options to non-controlling interests | – | – | – | 340 | – | 340 |
| Total | 137,152 | 796 | 197 | 2,823 | 800 | 141,768 |
| At 31 Dec 2014 | | | | | | |
| | Up to 1 month \$m | >1 month to 3 months \$m | >3 months to 1 year \$m | >1 year to 5 years \$m | >5 years \$m | Total \$m |
| Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants | 129,484 | – | – | – | – | 129,484 |
| Accounts payable, accruals and other liabilities ⁴ | 22,722 | 7 | 104 | – | – | 22,833 |
| Other financial liabilities: | | | | | | |
| Other financial liabilities of Clearing House Funds | 4 | – | 60 | – | – | 64 |
| Other financial liabilities of Corporate Funds: | | | | | | |
| Financial guarantee contract (maximum amount guaranteed) (note 46(b)) | 100 | – | – | – | – | 100 |
| Participants' contributions to Clearing House Funds | 8,597 | 783 | 46 | – | – | 9,426 |
| Borrowings: | | | | | | |
| Bank borrowings | 2 | 4 | 16 | 87 | 1,612 | 1,721 |
| Convertible bonds | – | – | 19 | 4,015 | – | 4,034 |
| Notes | 11 | – | 31 | 1,648 | – | 1,690 |
| Written put options to non-controlling interests | – | – | – | 252 | – | 252 |
| Total | 160,920 | 794 | 276 | 6,002 | 1,612 | 169,604 |

4 Amounts excluded non-financial liabilities of \$16 million (31 December 2014: \$16 million).

52. Financial Risk Management (continued)

(b) Liquidity risk management (continued)

At 31 December 2015, the maximum gross nominal value of outstanding forward foreign exchange contracts held by the Group was \$2,261 million (31 December 2014: \$1,042 million). The table below analyses the Group's outstanding forward foreign exchange contracts at 31 December (which include all contracts regardless of whether they had gains or losses at the year end) that would be settled on a gross basis into relevant maturity buckets based on their contractual maturity dates. The amounts disclosed in the table are contractual undiscounted cash flows, which are different from the carrying amounts (ie, fair values) in the consolidated statement of financial position.

| | At 31 Dec 2015 | | | At 31 Dec 2014 | | |
|------------------------------------|-------------------------|--------------------------------|--------------|-------------------------|--------------------------------|--------------|
| | Up to 1 month \$m | >1 month to 3 months \$m | Total \$m | Up to 1 month \$m | >1 month to 3 months \$m | Total \$m |
| Forward foreign exchange contracts | | | | | | |
| – outflows | 1,382 | 879 | 2,261 | 870 | 159 | 1,029 |
| – inflows | 1,384 | 877 | 2,261 | 878 | 164 | 1,042 |

The Group is not exposed to liquidity risk on the outstanding base metals futures and options contracts cleared through LME Clear.

(c) Credit risk management

(i) Investment and accounts receivable-related risk

The Group is exposed to credit risk, which is the risk that a counterparty will be unable to pay amounts in full when due. It arises primarily from the Group's investments and accounts receivables. Impairment provisions are made for losses that have been incurred at the end of the reporting period. The Group limits its exposure to credit risk by rigorously selecting the counterparties (ie, deposit-takers, bond issuers and debtors) and by diversification. At 31 December 2015, the investment in debt securities for Margin Funds and Corporate Funds held by the Hong Kong entities were of investment grade and had a weighted average credit rating of A1 (Moody) (31 December 2014: A1 (Moody)). Deposits in Hong Kong are placed only with the note-issuing banks in Hong Kong, investment grade licensed banks and restricted licence banks approved by the Board from time to time. All investments are subject to a maximum concentration limit approved by the Board and there was no significant concentration risk to a single counterparty (except certain Hong Kong note-issuing banks). The investment in debt securities for Margin Funds held by the LME Group were issued by the US Treasury, and the cash, deposit and cash equivalents balances of the LME Group are held only with investment grade licensed banks. The LME Group's only significant concentration risk is with the banks. Certain cash equivalents are invested in reverse repurchase investments where collateral is held against the default of such investments. The Group mitigates its exposure to risks relating to accounts receivable from its Participants by requiring the Participants to meet the Group's established financial requirements and criteria for admission as Participants.

52. Financial Risk Management (continued)

(c) Credit risk management (continued)

(i) Investment and accounts receivable-related risk (continued)

In the normal course of business, the clearing houses of the Group, HKSCC, SEOCH, HKCC, OTC Clear and LME Clear, act as the counterparties to eligible trades concluded on the Stock Exchange, the Futures Exchange, the over-the-counter market and the LME through the novation of the obligations of the buyers and sellers. HKSCC is also responsible for the good title to the securities deposited and accepted in the CCASS depository. As a result, the Group has considerable market risk and credit risk since the Participants' ability to honour their obligations in respect of their trades and securities deposited may be adversely impacted by economic conditions affecting the over-the-counter market, the Cash Market, the Derivatives Market and the Commodities Market. If the Participants default on their obligations on settlement or there are defects in the title of securities deposited and accepted in the CCASS depository, the Group could be exposed to potential risks not otherwise accounted for in these consolidated financial statements.

(ii) Clearing and settlement-related risk management

The Group mitigates its exposure to clearing and settlement-related risks described above by requiring the Participants to meet the Group's established financial requirements and criteria for admission as Participants, monitoring compliance with risk management measures such as imposing position limits and requiring Clearing Participants to deposit margins, Mainland security and settlement deposits, and cash collateral and contribute to the Clearing House Funds set up by HKSCC, SEOCH, HKCC, OTC Clear and LME Clear. HKSCC also retains recourse against those Participants whose securities are deposited and accepted in the CCASS depository.

Position limits are imposed by HKCC and SEOCH to regulate or limit the maximum number or value of gross and net positions which can be held or controlled by the Participants based on their liquid capital.

Under the HKSCC Margining and Guarantee Fund arrangements, each HKSCC Clearing Participant is allowed by HKSCC a Margin Credit of \$5 million and a Dynamic Contribution Credit of \$1 million. If a Clearing Participant defaults and any loss arises, HKSCC will absorb the default loss up to the Margin Credit and Dynamic Contribution Credit utilised by the defaulting Clearing Participant, after deducting its collateral and Guarantee Fund contribution kept by HKSCC. After the initial losses, HKSCC is required to absorb further losses after the HKSCC Guarantee Fund reserve and the Guarantee Fund contribution (excluding the Dynamic Contribution portion) of non-defaulting Clearing Participants are depleted. The amount of losses borne by HKSCC will be calculated on a pro rata basis with reference to the non-defaulting Clearing Participants' Dynamic Contributions and Dynamic Contribution Credits granted by HKSCC. At 31 December 2015, HKSCC has 502 Clearing Participants (31 December 2014: 491) and the total amounts of Margin Credit and Dynamic Contribution Credit granted to Clearing Participants amounted to \$722 million (31 December 2014: \$872 million).

52. Financial Risk Management (continued)

(c) Credit risk management (continued)

(ii) Clearing and settlement-related risk management (continued)

Under the HKCC Contingent Advance Capital arrangement, HKCC shares 50 per cent of the daily Participants' Additional Deposits collectible from Clearing Participants. In case of default, the HKCC Contingent Advance Capital would be utilised only after utilisation of the defaulting Clearing Participants' margin and all available resources of the HKCC Reserve Fund (including but not limited to the defaulting Clearing Participants' Reserve Fund contributions, HKCC Reserve Fund reserve and the non-defaulting Clearing Participants' Reserve Fund contribution) as temporary funding. The non-defaulting Clearing Participants will be responsible for sharing the loss of the defaulting participant and replenishing the HKCC Contingent Advance Capital after utilisation.

The HKSCC Margin Credit, Dynamic Contribution Credit and the HKCC Contingent Advance Capital arrangement are supported by the \$4 billion of shareholders' funds set aside by the HKEX Group for risk management purpose.

(iii) Exposure to credit risk

At 31 December, the maximum exposure to credit risk of the financial assets of the Group was equal to their carrying amounts. The maximum exposure to credit risk of the financial guarantee contract issued by the Group was as follows:

| | At 31 Dec 2015 | | At 31 Dec 2014 | |
|--|--|--|--|--|
| | Carrying amount in consolidated statement of financial position \$m | Maximum exposure to credit risk \$m | Carrying amount in consolidated statement of financial position \$m | Maximum exposure to credit risk \$m |
| Financial guarantee contract | | | | |
| Undertaking to indemnify the Collector of Stamp Revenue (note 46(b)) | (20) | 103 | (20) | 100 |

52. Financial Risk Management (continued)

(c) Credit risk management (continued)

(iv) Collateral held for mitigating credit risk

Certain securities, cash deposits and non-cash collateral are being held by the Group to mitigate the Group's exposure to credit risk. The financial effect of the collateral, which is capped by the amount receivable from each counterparty, was as follows:

| | At 31 Dec 2015 | | At 31 Dec 2014 | |
|---|---|--|---|--|
| | Carrying amount in consolidated statement of financial position \$m | Collateral held for mitigating credit risk \$m | Carrying amount in consolidated statement of financial position \$m | Collateral held for mitigating credit risk \$m |
| Accounts receivable and deposits | 15,438 | 5,023 | 22,423 | 7,142 |
| Fair value of base metals futures and options contracts cleared through LME Clear | 64,480 | 64,480 | 59,679 | 59,679 |
| Reverse repurchase investments | 58,574 | 58,574 | 71,262 | 71,262 |

(v) Financial assets that were not impaired

At 31 December 2015, accounts receivable and deposits of \$15,082 million (31 December 2014: \$22,005 million) were neither past due nor impaired. They relate to a wide range of customers for whom there was no recent history of default.

At 31 December 2015, the age analysis of the financial assets (which mainly relate to receivables from Participants and listed companies) of the Group that were determined to be not impaired according to the period past due was as follows:

| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
|------------------|--------------------|--------------------|
| Up to six months | 356 | 395 |
| Over 3 years | - | 23 |
| | 356 | 418 |

(vi) Financial assets that were impaired at the end of the reporting period

At 31 December 2015, receivables of the Group amounting to \$4 million (31 December 2014: \$82 million) were determined to be impaired and full provision had been made. These receivables were outstanding for over 180 days at the end of the reporting period or were due from companies with financial difficulties. The factors the Group considered in determining whether the financial assets were impaired are disclosed in note 2(t)(vi).

52. Financial Risk Management (continued)

(c) Credit risk management (continued)

(vii) Outstanding balances from debtors which were not recognised as income

As soon as a receivable becomes impaired, the Group may continue to allow the debtors concerned to participate in its markets but no further accounts receivable will be recognised in the consolidated statement of financial position as economic benefits may not flow to the Group. The revenue concerned is not recognised but tracked as doubtful deferred revenue and will only be recognised as income when cash is received. At 31 December 2015, the amount of doubtful deferred revenue in relation to the debtors concerned amounted to \$28 million (31 December 2014: \$120 million).

(d) Fair values of financial assets and financial liabilities

(i) Financial assets and financial liabilities carried at fair value

At 31 December 2015 and 31 December 2014, no non-financial assets or liabilities were carried at fair values.

The following tables present the carrying value of financial assets and financial liabilities measured at fair value at 31 December according to the levels of the fair value hierarchy defined in HKFRS 13: Fair Value Measurement, with the fair value of each financial asset and financial liability categorised based on the lowest level of input that is significant to that fair value measurement. The levels are defined as follows:

- Level 1: fair values measured using quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: fair values measured using valuation techniques in which all significant inputs other than quoted prices included within Level 1 are directly or indirectly based on observable market data.
- Level 3: fair values measured using valuation techniques in which any significant input is not based on observable market data.

52. Financial Risk Management (continued)

(d) Fair values of financial assets and financial liabilities (continued)

(i) Financial assets and financial liabilities carried at fair value (continued)

| At 31 Dec 2015 | | | | |
|---|----------------|----------------|----------------|--------------|
| Recurring fair value measurements: | Level 1 \$m | Level 2 \$m | Total \$m | |
| Financial assets | | | | |
| Financial assets measured at fair value through profit or loss: | | | | |
| – equity securities | 185 | – | | 185 |
| – debt securities | 4,953 | 3,081 | | 8,034 |
| – forward foreign exchange contracts | – | 6 | | 6 |
| – base metals futures and options contracts cleared through LME Clear | – | 64,480 | | 64,480 |
| | 5,138 | 67,567 | | 72,705 |
| Financial liabilities | | | | |
| Financial liabilities at fair value through profit or loss: | | | | |
| – forward foreign exchange contracts | – | 6 | | 6 |
| – base metals futures and options contracts cleared through LME Clear | – | 64,480 | | 64,480 |
| | – | 64,486 | | 64,486 |
| At 31 Dec 2014 | | | | |
| Recurring fair value measurements: | Level 1 \$m | Level 2 \$m | Level 3 \$m | Total \$m |
| Financial assets | | | | |
| Financial assets measured at fair value through profit or loss: | | | | |
| – equity securities | 243 | – | 156 | 399 |
| – debt securities | – | 2,594 | – | 2,594 |
| – forward foreign exchange contracts | – | 14 | – | 14 |
| – base metals futures and options contracts cleared through LME Clear | – | 59,679 | – | 59,679 |
| | 243 | 62,287 | 156 | 62,686 |
| Financial liabilities | | | | |
| Financial liabilities at fair value through profit or loss: | | | | |
| – forward foreign exchange contracts | – | 1 | – | 1 |
| – base metals futures and options contracts cleared through LME Clear | – | 59,679 | – | 59,679 |
| | – | 59,680 | – | 59,680 |

52. Financial Risk Management (continued)

(d) Fair values of financial assets and financial liabilities (continued)

(i) Financial assets and financial liabilities carried at fair value (continued)

During 2015 and 2014, there were no transfers of instruments between Level 1 and Level 2.

Level 2 fair values of debt securities, forward foreign exchange contracts and base metals futures and options contracts have been determined based on quotes from market makers or alternative pricing sources supported by observable inputs. The most significant input are market interest rates and market prices of metals.

The Group's policy is to recognise transfers into and out of fair value hierarchy levels as of the date of the event or change in circumstances that caused the transfer.

Fair value measurements using significant unobservable inputs (Level 3)

| | Investment in an unlisted company | |
|---|-----------------------------------|-------------|
| | 2015 \$m | 2014 \$m |
| At 1 Jan | 156 | 141 |
| Gains recognised in profit or loss, under net investment income | 31 | 23 |
| Disposals | (187) | - |
| Exchange differences recognised in other comprehensive income, under currency translation differences of foreign subsidiaries | - | (8) |
| At 31 Dec | - | 156 |
| Change in unrealised gains for the year included in profit or loss for assets held at 31 Dec, under net investment income | - | 23 |

At 31 December 2014, the Group classified an unlisted investment held by a subsidiary as a Level 3 investment, and its value was determined using discounted cash flow valuation techniques. No sensitivity of the fair value measurement of the investment to changes in unobservable inputs is presented as the investment was sold during 2015.

52. Financial Risk Management (continued)

(d) Fair values of financial assets and financial liabilities (continued)

(ii) Fair values of financial assets and financial liabilities not reported at fair values

Summarised in the following table are the carrying amounts and fair values of financial assets and financial liabilities not presented in the consolidated statement of financial position at their fair values. These assets and liabilities were classified under Level 2 in the fair value hierarchy. The carrying amounts of bank borrowings with floating interest rates, short-term receivables (eg, accounts receivable, deposits and cash and cash equivalents) and short-term payables (eg, accounts payable and other liabilities) approximated their fair values, and accordingly no disclosure of the fair values of these items is presented.

| | At 31 Dec 2015 | | At 31 Dec 2014 | |
|--|--|-------------------|--|-------------------|
| | Carrying amount in consolidated statement of financial position \$m | Fair value \$m | Carrying amount in consolidated statement of financial position \$m | Fair value \$m |
| Assets | | | | |
| Financial assets measured at amortised cost: | | | | |
| – other financial assets maturing over one year ¹ | 57 | 53 | 57 | 51 |
| Liabilities | | | | |
| Borrowings: | | | | |
| – liability component of convertible bonds ² | – | – | 3,701 | 3,812 |
| – notes ² | 1,516 | 1,544 | 1,515 | 1,521 |
| – written put options to non-controlling interests ² | 308 | 316 | 225 | 227 |
| Financial guarantee to the Collector of Stamp Revenue ³ | 20 | 85 | 20 | 67 |

1 The fair values are based on cash flows discounted using Hong Kong Government bond rates of a tenor similar to the contractual maturity of the respective assets, adjusted by an estimated credit spread. The discount rates used ranged from 0.80 per cent to 2.32 per cent at 31 December 2015 (31 December 2014: 0.83 per cent to 2.78 per cent).

2 The fair values are based on cash flows discounted using the prevailing market interest rates for loans with similar credit rating and similar tenor of the respective loans. The discount rates used ranged from 2.20 per cent to 2.40 per cent at 31 December 2015 (31 December 2014: 2.05 per cent to 2.83 per cent).

3 The fair values are based on the fees charged by financial institutions for granting such guarantees discounted using a ten-year Hong Kong Government bond rate to perpetuity but capped at the maximum exposure of the financial guarantee. The discount rate used was 1.52 per cent at 31 December 2015 (31 December 2014: 1.85 per cent).

52. Financial Risk Management (continued)

(e) Offsetting financial assets and financial liabilities

The disclosures set out in the tables below include financial assets and financial liabilities that:

- are offset in the Group's consolidated statement of financial position; or
- are subject to an enforceable master netting arrangement or similar agreement that covers similar financial instruments, irrespective of whether they are offset in the consolidated statement of financial position.

HKSCC currently has a legally enforceable right to set off certain Continuous Net Settlement (CNS) money obligations receivable and payable relating to the same Clearing Participant and it intends to settle on a net basis.

LME Clear has a legally enforceable right to set off open positions of certain contracts within an individual member's account for those securities settling on the same date and it intends to settle on a net basis.

For the net amounts of CNS money obligations receivable or payable and net fair value of base metals futures and options contracts (ie, after set-off) and other accounts receivables due from customers (including Participants, ChinaClear, information vendors and hosting services customers), they do not meet the criteria for offsetting in the consolidated statement of financial position since the right of set-off of the recognised amounts is only enforceable following an event of default of the customers. In addition, the Group does not intend to settle the balances on a net basis.

(i) Financial assets subject to offsetting, enforceable master netting arrangements or similar agreements

| Type of financial assets | At 31 Dec 2015 | | | | | |
|---|---|---|--|--|------------------------------|----------------|
| | Gross amount of recognised financial assets \$m | Gross amount of recognised financial liabilities offset in the consolidated statement of financial position \$m | Net amount of financial assets presented in the consolidated statement of financial position \$m | Related amounts not offset in the consolidated statement of financial position | | Net amount \$m |
| | | | | Financial liabilities other than cash collateral \$m | Cash collateral received \$m | |
| CNS money obligations receivable | 128,003 | (114,474) | 13,529 | (3,057) | (3,511) | 6,961 |
| Base metals futures and options contracts cleared through LME Clear | 1,342,331 | (1,277,851) | 64,480 | (30,624) | (33,856) | - |
| Other accounts receivable from Participants, ChinaClear, information vendors and hosting services customers, net of provision for impairment losses | 1,068 | - | 1,068 | - | (91) | 977 |
| Total | 1,471,402 | (1,392,325) | 79,077 | (33,681) | (37,458) | 7,938 |

52. Financial Risk Management (continued)

(e) Offsetting financial assets and financial liabilities (continued)

(i) Financial assets subject to offsetting, enforceable master netting arrangements or similar agreements (continued)

| Type of financial assets | At 31 Dec 2014 | | | | | |
|---|---|---|--|--|------------------------------|----------------|
| | Gross amount of recognised financial assets \$m | Gross amount of recognised financial liabilities offset in the consolidated statement of financial position \$m | Net amount of financial assets presented in the consolidated statement of financial position \$m | Related amounts not offset in the consolidated statement of financial position | | Net amount \$m |
| | | | | Financial liabilities other than cash collateral \$m | Cash collateral received \$m | |
| CNS money obligations receivable | 203,283 | (182,873) | 20,410 | (6,906) | (4,462) | 9,042 |
| Base metals futures and options contracts cleared through LME Clear | 1,219,663 | (1,159,984) | 59,679 | (42,782) | (16,897) | - |
| Other accounts receivable from Participants, ChinaClear, information vendors and hosting services customers, net of provision for impairment losses | 1,004 | - | 1,004 | - | (98) | 906 |
| Total | 1,423,950 | (1,342,857) | 81,093 | (49,688) | (21,457) | 9,948 |

(ii) Financial liabilities subject to offsetting, enforceable master netting arrangements or similar agreements

| Type of financial liabilities | At 31 Dec 2015 | | | | | |
|---|--|--|---|--|-----------------------------|----------------|
| | Gross amount of recognised financial liabilities \$m | Gross amount of recognised financial assets offset in the consolidated statement of financial position \$m | Net amount of financial liabilities presented in the consolidated statement of financial position \$m | Related amounts not offset in the consolidated statement of financial position | | Net amount \$m |
| | | | | Financial assets other than cash collateral \$m | Cash collateral pledged \$m | |
| CNS money obligations payable | 128,132 | (114,474) | 13,658 | (3,057) | - | 10,601 |
| Base metals futures and options contracts cleared through LME Clear | 1,342,331 | (1,277,851) | 64,480 | (30,624) | - | 33,856 |
| Total | 1,470,463 | (1,392,325) | 78,138 | (33,681) | - | 44,457 |

52. Financial Risk Management (continued)

(e) Offsetting financial assets and financial liabilities (continued)

(ii) Financial liabilities subject to offsetting, enforceable master netting arrangements or similar agreements (continued)

| Type of financial liabilities | At 31 Dec 2014 | | | | | |
|---|--|--|---|--|-----------------------------|----------------|
| | Gross amount of recognised financial liabilities \$m | Gross amount of recognised financial assets offset in the consolidated statement of financial position \$m | Net amount of financial liabilities presented in the consolidated statement of financial position \$m | Related amounts not offset in the consolidated statement of financial position | | Net amount \$m |
| | | | | Financial assets other than cash collateral \$m | Cash collateral pledged \$m | |
| CNS money obligations payable | 203,902 | (182,873) | 21,029 | (6,906) | - | 14,123 |
| Base metals futures and options contracts cleared through LME Clear | 1,219,663 | (1,159,984) | 59,679 | (42,782) | - | 16,897 |
| Total | 1,423,565 | (1,342,857) | 80,708 | (49,688) | - | 31,020 |

(iii) The tables below reconcile the “net amounts of financial assets and financial liabilities presented in the consolidated statement of financial position”, as set out above, to the “accounts receivables, prepayments and deposits”, “accounts payable, accruals and other liabilities”, “financial assets measured at fair value through profit or loss” and “financial liabilities at fair value through profit or loss” presented in the consolidated statement of financial position.

| | Accounts receivables, prepayments and deposits | | Financial assets measured at fair value through profit or loss | |
|---|--|--------------------|--|--------------------|
| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
| Net amount of financial assets after offsetting as stated above: | | | | |
| – CNS money obligations receivable | 13,529 | 20,410 | - | - |
| – Other accounts receivable from Participants, ChinaClear, information vendors and hosting services customers, net of provision for impairment losses | 1,068 | 1,004 | - | - |
| – Base metals futures and options contracts cleared through LME Clear | - | - | 64,480 | 59,679 |
| Financial assets not in scope of offsetting disclosures | 841 | 1,009 | 8,225 | 3,007 |
| Prepayments | 118 | 100 | - | - |
| Amounts presented in the consolidated statement of financial position | 15,556 | 22,523 | 72,705 | 62,686 |

52. Financial Risk Management (continued)

(e) Offsetting financial assets and financial liabilities (continued)

(iii) (continued)

| | Accounts payable, accruals and other liabilities | | Financial liabilities at fair value through profit or loss | |
|---|--|--------------------------|--|--------------------------|
| | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m | At 31 Dec 2015 \$m | At 31 Dec 2014 \$m |
| Net amount of financial liabilities after offsetting as stated above: | | | | |
| – CNS money obligations payable | 13,658 | 21,029 | – | – |
| – Base metals futures and options contracts cleared through LME Clear | – | – | 64,480 | 59,679 |
| Financial liabilities not in scope of offsetting disclosures | 1,611 | 1,804 | 6 | 1 |
| Non-financial liabilities | 16 | 16 | – | – |
| Amounts presented in the consolidated statement of financial position | 15,285 | 22,849 | 64,486 | 59,680 |

Except for financial assets measured at fair value through profit or loss and financial liabilities at fair value through profit or loss which are measured at fair value, the remaining gross amounts of financial assets and financial liabilities and their net amounts as presented in the consolidated statement of financial position that are disclosed in the above tables are measured at amortised cost. The amounts in the above tables that are offset in the consolidated statement of financial position are measured on the same basis.

53. Statement of Financial Position and Reserve Movement of HKEX

Statement of Financial Position of HKEX

| | At 31 Dec 2015 | | | At 31 Dec 2014 | | |
|--|----------------|------------------------|---------------|----------------|------------------------|---------------|
| | Current \$m | Non- current \$m | Total \$m | Current \$m | Non- current \$m | Total \$m |
| ASSETS | | | | | | |
| Cash and cash equivalents | 5,245 | – | 5,245 | 4,446 | – | 4,446 |
| Financial assets measured at fair value through profit or loss | 2,375 | – | 2,375 | – | – | – |
| Financial assets measured at amortised cost | – | 1 | 1 | – | 1 | 1 |
| Accounts receivable, prepayments and deposits | 42 | 21 | 63 | 29 | 5 | 34 |
| Amounts due from subsidiaries | 2,119 | 16,584 | 18,703 | 2,516 | 16,036 | 18,552 |
| Interest in a joint venture | – | 100 | 100 | – | 100 | 100 |
| Intangible assets | – | 95 | 95 | – | 84 | 84 |
| Fixed assets | – | 216 | 216 | – | 235 | 235 |
| Investments in subsidiaries | – | 5,648 | 5,648 | – | 5,326 | 5,326 |
| Total assets | 9,781 | 22,665 | 32,446 | 6,991 | 21,787 | 28,778 |
| LIABILITIES AND EQUITY | | | | | | |
| Liabilities | | | | | | |
| Financial liabilities at fair value through profit or loss | 223 | – | 223 | 150 | – | 150 |
| Accounts payable, accruals and other liabilities | 359 | – | 359 | 277 | – | 277 |
| Amounts due to subsidiaries | 275 | – | 275 | 183 | 3,385 | 3,568 |
| Taxation payable | 27 | – | 27 | 43 | – | 43 |
| Other financial liabilities | 11 | – | 11 | 123 | – | 123 |
| Borrowings | – | 3,101 | 3,101 | – | 3,100 | 3,100 |
| Provisions | 59 | 2 | 61 | 53 | 2 | 55 |
| Deferred tax liabilities | – | 18 | 18 | – | 22 | 22 |
| Total liabilities | 954 | 3,121 | 4,075 | 829 | 6,509 | 7,338 |
| Equity | | | | | | |
| Share capital | | 19,285 | | | 12,225 | |
| Shares held for Share Award Scheme | | (590) | | | (482) | |
| Employee share-based compensation reserve | | 199 | | | 142 | |
| Convertible bond reserve | | – | | | 409 | |
| Merger reserve | | 694 | | | 694 | |
| Retained earnings | | 8,783 | | | 8,452 | |
| Equity attributable to shareholders of HKEX | | 28,371 | | | 21,440 | |
| Total liabilities and equity | | 32,446 | | | 28,778 | |
| Net current assets | | 8,827 | | | 6,162 | |

Approved by the Board of Directors on 2 March 2016

CHOW Chung Kong
Director

LI Xiaojia, Charles
Director

53. Statement of Financial Position and Reserve Movement of HKEX (continued)

(a) Reserve movement of HKEX

| | Employee share-based compensation reserve \$m | Convertible bond reserve \$m | Merger reserve \$m | Retained earnings \$m |
|--|---|------------------------------------|--------------------------|-----------------------------|
| At 1 Jan 2014 | 105 | 409 | 694 | 8,905 |
| Profit attributable to shareholders | – | – | – | 3,655 |
| 2013 final dividend at \$1.72 per share | – | – | – | (1,996) |
| 2014 interim dividend at \$1.83 per share | – | – | – | (2,133) |
| Unclaimed HKEX dividends forfeited | – | – | – | 29 |
| Vesting of dividend shares of Share Award Scheme | (97) | – | – | (8) |
| Employee share-based compensation benefits | 137 | – | – | – |
| Transfer to share capital upon exercise of employee share options | (3) | – | – | – |
| At 31 Dec 2014 | 142 | 409 | 694 | 8,452 |
| At 1 Jan 2015 | 142 | 409 | 694 | 8,452 |
| Profit attributable to shareholders | – | – | – | 10,001 |
| 2014 final dividend at \$2.15 per share | – | – | – | (2,533) |
| 2015 interim dividend at \$3.08 per share | – | – | – | (3,679) |
| Unclaimed HKEX dividends forfeited | – | – | – | 18 |
| Vesting of dividend shares of Share Award Scheme | (126) | – | – | (8) |
| Employee share-based compensation benefits | 183 | – | – | – |
| Conversion of convertible bonds | – | (409) | – | (3,468) |
| At 31 Dec 2015 | 199 | – | 694 | 8,783 |