



1. Our opinion is unmodified

We have audited the consolidated financial statements of Lancashire Holdings Limited (“the Group”) for the year ended 31 December 2018 which comprise the consolidated statement of comprehensive income (loss), the consolidated balance sheet, the consolidated statement of changes in shareholders' equity, the statement of consolidated cash flows, and the related notes, including the accounting policies on pages 104 to 110.

In our opinion the consolidated financial statements:

- give a true and fair view of the state of the Group's affairs as at 31 December 2018 and of its profit for the year then ended; and
- have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union (IFRSs as adopted by the EU).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (“ISAs (UK)”) and applicable law. Our responsibilities are described below. We have fulfilled our ethical responsibilities under, and are independent of the Group in accordance with, UK ethical requirements including the FRC Ethical Standard as applied to listed entities. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion.

2. Key audit matters: our assessment of risks of material misstatement

Key audit matters are those matters that, in our professional judgement, were of most significance in the audit of the consolidated financial statements and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by us, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. In arriving at our audit opinion above, the key audit matters, in decreasing order of audit significance, were as follows:

Valuation of insurance contract liabilities for losses and loss adjustment expenses on a gross basis and net of outwards reinsurance

(\$915.0m gross, \$592.1m net of outwards reinsurance, of which incurred but not reported represented \$389.3m gross, \$233.0m net of outwards reinsurance; (2017: \$933.5m gross, \$649.4m net of outwards reinsurance, of which incurred but not reported represented \$446.6m gross, \$155.8m net of outwards reinsurance).

Refer to page 62 (Audit Committee report), page 107 (accounting policy) and page 148 to 151 (financial disclosures).

Risk vs 2017: ◀ ▶

Risk	Response
<p>The Group maintains reserves to cover the estimated ultimate cost of settling all losses and loss adjustment expenses arising from events which have occurred up to the balance sheet date, regardless of whether those losses have been reported to the Group.</p> <p>Subjective valuation</p> <p>Insurance liabilities represent the single largest liability for the Group. Valuation of these liabilities is highly judgemental because it requires a number of assumptions to be made with high estimation uncertainty such as expected loss ratios, estimates of ultimate premium and of the frequency and severity of claims and, where appropriate, the discount rate for longer tail classes of business by territory and line of business. The determination and application of the methodology and performance of the calculations are also complex.</p> <p>These judgemental and complex calculations for insurance liabilities are also used to derive the valuation of the related reinsurance assets.</p> <p>A margin is added to the actuarial best estimate of insurance liabilities to make allowance for specific risks identified in assessment of the best estimate. The appropriate margin to recognise is a subjective judgement and estimate taken by the Directors, based on the perceived uncertainty and potential for volatility in the underlying claims.</p> <p>The effect of these matters is that, as part of our risk assessment, we determined that valuation of gross and net insurance contract liabilities for losses and loss adjustment expenses has a high degree of estimation uncertainty, with a potential range of reasonable outcomes greater than our materiality for the consolidated financial statements as a whole, and possibly many times that amount. The consolidated financial statements (note 13) discloses the sensitivity estimated by the Group.</p> <p>Completeness and accuracy of data</p> <p>The valuation of insurance liabilities depends on complete and accurate data about the volume, amount and pattern of current and historical claims since they are often used to form expectations about future claims. If the data used in calculating the insurance liabilities, or for forming judgements over key assumptions, is not complete and accurate then material impacts on the valuation of insurance liabilities may arise.</p>	<p>We have used our own actuarial specialists to assist us in performing our procedures in this area.</p> <p>Our procedures included:</p> <ul style="list-style-type: none"> • Control operation Tested the design and implementation of key controls around review and approval of reserves as well as completeness and accuracy of the data used in the reserving process. • Methodology assessment Assessed and challenged the reserving methodology (on a gross basis and net of outwards reinsurance) based on our knowledge and understanding of the reserving policy within the Group. This has also involved comparing the Group's reserving methodology with industry practice and understanding the rationale for key differences. • Historical experience Challenged the quality of the Group's historical reserving estimates by monitoring the development of losses against initial estimates. • Independent re-performance Applied our own assumptions, across all classes of business, to perform re-projections on the insurance contract liabilities for loss and loss adjustment expenses on both a gross and net basis and comparing these to the Group's projected results. Where there were significant variances in the results, we have challenged the Group's assumptions. Our independent re-projections focussed on classes of business where losses tend to relate to low frequency high severity events. • Benchmarking of large losses Assessed and challenged the reserving assumptions by comparing the Group's loss experience to peers in the market, on a gross and net basis, including on a contract by contract basis for large loss and catastrophe events. • Data reconciliations Checked the completeness and accuracy of the data used within the reserving process by reconciling the actuarial source data to their financial systems.

Valuation of premiums which are estimated, included in gross premiums written

(2018: \$638.5m, 2017: \$591.6m)

Refer to page 59 (Audit Committee report), pages 106 (accounting policy) and pages 134 and 135 (financial disclosures).

Risk vs 2017: ◀ ▶

Risk	Response
<p>Subjective valuation</p> <p>Pricing for certain contracts is based on a best estimate of ultimate premiums as a result of premiums being based upon the latest information received from third parties at the balance sheet date. Judgement is involved in determining the ultimate estimates in order to establish the appropriate premium value and, ultimately, the cash to be received. As updated information is received over the life of the contract, adjustments are made to the premium recognised.</p> <p>It should however be noted that it is only a portion of the total gross premiums written figures noted above that are subject to this valuation risk.</p>	<p>Our procedures included:</p> <ul style="list-style-type: none"> • Control operation Tested the design and implementation of key controls over the periodic review of premium estimates booked. • Historical experience Performed procedures to understand the development of estimated premium income by comparing the Group's estimated premium income to actual premium income once received and checked actual premium income back to source documentation for a sample of policies.

We continue to perform procedures over policies that are still earning on non-standard earning profiles. However, as the Group's syndicates are now materially earning all 2018 incepted business on straight line earning profiles, we have not assessed this as one of the most significant risks in our current year audit and, therefore, it is not separately identified in our report this year.

3. Our application of materiality and an overview of the scope of our audit

Materiality for the consolidated financial statements as a whole was set at \$5.1 million (2017: \$7.0 million), determined with reference to a benchmark of Group profit before tax normalised by averaging over the last five years due to fluctuations in the frequency and severity of catastrophe loss events, of which it represents 5 per cent (2017: 5 per cent).

We agreed to report to the Audit Committee any corrected or uncorrected identified misstatements exceeding \$0.25 million (2017: \$0.3 million), in addition to other identified misstatements that warranted reporting on qualitative grounds.

Of the Group's 9 (2017: 9) reporting components, including the parent company, UK insurance company, Bermuda insurance company, UK service entity and Lloyd's operations, we subjected 5 (2017: 8) to full scope audits for Group purposes. Including the audit of the consolidation adjustments our scope covered 100 per cent (2017: 100 per cent) of gross premiums written, loss before tax and total assets.

The Group team instructed component auditors as to the significant areas to be covered, including the relevant risks detailed above and the information to be reported back.

The Group team approved the component materialities, which ranged from \$0.8m to \$5.0m (2017: \$9,500 to \$3.8 million), having regard to the mix of size and risk profile of the Group across the components.

The Group team visited all component locations in Bermuda and the UK (2017: Bermuda and the UK). Video and telephone conference meetings were also held with these component auditors. At these visits and meetings, the findings reported to the Group team were discussed in more detail, and any further work required by the Group team was then performed by the component auditor.

4. We have nothing to report on going concern

The Directors have prepared the consolidated financial statements on the going concern basis as they do not intend to liquidate the Group or to cease their operations, and as they have concluded that the Group's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over their ability to continue as a going concern for at least a period of twelve months from the date of approval of the consolidated financial statements ("the going concern period").

Our responsibility is to conclude on the appropriateness of the Directors' conclusions and, had there been a material uncertainty related to going concern, to make reference to that in this audit report. However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of reference to a material uncertainty in this auditors' report is not a guarantee that the Group will continue in operation.

In our evaluation of the Directors' conclusions, we considered the inherent risks to the Group's business model, including the impact of Brexit, and analysed how those risks might affect the Group's financial resources or ability to continue operations over the going concern period. We evaluated those risks and concluded that they were not significant enough to require us to perform additional audit procedures.

Based on this work, we are required to report to you if we have anything material to add or draw attention to in relation to the Directors' statement in the accounting policies section to the consolidated financial statements on the use of the going concern basis of accounting with no material uncertainties that may cast significant doubt over the Group's use of that basis for a period of at least twelve months from the date of approval of the consolidated financial statements.

We have nothing to report in these respects, and we did not identify going concern as a key audit matter.

5. We have nothing to report on the other information in the Annual Report and Accounts

The Directors are responsible for the other information presented in the Annual Report and Accounts together with the consolidated financial statements. Our opinion on the consolidated financial statements does not cover the other information and, accordingly, we do not express an audit opinion on, except as explicitly stated below, any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the consolidated financial statements or our audit knowledge. Based solely on that work we have not identified material misstatements in the other information.

Directors' Remuneration Report

In addition to our audit of the consolidated financial statements, the Directors have engaged us to audit the information in the Directors' Remuneration Report that is described as having been audited, which the Directors have decided to prepare as if the Company was required to comply with the requirements of Schedule 8 to The Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (SI 2008 No. 410) made under the UK Companies Act 2006.

In our opinion the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the UK Companies Act 2006, as if those requirements applied to the Company.

Disclosures of principal risks and longer-term viability

Based on the knowledge we acquired during our financial statements audit, we have nothing material to add or draw attention to in relation to:

- the Directors' confirmation within viability statement page 93 that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency and liquidity;
- the Principal Risks disclosures describing these risks and explaining how they are being managed and mitigated; and
- the Directors' explanation in the viability statement of how they have assessed the prospects of the Group, over what period they have done so and why they considered that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Our work is limited to assessing these matters in the context of only the knowledge acquired during our financial statements audit. As we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of anything to report on these statements is not a guarantee as to the Group's longer-term viability.

Corporate governance disclosures

We are required to report to you if we have identified material inconsistencies between the knowledge we acquired during our financial statements audit and the Directors' statement that they consider that the Annual Report and Accounts taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy; or the section of the Annual Report and Accounts describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.

We are required to report to you if the Corporate Governance Statement does not properly disclose a departure from the eleven provisions of the UK Corporate Governance Code specified by the Listing Rules for our review.

We have nothing to report in these respects.

6. Respective responsibilities

Directors' responsibilities

As explained more fully in their statement set out on page 94, the Directors are responsible for: the preparation of the consolidated financial statements including being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error; assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or other irregularities (see below), or error, and to issue our opinion in an auditor's report. Reasonable assurance is a high level of assurance, but does not guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud, other irregularities or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the consolidated financial statements.

A fuller description of our responsibilities is provided on the FRC's website at www.frc.org.uk/auditorsresponsibilities.

7. The purpose of our audit work and to whom we owe our responsibilities

This report is made solely to the Company's members, as a body, in accordance with section 90 of the Bermuda Companies Act 1981 and the terms of our engagement. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and the further matters we are required to state to them in accordance with the terms agreed with the Company and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members, as a body, for our audit work, for this report, or for the opinions we have formed.



Rees Aronson

for and on behalf of KPMG LLP, Statutory Auditor

Chartered Accountants

15 Canada Square
London, E14 5GL

13 February 2019

Consolidated statement of comprehensive income (loss)

For the year ended 31 December 2018

	Notes	2018 \$m	2017 \$m
Gross premiums written	2	638.5	591.6
Outwards reinsurance premiums	2	(220.8)	(193.6)
Net premiums written		417.7	398.0
Change in unearned premiums	2	(19.7)	22.6
Change in unearned premiums on premiums ceded	2	15.5	7.3
Net premiums earned		413.5	427.9
Net investment income	3	34.7	30.5
Net other investment (losses) income	3	(4.2)	1.2
Net realised (losses) gains and impairments	3	(5.1)	9.1
Share of loss of associate	16	(7.1)	(9.4)
Other income	5	12.4	17.2
Net foreign exchange (losses) gains		(1.6)	2.3
Total net revenue		442.6	478.8
Insurance losses and loss adjustment expenses	2, 13	307.4	538.0
Insurance losses and loss adjustment expenses recoverable	2, 13	(142.0)	(202.6)
Net insurance losses		165.4	335.4
Insurance acquisition expenses	2, 4	131.0	120.7
Insurance acquisition expenses ceded	2, 4	(4.6)	(5.1)
Other operating expenses	6, 7, 21	89.2	83.6
Equity based compensation	7	7.9	(0.4)
Total expenses		388.9	534.2
Results of operating activities		53.7	(55.4)
Financing costs	8	20.1	17.5
Profit (loss) before tax		33.6	(72.9)
Tax credit	9	4.0	2.3
Profit (loss) for the year		37.6	(70.6)
Profit (loss) for the year attributable to:			
Equity shareholders of LHL		37.5	(71.1)
Non-controlling interests		0.1	0.5
Profit (loss) for the year		37.6	(70.6)
Other comprehensive (loss) income to be reclassified to profit or loss in subsequent periods			
Net change in unrealised gains/losses on investments	3, 11	(12.9)	4.9
Tax provision on net change in unrealised gains/losses on investments	11	0.1	–
Other comprehensive (loss) income		(12.8)	4.9
Total comprehensive income (loss) for the year		24.8	(65.7)
Total comprehensive income (loss) attributable to:			
Equity shareholders of LHL		24.7	(66.2)
Non-controlling interests		0.1	0.5
Total comprehensive income (loss) for the year		24.8	(65.7)
Earnings (loss) per share			
Basic	22	\$0.19	(\$0.36)
Diluted	22	\$0.19	(\$0.36)

Consolidated balance sheet

As at 31 December 2018

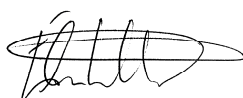
	Notes	2018 \$m	2017 \$m
Assets			
Cash and cash equivalents	10, 18	154.6	256.5
Accrued interest receivable		6.8	6.1
Investments	11, 12, 18	1,659.0	1,654.6
Inwards premiums receivable from insureds and cedants	14	318.1	297.9
Reinsurance assets			
– Unearned premiums on premiums ceded		56.7	41.2
– Reinsurance recoveries	13	322.9	284.1
– Other receivables	14	9.8	20.7
Other receivables	14	35.3	42.4
Investment in associate	12, 16	67.1	59.4
Property, plant and equipment		1.4	2.6
Deferred acquisition costs		74.2	76.7
Intangible assets	17	153.8	153.8
Total assets		2,859.7	2,896.0
Liabilities			
Insurance contracts			
– Losses and loss adjustment expenses	13	915.0	933.5
– Unearned premiums		370.6	350.9
– Other payables		36.0	40.7
Amounts payable to reinsurers		81.3	65.5
Deferred acquisition costs ceded		7.1	2.5
Other payables		45.4	48.0
Corporation tax payable		0.9	2.8
Deferred tax liability	15	11.2	16.5
Interest rate swap	18	0.4	2.0
Long-term debt	18	324.3	326.3
Total liabilities		1,792.2	1,788.7
Shareholders' equity			
Share capital	19	101.0	100.7
Own shares	19	(9.4)	(12.1)
Other reserves	20	869.0	866.2
Accumulated other comprehensive loss	11	(14.3)	(1.5)
Retained earnings		120.9	153.6
Total shareholders' equity attributable to equity shareholders of LHL		1,067.2	1,106.9
Non-controlling interests	23	0.3	0.4
Total shareholders' equity		1,067.5	1,107.3
Total liabilities and shareholders' equity		2,859.7	2,896.0

Financial statements

The consolidated financial statements were approved by the Board of Directors on 13 February 2019 and signed on its behalf by:



Peter Clarke
Director/Chairman



Elaine Whelan
Director/CFO

Consolidated statement of changes in shareholders' equity

For the year ended 31 December 2018

Notes	Share capital \$m	Own shares \$m	Other reserves \$m	Accumulated other comprehensive loss \$m	Retained earnings \$m	Shareholders' equity attributable to equity shareholders of LHL \$m	Non-controlling interests \$m	Total shareholders' equity \$m
Balance as at 31 December 2016	100.7	(23.2)	881.6	(6.4)	254.6	1,207.3	0.5	1,207.8
Total comprehensive loss for the year	–	–	–	4.9	(71.1)	(66.2)	0.5	(65.7)
Shares donated to the trust	19, 20, 23	–	1.2	(1.2)	–	–	–	–
Distributed by the trust	19, 20	–	9.9	(13.8)	–	(3.9)	–	(3.9)
Dividends on common shares	19	–	–	–	(29.9)	(29.9)	–	(29.9)
Dividends paid to minority interest holders	23	–	–	–	–	–	(0.6)	(0.6)
Equity based compensation – credit	20	–	–	(0.4)	–	(0.4)	–	(0.4)
Balance as at 31 December 2017	100.7	(12.1)	866.2	(1.5)	153.6	1,106.9	0.4	1,107.3
Total comprehensive income for the year	–	–	–	(12.8)	37.5	24.7	0.1	24.8
Shares purchased by the trust	19, 20, 23	0.3	(4.6)	4.3	–	–	–	–
Distributed by the trust	19, 20	–	7.3	(9.9)	–	(2.6)	–	(2.6)
Purchase of shares from non-controlling interest	20	–	–	(0.1)	–	(0.1)	(0.2)	(0.3)
Dividends on common shares	19	–	–	–	(70.2)	(70.2)	–	(70.2)
Equity based compensation – expense	20	–	–	8.5	–	8.5	–	8.5
Balance as at 31 December 2018	101.0	(9.4)	869.0	(14.3)	120.9	1,067.2	0.3	1,067.5

Statement of consolidated cash flows

For the year ended 31 December 2018

	Notes	2018 \$m	2017 \$m
Cash flows used in operating activities			
Profit (loss) before tax		33.6	(72.9)
Tax (paid) refunded		(3.3)	1.3
Depreciation	6	1.4	1.8
Interest expense on long-term debt	8	18.1	16.4
Interest and dividend income		(36.6)	(37.1)
Net amortisation of fixed maturity securities		(0.6)	2.8
Equity based compensation	7	7.9	(0.4)
Foreign exchange (gains) losses		(4.3)	9.4
Share of loss of associate	16	7.1	9.4
Net other investment loss (income)		3.9	(1.2)
Net realised losses (gains) and impairments	3	5.1	(9.1)
Net unrealised gains on interest rate swaps		(1.6)	(1.7)
Changes in operational assets and liabilities			
– Insurance and reinsurance contracts		(51.5)	52.0
– Other assets and liabilities		18.3	(9.4)
Net cash flows used in operating activities		(2.5)	(38.7)
Cash flows (used in) from investing activities			
Interest and dividends received		35.9	37.6
Purchase of property, plant and equipment		(0.2)	(0.6)
Investment in associate	23	(14.8)	(19.1)
Purchase of investments		(1,143.1)	(1,196.1)
Proceeds on sale of investments		1,115.8	1,209.5
Net cash flows (used in) from investing activities		(6.4)	31.3
Cash flows used in financing activities			
Interest paid		(18.0)	(16.3)
Dividends paid	19	(70.2)	(29.9)
Dividends paid to minority interest holders	23	–	(0.6)
Distributions by trust		(2.6)	(3.9)
Purchase of shares from non-controlling interest		(0.3)	–
Net cash flows used in financing activities		(91.1)	(50.7)
Net decrease in cash and cash equivalents			
Cash and cash equivalents at beginning of year		256.5	308.8
Effect of exchange rate fluctuations on cash and cash equivalents		(1.9)	5.8
Cash and cash equivalents at end of year	10	154.6	256.5

Accounting policies

For the year ended 31 December 2018

Summary of significant accounting policies

The basis of preparation, use of estimates, consolidation principles and significant accounting policies adopted in the preparation of these consolidated financial statements are set out below.

Basis of preparation

The consolidated financial statements are prepared on a going concern basis in accordance with accounting principles generally accepted under IFRS as adopted by the EU.

Where IFRS is silent, as it is in respect of certain aspects relating to the measurement of insurance products, the IFRS framework allows reference to another comprehensive body of accounting principles. In such instances, the Group's management determines appropriate measurement bases, to provide the most useful information to users of the consolidated financial statements, using their judgement and considering U.S. GAAP. In the course of preparing the consolidated financial statements, no judgements have been made in the process of applying the Group's accounting policies, other than those involving estimations as noted in the 'Use of Estimates' section below, that have had a significant effect on amounts recognised in the consolidated financial statements.

All amounts, excluding share data or where otherwise stated, are in millions of U.S. dollars.

Changes in accounting standards

IFRS 15, Revenue from Contracts with Customers, was effective on 1 January 2018. The adoption of IFRS 15, using the cumulative effect approach, has not had a material impact on the results and disclosures reported in the consolidated financial statements for the year ended 31 December 2018 and is consistent with the Group's previous treatment of other income. While a number of other amended IFRS and IFRIC standards have become effective this year, none of these standards have had a material impact on the Group.

Future accounting changes

IFRS 17, Insurance Contracts, issued in May 2017, specifies the financial reporting for insurance contracts by an insurer. The new standard is currently effective for annual periods beginning on or after 1 January 2021. At its board meeting on 14 November 2018, the IASB tentatively decided to propose an amendment of the IFRS 17 effective date to reporting periods on or after 1 January 2022. The standard includes a number of significant changes regarding the measurement and disclosure of insurance contracts both in terms of liability measurement and profit recognition. The Group will continue to assess the impact that the new standard will have on its results and the presentation and disclosure requirements. IFRS 17 has not yet been endorsed by the EU.

IFRS 9, Financial Instruments: Classification and Measurement, is effective for annual periods beginning on or after 1 January 2018. The amendments to IFRS 4, Insurance Contracts, issued in 2016, provide a temporary exemption from applying IFRS 9. The Group qualifies for, and has elected to apply, the temporary exemption available to companies whose predominant activity is to issue insurance contracts. The exemption lasts until accounting periods beginning on or after 1 January 2022, subject to the proposed deferral of IFRS 17 as noted above, and addresses the accounting consequences of applying IFRS 9 to insurers prior to the adoption of IFRS 17, Insurance Contracts. IFRS 9 introduces new classification and measurement requirements for financial instruments, an expected credit loss impairment model that replaces the IAS 39 incurred loss model and new hedge accounting requirements. Applying the new requirements of IFRS 9, the Group currently anticipates that all investments held by the Group will be classified as at FVTPL (mandatory), because they are managed on a fair value basis. As a result all investments currently disclosed in Note 11 as AFS will be reclassified as at FVTPL (mandatory) with changes in unrealised gains (losses) currently recorded within other comprehensive (loss) income to be reclassified and recorded within net investment income in profit or (loss). The reclassification from AFS to FVTPL (mandatory) will not result in a change in the carrying value of the investments disclosed in Note 11 of the consolidated financial statements. Further implications from the change in classification from AFS to FVTPL (mandatory) will be that balances within accumulated other comprehensive income (loss) will be reclassified to retained earnings on the date of transition.

IFRS 16, Leases, is effective for annual periods beginning on or after 1 January 2019 and replaces the existing lease standard IAS 17. IFRS 16 introduces a single on-balance sheet accounting model for both finance and operating leases. The adoption of the standard results in the recognition of a right-of-use asset and associated lease liability on the balance sheet. In addition, the current operating lease rental charges in the consolidated statement of comprehensive income (loss) will be replaced with a depreciation charge for the right-of-use asset and an interest expense for the lease liabilities. IFRS 16 will be adopted by the Group on 1 January 2019 using the fully retrospective transition approach. The estimated \$1.8 million cumulative effect of adopting IFRS 16 will be recognised in the consolidated financial statements for the year ending 31 December 2019 as a credit to the opening balance of retained earnings as at 1 January 2018, with a re-statement of comparative information.

The consolidated balance sheet is presented in order of decreasing liquidity.

Use of estimates

The preparation of financial statements in conformity with IFRS requires the Group to make estimates and assumptions that affect the reported and disclosed amounts at the balance sheet date and the reported and disclosed amounts of revenues and expenses during the reporting period. Actual results may differ materially from the estimates made.

The most significant estimate made by management is in relation to losses and loss adjustment expenses, both gross and net of outwards reinsurance recoverable. This is discussed on page 106 and 107 and also in the risk disclosures section from page 118.

Less significant estimates are made in determining the estimated fair value of certain financial instruments and management judgement is applied in determining impairment charges. The estimation of the fair value of financial instruments is discussed on pages 107 and 108 and in note 11.

Whilst not significant, estimates are also utilised in the valuation of intangible assets. The fair value of intangible assets recognised on the acquisition of a subsidiary is largely based on the estimated expected cash flows of the business acquired and the contractual rights of that business. The assumptions made by management in performing annual impairment tests of intangible assets are subject to estimation uncertainty. Details of the key assumptions used in the estimation of the recoverable amounts of the CGU are contained in note 17.

Consolidation principles

The consolidated financial statements comprise the financial statements of the Company and its subsidiaries as at and for the year ended 31 December 2018. Subsidiaries are fully consolidated from the date of acquisition, being the date on which the Group obtains control, and continue to be consolidated until the date when such control ceases. Intercompany balances, profits and transactions are eliminated. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary.

The Group participates in two syndicates at Lloyd's, which are managed by the Group's managing agent subsidiary. In view of the several liability of underwriting members at Lloyd's, the Group recognises its proportion of all the transactions undertaken by the syndicates in which it participates within its consolidated statement of comprehensive income (loss). Similarly, the Group's proportion of the syndicates' assets and liabilities has been reflected in its consolidated balance sheet. This proportion is calculated by reference to the Group's participation as a percentage of each syndicate's total capacity for each year of account.

Subsidiaries' accounting policies are generally consistent with the Group's accounting policies. Where they differ, adjustments are made on consolidation to bring accounting policies in line.

Associate

Investments, in which the Group has significant influence over the operational and financial policies of the investee, are recognised at cost and thereafter accounted for using the equity method. Under this method, the Group records its proportionate share of income or (loss) from such investments in its consolidated statement of comprehensive income (loss) for the period. Adjustments are made to associate accounting policies, where necessary, in order to be consistent with the Group's accounting policies.

Foreign currency

The functional currency, which is the currency of the primary economic environment in which operations are conducted, for all Group entities is U.S. dollars. Items included in the financial statements of each of the Group's entities are measured using the functional currency. The consolidated financial statements are also presented in U.S. dollars.

Foreign currency transactions are recorded in the functional currency for each entity using the exchange rates prevailing at the dates of the transactions, or at the average rate for the period when this is a reasonable approximation. Monetary assets and liabilities denominated in foreign currencies are revalued at period end exchange rates. The resulting exchange differences on revaluation are recorded in the consolidated statement of comprehensive income (loss) within net foreign exchanges (losses) gains. Non-monetary assets and liabilities denominated in a foreign currency are carried at historic rates. Non-monetary assets and liabilities carried at estimated fair value and denominated in a foreign currency are translated at the exchange rate at the date the estimated fair value was determined.

Intangible assets

The Group's intangible assets comprise syndicate participation rights and goodwill. The cost of syndicate participation rights and goodwill acquired in a business combination is their fair value as at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses. The useful lives of intangible assets are assessed to be either finite or indefinite depending on the nature of the asset. Intangible assets with finite lives are amortised over their useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. Intangible assets with indefinite useful lives are tested for impairment at least annually at the CGU level by comparing the net present value of the future earnings stream of the CGU to the carrying value of the CGU and related intangible assets. Such intangible assets are not amortised. The useful life of an intangible asset with an indefinite life is reviewed annually to determine whether the indefinite life assessment continues to be supportable.

Syndicate participation rights and goodwill are considered to have an indefinite life.

Insurance contracts

Classification

Insurance contracts are those contracts that transfer significant insurance risk at the inception of the contract. Contracts that do not transfer significant insurance risk are accounted for as investment contracts. Insurance risk is transferred when an insurer agrees to compensate a policyholder if a specified uncertain future event adversely affects the policyholder.

Premiums and acquisition costs

Premiums are first recognised as written at the later of a contract's binding or inception date. The Group writes both excess of loss and pro-rata (proportional) contracts. For the majority of excess of loss contracts, premiums written are recorded based on the minimum and deposit or flat premium, as defined in the contract. Subsequent adjustments to the minimum and deposit premium are recognised in the period in which they are determined. For pro-rata contracts and excess of loss contracts where no deposit is specified in the contract, premiums written are recognised based on estimates of ultimate premiums provided by the insureds or ceding companies. Initial estimates of premiums written are recognised in the period in which the contract incepts, or the period in which the contract is bound if later. Subsequent adjustments, based on reports of actual premium by the insureds or ceding companies, or revisions in estimates, are recorded in the period in which they are determined.

Premiums written are earned rateably over the term of the underlying risk period of the insurance contract, except where the period of risk differs significantly from the contract period. In these circumstances, premiums are recognised over the period of risk in proportion to the amount of insurance protection provided. The portion of the premium related to the unexpired portion of the risk period is reflected in unearned premiums.

Where contract terms require the reinstatement of coverage after an insured's or ceding company's loss, the estimated mandatory reinstatement premiums are recorded as premiums written when a specific loss event occurs. Reinstatement premiums are not recorded for losses included within the provision for IBNR that do not relate to a specific loss event.

Inwards premiums receivable from insureds and cedants are recorded net of commissions, brokerage, premium taxes and other levies on premiums, unless the contract specifies otherwise. These balances are regularly reviewed for impairment, with any impairment loss recognised as an expense in the period in which it is determined.

Acquisition costs represent commissions, brokerage, profit commissions and other variable costs that relate directly to the successful securing of new contracts and the renewing of existing contracts. They are generally deferred over the period in which the related premiums are earned to the extent they are recoverable out of expected future revenue margins. All other acquisition costs are recognised as an expense when incurred.

Outwards reinsurance

Outwards reinsurance premiums comprise the cost of reinsurance contracts entered into. Outwards reinsurance premiums are accounted for in the period in which the contract incepts, or the period in which the contract is bound if later. The provision for the reinsurers' share of unearned premiums represents that part of reinsurance premiums ceded which are estimated to be earned in future financial periods. Unearned reinsurance commissions are recognised as a liability using the same principles.

Any amounts recoverable from reinsurers are estimated using the same methodology as for the underlying losses. The Group monitors the creditworthiness of its reinsurers on an ongoing basis and assesses any reinsurance assets for impairment, with any impairment loss recognised as an expense in the period in which it is determined.

Losses

Losses comprise losses and loss adjustment expenses paid in the period and changes in the provision for outstanding losses and ACR, including the provision for IBNR and related expenses. Losses and loss adjustment expenses are charged to profit or loss as they are incurred.

Losses and loss adjustment expenses represent the estimated ultimate cost of settling all insurance claims arising from events which have occurred up to the balance sheet date, including a provision for IBNR. The Group does not discount its liabilities for unpaid losses. Outstanding losses are initially set on the basis of reported losses received from third parties. ACR are determined where the Group's best estimate of the reported loss is greater than that reported. Estimated IBNR reserves may also consist of a provision for additional development in excess of losses reported by insureds or ceding companies, as well as a provision for losses which have occurred but which have not yet been reported by insureds or ceding companies. IBNR reserves are set on a best estimate basis and are estimated by management using various actuarial methods as well as a combination of the Group's own loss experience, historical insurance industry loss experience, underwriters' experience, estimates of pricing adequacy trends and management's professional judgement.

A portion of the Group's business is in classes with high attachment points of coverage, including property catastrophe excess of loss. Reserving for losses in such programmes is inherently complicated in that losses in excess of the attachment level of the Group's policies are characterised by high severity and low frequency and other factors which could vary significantly as losses are settled. This limits the volume of industry loss experience available from which to reliably predict ultimate losses following a loss event.

The estimation of the ultimate loss and loss adjustment expense liability is a complex process which incorporates a significant amount of judgement. It is reasonably possible that uncertainties inherent in the reserving process, delays in insureds or ceding companies reporting losses to the Group, together with the potential for unforeseen adverse developments, could lead to a material change in estimated losses and loss adjustment expenses.

Liability adequacy tests

At each balance sheet date, the Group performs a liability adequacy test to determine if there is an overall excess of expected claims over unearned premiums for the period of unexpired risk by using current best estimates of future cash outflows generated by its insurance contracts, plus any investment income thereon. If, as a result of these tests, the carrying amount of the Group's insurance liabilities is found to be inadequate, the deficiency is charged to income for the period, initially by writing off deferred acquisition costs and subsequently by establishing a provision.

Financial instruments

Cash and cash equivalents

Cash and cash equivalents are carried in the consolidated balance sheet at amortised cost and include cash in hand, deposits held on call with banks and other short-term highly liquid investments with a maturity of three months or less at the date of purchase. Carrying amounts approximate fair value due to the short-term nature and high liquidity of the instruments.

Interest income earned on cash and cash equivalents is recognised on the effective interest rate method. The carrying value of accrued interest income approximates estimated fair value due to its short-term nature and high liquidity.

Investments

The Group's fixed maturity and equity securities include quoted and unquoted investments that are classified as either AFS or at FVTPL and are carried at estimated fair value. The classification of the Group's financial assets is determined at the time of initial purchase and depends on the nature of the investment. A financial asset is classified at FVTPL if it is managed and evaluated on a fair value basis and if acquired principally for the purpose of selling in the short term, or if it forms part of a portfolio of financial assets in which there is evidence of short-term profit taking. Equity securities classified as AFS are those that are neither classified as held for trading nor designated at FVTPL. Fixed maturity securities classified as AFS are those that are intended to be held for an indefinite period, the composition, duration and allocation of these investments are reviewed by management on a regular basis in order to respond to needs for liquidity, changes in interest rates and other market conditions. The Group has elected to carry certain fixed maturity securities at FVTPL upon initial recognition. This category includes instruments in which the cash flows are linked to the performance of an underlying pool of securities. Presentation of these securities in the FVTPL category is consistent with how management monitors and evaluates the performance of these securities.

The Group's hedge funds are unquoted investments classified at FVTPL and are carried at estimated fair value. Estimated fair values are determined using a combination of the most recent NAVs provided by each fund's independent administrator and the estimated performance provided by each hedge fund manager.

Accounting policies: continued

Regular way purchases and sales of investments are recognised at estimated fair value including, in the case of investments not carried at FVTPL, transaction costs attributable to the acquisition of that investment on the trade date and are subsequently carried at estimated fair value. The estimated fair values of quoted and unquoted investments are determined based on bid prices from recognised exchanges, broker-dealers, recognised indices or pricing vendors. Unrealised gains and losses from changes in the estimated fair value of AFS investments are included in accumulated other comprehensive loss in shareholders' equity. Changes in estimated fair value of investments classified at FVTPL are recognised in the consolidated statement of comprehensive income (loss) within net other investment (losses) income.

Investments are derecognised when the Group has transferred substantially all of the risks and rewards of ownership. On derecognition of an AFS investment, previously recorded unrealised gains and losses are recycled from accumulated other comprehensive loss in shareholders' equity and included in the consolidated statement of comprehensive income (loss) as a realised gain or loss within net realised (losses) gains and impairments.

Amortisation and accretion of premiums and discounts on AFS fixed maturity securities are calculated using the effective interest rate method and are recognised in current period net investment income. Interest income is recognised on the effective interest rate method. The carrying value of accrued interest income approximates estimated fair value due to its short-term nature and high liquidity. Dividends on equity securities are recorded as income on the date the dividends become payable to the holders of record.

The Group regularly reviews the carrying value of its AFS investments for evidence of impairment. Such evidence would include a prolonged decline in estimated fair value below cost or amortised cost, where other factors, such as expected cash flows, do not support a recovery in value. If an impairment is deemed appropriate, the difference between cost or amortised cost and estimated fair value is removed from accumulated other comprehensive loss in shareholders' equity and charged to current period profit or loss. Impairment losses on fixed maturity securities may be subsequently reversed through profit or loss while impairment losses on equity securities are not subsequently reversed through profit or loss.

Derivative financial instruments

Derivatives are classified as financial assets or liabilities at FVTPL. They are initially recognised at estimated fair value on the date a contract is entered into, the trade date, and are subsequently carried at estimated fair value. Derivative instruments with a positive estimated fair value are recorded as derivative financial assets and those with a negative estimated fair value are recorded as derivative financial liabilities.

Derivative financial instruments include exchange-traded future and option contracts, forward foreign currency contracts, interest rate swaps, credit default swaps and interest rate swaptions. They derive their value from the underlying instrument and are subject to the same risks as that underlying instrument, including liquidity, credit and market risk. Estimated fair values are based on exchange or broker-dealer quotations, where available, or discounted cash flow models, which incorporate the pricing of the underlying instrument, yield curves and other factors. Changes in the estimated fair value of derivative instruments are recognised in the consolidated statement of comprehensive income (loss) within net other investment(losses) income. The Group does not currently hold any derivatives classified as hedging instruments. For discounted cash flow techniques, estimated future cash flows are based on management's best estimates and the discount rate used is an appropriate market rate.

Derivative financial assets and liabilities are offset and the net amount is reported in the consolidated balance sheet only to the extent there is a legally enforceable right of offset and there is an intention to settle on a net basis, or to realise the assets and liabilities simultaneously. Derivative financial assets and liabilities are derecognised when the Group has transferred substantially all of the risks and rewards of ownership or the liability is discharged, cancelled or expired.

Other income

Other income is measured based on the consideration specified in a contract and excludes amounts collected on behalf of third parties.

Nature of services

The table below details the type of services from which the Group derives its other income.

Services	Nature, timing of satisfaction of performance obligation and significant payment terms
Kinesis underwriting fees	The Group recognises underwriting fees over the underwriting cycle based on the underlying exposure of the covered contracts. Underwriting fees are received by or before the collateral funding date, which is prior to commencement of the underwriting cycle.
Kinesis profit commission	The Group recognises profit commission following the end of the underwriting cycle based on the underlying performance of the covered contracts and as collateral is released. Profit commissions may only be received once the profit commission hurdle has been met.
Lloyd's consortium management fees	The Group recognises consortium fees over the risk period based on the underlying exposure of the covered contracts. Consortium fees are received quarterly.
Lloyd's consortium profit commission	The Group recognises profit commission in line with the underlying performance of covered contracts once the year of account closes, which is also when the profit commissions are received.
Lloyd's managing agency fees	The Group recognises managing agency fees in line with services provided for each year of account. Managing agency fees are received quarterly.
Lloyd's managing agency profit commission	The Group recognises profit commission on open years of account when measurement is virtually certain. Profit commissions are received once the year of account closes.

Long-term debt

Long-term debt is recognised initially at fair value, net of transaction costs incurred. Thereafter it is held at amortised cost, with the amortisation calculated using the effective interest rate method. Derecognition occurs when the obligation has been extinguished.

Property, plant and equipment

Property, plant and equipment is carried at historical cost, less accumulated depreciation and any impairment in value. Depreciation is calculated to write off the cost over the estimated useful economic life on a straight-line basis as follows:

IT equipment	33% per annum
Office furniture and equipment	20% to 33% per annum
Leasehold improvements	20% per annum

The assets' residual values, useful lives and depreciation methods are reviewed, and adjusted if appropriate, at each balance sheet date.

An item of property, plant or equipment is derecognised on disposal or when no future economic benefits are expected to arise from the continued use of the asset.

Gains and losses on the disposal of property, plant and equipment are determined by comparing proceeds with the carrying amount of the asset, and are included in the consolidated statement of comprehensive income (loss). Costs for repairs and maintenance are charged to profit or loss as incurred.

Leases

Rentals payable under operating leases are charged to profit or loss on a straight-line basis over the lease term.

Employee benefits

Equity compensation plans

The Group currently operates an RSS under which nil-cost options have been granted. The fair value of the equity instruments granted is estimated on the date of grant. The estimated fair value is recognised as an expense pro-rata over the vesting period of the instrument, adjusted for the impact of any non-market vesting conditions. No adjustment to vesting assumptions is made in respect of market vesting conditions.

At each balance sheet date, the Group revises its estimate of the number of RSS nil-cost options that are expected to become exercisable. It recognises the impact of the revision of original estimates, if any, as equity based compensation expense (credit) in the consolidated statement of comprehensive income (loss), and a corresponding adjustment is made to other reserves in shareholders' equity over the remaining vesting period.

On exercise, the differences between the expense charged to the consolidated statement of comprehensive income (loss) and the actual cost to the Group, if any, is transferred to other reserves in shareholders' equity.

Accounting policies: continued

Pensions

The Group operates a defined contribution plan. On payment of contributions to the plan there is no further obligation for the Group. Contributions are recognised as employee benefits in the consolidated statement of comprehensive income (loss) in the period when the services are rendered.

Tax

Income tax represents the sum of the tax currently payable and any deferred tax. The tax payable is calculated based on taxable profit for the period using tax rates and tax laws enacted or substantively enacted at the year end reporting date and any adjustments to tax payable in respect of prior periods. Taxable profit for the period can differ from that reported in the consolidated statement of comprehensive income (loss) due to non-taxable income and certain items which are not tax deductible or which are deferred to subsequent periods.

Deferred tax is recognised on all temporary differences between the assets and liabilities in the consolidated balance sheet and their tax base, except when the deferred tax liability arises from the initial recognition of goodwill. Deferred tax assets or liabilities are accounted for using the balance sheet liability method. Deferred tax assets are recognised to the extent that realising the related tax benefit through future taxable profits is likely and are reassessed each year for recognition.

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 income taxes relate to the same fiscal authority.

Where the current estimated fair value of equity based compensation awards differs from the estimated fair value at the time of grant, adjusted where applicable for dividends, the related corporation tax and deferred tax charge or credit is recognised directly in other reserves.

Own shares

Own shares include shares repurchased under share repurchase authorisations and held in treasury, plus shares repurchased and held in trust, for the purposes of employee equity based compensation schemes. Own shares are deducted from shareholders' equity. No gain or loss is recognised on the purchase, sale, cancellation or issue of own shares and any consideration paid or received is recognised directly in equity.

Risk disclosures: introduction

The Group is exposed to risks from several sources, classified into six primary risk categories. These are insurance risk, market risk, liquidity risk, credit risk, operational risk and strategic risk. The primary risk to the Group is insurance risk.

The primary objective of the Group's ERM framework is to ensure that the capital resources held are matched to the risk profile of the Group and that the balance between risk and return is considered as part of all key business decisions. The Group has formulated, and keeps under review, a risk appetite which is set by the Board of Directors. The Group's appetite for risk will vary marginally from time to time to reflect the potential risks and returns that present themselves. However, protecting the Group's capital and maximising risk-adjusted returns for investors over the long term are constants. The risk appetite of the Group is central to how the business is run and permeates into the risk appetites that the individual operating entity boards of directors have adopted. These risk appetites are expressed through detailed risk tolerances at both a Group and an operating entity level. Risk tolerances represent the maximum amount of capital, generally on a modelled basis, that the Group and its entities are prepared to expose to certain risks.

The Board of Directors is responsible for setting and monitoring the Group's risk appetite and tolerances, whereas the individual entity boards of directors are responsible for setting and monitoring entity level risk tolerances. All risk tolerances are subject to at least an annual review and consideration by the respective boards of directors. The LHL Board and individual entity boards of directors review actual risk levels versus tolerances, emerging risks and any risk learning events at least quarterly. In addition, on at least a monthly basis, management reviews the output from SHARP in order to assess modelled potential losses against risk tolerances and ensure that risk levels are managed in accordance with them.

Economic capital models

The Group maintains economic capital models at the LICL, LUK and syndicate levels. These models are primarily focused on insurance risks, however they are also used to model other risks including market, credit and operational risks. The syndicate models are vetted by Lloyd's as part of its own capital and solvency regulations.

The economic capital models produce data in the form of stochastic distributions for all classes, including non-elemental classes. The distributions include the mean outcome and the result at various return periods, including very remote events. Projected financial outcomes for each insurance class are calculated, as well as the overall portfolio including diversification credit. Diversification credit arises as individual risks are generally not strongly correlated and are unlikely to all produce profits or losses at the same time.

The six primary risk categories are discussed in detail on page 112 to 133.

A. Insurance risk

The Group underwrites worldwide, predominantly short-tail, insurance and reinsurance contracts that transfer insurance risk, including risks exposed to both natural and man-made catastrophes. The Group's exposure in connection with insurance contracts is, in the event of insured losses, whether premiums will be sufficient to cover the loss payments and expenses. Insurance and reinsurance markets are cyclical and premium rates and terms and conditions vary by line of business depending on market conditions and the stage of the cycle. Market conditions are impacted by capacity and recent loss events, and broader economic cycle impacts amongst other factors. The Group's underwriters assess likely losses using their experience and knowledge of past loss experience, industry trends and current circumstances. This allows them to estimate the premiums sufficient to meet likely losses and expenses and desired levels of profitability consistent with the Group's risk-adjusted RoE targets.

The Group considers insurance risk at an individual contract level, at a segment level, a geographic level and at an aggregate portfolio level. This ensures that careful risk selection, limits on concentration and appropriate portfolio diversification are accomplished. The four principal classes of business for the Group, excluding the Lloyd's segment, are Property, Energy, Aviation and Marine. These classes, plus the Group's Lloyd's segment, are deemed to be the Group's five operating segments. The level of insurance risk tolerance per peril is set by the Board and the boards of directors at individual entity level.

A number of controls are deployed to manage the amount of insurance exposure assumed:

- the Group has a rolling three-year strategic plan that helps establish the over-riding business goals that the Board of Directors aims to achieve;
- a detailed business plan is produced annually, which includes expected premiums and combined ratios by class and considers risk-adjusted profitability, capital usage and requirements. The plan is approved by the Board of Directors and is monitored, reviewed and updated on an ongoing basis;
- for Cathedral, the syndicates' business forecast and business plan are subject to review and approval by Lloyd's;
- BLAST, SHARP and Cathedral's internal models are used to measure occurrence risks, aggregate risks and correlations between classes and other non-insurance risks;
- each authorised class has a predetermined normal maximum line structure;
- each underwriter has a clearly defined limit of underwriting authority;
- the Group and individual operating entities have predetermined tolerances on probabilistic and deterministic losses of capital for certain single events;
- risk levels versus tolerances are monitored on a regular basis;
- a daily underwriting call is held for LIGL and LUK to peer review insurance proposals, opportunities and emerging risks;
- a daily post-binding review process with exception reporting to management based on underwriting authority operates at Cathedral;
- sophisticated pricing and aggregation models are utilised in certain areas of the underwriting process, and are updated frequently;
- BLAST and other modelling tools are deployed to model catastrophes and resultant losses to the portfolio and the Group; and
- reinsurance may be purchased to mitigate both frequency and severity of losses on a treaty or facultative basis and to improve risk-adjusted RoE.

Some of the Group's business provides coverage for natural catastrophes (e.g. hurricanes, earthquakes, wildfires and floods) and is subject to potential seasonal variation and the effects of climate change. A proportion of the Group's business is exposed to large catastrophe losses in North America, Europe and Japan as a result of windstorms. The level of windstorm activity, and landfall thereof, during the North American, European and Japanese wind seasons may materially impact the Group's loss experience. The North American and Japanese wind seasons are typically June to November and the European wind season November to March. The Group also bears exposure to large losses arising from other non-seasonal natural catastrophes, such as earthquakes, tsunamis, droughts, floods and tornadoes, from risk losses throughout the year and from war, terrorism and political risk and other events. The Group's associate bears exposure to catastrophe losses and any significant loss event could potentially result in impairment in the value of the Group's investment in associate.

The Group's exposures to certain peak zone elemental losses, as a percentage of tangible capital, including long-term debt, are shown below. Net loss estimates are before income tax and net of reinstatement premiums and outwards reinsurance. The exposure to catastrophe losses that would result in an impairment to the investment in associate is included in the figures below.

As at 31 December 2018		100 year return period estimated net loss		250 year return period estimated net loss	
		\$m	% of tangible capital	\$m	% of tangible capital
Zones	Perils				
Gulf of Mexico ¹	Hurricane	163.2	13.2	242.8	19.6
Non-Gulf of Mexico – U.S.	Hurricane	110.2	8.9	241.6	19.5
California	Earthquake	78.0	6.3	129.5	10.5
Pan-European	Windstorm	70.7	5.7	118.0	9.5
Japan	Earthquake	45.0	3.6	81.2	6.6
Japan	Typhoon	36.3	2.9	49.1	4.0
Pacific North West	Earthquake	22.7	1.8	73.1	5.9

1. Landing hurricane from Florida to Texas.

As at 31 December 2017		100 year return period estimated net loss		250 year return period estimated net loss	
		\$m	% of tangible capital	\$m	% of tangible capital
Zones	Perils				
Gulf of Mexico ¹	Hurricane	173.8	13.6	253.6	19.8
Non-Gulf of Mexico – U.S.	Hurricane	140.9	11.0	306.5	24.0
California	Earthquake	96.1	7.5	181.1	14.2
Pan-European	Windstorm	77.2	6.0	125.1	9.8
Japan	Earthquake	46.6	3.6	85.6	6.7
Japan	Typhoon	51.6	4.0	68.1	5.3
Pacific North West	Earthquake	33.1	2.6	79.6	6.2

1. Landing hurricane from Florida to Texas.

There can be no guarantee that the modelled assumptions and techniques deployed in calculating these figures are accurate. There could also be an unmodelled loss which exceeds these figures. In addition, any modelled loss scenario could cause a larger loss to capital than the modelled expectation.

Details of annual gross premiums written by geographic area of risks insured are provided below:

	2018		2017	
	\$m	%	\$m	%
U.S. and Canada	188.2	29.5	177.6	30.0
Worldwide, including the U.S. and Canada ¹	129.8	20.3	98.6	16.7
Worldwide offshore	118.6	18.6	162.5	27.5
Europe	51.3	8.0	38.9	6.6
Far East	29.0	4.5	27.9	4.7
Worldwide, excluding the U.S. and Canada ²	13.4	2.1	11.5	1.9
Middle East	8.2	1.3	6.9	1.2
Rest of world	100.0	15.7	67.7	11.4
Total	638.5	100.0	591.6	100.0

1. Worldwide, including the U.S. and Canada, comprises insurance and reinsurance contracts that insure or reinsure risks in more than one geographic area.

2. Worldwide, excluding the U.S. and Canada, comprises insurance and reinsurance contracts that insure or reinsure risks in more than one geographic area, but that specifically exclude the U.S. and Canada.

Risk disclosures: continued

Details of annual gross premiums written by business segment are provided below:

	2018		2017	
	\$m	%	\$m	%
Lloyd's	256.8	40.2	207.3	35.0
Property	214.6	33.6	198.0	33.5
Energy	103.0	16.1	101.8	17.2
Aviation	33.0	5.2	16.9	2.9
Marine	31.1	4.9	67.6	11.4
Total	638.5	100.0	591.6	100.0

Further details of the gross premiums written and the risks associated with each of these five principal business segments are described on the following pages.

I. Lloyd's

Gross premiums written, for the year:

	2018 \$m	2017 \$m
Property reinsurance	82.3	88.5
Property direct and facultative	74.4	56.1
Other aviation and satellite	37.7	25.0
Marine cargo	31.9	22.5
Energy	19.0	10.8
Aviation deductible	6.4	–
Terrorism	5.1	4.4
Total	256.8	207.3

Property reinsurance predominantly includes property catastrophe excess of loss, property per risk excess of loss and property retrocession lines of business. Property catastrophe excess of loss and property per risk excess of loss provide protection for elemental and non-elemental risks and are written on an excess of loss treaty basis within the U.S. and internationally. The U.S. property catastrophe excess of loss book is particularly focused on regional clients. Property retrocession is written on an excess of loss basis through treaty arrangements. It provides coverage for elemental risks when sold on a catastrophe basis and both elemental and non-elemental risks when sold on a per risk retrocession basis. Protection is generally given on a regional basis and may cover specific property risks or all catastrophe perils. It is also generally written on an UNL basis, meaning loss payments are linked to the ceding company's own loss.

Property direct and facultative is a worldwide book of largely commercial property business, written both in the open market and under delegated authorities. The account spans small individual locations to Fortune 500 accounts but with a bias towards small to medium-sized risks. Policies are generally provided both for non-elemental and elemental perils, although not all risks include both elemental and non-elemental coverage. Coverage is generally written on a full value, primary or excess of loss basis, although the very largest accounts are currently seldom written at the primary level.

Other aviation and satellite includes aviation reinsurance, aviation war, general aviation, airlines hull and liability and satellite lines of business. Aviation reinsurance provides excess of loss catastrophe cover to the insurers of the world's major airlines and aircraft and aircraft manufacturers whilst the airlines hull and liability line provides cover to the airlines directly. Both lines include cover for the aircraft themselves as well as losses arising from passenger and third-party liability claims against airlines and/or manufacturers. Aviation war covers loss or damage to aviation assets from war, terrorism and similar causes. General aviation covers fixed wing and rotor wing aircraft, typically with 50 passenger seats or less, and covers both commercial and private clients. A significant part of the satellite account is written through SATEC, a specialist underwriting agency, to which underwriting authority is delegated. Satellite insurance is purchased by launch operators, satellite manufacturers and satellite operators to protect against launch or deployment failure or subsequent failure in orbit. Policies are typically written for launch plus one year in orbit. Thereafter, orbit cover is normally provided on an annual basis.

Marine cargo is an international account and is written either on a direct basis or by way of reinsurance. It covers the (re)insurance of commodities or goods in transit. Typically, transit cover is provided on an all-risks basis for marine perils for the full value of the goods concerned, although higher value or capacity business may be written on a layered basis. Static cover is also provided for losses to cargo, from both elemental and non-elemental causes, whilst static at points along its route. In addition, the cargo account can include specie and fine art, vault risks, artwork on exhibition and marine war business relating to cargo in transit.

Energy risks are written mostly on a direct basis and may be ground-up or for primary or excess layers on either a first loss or full value basis. Worldwide offshore energy policies are typically package policies which may include physical damage, well control, business interruption and third-party liability sections. Coverage can include fire and explosion and elemental risks. Individual assets covered can be high-value and are

therefore mostly written on a subscription basis, meaning that coverage is placed with multiple risk carriers. Construction energy contracts generally cover all risks of platforms, FPSO and drilling units under construction at yard and offshore, during towing and installation. Onshore construction contracts are generally not written. Power generation and utility business can be written either ground-up or on a primary or excess basis. The core composition of the portfolio is operational conventional thermal power generation, renewable energy and associated transmission & distribution assets. Midstream exposures encompass the onshore movements of electricity, oil, gas and water and can include treatment and processing plants. Risks associated with the processing or refining of oil or petroleum by-products are excluded. Our underwriting appetite targets well engineered and operated power and midstream opportunities, whilst carefully balancing the associated natural catastrophe and business interruption exposures.

Aviation deductible business is a specialist area with small individual limits normally up to \$1.0 million and covers the deductible the airline would normally have for each and every loss under the terms of their airline policy.

Terrorism business can be written either ground-up or for primary or excess layers, with cover provided for U.S. and worldwide property risks, but typically excluding nuclear, chemical, biological and cyber coverage in most territories. Cover is generally provided to medium to large commercial and industrial enterprises. Policies are typically written for scheduled locations and exposure is controlled by setting limits on aggregate exposure within a 'blast zone' radius. The term of these contracts may be multi-year, reflecting the term of the underlying exposures.

Reinsurance may be purchased to reduce the exposure to large risk losses and large natural catastrophe losses in the U.S., Canada and worldwide with certain exclusions. Reinsurance may also be purchased to mitigate an accumulation of smaller, attritional losses. Reinsurance may be purchased on a facultative, excess of loss treaty or proportional treaty basis.

II. Property

Gross premiums written, for the year:

	2018 \$m	2017 \$m
Property catastrophe excess of loss	103.7	101.9
Terrorism	41.3	34.9
Property political risk	35.4	31.1
Property risk excess of loss	15.0	12.9
Property retrocession	10.0	10.0
Other property	9.2	7.2
Total	214.6	198.0

Property catastrophe excess of loss covers elemental risks and is written on an excess of loss treaty basis. The property catastrophe excess of loss portfolio is written within the U.S. and also internationally. Cover is offered for specific perils and regions or countries.

Terrorism business can be written either ground-up or for primary or excess layers, with cover provided for U.S. and worldwide property risks, but typically excluding nuclear, chemical, biological and cyber coverage in most territories. Cover is generally provided to medium to large commercial and industrial enterprises. Policies are typically written for scheduled locations and exposure is controlled by setting limits on aggregate exposure within a 'blast zone' radius. The term of these contracts is often multi-year reflecting the term of the underlying exposures. Some national pools are also written, which may include nuclear, chemical and biological coverage and may have an element of life coverage.

Property political risk cover is written either ground-up or on an excess of loss basis. Coverage that the Group provides in the political risk book is split between confiscation perils coverage and sovereign/quasi-sovereign obligor coverage. Confiscation perils coverage protects against CEND and may be extended to include other perils. Sovereign/quasi-sovereign obligors coverage protects against the non-payment or non-honouring of an obligation by a sovereign or quasi-sovereign entity. Cover is provided to medium to large commercial and industrial clients as well as bank and commodity trading clients. The term of these contracts is often multi-year reflecting the term of the underlying exposures. The Group does not provide cover against purely private obligor credit risk.

Property risk excess of loss is written on an excess of loss basis through UNL treaty arrangements, predominantly covering fire and allied perils in addition to natural catastrophe exposure. The portfolio is written on a worldwide basis, with particular focus on the U.S. market.

Property retrocession is written on an excess of loss basis through treaty arrangements and covers elemental risks. Cover may be on a worldwide or regional basis and may cover specific risks or all catastrophe perils. Coverage may be given on a UNL basis, meaning that loss payments are linked directly to the ceding company's own loss, or on an ILW basis, meaning that loss payments are linked to the overall industry insured loss as measured by independent third-party loss index providers.

The Group is exposed to large natural catastrophe losses, such as windstorm and earthquake losses, primarily from assuming property catastrophe excess of loss and property retrocession portfolio risks. Exposure to such events is controlled and measured by setting limits on aggregate exposures in certain classes per geographic zone and through loss modelling. The accuracy of the latter exposure analysis is limited by the quality of data and the effectiveness of the modelling. It is possible that a catastrophic event significantly exceeds the expected modelled event loss. The Group's appetite and exposure guidelines for large losses are set out on pages 112 and 113.

Risk disclosures: continued

Reinsurance may be purchased to mitigate exposures to large natural catastrophe losses in the U.S., Canada and worldwide with certain exclusions. Reinsurance may also be purchased to reduce the Group's worldwide exposure to large risk losses. Reinsurance is typically purchased on an excess of loss basis, however ILWs or quota share arrangements may be entered into.

III. Energy

Gross premiums written, for the year:

	2018 \$m	2017 \$m
Worldwide offshore energy	63.8	66.6
Onshore energy	14.6	3.5
Gulf of Mexico offshore energy	10.6	24.4
Construction energy	4.1	(1.1)
Energy liabilities	3.1	3.0
Other energy	6.8	5.4
Total	103.0	101.8

Energy risks are written mostly on a direct basis and may be ground-up or for primary or excess layers on either a first loss or full value basis. Worldwide offshore energy policies are typically package policies which may include physical damage, business interruption and third-party liability sections. Coverage can include fire and explosion and elemental risks. Individual assets covered can be high value and are therefore mostly written on a subscription basis, meaning that coverage is placed with multiple risk carriers.

Onshore energy risks can include onshore Gulf of Mexico and worldwide energy installations and are largely subject to the same loss events as the Gulf of Mexico offshore energy programmes.

Gulf of Mexico offshore energy programmes cover elemental and non-elemental risks. Most policies have sub-limits on coverage for elemental losses. These programmes are exposed to Gulf of Mexico windstorms. Exposure to such events is controlled and measured through loss modelling. The accuracy of this exposure analysis is limited by the quality of data and the effectiveness of the modelling. It is possible that a catastrophic event significantly exceeds the expected modelled event loss. The Group's appetite and exposure guidelines to large losses are set out on pages 112 and 113.

Construction energy contracts generally cover all risks of platform and drilling units under construction at yards and offshore, during towing and installation. Onshore construction contracts are generally not written.

The Group writes energy liability business on a stand-alone basis. Unlike the liability contained within the energy packages that Lancashire writes, stand-alone energy liability is written on an excess of loss basis only. Coverage is worldwide and provides coverage for all kinds of damages and loss to third parties. Coverage is generally restricted to offshore assets.

Reinsurance protection may be purchased to protect a portion of loss from elemental and non-elemental energy claims, and from the accumulation of smaller, attritional losses. Reinsurance is typically purchased on an excess of loss basis but, from time to time, quota share arrangements may be entered into. Reinsurance may be purchased on a facultative or treaty basis.

IV. Aviation

Gross premiums written, for the year:

	2018 \$m	2017 \$m
AV52	19.4	16.8
Aviation deductible	11.1	–
Other aviation	2.5	0.1
Total	33.0	16.9

AV52 is written on a risk-attaching excess of loss basis and provides coverage for third-party liability, excluding own passenger liability, resulting from acts of war or hijack of aircraft. Cover excludes countries whose governments provide a backstop coverage, but does include some U.S. commercial airlines.

Aviation deductible business is a specialist area with small individual limits normally up to \$1.0 million and covers the deductible the airline would normally have for each and every loss under the terms of their airline policy.

Reinsurance may be purchased to mitigate exposures to an AV52 event loss. Reinsurance is typically purchased on a treaty excess of loss basis. Quota share reinsurance is typically used to reduce the Group's exposure to aviation deductible business.

V. Marine

Gross premiums written, for the year:

	2018 \$m	2017 \$m
Marine hull and total loss	14.0	20.0
Marine P&I clubs	7.3	10.1
Marine builders' risk	6.0	13.9
Marine hull war	5.5	7.1
Marine excess of loss	(3.9)	13.4
Other marine	2.2	3.1
Total	31.1	67.6

With the exception of the marine P&I clubs, where excess layers are written, most policies are written on a ground-up basis. Marine hull and total loss is generally written on a direct basis and covers marine risks on a worldwide basis, primarily for physical damage. Marine P&I clubs is mostly the reinsurance of the International Group of Protection and Indemnity Clubs and covers marine liabilities. Marine builders' risk covers the building of ocean-going vessels in specialised yards worldwide and their testing and commissioning. Marine hull war is mostly direct insurance of loss of vessels from war, piracy or terrorist attack, with a very limited amount of facultative reinsurance. Marine excess of loss is written on a treaty basis and covers ocean and inland marine risks.

The largest expected exposure in the marine class is from physical loss rather than from elemental loss events, although there is exposure to elemental perils and to the costs for removal of wrecks.

Reinsurance may be purchased to reduce the Group's exposure to both large risk losses and an accumulation of smaller, attritional losses. Reinsurance is typically purchased on a treaty excess of loss basis.

Reinsurance

The Group, in the normal course of business and in accordance with its risk management practices, seeks to reduce certain types of loss that may arise from events that could cause unfavourable underwriting results, and to improve the modelled risk-adjusted RoE by entering into reinsurance arrangements. Reinsurance does not relieve the Group of its obligations to policyholders. Under the Group's reinsurance security policy, reinsurers are assessed and approved as appropriate security based on their financial strength ratings, amongst other factors. The RSC considers reinsurers that are not rated or do not fall within the predefined rating categories on a case-by-case basis, and would usually require collateral to be posted to support such obligations. There are specific guidelines for these collateralised contracts. The RSC monitors the Group's reinsurers on an ongoing basis and formally reviews the Group's reinsurance arrangements at least quarterly.

Reinsurance protection is typically purchased on an excess of loss basis, however it may also include ILW covers or quota share arrangements. The mix of reinsurance cover is dependent on the specific loss mitigation requirements, market conditions and available capacity. Reinsurance may also be purchased to optimise the risk-adjusted return of the underwriting portfolio. The structure varies between types of peril and sub-class. The Group regularly reviews its catastrophe and other exposures and may purchase reinsurance in order to reduce the Group's net exposure to a large natural catastrophe loss and/or to reduce net exposures to other large losses. The Group can purchase both facultative and treaty reinsurance with varying cover and attachment points. The reinsurance coverage is not intended to be available to meet all potential loss circumstances. The Group will retain some losses, as the cover purchased is unlikely to transfer the totality of the Group's exposure. Any loss amount which exceeds the programme would be retained by the Group. Some parts of the reinsurance programme have limited reinstatements, therefore the number of claims which may be recovered from second or subsequent losses in those particular circumstances is limited.

Insurance liabilities

The most significant judgement made by management is the estimation of losses and loss adjustment expenses. The estimation of the ultimate liability arising from claims made under insurance and reinsurance contracts is a critical estimate for the Group, particularly given the nature of the business written.

Under GAAP, loss reserves are not permitted until the occurrence of an event which may give rise to a claim. As a result, only loss reserves applicable to losses incurred up to the reporting date are established, with no allowance for the provision of a contingency reserve to account for expected future losses or for the emergence of new types of latent claims. Claims arising from future events can be expected to require the establishment of substantial reserves from time to time. All of the Group's reserves are reported on an undiscounted basis.

Losses and loss adjustment expenses are maintained to cover the Group's estimated liability for both reported and unreported claims. Reserving methodologies that calculate a point estimate for the ultimate losses are utilised. This represents management's best estimate of ultimate loss and loss adjustment expenses. The Group's internal actuaries review the reserving assumptions and methodologies on a quarterly basis with loss estimates being subject to a semi-annual independent review by external actuaries. The results of the independent review are presented to the

Risk disclosures: continued

Group's Audit Committee. The Group has also established Reserve Committees at the operating entity level, which have responsibility for the review of large claims and IBNR levels, monitoring their development and approving any changes in reserving methodology and assumptions.

The extent to which the reserving process relies on management's judgement is dependent on a number of factors including whether the business is insurance or reinsurance, whether it is short-tail or long-tail and whether the business is written on an excess of loss or pro-rata basis. Generally, the Group writes most of its business on a direct excess of loss basis and the Group does not currently write a significant amount of long-tail business.

Insurance versus reinsurance

Loss reserve calculations, whether reserving for direct insurance business or for reinsurance classes, are not precise in that they deal with the inherent uncertainty of assumptions regarding future reporting and development patterns, frequency and severity trends, claims settlement practices, potential changes in the legal environment and other factors, such as inflation. The estimates and judgements relied on in making loss reserve calculations are based on a number of factors and may be revised as additional experience or other data becomes available. Loss reserve calculations are also reviewed as new or improved methodologies are developed and as laws or regulations change.

Furthermore, as a business operating within a broker market, management must rely on loss information reported to brokers by other insurers and their loss adjusters, who must estimate their own losses at the policy level, often based on incomplete and changing information. The information management receives varies by cedant and may include paid losses, estimated case reserves and an estimated provision for IBNR reserves. Additionally, reserving practices and the quality of data reporting may vary among ceding companies, which adds further uncertainty to management's estimates of the ultimate losses.

Short-tail versus long-tail

In general, claims relating to short-tail risks, such as the majority of risks underwritten by the Group, are reported more promptly than those relating to long-tail risks, including the majority of casualty risks. The timeliness of reporting can be affected by such factors as the nature of the event causing the loss, the location of the loss, and whether the losses are from policies in force with insureds, primary insurers, reinsurers or vendor binding authorities.

Excess of loss versus proportional

For excess of loss contracts, which make up the majority of the Group's business, management are aided by the fact that each policy has a defined limit of liability arising from one event. Once that limit has been reached, there is no further exposure to additional losses from that policy for the same event. For proportional business, an initial estimated loss and loss expense ratio is generally used. This is based upon information provided by the insured or ceding company and/or their broker and management's historical experience of that treaty, if any, and the estimate is adjusted as actual experience becomes known.

Time lags

There is a time lag inherent in reporting from the original claimant to the primary insurer or binding authority holder to the broker and then to the reinsurer. Also, the combination of low claims frequency and high severity makes the available data more volatile and less useful for predicting ultimate losses. In the case of proportional contracts, reliance is placed on an analysis of a contract's historical experience, industry information, and the professional judgement of underwriters in estimating reserves for these contracts. In addition, if available, reliance is placed partially on ultimate loss ratio forecasts as reported by insureds or cedants, which are normally subject to a quarterly or six-month lag.

Uncertainty

As a result of the time lag described above, an estimation must be made of IBNR reserves, which consist of a provision for additional development in excess of the case reserves reported by insureds or ceding companies, as well as a provision for claims which have occurred but which have not yet been reported by insureds or ceding companies. Due to the degree of reliance that is necessarily placed on insureds or ceding companies for claims reporting, the associated time lag, the low frequency/high severity nature of much of the business that the Group underwrites, and the varying reserving practices among ceding companies, reserve estimates are highly dependent on management judgement and are therefore uncertain. During the loss settlement period, which may be years in duration, additional facts regarding individual claims and trends often will become known, and current laws and case law may change as well as regulatory directives, with a consequent impact on reserving.

For certain catastrophic events there are greater uncertainties underlying the assumptions and associated estimated reserves for losses and loss adjustment expenses. Complexity resulting from problems such as policy coverage issues, multiple events affecting one geographic area and the resulting impact on claims adjusting (including the allocation of claims to the specific event and the effect of demand surge on the cost of building materials and labour) by, and communications from, insureds or ceding companies, can cause delays to the timing with which the Group is notified of changes to loss estimates.

As at 31 December 2018, management's estimates for IBNR represented 39.3 per cent of total net loss reserves (31 December 2017 – 44.8 per cent). The estimate relates to catastrophe events during recent years, in addition to potential claims on non-elemental risks where timing delays in insured or cedant reporting may mean losses could have occurred of which the Group was not made aware by the balance sheet date.

B. Market risk

The Group is at risk of loss due to movements in market factors. The main risks include:

- i. Insurance risk;
- ii. Investment risk;
- iii. Debt risk; and
- iv. Currency risk.

These risks, and the management thereof, are described below.

I. Insurance risk

The Group is exposed to insurance market risk from several sources, including the following:

- the advent or continuation of a soft market, which may result in a stabilisation or decline in premium rates and/or terms and conditions for certain lines, or across all lines;
- the actions and reactions of key competitors, which may directly result in volatility in premium volumes and rates, fee levels and other input costs;
- market events, including unusual inflation in rates, may result in a limit in the availability of cover, causing political intervention or national remedies;
- failure to maintain broker, binding authority and client relationships, leading to a limited or substandard choice of risks inconsistent with the Group's risk appetite;
- changes in regulation including capital, governance or licensing requirements; and
- changes in the geopolitical environment including the UK's impending exit from the EU and the implications for business passporting within the EEA.

The most important method to mitigate insurance market risk is to maintain strict underwriting standards. The Group manages insurance market risk in numerous ways, including the following:

- reviews and amends underwriting plans and outlook as necessary;
- reduces exposure to market sectors where conditions have reached unattractive levels;
- purchases appropriate, cost-effective reinsurance cover to mitigate exposures;
- closely monitors changes in rates and terms and conditions;
- ensures through continuous capital management that it does not allow surplus capital to drive underwriting appetite;
- holds a daily underwriting meeting for LICL and LUK to discuss, inter alia, market conditions and opportunities;
- reviews all new and renewal business post-underwriting for Cathedral;
- reviews outputs from BLAST to assess up-to-date profitability of classes and sectors;
- holds a quarterly Underwriting and Underwriting Risk Committee meeting to review underwriting strategy;
- holds a fortnightly RRC meeting to monitor estimated exposures to peak zone elemental losses and RDSs; and
- holds regular meetings with regulators.

Insurance contract liabilities are not directly sensitive to the level of market interest rates, as they are undiscounted and contractually non-interest bearing.

Risk disclosures: continued

II. Investment risk

Movements in investments resulting from changes in interest and inflation rates and currency exchange rates, amongst other factors, may lead to an adverse impact on the value of the Group's investment portfolio. Investment guidelines are established by the Investment Committee of the Board of Directors to manage this risk. Investment guidelines set parameters within which the Group's external investment managers must operate. Important parameters include guidelines on permissible asset classes, duration ranges, credit quality, currency, maturity, sectors, geographical, sovereign and issuer exposures. Compliance with guidelines is monitored on a monthly basis. Any adjustments to the investment guidelines are approved by the Investment Committee and the Board of Directors.

The Group's fixed maturity portfolios are managed by five external investment managers. The Group also has a diversified low volatility multi-strategy portfolio of hedge funds and a small equity portfolio. The performance of the managers is monitored on an ongoing basis.

Within the Group's investment guidelines are subsets of guidelines for the portion of funds required to meet near-term obligations and cash flow needs following an extreme event. These guidelines add a further degree of requirements, including fewer allowable asset classes, higher credit quality, shorter duration and higher liquidity. The primary objectives for this portion of assets are capital preservation and providing liquidity to meet insurance and other near-term obligations. In addition to cash managed internally, funds held in the investment portfolio to cover this potential liability are designated as the core and core plus portfolios and the portfolio duration is matched to the duration of the insurance liabilities, within an agreed range. The core and core plus portfolios are invested in fixed maturity securities, fixed maturity funds and cash and cash equivalents. The combined core and core plus portfolios may, at times, contain assets significantly in excess of those required to meet insurance liabilities or other defined funding needs.

Assets in excess of those required to be held in the core and core plus portfolios are typically held in the surplus portfolio. The surplus portfolio is invested in fixed maturity securities, principal protected equity-linked notes, derivative instruments, cash and cash equivalents, equity securities and hedge funds. In general, the duration of the surplus portfolio is slightly longer than the core or core plus portfolio.

The Group reviews the composition, duration and asset allocation of its investment portfolio on a regular basis in order to respond to changes in interest rates and other market conditions. If certain asset classes are anticipated to produce a higher return within management's risk tolerance, an adjustment in asset allocation may be made. Conversely, if the risk profile is expected to move outside of tolerance levels, adjustments may be made to reduce the risks in the portfolio.

The investment portfolio is currently structured to perform similarly in risk-on and risk-off environments. The Group endeavours to limit losses in risk-on, risk-off and interest rate hike scenarios. The Group models various periods of significant stress in order to better understand the investment portfolio's risks and exposures. The scenarios represent what could, and most likely will, occur (albeit not in the exact form of the scenarios, which are based on historic periods of volatility). The Group also monitors the portfolio impact of more severe disaster scenarios consisting of extreme shocks.

The IRRC meets quarterly to ensure that the Group's strategic and tactical investment actions are consistent with investment risk preferences, appetite, risk and return objectives and tolerances. The IRRC also helps further develop the risk tolerances to be incorporated into the ERM framework.

The investment mix of the fixed maturity portfolios is as follows:

As at 31 December 2018	Core		Core plus		Surplus		Total	
	\$m	%	\$m	%	\$m	%	\$m	%
– Short-term investments	48.1	3.2	175.6	11.8	1.8	0.1	225.5	15.1
– Fixed maturity funds	11.4	0.8	–	–	–	–	11.4	0.8
– U.S. treasuries	69.6	4.7	113.1	7.6	3.9	0.3	186.6	12.6
– Other government bonds	15.9	1.0	29.5	2.0	13.3	0.9	58.7	3.9
– U.S. municipal bonds	1.0	0.1	4.4	0.3	–	–	5.4	0.4
– U.S. government agency debt	13.1	0.9	69.6	4.7	5.4	0.4	88.1	6.0
– Asset backed securities	16.5	1.1	62.2	4.2	50.6	3.4	129.3	8.7
– U.S. government agency mortgage backed securities	4.8	0.3	15.0	1.0	60.1	4.0	79.9	5.3
– Non-agency mortgage backed securities	3.8	0.3	10.4	0.7	6.9	0.5	21.1	1.5
– Agency commercial mortgage backed securities	–	–	1.9	0.1	3.3	0.2	5.2	0.3
– Non-agency commercial mortgage backed securities	0.4	–	–	–	0.1	–	0.5	–
– Bank loans	–	–	–	–	109.1	7.3	109.1	7.3
– Corporate bonds	200.1	13.5	277.9	18.7	43.6	2.9	521.6	35.1
Total fixed maturity securities – AFS	384.7	25.9	759.6	51.1	298.1	20.0	1,442.4	97.0
Fixed maturity securities – at FVTPL	–	–	–	–	45.0	3.0	45.0	3.0
Total fixed maturity securities	384.7	25.9	759.6	51.1	343.1	23.0	1,487.4	100.0

As at 31 December 2017	Core		Core plus		Surplus		Total	
	\$m	%	\$m	%	\$m	%	\$m	%
– Short-term investments	8.8	0.6	98.7	6.7	3.6	0.2	111.1	7.5
– Fixed maturity funds	31.0	2.1	–	–	–	–	31.0	2.1
– U.S. treasuries	100.7	6.8	118.2	8.0	16.8	1.1	235.7	15.9
– Other government bonds	16.4	1.1	13.4	0.9	41.6	2.8	71.4	4.8
– U.S. municipal bonds	1.9	0.1	4.1	0.3	–	–	6.0	0.4
– U.S. government agency debt	17.1	1.2	34.5	2.3	18.9	1.3	70.5	4.8
– Asset backed securities	15.9	1.1	56.7	3.8	71.4	4.8	144.0	9.7
– U.S. government agency mortgage backed securities	8.4	0.6	22.4	1.5	110.2	7.6	141.0	9.7
– Non-agency mortgage backed securities	2.2	0.1	3.3	0.2	7.7	0.5	13.2	0.8
– Non-agency commercial mortgage backed securities	–	–	0.2	–	–	–	0.2	–
– Bank loans	–	–	–	–	106.7	7.2	106.7	7.2
– Corporate bonds	168.7	11.4	264.7	18.0	88.0	6.0	521.4	35.4
Total fixed maturity securities – AFS	371.1	25.1	616.2	41.7	464.9	31.5	1,452.2	98.3
Fixed maturity securities – at FVTPL	–	–	–	–	25.7	1.7	25.7	1.7
Total fixed maturity securities	371.1	25.1	616.2	41.7	490.6	33.2	1,477.9	100.0

Risk disclosures: continued

Bank loans, corporate bonds, fixed maturity securities at FVTPL and other government bonds by country are as follows:

As at 31 December 2018	Financials \$m	Other industries \$m	Total ¹ \$m	Other government bonds \$m	Total ² \$m
United States	171.7	295.7	467.4	–	467.4
United Kingdom	33.3	18.7	52.0	0.1	52.1
Canada	10.7	10.9	21.6	19.8	41.4
Japan	17.9	7.8	25.7	–	25.7
Netherlands	4.6	8.6	13.2	7.2	20.4
France	13.0	2.2	15.2	1.8	17.0
Switzerland	7.8	7.5	15.3	–	15.3
Germany	1.7	3.3	5.0	7.5	12.5
Spain	9.8	0.7	10.5	–	10.5
Sweden	4.1	–	4.1	6.1	10.2
Denmark	4.9	–	4.9	3.4	8.3
Supranational	7.0	–	7.0	–	7.0
Australia	6.8	–	6.8	–	6.8
Italy	1.5	3.5	5.0	–	5.0
Belgium	–	4.0	4.0	0.5	4.5
Other	5.2	12.8	18.0	12.3	30.3
Total	300.0	375.7	675.7	58.7	734.4

1. Includes bank loans, corporate bonds and fixed maturity securities at FVTPL.

2. Includes bank loans, corporate bonds, fixed maturity securities at FVTPL and other government bonds.

As at 31 December 2017	Financials \$m	Other industries \$m	Total ¹ \$m	Other government bonds \$m	Total ² \$m
United States	183.4	300.2	483.6	–	483.6
Canada	13.4	13.6	27.0	19.3	46.3
United Kingdom	15.5	12.3	27.8	2.0	29.8
Netherlands	9.6	10.4	20.0	6.3	26.3
Germany	5.2	5.7	10.9	13.9	24.8
France	15.0	3.5	18.5	5.1	23.6
Australia	14.5	0.2	14.7	1.0	15.7
Japan	12.6	2.6	15.2	–	15.2
Sweden	6.9	–	6.9	5.1	12.0
Luxembourg	1.5	5.3	6.8	–	6.8
Denmark	2.1	0.3	2.4	3.9	6.3
Switzerland	3.0	2.6	5.6	–	5.6
India	–	–	–	4.2	4.2
Spain	3.5	0.7	4.2	–	4.2
China	–	1.2	1.2	2.7	3.9
Other	5.9	3.1	9.0	7.9	16.9
Total	292.1	361.7	653.8	71.4	725.2

1. Includes bank loans, corporate bonds and fixed maturity securities at FVTPL.

2. Includes bank loans, corporate bonds, fixed maturity securities at FVTPL and other government bonds.

The sector allocation of bank loans, corporate bonds and fixed maturity securities at FVTPL is as follows:

As at 31 December	2018		2017	
	\$m	%	\$m	%
Industrial	344.8	51.0	329.1	50.3
Financial	293.0	43.4	289.5	44.3
Utility	30.9	4.6	32.6	5.0
Supranationals	7.0	1.0	2.6	0.4
Total	675.7	100.0	653.8	100.0

The Group's net asset value is directly impacted by movements in the fair value of investments held. Values can be impacted by movements in interest rates, credit ratings, exchange rates, current economic environment and outlook.

The Group's investment portfolio is mainly comprised of fixed maturity securities and cash and cash equivalents. Fixed maturity funds are overseas deposits held by the syndicates in trust for the benefit of the policyholders in those overseas jurisdictions. They consist of high quality, short duration fixed maturity securities. The Group also has a hedge fund portfolio as well as a small equity portfolio. The estimated fair value of the Group's fixed maturity portfolio is generally inversely correlated to movements in market interest rates. If market interest rates fall, the fair value of the Group's fixed maturity securities would tend to rise and vice versa.

The sensitivity of the price of fixed maturity securities, and certain derivatives, to movements in interest rates is indicated by their duration. The greater a security's duration, the greater its price volatility to movements in interest rates. The sensitivity of the Group's fixed maturity and derivative investment portfolio to interest rate movements is detailed below, assuming linear movements in interest rates:

As at 31 December	2018		2017	
	\$m	%	\$m	%
Immediate shift in yield (basis points)				
100	(22.4)	(1.5)	(28.5)	(1.9)
75	(16.8)	(1.1)	(21.4)	(1.4)
50	(11.2)	(0.8)	(14.3)	(1.0)
25	(5.6)	(0.4)	(7.1)	(0.5)
(25)	6.4	0.4	7.2	0.5
(50)	12.7	0.9	14.4	1.0
(75)	19.1	1.3	21.6	1.5
(100)	25.5	1.7	28.8	1.9

The Group mitigates interest rate risk on the investment portfolio by establishing and monitoring duration ranges in its investment guidelines. The Group may manage duration through the use of interest rate futures and swaptions from time to time. The duration of the core portfolio is matched to the modelled duration of the insurance reserves, within a permitted range. The permitted duration range for the core plus portfolio is between zero and four years and for the surplus portfolio is between one and five years.

The total durations of the externally managed portfolios, which are comprised of fixed maturity, cash and cash equivalents and certain derivatives, are as follows:

As at 31 December	2018 years	2017 years
Core portfolio	1.8	1.7
Core plus portfolio	1.7	1.7
Surplus portfolio ¹	1.3	2.0
Overall external portfolio¹	1.6	1.8

1. Including duration overlay.

The overall duration for fixed maturity, managed cash and cash equivalents and certain derivatives is 1.5 years (2017 – 1.7 years).

In addition to duration management, the Group monitors VaR to measure potential losses in the estimated fair values of its cash and invested assets and to understand and monitor risk. The VaR calculation is performed using variance/covariance risk modelling to capture the cash flows and embedded optionality of the portfolio. Securities are valued individually using standard market pricing models. These security valuations serve as the input to many risk analytics, including full valuation risk analyses, as well as parametric methods that rely on option-adjusted risk sensitivities to approximate the risk and return profiles of the portfolio.

Risk disclosures: continued

The principal VaR measure that is produced is an annual VaR at the 99th percentile confidence level. Under normal conditions, the portfolio is not expected to lose more than the VaR metric listed in the table below, 99 per cent of the time over a one-year time horizon.

The Group's annual VaR calculations are as follows:

As at 31 December	2018		2017	
	\$m	% of shareholders' equity	\$m	% of shareholders' equity
99th percentile confidence level ¹	26.0	2.4	27.0	2.4

1. Including the impact of internal foreign exchange hedges.

Derivative financial instruments

The Group's investment guidelines permit the investment managers to utilise exchange-traded futures and options contracts, and OTC instruments including interest rate swaps, credit default swaps, interest rate swaptions and forward foreign currency contracts. Derivatives are used for yield enhancement, duration management, interest rate and foreign currency exposure management or to obtain an exposure to a particular financial market. These positions are monitored regularly. The Group may also use OTC or exchange-traded managed derivatives to mitigate interest rate risk and foreign currency exposures. The Group principally has exposure to derivatives related to the following types of risks: foreign currency risk, interest rate risk and credit risk.

The Group currently invests in the following derivative financial instruments:

- a. Futures;
- b. Options;
- c. Forward foreign currency contracts; and
- d. Swaps.

The net gains (losses) on the Group's derivative financial instruments recognised in the consolidated statement of comprehensive income (loss) are as follows:

As at 31 December 2018	Net realised losses \$m	Net foreign exchange gains \$m	Financing gains \$m
Interest rate futures	(1.0)	–	–
Forward foreign currency contracts	–	1.6	–
Interest rate swaps	–	–	0.9
Total	(1.0)	1.6	0.9

As at 31 December 2017	Net realised losses \$m	Net foreign exchange losses \$m	Financing gains \$m
Interest rate futures	(0.7)	–	–
Forward foreign currency contracts	–	(0.7)	–
Total	(0.7)	(0.7)	–

The estimated fair values of the Group's derivative instruments are as follows:

As at 31 December	2018				2017			
	Other investments \$m	Other receivables \$m	Other payables \$m	Interest rate swaps \$m	Other investments \$m	Other receivables \$m	Other payables \$m	Interest rate swaps \$m
Forward foreign currency contracts	(0.3)	1.1	(1.0)	–	(0.5)	1.6	(0.1)	–
Interest rate swaps	–	–	–	(0.4)	–	–	–	(2.0)
Total	(0.3)	1.1	(1.0)	(0.4)	(0.5)	1.6	(0.1)	(2.0)

A. Futures

The Group's investment guidelines permit the use of futures which provide the Group with participation in market movements, determined by the underlying instrument on which the futures contract is based, without holding the instrument itself or the individual securities. This approach allows the Group more efficient and less costly access to the exposure than would be available by the exclusive use of individual fixed maturity and money market securities. Exchange-traded futures contracts may also be used as substitutes for ownership of the physical securities.

All futures contracts are held on a non-leveraged basis. An initial margin is provided, which is a deposit of cash and/or securities in an amount equal to a prescribed percentage of the contract value. The fair value of futures contracts is estimated daily and the margin is adjusted accordingly with unrealised gains and/or losses settled daily in cash and/or securities. A realised gain or loss is recognised when the contract is closed.

Futures contracts expose the Group to market risk to the extent that adverse changes occur in the estimated fair values of the underlying securities. Exchange-traded futures are, however, subject to a number of safeguards to ensure that obligations are met. These include the use of clearing houses (thus reducing counterparty credit risk), the posting of margins and the daily settlement of unrealised gains and losses. The amount of credit risk is therefore considered low. The investment guidelines restrict the maximum notional futures position as a percentage of the investment portfolio's estimated fair value.

The Group's exposure to interest rate futures are as follows:

As at 31 December	2018			2017		
	Notional long \$m	Notional short \$m	Net notional long (short) \$m	Notional long \$m	Notional short \$m	Net notional long (short) \$m
Interest rate futures	69.1	94.1	(25.0)	100.1	103.5	(3.4)
Total	69.1	94.1	(25.0)	100.1	103.5	(3.4)

B. Options

The Group's investment guidelines permit the use of exchange-traded options on U.S. treasury futures and Euro dollar futures, which are used to manage exposure to interest rate risk and also to hedge duration. Exchange-traded options are held on a similar basis to futures and are subject to similar safeguards. Options are contractual arrangements that give the purchaser the right, but not the obligation, to either buy or sell an instrument at a specific set price at a predetermined future date. The Group may enter into option contracts that are secured by holdings in the underlying securities or by other means which permit immediate satisfaction of the Group's obligations. The notional amount of options is \$nil as at 31 December 2018 and 2017.

The investment guidelines also restrict the maximum notional options exposure as a percentage of the investment portfolio's estimated fair value.

Risk disclosures: continued

C. Forward foreign currency contracts

A forward foreign currency contract is a commitment to purchase or sell a foreign currency at a future date, at a defined rate. The Group may utilise forward foreign currency contracts to gain exposure to a certain currency or market rate or manage the impact of fluctuations in foreign currencies on the value of its foreign currency denominated investments, debt, insurance related currency exposures and/or expenses.

Forward contracts expose the Group to credit, market and liquidity risks. Credit risk arises from the potential inability of counterparties to perform under the terms of the contract. The Group is exposed to market risk to the extent that adverse changes occur in the exchange rate of the underlying foreign currency. Liquidity risk represents the possibility that the Group may not be able to rapidly adjust the size of its forward positions at a reasonable price in times of high volatility and financial stress. These risks are mitigated by requiring a minimum counterparty credit quality, restricting the maximum notional exposure as a percentage of the investment portfolio's estimated fair value and restricting exposures to foreign currencies, individually and in aggregate, as a percentage of the investment portfolio's estimated fair value.

The notional amount of a derivative contract is the underlying quantity upon which payment obligations are calculated. A long position is equivalent to buying the underlying currency whereas a short position is equivalent to having sold the underlying currency.

The Group has the following open forward foreign currency contracts:

As at 31 December	2018			2017		
	Notional long \$m	Notional short \$m	Net notional long (short) \$m	Notional long \$m	Notional short \$m	Net notional long (short) \$m
Canadian Dollar	–	20.3	(20.3)	–	26.9	(26.9)
Euro	22.9	38.0	(15.1)	24.0	44.6	(20.6)
Australian Dollar	–	5.8	(5.8)	–	7.2	(7.2)
Japanese Yen	–	3.6	(3.6)	–	3.9	(3.9)
Swedish Krona	–	2.8	(2.8)	–	3.0	(3.0)
Mexican Peso	0.7	–	0.7	1.7	–	1.7
Malaysian Ringgit	3.9	–	3.9	4.9	–	4.9
British Pound	67.3	3.5	63.8	53.5	4.0	49.5
Total	94.8	74.0	20.8	84.1	89.6	(5.5)

D. Swaps

The Group's investment guidelines permit the use of interest rate swaps and credit default swaps which are traded primarily OTC.

Interest rate swaps are used to manage interest rate exposure, portfolio duration or to capitalise on anticipated changes in interest rate volatility without investing directly in the underlying securities. Interest rate swap agreements entail the exchange of commitments to pay or receive interest, such as an exchange of floating rate payments for fixed rate payments, with respect to a notional amount of principal. These agreements involve elements of credit and market risk. Such risks include the possibility that there may not be a liquid market, that the counterparty may default on its obligation to perform, or that there may be unfavourable movements in interest rates. These risks are mitigated through defining a minimum counterparty credit quality and a maximum notional exposure to interest rate swaps as a percentage of the investment portfolio's estimated fair value. The notional amount of interest rate swaps held in the investment portfolio is not material as at 31 December 2018 and 2017. Through the use of interest rate swaps, the Group has fixed the interest rate on Lancashire's subordinated loan notes until December 2020. As at 31 December 2018 the notional amount of interest rate swaps held for hedging purposes was \$124.5 million (31 December 2017 – \$125.8 million).

The Group may utilize credit default swaps to add or reduce credit risk to an individual issuer, or a basket of issuers, without investing directly in their securities. The group did not hold any credit default swaps at 31 December 2018 or 31 December 2017.

III. Debt risk

The Group has issued long-term debt as described in note 18. The LHL subordinated loan notes due in 2035 bear interest at a floating rate that is reset on a quarterly basis, plus a fixed margin of 3.70 per cent. The Group is subject to interest rate risk on the coupon payments of these subordinated loan notes. The Group has mitigated the interest rate risk on the LHL subordinated loan notes by entering into interest rate swap contracts on the following loan notes:

	Maturity date	Interest hedged
Subordinated loan notes \$97.0 million	15 December 2035	100%
Subordinated loan notes €24.0 million	15 June 2035	100%

The interest rate swaps expire on 15 December 2020, therefore until 2020 the Group has a fixed interest rate on the LHL subordinated loan notes due in 2035.

The senior unsecured notes maturing 1 October 2022 bear interest at a fixed rate of 5.70 per cent and therefore the Group is not exposed to cash flow interest rate risk on this long-term debt.

The Group is subject to interest rate risk on the coupon payments on Cathedral's long-term debt described in note 18. An increase of 100 basis points on the EURIBOR and LIBOR three-month deposit rates would result in an increase in the interest expense on long-term debt for the Group of approximately \$0.7 million on an annual basis.

IV. Currency risk

The Group underwrites from two locations, Bermuda and London, although risks are assumed on a worldwide basis. Risks assumed are predominantly denominated in U.S. dollars.

The Group is exposed to currency risk to the extent its assets are denominated in different currencies to its liabilities. The Group is also exposed to non-retranslation risk on non-monetary assets such as unearned premiums and deferred acquisition costs. Exchange gains and losses can impact profit or loss.

The Group hedges monetary non-U.S. dollar liabilities primarily with non-U.S. dollar assets, but may also use derivatives to mitigate foreign currency exposures. The Group's main foreign currency exposure relates to its insurance obligations, cash holdings, investments, premiums receivable, dividends payable and the Euro denominated subordinated loan notes discussed in note 18. The Group uses forward foreign currency contracts for the purposes of managing currency exposures. See page 126 for a listing of the Group's open forward foreign currency contracts.

The Group's assets and liabilities, categorised by currency at their translated carrying amount, are as follows:

	U.S.\$ \$m	Sterling \$m	Euro \$m	Japanese Yen \$m	Other \$m	Total \$m
Assets						
Cash and cash equivalents	86.0	15.2	19.4	9.0	25.0	154.6
Accrued interest receivable	6.6	0.1	0.1	–	–	6.8
Investments	1,546.0	18.0	69.8	–	25.2	1,659.0
Inwards premiums receivable from insureds and cedants	270.9	11.2	20.6	5.3	10.1	318.1
Reinsurance assets	361.1	13.6	12.1	–	2.6	389.4
Other receivables	26.7	8.2	–	–	0.4	35.3
Investment in associate	67.1	–	–	–	–	67.1
Property, plant and equipment	0.2	1.2	–	–	–	1.4
Deferred acquisition costs	48.4	8.0	11.6	1.0	5.2	74.2
Intangible assets	153.8	–	–	–	–	153.8
Total assets as at 31 December 2018	2,566.8	75.5	133.6	15.3	68.5	2,859.7

	U.S.\$ \$m	Sterling \$m	Euro \$m	Japanese Yen \$m	Other \$m	Total \$m
Liabilities						
Losses and loss adjustment expenses	685.4	59.5	113.7	19.7	36.7	915.0
Unearned premiums	265.8	25.4	43.3	10.4	25.7	370.6
Insurance contracts – other payables	26.9	4.7	2.9	–	1.5	36.0
Amounts payable to reinsurers	75.8	2.8	2.5	–	0.2	81.3
Deferred acquisition costs ceded	4.7	–	2.1	–	0.3	7.1
Other payables	23.9	21.0	0.4	–	0.1	45.4
Corporation tax payable	–	0.9	–	–	–	0.9
Deferred tax liability	7.8	3.4	–	–	–	11.2
Interest rate swap	(0.8)	–	1.2	–	–	0.4
Long-term debt	284.4	–	39.9	–	–	324.3
Total liabilities as at 31 December 2018	1,373.9	117.7	206.0	30.1	64.5	1,792.2

Risk disclosures: continued

Assets	U.S.\$ \$m	Sterling \$m	Euro \$m	Japanese Yen \$m	Other \$m	Total \$m
Cash and cash equivalents	158.1	16.9	33.6	11.7	36.2	256.5
Accrued interest receivable	6.1	–	–	–	–	6.1
Investments	1,538.2	20.8	82.1	–	13.5	1,654.6
Inwards premiums receivable from insureds and cedants	252.1	13.4	19.7	2.3	10.4	297.9
Reinsurance assets	331.9	6.1	6.1	–	1.9	346.0
Other receivables	39.3	2.5	–	–	0.6	42.4
Investment in associate	59.4	–	–	–	–	59.4
Property, plant and equipment	0.3	2.3	–	–	–	2.6
Deferred acquisition costs	55.2	6.5	9.4	0.9	4.7	76.7
Intangible assets	153.8	–	–	–	–	153.8
Total assets as at 31 December 2017	2,594.4	68.5	150.9	14.9	67.3	2,896.0
<hr/>						
Liabilities	U.S.\$ \$m	Sterling \$m	Euro \$m	Japanese Yen \$m	Other \$m	Total \$m
Losses and loss adjustment expenses	773.5	38.5	72.9	8.6	40.0	933.5
Unearned premiums	259.7	20.7	37.9	8.6	24.0	350.9
Insurance contracts – other payables	30.4	5.8	2.6	–	1.9	40.7
Amounts payable to reinsurers	62.8	1.5	1.0	–	0.2	65.5
Deferred acquisition costs ceded	2.1	–	0.3	–	0.1	2.5
Other payables	30.8	16.4	0.7	–	0.1	48.0
Corporation tax payable	–	2.8	–	–	–	2.8
Deferred tax liability	7.8	8.7	–	–	–	16.5
Interest rate swap	0.2	–	1.8	–	–	2.0
Long-term debt	283.3	–	43.0	–	–	326.3
Total liabilities as at 31 December 2017	1,450.6	94.4	160.2	17.2	66.3	1,788.7

The impact on net income of a proportional foreign exchange movement of 10.0 per cent up and 10.0 per cent down against the U.S. dollar at the year end spot rates would be an increase or decrease of \$5.4 million (2017 – \$3.5 million).

C. Liquidity risk

Liquidity risk is the risk that cash may not be available to pay obligations when they are due without incurring an unreasonable cost. The Group's main exposures to liquidity risk are with respect to its insurance and investment activities. The Group is exposed if proceeds from financial assets are not sufficient to fund obligations arising from its insurance contracts. The Group can be exposed to daily calls on its available investment assets, principally to settle insurance claims and to fund trust accounts following a large catastrophe loss.

Exposures in relation to insurance activities are as follows:

- large catastrophic events, or multiple medium-sized events in quick succession, resulting in a requirement to pay a large value of claims within a relatively short time frame or fund trust accounts;
- failure of insureds or cedants to meet their contractual obligations with respect to the payment of premiums in a timely manner; and
- failure of reinsurers to meet their contractual obligations with respect to the payment of claims in a timely manner.

Exposures in relation to investment activities are as follows:

- adverse market movements and/or a duration mismatch to obligations, resulting in investments being disposed of at a significant realised loss; and
- an inability to liquidate investments due to market conditions.

The maturity dates of the Group's fixed maturity portfolio are as follows:

As at 31 December 2018	Core \$m	Core plus \$m	Surplus \$m	Total \$m
Less than one year	100.2	245.3	11.9	357.4
Between one and two years	104.9	156.0	35.3	296.2
Between two and three years	76.2	89.1	20.5	185.8
Between three and four years	30.0	66.4	18.0	114.4
Between four and five years	34.4	75.3	28.4	138.1
Over five years	13.5	38.0	108.0	159.5
Asset backed and mortgage backed securities	25.5	89.5	121.0	236.0
Total fixed maturity securities	384.7	759.6	343.1	1,487.4

As at 31 December 2017	Core \$m	Core plus \$m	Surplus \$m	Total \$m
Less than one year	89.5	211.0	12.6	313.1
Between one and two years	102.7	84.1	45.5	232.3
Between two and three years	95.6	103.1	27.2	225.9
Between three and four years	18.8	44.1	40.4	103.3
Between four and five years	27.3	49.4	48.9	125.6
Over five years	10.7	41.9	126.7	179.3
Asset backed and mortgage backed securities	26.5	82.6	189.3	298.4
Total fixed maturity securities	371.1	616.2	490.6	1,477.9

The maturity profile of the insurance contracts and financial liabilities of the Group is as follows:

As at 31 December 2018	Years until liability becomes due – undiscounted values					Total \$m
	Balance sheet \$m	Less than one \$m	One to three \$m	Three to five \$m	Over five \$m	
Losses and loss adjustment expenses	915.0	497.9	269.4	89.9	57.8	915.0
Insurance contracts – other payables	36.0	35.7	0.3	–	–	36.0
Amounts payable to reinsurers	81.3	81.3	–	–	–	81.3
Other payables	45.4	45.4	–	–	–	45.4
Interest rate swap	0.4	0.1	0.3	–	–	0.4
Long-term debt ¹	324.3	16.2	37.3	160.0	344.3	557.8
Total	1,402.4	676.6	307.3	249.9	402.1	1,635.9

1. The maturity profile of long-term debt includes accrued interest.

Risk disclosures: continued

As at 31 December 2017	Years until liability becomes due – undiscounted values					Total \$m
	Balance sheet \$m	Less than one \$m	One to three \$m	Three to five \$m	Over five \$m	
Losses and loss adjustment expenses	933.5	524.3	265.6	88.0	55.6	933.5
Insurance contracts – other payables	40.7	37.5	3.2	–	–	40.7
Amounts payable to reinsurers	65.5	65.5	–	–	–	65.5
Other payables	48.0	48.0	–	–	–	48.0
Interest rate swap	2.0	0.9	1.1	–	–	2.0
Long-term debt ¹	326.3	15.1	36.2	167.6	354.8	573.7
Total	1,416.0	691.3	306.1	255.6	410.4	1,663.4

1. The maturity profile of long-term debt includes accrued interest.

Actual maturities of the above may differ from contractual maturities because certain borrowers have the right to call or prepay certain obligations with or without call or prepayment penalties. While the estimation of the ultimate liability for losses and loss adjustment expenses is complex and incorporates a significant amount of judgement, the timing of payment of losses and loss adjustment expenses is also uncertain and cannot be predicted as simply as for other financial liabilities. Actuarial and statistical techniques, past experience and management's judgement have been used to determine a likely settlement pattern.

The Group manages its liquidity risks via its investment strategy to hold high quality, liquid securities, sufficient to meet its insurance liabilities and other near-term liquidity requirements. The creation of the core and core plus portfolios with their subset of guidelines aims to ensure funds are readily available to meet potential insurance liabilities in an extreme event plus other near-term liquidity requirements. In addition, the Group has established asset allocation and maturity parameters within the investment guidelines such that the majority of the investments are in high quality assets which could be converted into cash promptly and at minimal expense. The Group monitors market changes and outlook and reallocates assets as deemed necessary.

D. Credit risk

Credit risk is the risk that a counterparty may fail to pay, or repay, a debt or obligation. The Group is exposed to credit risk on its fixed maturity investment portfolio and derivative instruments, its inwards premiums receivable from insureds and cedants, and on any amounts recoverable from reinsurers.

Credit risk on the fixed maturity portfolio is mitigated through the Group's policy to invest in instruments of high credit quality issuers and to limit the amounts of credit exposure with respect to particular ratings categories and any one issuer. Securities rated below an S&P or equivalent rating of BBB-/Baa3 may comprise no more than 15.0 per cent of shareholders' equity. In addition, no one issuer, with the exception of U.S. government and agency securities, other G10 government guaranteed securities (excluding Italy) and Australian sovereign debt, should exceed 5.0 per cent of shareholders' equity. The Group is therefore not exposed to any significant credit concentration risk on its investment portfolio, except for fixed maturity securities issued by the U.S. government and government agencies and other highly-rated governments.

Credit risk on exchange-traded derivative instruments is mitigated by the use of clearing houses to reduce counterparty credit risk, requiring the posting of margins and settling of unrealised gains and losses daily. Credit risk on OTC derivatives is mitigated by monitoring the creditworthiness of the counterparties and by requiring collateral amounts exceeding predetermined thresholds to be posted for positions which have accrued gains.

Credit risk on inwards premiums receivable from insureds and cedants is managed by conducting business with reputable broking organisations, with whom the Group has established relationships, and by rigorous cash collection procedures. The Group also has a broker approval process in place. Binding authorities are subject to standard market controls including credit control. Credit risk from reinsurance recoverables is primarily managed by the review and approval of reinsurer security, as discussed on page 117.

The table below presents an analysis of the Group's major exposures to counterparty credit risk, based on their rating. The table includes amounts due from policyholders and unsettled investment trades. The quality of these receivables is not graded but, based on management's historical experience, there is limited default risk associated with these amounts.

As at 31 December 2018	Cash and fixed maturity securities \$m	Inwards premiums receivable and other receivables \$m	Reinsurance recoveries \$m
AAA	335.9	–	–
AA+, AA, AA-	586.2	–	3.6
A+, A, A-	402.6	87.0	208.3
BBB+, BBB, BBB-	219.7	–	–
Other ¹	97.6	276.2	111.0
Total	1,642.0	363.2	322.9

1. Reinsurance recoveries classified as 'other' include \$100.5 million of reserves that are fully collateralised.

As at 31 December 2017	Cash and fixed maturity securities \$m	Inwards premiums receivable and other receivables \$m	Reinsurance recoveries \$m
AAA	368.0	–	–
AA+, AA, AA-	621.8	–	2.7
A+, A, A-	403.7	69.5	177.0
BBB+, BBB, BBB-	237.3	–	–
Other ¹	103.6	291.5	104.4
Total	1,734.4	361.0	284.1

1. Reinsurance recoveries classified as 'other' include \$93.6 million of reserves that are fully collateralised.

The counterparty to the Group's long-term debt interest rate swaps is currently rated A by S&P.

The following table shows inwards premiums receivable that are past due but not impaired:

	2018 \$m	2017 \$m
Less than 90 days past due	8.5	15.3
Between 91 and 180 days past due	5.5	5.3
Over 180 days past due	8.4	14.0
Total	22.4	34.6

Provisions of \$2.9 million (2017 – \$2.4 million) have been made for impaired or irrecoverable balances and \$0.5 million (2017 – \$1.4 million) was charged to the consolidated statement of comprehensive income (loss) in respect of bad debts.

E. Operational risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes or systems. The Group and its subsidiaries have identified and evaluated their key operational risks and these are incorporated in the risk registers and modelled within the subsidiaries' capital models. The Group has also established, and monitors compliance with, internal operational risk tolerances. The RRC reviews operational risk on at least an annual basis and operational risk is covered in the Group CRO's quarterly ORSA report to the LHL Board and entity boards and in the Cathedral Risk, Capital and Compliance Committee reporting.

In order to manage operational risks, the Group has implemented a robust governance framework. Policies and procedures are documented and identify the key risks and controls within processes. The Group's internal audit function provides independent feedback with regard to the accuracy and completeness of key risks and controls, and independently verifies the effective operation of these through substantive testing. All higher risk areas are subject to an annual audit while compliance with tax operating guidelines is audited quarterly. Frequency of audits for all other areas varies from quarterly at the most frequent to a minimum of once every four years, on a rotational basis.

Risk disclosures: continued

F. Strategic risk

The Group has identified several strategic risks. These include:

- the risks that either the poor execution of the business plan or an inappropriate business plan in itself results in a strategy that fails to adequately reflect the trading environment, resulting in an inability to optimise performance, including reputational risk;
- the risks of the failure to maintain adequate capital, accessing capital at an inflated cost or the inability to access capital. This includes unanticipated changes in vendor, regulatory and/or rating agency models that could result in an increase in capital requirements or a change in the type of capital required; and
- the risks of succession planning, staff retention and key man risks.

I. Business plan risk

The Group addresses the risks associated with the planning and execution of the business plan through a combination of the following:

- an iterative annual forward-looking business planning process with cross departmental involvement;
- evaluation and approval of the annual business plan by the Board of Directors;
- regular monitoring of actual versus planned results;
- periodic review and re-forecasting as market conditions change; and
- feedback to senior management via the daily UMCC and fortnightly RRC meetings.

II. Capital management risk

The total capital of the Group is as follows:

As at 31 December	2018 \$m	2017 \$m
Shareholders' equity	1,067.2	1,106.9
Long-term debt	324.3	326.3
Total capital	1,391.5	1,433.2
Intangible assets	(153.8)	(153.8)
Total tangible capital	1,237.7	1,279.4

Risks associated with the effectiveness of the Group's capital management are mitigated as follows:

- regular monitoring of current and prospective regulatory and rating agency capital requirements;
- regular discussion with the Cathedral management team regarding Lloyd's capital requirements;
- oversight of capital requirements by the Board of Directors;
- ability to purchase sufficient, cost effective reinsurance;
- maintaining contact with vendors, regulators and rating agencies in order to stay abreast of upcoming developments; and
- participation in industry groups such as the International Underwriters Association, the Association of Bermuda Insurers and Reinsurers and the Lloyd's Market Association.

The Group reviews the level and composition of capital on an ongoing basis with a view to:

- maintaining sufficient capital for underwriting opportunities and to meet obligations to policyholders;
- maximising the risk-adjusted return to shareholders within predetermined risk tolerances;
- maintaining adequate financial strength ratings; and
- meeting internal and regulatory capital requirements.

Capital is increased or returned as appropriate. The retention of earnings generated leads to an increase in capital. Capital raising can include debt or equity and returns of capital may be made through dividends, share repurchases, a redemption of debt or any combination thereof. Other capital management tools and products available to the Group may also be utilised. All capital actions require approval by the Board of Directors.

Internal methods have been developed to review the profitability of classes of business and their estimated capital requirements plus the capital requirements of the combination of a wide range of other risk categories. These approaches are used by management in decision making.

The Group's aim is to maximise risk-adjusted returns for its shareholders across the cycle. The return is generated within a broad framework of risk parameters. The return is measured by management in terms of the IRR of the increase in FCBVS in the period adjusted for dividends accrued. This aim is a long-term goal, acknowledging that management expects both higher and lower results in the shorter term. The cyclical and volatility of the insurance market is expected to be the largest driver of this pattern. Management monitors these peaks and troughs – adjusting the Group's portfolio to make the most effective use of available capital and seeking to maximise the risk-adjusted return.

IRR achieved is as follows:

	Annual return %	Compound annual return %	Inception to date return %
31 December 2018	2.4	17.5	716.3
31 December 2017	(5.9)	17.7	608.2

IRR achieved in excess of the three-month treasury yield is as follows:

	Annual return %	Compound annual return %	Inception to date return %
31 December 2018	0.5	16.4	701.1
31 December 2017	(6.8)	16.7	595.2

The primary source of capital used by the Group is equity shareholders' funds and borrowings (note 18). As a holding company, LHL relies on dividends from its operating entities to provide the cash flow required for debt service and dividends to shareholders. The operating entities' ability to pay dividends and make capital distributions is subject to the legal and regulatory restrictions of the jurisdictions in which they operate.

Between 2014 and 2018 the PRA operated as the Group's Solvency II supervisor and the Group was subject to the requirements of the UK's Solvency II regime. Effective 1 January 2019, the Company will establish its Group supervisory and tax domiciles in Bermuda and therefore be supervised by the BMA. This change will not affect the Group's UK regulated insurance entities, which will continue to be regulated by the PRA and the FCA. Additionally, CUL is also regulated by Lloyd's.

Under Solvency II the basis for assessing capital and solvency comprises a market-consistent economic balance sheet and a SCR, using either an internal model or the standard formula. Both the Group and LUK calculate their SCR using the standard formula. The Group's and LUK's Solvency II own funds are primarily comprised of Tier 1 items for the years ended 31 December 2018 and 31 December 2017. Tier 1 capital is the highest quality capital under Solvency II with the greatest loss absorbing capacity, comprising share capital and retained earnings. For the years ended 31 December 2018 and 2017 the Group and LUK were more than adequately capitalised under the Solvency II regime.

LICL is regulated by the BMA and is required to monitor its solvency capital requirement under the BMA's regulatory framework, which has been assessed as equivalent to the Solvency II regime. LICL's capital requirement is calculated using the BSCR standard formula model. For the years ended 31 December 2018 and 2017, LICL was more than adequately capitalised under the BMA regulatory regime.

The Group's underwriting capacity in its Lloyd's syndicates must be supported by providing a deposit in the form of cash, securities or LOCs, which are referred to as FAL. The capital framework at Lloyd's requires each managing agent to calculate the capital requirement for each syndicate they manage. Solvency II internal models are used to determine capital requirements for Syndicate 2010 and Syndicate 3010 based on the uSCR. Lloyd's has the discretion to take into account other factors at syndicate or member level to uplift the calculated uSCR. This may include perceived deficiencies in the internal model result as well as the need to maintain Lloyd's overall security rating. Currently, as a minimum, Lloyd's applies a 35.0 per cent uplift to each syndicate's uSCR to arrive at the ECA.

Lloyd's then uses each syndicate's ECA as a basis for determining member level capital requirements, which is backed by FAL. For the 2019 calendar year the Group's corporate member's FAL requirement was set at 67.8 per cent (2018 - 66.5 per cent) of underwriting capacity supported. Further solvency adjustments are made to allow for open year profits and losses of the syndicates on which the corporate member participates. The Group has met its FAL requirement of £187.8 million as at 31 December 2018 (31 December 2017 - £184.3 million).

For the years ended 31 December 2018 and 2017 the capital requirements of all the Group's regulatory jurisdictions were met.

III. Retention risk

Risks associated with succession planning, staff retention and key man risks are mitigated through a combination of resource planning processes and controls, including:

- the identification of key personnel with appropriate succession plans;
- the identification of key team profit generators and function holders with targeted retention packages;
- documented recruitment procedures, position descriptions and employment contracts;
- resource monitoring and the provision of appropriate compensation, including equity based compensation which vests over a defined time horizon; and
- training schemes.

Notes to the accounts

1. General information

The Group is a provider of global specialty insurance and reinsurance products with operations in London and Bermuda. LHL was incorporated under the laws of Bermuda on 12 October 2005. On 16 March 2009, LHL was added to the Official List and its common shares were admitted to trading on the main market of the LSE; previously LHL's shares were listed on AIM, a subsidiary market of the LSE. Since 21 May 2007, LHL's shares have had a secondary listing on the BSX. LHL's head office and registered office is Power House, 7 Par-la-Ville Road, Hamilton HM 11, Bermuda.

The consolidated financial statements for the year ended 31 December 2018 include the Company's subsidiary companies, the Company's investment in associate, and the Group's share of the syndicates' assets and liabilities and income and expenses. A full listing of the Group's related parties can be found in note 23.

2. Segmental reporting

Management and the Board of Directors review the Group's business primarily by its five principal segments: Property, Energy, Marine, Aviation and Lloyd's. These segments are therefore deemed to be the Group's operating segments for the purposes of segmental reporting. Further sub-classes of business are underwritten within each operating segment. The nature of these individual sub-classes is discussed further in the risk disclosures section on pages 114 to 117. Operating segment performance is measured by the net underwriting profit or loss and the combined ratio.

All amounts reported are transactions with external parties and associates. There are no significant inter-segmental transactions and there are no significant insurance or reinsurance contracts that insure or reinsure risks in Bermuda, the Group's country of domicile.

Revenue and expense by operating segment

For the year ended 31 December 2018	Property \$m	Energy \$m	Marine \$m	Aviation \$m	Lloyd's \$m	Total \$m
Gross premiums written by geographic area						
U.S. and Canada	78.9	1.8	–	–	107.5	188.2
Worldwide, including the U.S. and Canada ¹	30.7	6.5	–	32.9	59.7	129.8
Worldwide offshore	0.3	87.0	31.3	–	–	118.6
Europe	27.4	1.9	–	–	22.0	51.3
Far East	15.3	0.5	–	–	13.2	29.0
Worldwide, excluding the U.S. and Canada ²	6.7	1.5	–	0.1	5.1	13.4
Middle East	4.4	2.3	–	–	1.5	8.2
Rest of world	50.9	1.5	(0.2)	–	47.8	100.0
Total	214.6	103.0	31.1	33.0	256.8	638.5
Outwards reinsurance premiums	(90.8)	(28.9)	(20.2)	(11.0)	(69.9)	(220.8)
Change in unearned premiums	(4.9)	7.9	10.6	(7.3)	(26.0)	(19.7)
Change in unearned premiums on premiums ceded	13.0	(6.1)	–	3.1	5.5	15.5
Net premiums earned	131.9	75.9	21.5	17.8	166.4	413.5
Insurance losses and loss adjustment expenses	(93.0)	22.0	(70.5)	(3.6)	(162.3)	(307.4)
Insurance losses and loss adjustment expenses recoverable	48.2	(1.4)	48.5	3.2	43.5	142.0
Insurance acquisition expenses	(34.8)	(34.1)	(11.4)	(9.4)	(41.3)	(131.0)
Insurance acquisition expenses ceded	3.3	0.5	(0.6)	1.0	0.4	4.6
Net underwriting profit (loss)	55.6	62.9	(12.5)	9.0	6.7	121.7
Net unallocated income and expenses						(88.1)
Profit before tax						33.6
Net loss ratio	34.0%	(27.1%)	102.3%	2.2%	71.4%	40.0%
Net acquisition cost ratio	23.9%	44.3%	55.8%	47.2%	24.6%	30.6%
Expense ratio	–	–	–	–	–	21.6%
Combined ratio	57.9%	17.2%	158.1%	49.4%	96.0%	92.2%

1. Worldwide, including the U.S. and Canada, comprises insurance and reinsurance contracts that insure or reinsure risks in more than one geographic area.

2. Worldwide, excluding the U.S. and Canada, comprises insurance and reinsurance contracts that insure or reinsure risks in more than one geographic area, but that specifically exclude the U.S. and Canada.

Revenue and expense by operating segment

For the year ended 31 December 2017	Property \$m	Energy \$m	Marine \$m	Aviation \$m	Lloyd's \$m	Total \$m
Gross premiums written by geographic area						
U.S. and Canada	80.0	4.7	–	–	92.9	177.6
Worldwide, including the U.S. and Canada ¹	30.3	2.5	–	16.9	48.9	98.6
Worldwide offshore	0.2	94.8	67.5	–	–	162.5
Europe	23.1	–	–	–	15.8	38.9
Far East	16.5	–	–	–	11.4	27.9
Worldwide, excluding the U.S. and Canada ²	6.0	0.1	–	–	5.4	11.5
Middle East	5.3	–	–	–	1.6	6.9
Rest of world	36.6	(0.3)	0.1	–	31.3	67.7
Total	198.0	101.8	67.6	16.9	207.3	591.6
Outwards reinsurance premiums	(66.3)	(45.1)	(11.3)	(7.2)	(63.7)	(193.6)
Change in unearned premiums	11.6	7.5	(5.6)	4.4	4.7	22.6
Change in unearned premiums on premiums ceded	3.2	6.2	–	(2.5)	0.4	7.3
Net premiums earned	146.5	70.4	50.7	11.6	148.7	427.9
Insurance losses and loss adjustment expenses	(254.9)	(34.7)	(17.3)	1.6	(232.7)	(538.0)
Insurance losses and loss adjustment expenses recoverable	87.3	23.6	0.6	0.6	90.5	202.6
Insurance acquisition expenses	(30.2)	(32.4)	(19.0)	(3.3)	(35.8)	(120.7)
Insurance acquisition expenses ceded	2.6	1.4	0.6	0.1	0.4	5.1
Net underwriting (loss) profit	(48.7)	28.3	15.6	10.6	(28.9)	(23.1)
Net unallocated income and expenses						(49.8)
Loss before tax						(72.9)
Net loss ratio	114.4%	15.8%	32.9%	(19.0%)	95.6%	78.4%
Net acquisition cost ratio	18.8%	44.0%	36.3%	27.6%	23.8%	27.0%
Expense ratio	–	–	–	–	–	19.5%
Combined ratio	133.2%	59.8%	69.2%	8.6%	119.4%	124.9%

1. Worldwide, including the U.S. and Canada, comprises insurance and reinsurance contracts that insure or reinsure risks in more than one geographic area.
2. Worldwide, excluding the U.S. and Canada, comprises insurance and reinsurance contracts that insure or reinsure risks in more than one geographic area, but that specifically exclude the U.S. and Canada.

Notes to the accounts: continued

3. Investment return

The total investment return for the Group is as follows:

	Net investment income and net other investment (losses) income ¹ \$m	Net realised (losses) gains and impairments \$m	Net change in unrealised gains/losses on AFS ² \$m	Total investment return excluding foreign exchange \$m	Net foreign exchange (losses) gains \$m	Total investment return including foreign exchange \$m
For the year ended 31 December 2018						
Fixed maturity securities – AFS	31.8	(6.4)	(12.4)	13.0	(5.4)	7.6
Fixed maturity securities – at FVTPL	(0.7)	–	–	(0.7)	–	(0.7)
Equity securities – AFS	–	–	(0.5)	(0.5)	–	(0.5)
Hedge funds – at FVTPL	(4.7)	2.3	–	(2.4)	–	(2.4)
Other investments	1.2	(1.0)	–	0.2	3.8	4.0
Cash and cash equivalents	2.9	–	–	2.9	(0.3)	2.6
Total investment return	30.5	(5.1)	(12.9)	12.5	(1.9)	10.6

1. Net unrealised gains/(losses) on our FVTPL investments are included within net investment income and net other investment income.

2. Applying IFRS 9, net change in unrealised gains /losses on AFS will be classified within net investment income and net other investment income.

	Net investment income and net other investment (losses) income ¹ \$m	Net realised (losses) gains and impairments \$m	Net change in unrealised gains/losses on AFS ² \$m	Total investment return excluding foreign exchange \$m	Net foreign exchange (losses) gains \$m	Total investment return including foreign exchange \$m
For the year ended 31 December 2017						
Fixed maturity securities – AFS	28.6	(2.9)	2.1	27.8	9.8	37.6
Fixed maturity securities – at FVTPL	(1.0)	2.4	–	1.4	–	1.4
Equity securities – AFS	–	0.8	2.8	3.6	–	3.6
Hedge funds – at FVTPL	1.1	9.5	–	10.6	–	10.6
Other investments	1.1	(0.7)	–	0.4	(2.6)	(2.2)
Cash and cash equivalents	1.9	–	–	1.9	0.5	2.4
Total investment return	31.7	9.1	4.9	45.7	7.7	53.4

1. Net unrealised gains/(losses) on our FVTPL investments are included within net investment income and net other investment income.

2. Applying IFRS 9, net change in unrealised gains /losses on AFS will be classified within net investment income and net other investment income.

Net realised (losses) gains and impairments includes impairment losses of \$0.4 million (2017 – \$1.3 million) recognised on fixed maturity securities.

Refer to pages 124 to 125 in the risk disclosures section for the estimated fair values of the Group's derivative instruments. Realised gains and losses on futures and options contracts are included in net realised (losses) gains and impairments.

Included in net investment income and net other investment income is \$4.4 million (2017 – \$4.6 million) of investment management, accounting and custodian fees.

4. Net insurance acquisition expenses

	2018 \$m	2017 \$m
Insurance acquisition expenses	128.5	115.9
Changes in deferred insurance acquisition expenses	2.5	4.8
Insurance acquisition expenses ceded	(9.2)	(7.2)
Changes in deferred insurance acquisition expenses ceded	4.6	2.1
Total net insurance acquisition expenses	126.4	115.6

5. Other income

	2018 \$m	2017 \$m
Kinesis underwriting fees	6.6	5.8
Kinesis profit commission	–	5.9
Lloyd's managing agency fees	1.2	1.0
Lloyd's consortium fees	0.5	0.2
Lloyd's consortium profit commission	1.4	1.5
Lloyd's profit commission	2.7	2.8
Total other income	12.4	17.2

As at 31 December 2018, contract assets in relation to other income amounted to \$10.9 million (31 December 2017 – \$9.0 million).

6. Results of operating activities

Results of operating activities are stated after charging the following amounts:

	2018 \$m	2017 \$m
Depreciation on owned assets	1.4	1.8
Operating lease charges	3.4	3.4
Auditors' remuneration		
– Group audit fees	1.7	1.8
Total	6.5	7.0

During 2018, KPMG provided non-audit services in relation to specific U.S. taxation advisory work. Fees for non-audit services provided in 2018 totalled fifteen thousand dollars. During 2017, KPMG provided non-audit services in relation to specified work over distributable reserves and pre-appointment procedures on the first quarter of 2017 earnings release. Fees for non-audit services provided in 2017 totalled twenty thousand dollars.

7. Employee benefits

	2018 \$m	2017 \$m
Wages and salaries	32.4	27.6
Pension costs	2.6	2.5
Bonus and other benefits	14.0	10.1
Total cash compensation	49.0	40.2
RSS – performance	1.5	(1.9)
RSS – ordinary	5.0	2.9
RSS – bonus deferral	1.0	2.1
RSS – Cathedral acquisition grant	0.4	(3.5)
Total equity based compensation	7.9	(0.4)
Total employee benefits	56.9	39.8

7. Employee benefits continued

Equity based compensation

The Group's equity based compensation scheme is its RSS. All outstanding and future RSS grants have an exercise period of ten years from the grant date.

The fair value of any TSR component of the nil-cost options is estimated using a stochastic model. For all other components the Black-Scholes model is used to estimate the fair value.

The following table lists the assumptions used in the stochastic model for the RSS awards granted during the years ended 31 December 2018 and 2017:

Assumptions	2018	2017
Dividend yield	–	–
Expected volatility ¹	24.1%	25.1%
Risk-free interest rate ²	0.8%	0.1%
Expected average life of options	3 years	3 years
Share price	\$7.95	\$8.60

- The expected volatility of LHL and comparator companies' share prices are calculated based on the movement in the share prices over a period prior to the grant date, equal in length to the expected life of the award.
- The risk-free interest rate is consistent with three-year UK government bond yields on the date of grant.

The calculation of the equity based compensation expense assumes forfeitures due to employee turnover of 10.0 per cent per annum prior to vesting, with subsequent adjustments to reflect actual experience.

RSS – performance

The performance RSS options vest after a three-year period and are dependent on certain performance criteria. A maximum of 85.0 per cent (2017 - 75.0 per cent) of the performance RSS options will vest only on the achievement of an RoE in excess of a required amount. A maximum of 15.0 per cent (2017 - 25.0 per cent) of the performance RSS options will vest only on the achievement of an absolute TSR in excess of a required amount. For the 2017 awards, TSR was determined on a relative basis of a predefined comparator group. An amount equivalent to the dividends paid between the grant date and the exercise date accrues and is paid at the time of exercise, pro-rata according to the number of RSS options that vest.

	Total number of restricted stock
Outstanding as at 31 December 2016	3,363,157
Granted	1,018,933
Exercised	(509,524)
Forfeited	(156,461)
Lapsed	(257,894)
Outstanding as at 31 December 2017	3,458,211
Granted	1,041,567
Exercised	(381,359)
Forfeited	(47,260)
Lapsed	(1,090,376)
Outstanding as at 31 December 2018	2,980,783
Exercisable as at 31 December 2017	249,112
Exercisable as at 31 December 2018	183,141

	2018	2017
	Total restricted stock	Total restricted stock
Weighted average remaining contractual life	8.0 years	7.8 years
Weighted average fair value at date of grant during the year	\$6.96	\$7.56
Weighted average share price at date of exercise during the year	\$8.14	\$8.82

RSS – ordinary

The ordinary RSS options were issued for the first time in 2016 and vest three years from the date of grant and do not have associated performance criteria for vesting. An amount equivalent to the dividends paid between the grant date and the exercise date accrues and is paid at the time of exercise. These awards will become exercisable in the first open period following the release of the Company's 2018 year-end results after the Board meeting in February 2019.

	Total number of restricted stock
Outstanding as at 31 December 2016	597,520
Granted	699,251
Forfeited	(10,025)
Outstanding as at 31 December 2017	1,286,746
Granted	1,018,951
Forfeited	(205,500)
Outstanding as at 31 December 2018	2,100,197

	2018	2017
	Total restricted stock	Total restricted stock
Weighted average remaining contractual life	8.4 years	8.7 years
Weighted average fair value at date of grant during the year	\$7.96	\$8.49

RSS – bonus deferral

The bonus deferral RSS options vesting periods range from one to three years from the date of grant and do not have associated performance criteria for vesting. An amount equivalent to the dividends paid between the grant date and the exercise date accrues and is paid at the time of exercise.

	Total number of restricted stock
Outstanding as at 31 December 2016	526,118
Granted	244,523
Exercised	(220,448)
Forfeited	(2,555)
Outstanding as at 31 December 2017	547,638
Granted	31,941
Exercised	(220,047)
Forfeited	(18,943)
Outstanding as at 31 December 2018	340,589

Exercisable as at 31 December 2017	78,295
Exercisable as at 31 December 2018	73,963

	2018	2017
	Total restricted stock	Total restricted stock
Weighted average remaining contractual life	7.7 years	8.3 years
Weighted average fair value at date of grant during the year	\$7.95	\$8.58
Weighted average share price at date of exercise during the year	\$8.25	\$8.73

7. Employee benefits continued

RSS – Cathedral acquisition

The Cathedral acquisition RSS options vesting periods range from three to five years and are dependent on certain performance criteria. A maximum of 75.0 per cent of the Cathedral acquisition RSS options will vest on the achievement of a Cathedral combined ratio below a required amount. A maximum of 25.0 per cent of the Cathedral acquisition RSS options vest on the achievement of an LHL RoE in excess of a required amount. An amount equivalent to the dividends paid between the grant date and the exercise date accrues and is paid at the time of exercise, pro-rata according to the number of RSS options that vest. The first tranche of awards were exercisable in 2017.

	Total number of restricted stock
Outstanding as at 31 December 2016	1,356,250
Exercised	(400,166)
Forfeited	(556,768)
Lapsed	(29,838)
Outstanding as at 31 December 2017	369,478
Exercised	(199,370)
Forfeited	(1,850)
Outstanding as at 31 December 2018	168,258
Exercisable as at 31 December 2017	205,955
Exercisable as at 31 December 2018	168,258

	2018	2017
	Total restricted stock	Total restricted stock
Weighted average remaining contractual life	4.9 years	5.9 years
Weighted average fair value at date of grant	\$13.01	\$13.01
Weighted average share price at date of exercise during the year	\$7.99	\$8.84

8. Financing costs

	2018 \$m	2017 \$m
Interest expense on long-term debt	18.1	16.4
Net (gains) losses on interest rate swaps	(0.9)	–
Other financing costs	2.9	1.1
Total	20.1	17.5

Refer to note 18 for details of long-term debt and financing arrangements.

9. Tax

Bermuda

LHL, LICL, LUK and KCML have received an undertaking from the Bermuda government exempting them from all Bermuda local income, withholding and capital gains taxes until 31 March 2035. At the present time no such taxes are levied in Bermuda.

United Kingdom

LHL and its UK subsidiaries are subject to normal UK corporation tax on all their taxable profits. From 1 January 2019 LHL will cease to be a tax resident in the UK and subject to UK corporation tax.

	2018 \$m	2017 \$m
Corporation tax charge for the period	2.9	3.3
Adjustments in respect of prior period corporation tax	(1.9)	(2.3)
Deferred tax credit for the period	(5.1)	(4.1)
Tax rate change adjustment	–	(0.6)
Adjustments in respect of prior period deferred tax	0.1	1.4
Total tax credit	(4.0)	(2.3)
	2018 \$m	2017 \$m
Profit (loss) before tax	33.6	(72.9)
Corporation tax at 19.0% (2017 – 19.3%)	6.4	(14.1)
Non-taxable (income) loss	(13.3)	10.1
Adjustments in respect of prior period	(1.8)	(0.9)
Differences related to equity based compensation	0.4	(0.6)
Other expense permanent differences	4.3	3.8
Tax rate change adjustment	–	(0.6)
Total tax credit	(4.0)	(2.3)

1. All tax reconciling balances have been classified as recurring items.

The current tax credit as a percentage of the Group's profit (2017 – loss) before tax is 11.9 per cent (2017 – negative 3.2 per cent). Non-taxable income (loss) relates to profits (losses) of companies within the Group that are non-tax resident in the UK and the share of loss of associate.

Refer to note 11 for details of the tax expense related to the net change in unrealised gains/losses on investments that is included in accumulated other comprehensive loss within shareholders' equity.

10. Cash and cash equivalents

	2018 \$m	2017 \$m
Cash at bank and in hand	97.5	107.0
Cash equivalents	57.1	149.5
Total cash and cash equivalents	154.6	256.5

Cash equivalents have an original maturity of three months or less. The carrying amount of these assets approximates their fair value. Refer to note 18 for the cash and cash equivalent balances on deposit as collateral. Cash and cash equivalents include managed cash of \$83.7 million (31 December 2017 – \$188.1 million).

Notes to the accounts: continued

11. Investments

As at 31 December 2018	Cost or amortised cost \$m	Unrealised gains \$m	Unrealised losses \$m	Estimated fair value ¹ \$m
Fixed maturity securities – AFS				
– Short-term investments	225.5	–	–	225.5
– Fixed maturity funds	11.4	–	–	11.4
– U.S. treasuries	187.5	0.3	(1.2)	186.6
– Other government bonds	59.8	0.1	(1.2)	58.7
– U.S. municipal bonds	5.4	–	–	5.4
– U.S. government agency debt	88.2	0.4	(0.5)	88.1
– Asset backed securities	131.1	1.0	(2.8)	129.3
– U.S. government agency mortgage backed securities	82.2	0.2	(2.5)	79.9
– Non-agency mortgage backed securities	21.3	–	(0.2)	21.1
– Agency commercial mortgage backed securities	5.3	–	(0.1)	5.2
– Non-agency commercial mortgage backed securities	0.5	–	–	0.5
– Bank loans	114.7	0.1	(5.7)	109.1
– Corporate bonds	528.8	1.0	(8.2)	521.6
Total fixed maturity securities – AFS	1,461.7	3.1	(22.4)	1,442.4
Fixed maturity securities – at FVTPL	45.7	–	(0.7)	45.0
Equity securities – AFS	20.0	2.7	–	22.7
Hedge funds – at FVTPL	143.0	9.3	(3.1)	149.2
Other investments	–	0.1	(0.4)	(0.3)
Total investments	1,670.4	15.2	(26.6)	1,659.0

1. When IFRS 9, Financial Instruments: Classification and Measurement is implemented, all investments held above will be classified as at FVTPL (mandatory), with no resulting changes in the estimated fair value.

As at 31 December 2017	Cost or amortised cost \$m	Unrealised gains \$m	Unrealised losses \$m	Estimated fair value ¹ \$m
Fixed maturity securities – AFS				
– Short-term investments	111.2	–	(0.1)	111.1
– Fixed maturity funds	31.2	–	(0.2)	31.0
– U.S. treasuries	237.4	0.1	(1.8)	235.7
– Other government bonds	71.2	0.8	(0.6)	71.4
– U.S. municipal bonds	6.0	–	–	6.0
– U.S. government agency debt	71.2	–	(0.7)	70.5
– Asset backed securities	139.5	4.9	(0.4)	144.0
– U.S. government agency mortgage backed securities	142.4	0.4	(1.8)	141.0
– Non-agency mortgage backed securities	13.2	0.2	(0.2)	13.2
– Non-agency commercial mortgage backed securities	0.2	–	–	0.2
– Bank loans	106.5	0.8	(0.6)	106.7
– Corporate bonds	520.1	3.6	(2.3)	521.4
Total fixed maturity securities – AFS	1,450.1	10.8	(8.7)	1,452.2
Fixed maturity securities – at FVTPL	25.7	–	–	25.7
Equity securities – AFS	20.0	3.2	–	23.2
Hedge funds – at FVTPL	144.6	9.8	(0.4)	154.0
Other investments	–	–	(0.5)	(0.5)
Total investments	1,640.4	23.8	(9.6)	1,654.6

1. When IFRS 9, Financial Instruments: Classification and Measurement is implemented, all investments held above will be classified as at FVTPL (mandatory), with no resulting changes in the estimated fair value.

Accumulated other comprehensive loss in relation to the Group's AFS fixed maturity and equity securities is as follows:

	2018 \$m	2017 \$m
Unrealised gains	5.8	14.0
Unrealised losses	(22.4)	(8.7)
Net unrealised foreign exchange losses (gains) on fixed maturity securities – AFS	2.1	(6.9)
Tax provision	0.2	0.1
Accumulated other comprehensive loss	(14.3)	(1.5)

Fixed maturity securities are presented in the risk disclosures section on page 129. Refer to note 18 for the investment balances in trusts in favour of ceding companies and on deposit as collateral.

The Group determines the estimated fair value of each individual security utilising the highest level inputs available. Prices for the Group's investment portfolio are provided by a third-party investment accounting firm whose pricing processes and the controls thereon are subject to an annual audit on both the operation and the effectiveness of those controls. The audit reports are available to clients of the firm and the report is reviewed annually by management. In accordance with their pricing policy, various recognised reputable pricing sources are used including broker-dealers and pricing vendors. The pricing sources use bid prices where available, otherwise indicative prices are quoted based on observable market trade data. The prices provided are compared to the investment managers' pricing. The Group has not made any adjustments to any pricing provided by independent pricing services or its third-party investment managers for either year ending 31 December.

The fair value of securities in the Group's investment portfolio is estimated using the following techniques:

Level (i)

Level (i) investments are securities with quoted prices in active markets. A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service or regulatory agency and those prices represent actual and regularly occurring market transactions on an arm's length basis. The Group determines securities classified as Level (i) to include highly liquid U.S. treasuries, certain highly liquid short-term investments and quoted equity securities.

Level (ii)

Level (ii) investments are securities with quoted prices in active markets for similar assets or liabilities or securities valued using other valuation techniques for which all significant inputs are based on observable market data. Instruments included in Level (ii) are valued via independent external sources using modelled or other valuation methods. Such methods are typically industry accepted standard and include:

- broker-dealer quotes;
- pricing models or matrix pricing;
- present values;
- future cash flows;
- yield curves;
- interest rates;
- prepayment speeds; and
- default rates.

Other similar quoted instruments or market transactions may be used.

11. Investments continued

The Group determines securities classified as Level (ii) to include short-term and fixed maturity investments and certain derivatives such as:

- Short-term investments;
- Fixed maturity funds;
- Other government bonds;
- U.S. municipal bonds;
- U.S. government agency debt;
- Asset backed securities;
- U.S. government agency mortgage backed securities;
- Non-agency mortgage backed securities;
- Agency commercial mortgage backed securities;
- Non-agency commercial mortgage backed securities;
- Bank loans;
- Corporate bonds; and
- OTC derivatives, such as options, forward foreign exchange contracts, interest rate swaps and credit default swaps.

LEVEL (iii)

Level (iii) investments are securities for which valuation techniques are not based on observable market data. The Group classifies hedge funds as Level (iii) assets as the valuation techniques incorporate both observable and unobservable inputs.

The estimated fair values of the Group's hedge funds are determined using a combination of the most recent NAVs provided by each fund's independent administrator and the estimated performance provided by each hedge fund manager. Independent administrators provide monthly reported NAVs with up to a one month delay in valuation. The most recent NAV available for each hedge fund is adjusted for the estimated performance, as provided by the fund manager, between the NAV date and the reporting date. Historically estimated fair values incorporating these performance estimates have not been significantly different from subsequent NAVs. Given the Group's knowledge of the underlying investments and the size of the Group's investment therein, we would not anticipate any material variance between estimated valuations and the final NAVs reported by the administrators.

The Group determines whether transfers have occurred between levels of the fair value hierarchy by re-assessing the categorisation at the end of each reporting period based on the lowest level input that is significant to the fair value measurement as a whole.

The fair value hierarchy of the Group's investment holdings is as follows:

As at 31 December 2018	Level (i) \$m	Level (ii) \$m	Level (iii) \$m	Total \$m
Fixed maturity securities – AFS				
– Short-term investments	216.8	8.7	–	225.5
– Fixed maturity funds	–	11.4	–	11.4
– U.S. treasuries	186.6	–	–	186.6
– Other government bonds	–	58.7	–	58.7
– U.S. municipal bonds	–	5.4	–	5.4
– U.S. government agency debt	–	88.1	–	88.1
– Asset backed securities	–	129.3	–	129.3
– U.S. government agency mortgage backed securities	–	79.9	–	79.9
– Non-agency mortgage backed securities	–	21.1	–	21.1
– Agency commercial mortgage backed securities	–	5.2	–	5.2
– Non-agency commercial mortgage backed securities	–	0.5	–	0.5
– Bank loans	–	109.1	–	109.1
– Corporate bonds	–	521.6	–	521.6
Total fixed maturity securities – AFS	403.4	1,039.0	–	1,442.4
Fixed maturity securities – at FVTPL	–	45.0	–	45.0
Equity securities – AFS	22.7	–	–	22.7
Hedge funds – at FVTPL	–	–	149.2	149.2
Other investments	–	(0.3)	–	(0.3)
Total investments	426.1	1,083.7	149.2	1,659.0
As at 31 December 2017				
Fixed maturity securities – AFS				
– Short-term investments	104.6	6.5	–	111.1
– Fixed maturity funds	–	31.0	–	31.0
– U.S. treasuries	235.7	–	–	235.7
– Other government bonds	–	71.4	–	71.4
– U.S. municipal bonds	–	6.0	–	6.0
– U.S. government agency debt	–	70.5	–	70.5
– Asset backed securities	–	144.0	–	144.0
– U.S. government agency mortgage backed securities	–	141.0	–	141.0
– Non-agency mortgage backed securities	–	13.2	–	13.2
– Non-agency commercial mortgage backed securities	–	0.2	–	0.2
– Bank loans	–	106.7	–	106.7
– Corporate bonds	–	521.4	–	521.4
Total fixed maturity securities – AFS	340.3	1,111.9	–	1,452.2
Fixed maturity securities – at FVTPL	–	25.7	–	25.7
Equity securities – AFS	23.2	–	–	23.2
Hedge funds – at FVTPL	–	–	154.0	154.0
Other investments	–	(0.5)	–	(0.5)
Total investments	363.5	1,137.1	154.0	1,654.6

There have been no transfers between Levels (i) and (ii).

Notes to the accounts: continued

11. Investments continued

The table below analyses the movements in investments classified as Level (iii) investments:

	Hedge funds \$m
As at 31 December 2016	129.4
Purchases	149.7
Sales	(136.5)
Total net realised and unrealised gains recognised in profit or loss	11.4
As at 31 December 2017	154.0
Purchases	17.6
Sales	(21.5)
Total net realised and unrealised losses recognised in profit or loss	(0.9)
As at 31 December 2018	149.2

12. Interests in structured entities

Consolidated structured entities

The Group's two consolidated structured entities are the EBT and the Orange Fund.

- the Group provides capital contributions to the EBT to enable it to meet its obligations to employees under the equity based compensation plans. The Group has a contractual agreement which may require it to provide financial support to the EBT (see note 23).
- the Orange Fund was opened during 2017 and holds short duration high quality cash equivalents and fixed maturity securities. The Lancashire Group companies are the only investors in the Orange Fund. The primary objectives of the fund are to preserve capital and provide liquidity to support the Group's operations.

Unconsolidated structured entities in which the group has an interest

As part of its investment activities, the Group invests in unconsolidated structured entities. The Group does not sponsor any of the unconsolidated structured entities.

A summary of the Group's interest in consolidated and unconsolidated structured entities is as follows:

	Orange Fund \$m	Investments \$m	Interest in associate \$m	Total \$m
As at 31 December 2018				
Fixed maturity securities				
– Asset backed securities	12.5	116.8	–	129.3
– U.S. government agency mortgage backed securities	–	79.9	–	79.9
– Non-agency mortgage backed securities	4.9	16.2	–	21.1
– Agency commercial mortgage backed securities	–	5.2	–	5.2
– Non-agency commercial mortgage backed securities	0.5	–	–	0.5
Total fixed maturity securities	17.9	218.1	–	236.0
Investment funds				
– Hedge funds	–	149.2	–	149.2
Total investment funds	–	149.2	–	149.2
Specialised investment vehicles				
– KHL (note 16)	–	–	67.1	67.1
Total	17.9	367.3	67.1	452.3

As at 31 December 2017	Orange Fund \$m	Investments \$m	Interest in associate \$m	Total \$m
Fixed maturity securities				
– Asset backed securities	8.1	135.9	–	144.0
– U.S. government agency mortgage backed securities	3.1	137.9	–	141.0
– Non-agency mortgage backed securities	–	13.2	–	13.2
– Non-agency commercial mortgage backed securities	–	0.2	–	0.2
Total fixed maturity securities	11.2	287.2	–	298.4
Investment funds				
– Hedge funds	–	154.0	–	154.0
Total investment funds	–	154.0	–	154.0
Specialised investment vehicles				
– KHL (note 16)	–	–	59.4	59.4
Total	11.2	441.2	59.4	511.8

The fixed maturity structured entities are created to meet specific investment needs of borrowers and investors which cannot be met from standardised financial instruments available in the capital markets. As such, they provide liquidity to the borrowers in these markets and provide investors with an opportunity to diversify risk away from standard fixed maturity securities. Whilst individual securities may differ in structure, the principles of the instruments are broadly the same and it is appropriate to aggregate the investments into the categories detailed above.

The risk that the Group faces in respect of the investments in structured entities is similar to the risk it faces in respect of other financial investments held on the consolidated balance sheet in that fair value is determined by market supply and demand. This is in turn driven by investor evaluation of the credit risk of the structure and changes in term structure of interest rates which change investors' expectation of the cash flows associated with the instrument and, therefore, its value in the market. Risk management disclosures for these financial instruments and other investments is provided on pages 120 to 131. The total assets of these structured entities are not considered meaningful for the purpose of understanding the related risks and therefore have not been presented.

The maximum exposure to loss in respect of these structured entities would be the carrying value of the instruments that the Group holds as at 31 December 2018 and 31 December 2017. Generally, default rates would have to increase substantially from their current level before the Group would suffer a loss and this assessment is made prior to investing and regularly through the holding period for the security. The Group has not provided any other financial or other support in addition to that described above as at the reporting date, and there is no intention to provide support in relation to any other unconsolidated structured entities in the foreseeable future.

As at 31 December 2018 the Group has a commitment of \$100.0 million (31 December 2017 – \$100.0 million) in respect of two credit facility funds. The Group, via the funds, provides collateral for revolving credit facilities purchased at a discount from financial institutions and is at risk for its portion of any defaults on those revolving credit facilities. The Group's proportionate share of these revolving credit facilities purchased by the funds as at 31 December 2018 is \$54.4 million (31 December 2017 – \$64.4 million), which currently remains unfunded. The maximum exposure to the credit facility funds is \$100.0 million and as at 31 December 2018 there have been no defaults under these facilities.

Notes to the accounts: continued

13. Losses and loss adjustment expenses

	Losses and loss adjustment expenses \$m	Reinsurance recoveries \$m	Net losses and loss adjustment expenses \$m
As at 31 December 2016	679.8	(136.7)	543.1
Net incurred losses for:			
Prior years	(40.1)	(25.0)	(65.1)
Current year	578.1	(177.6)	400.5
Exchange adjustments	18.8	(0.7)	18.1
Incurred losses and loss adjustment expenses	556.8	(203.3)	353.5
Net paid losses for:			
Prior years	231.1	(50.2)	180.9
Current year	72.0	(5.7)	66.3
Paid losses and loss adjustment expenses	303.1	(55.9)	247.2
As at 31 December 2017	933.5	(284.1)	649.4
Net incurred losses for:			
Prior years	(124.4)	(2.5)	(126.9)
Current year	431.8	(139.5)	292.3
Exchange adjustments	(7.2)	0.6	(6.6)
Incurred losses and loss adjustment expenses	300.2	(141.4)	158.8
Net paid losses for:			
Prior years	261.5	(99.1)	162.4
Current year	57.2	(3.5)	53.7
Paid losses and loss adjustment expenses	318.7	(102.6)	216.1
As at 31 December 2018	915.0	(322.9)	592.1

Further information on the calculation of loss reserves and the risks associated with them is provided in the risk disclosures section from page 117. The risks associated with general insurance contracts are complex and do not readily lend themselves to meaningful sensitivity analysis. The impact of an unreported event could lead to a significant increase in the Group's loss reserves. The Group believes that the loss reserves established are adequate, however a 20.0 per cent increase in estimated losses would lead to a \$183.0 million (31 December 2017 – \$186.7 million) increase in gross loss reserves. There was no change to the Group's reserving methodology during the year. The split of losses and loss adjustment expenses between notified outstanding losses, ACR assessed by management and IBNR is shown below:

	2018		2017	
	\$m	%	\$m	%
As at 31 December				
Outstanding losses	315.2	34.4	300.4	32.2
Additional case reserves	210.5	23.0	186.5	20.0
Losses incurred but not reported	389.3	42.6	446.6	47.8
Total	915.0	100.0	933.5	100.0

The Group's reserve for unpaid losses and loss adjustment expenses as at 31 December 2018 and 2017 had an estimated duration of approximately two years.

Claims development

The development of insurance liabilities is indicative of the Group's ability to estimate the ultimate value of its insurance liabilities. The Group began writing insurance and reinsurance business in December 2005. With the acquisition of Cathedral in 2013, the Group assumed additional loss reserves relating to 2001 and subsequent years.

Accident year	2008 and prior \$m	2009 \$m	2010 \$m	2011 \$m	2012 \$m	2013 \$m	2014 \$m	2015 \$m	2016 \$m	2017 \$m	2018 \$m	Total \$m
Gross Group losses												
Estimate of ultimate liability ¹												
At end of accident year	836.4	163.3	297.4	397.0	250.3	280.0	274.8	276.0	298.5	580.1	429.7	
One year later	548.5	107.8	209.4	371.9	350.4	259.8	226.7	214.6	310.7	547.1		
Two years later	499.5	73.1	204.2	447.0	338.8	224.0	206.0	196.2	274.4			
Three years later	453.0	66.0	235.8	450.4	326.9	224.4	196.5	189.6				
Four years later	445.8	89.1	229.4	460.0	313.3	222.1	193.4					
Five years later	503.8	81.7	231.4	450.7	308.7	218.4						
Six years later	497.3	72.9	229.8	452.6	299.5							
Seven years later	496.7	90.8	229.6	446.9								
Eight years later	494.9	89.6	228.3									
Nine years later	493.7	65.4										
Ten years later	487.3											
Current estimate of cumulative liability	487.3	65.4	228.3	446.9	299.5	218.4	193.4	189.6	274.4	547.1	429.7	3,380.0
Paid	(455.2)	(61.9)	(217.7)	(424.4)	(270.3)	(202.4)	(172.0)	(161.2)	(181.0)	(261.7)	(57.2)	(2,465.0)
Total Group gross liability	32.1	3.5	10.6	22.5	29.2	16.0	21.4	28.4	93.4	285.4	372.5	915.0

1. Adjusted for revaluation of foreign currencies at the exchange rate as at 31 December 2018.

Accident year	2008 and prior \$m	2009 \$m	2010 \$m	2011 \$m	2012 \$m	2013 \$m	2014 \$m	2015 \$m	2016 \$m	2017 \$m	2018 \$m	Total \$m
Reinsurance												
Estimate of ultimate recovery ¹												
At end of accident year	50.5	1.6	33.8	56.2	48.9	9.9	17.8	15.3	73.1	177.6	139.3	
One year later	51.1	1.3	23.6	52.6	121.8	8.9	14.1	12.2	98.5	185.0		
Two years later	46.6	0.7	24.1	92.4	122.0	8.8	13.1	12.6	96.7			
Three years later	44.2	0.7	33.5	88.9	121.2	8.0	11.5	13.0				
Four years later	41.2	10.0	34.4	103.3	121.2	8.0	11.9					
Five years later	69.8	7.0	34.6	102.8	121.2	8.0						
Six years later	69.0	2.5	35.7	106.1	120.9							
Seven years later	69.2	2.5	36.2	105.4								
Eight years later	68.7	1.3	36.5									
Nine years later	67.6	1.1										
Ten years later	64.2											
Current estimate of cumulative recovery	64.2	1.1	36.5	105.4	120.9	8.0	11.9	13.0	96.7	185.0	139.3	782.0
Paid	(46.8)	0.5	(35.1)	(101.6)	(117.9)	(7.5)	(8.4)	(12.6)	(49.4)	(76.8)	(3.5)	(459.1)
Total Group gross recovery	17.4	1.6	1.4	3.8	3.0	0.5	3.5	0.4	47.3	108.2	135.8	322.9

1. Adjusted for revaluation of foreign currencies at the exchange rate as at 31 December 2018.

Notes to the accounts: continued

13. Losses and loss adjustment expenses continued

Accident year	2008 and prior \$m	2009 \$m	2010 \$m	2011 \$m	2012 \$m	2013 \$m	2014 \$m	2015 \$m	2016 \$m	2017 \$m	2018 \$m	Total \$m
Net Group losses												
Estimate of ultimate liability ¹												
At end of accident year	785.9	161.7	263.6	340.8	201.4	270.1	257.0	260.7	225.4	402.5	290.4	
One year later	497.4	106.5	185.8	319.3	228.6	250.9	212.6	202.4	212.2	362.1		
Two years later	452.9	72.4	180.1	354.6	216.8	215.2	192.9	183.6	177.7			
Three years later	408.8	65.3	202.3	361.5	205.7	216.4	185.0	176.6				
Four years later	404.6	79.1	195.0	356.7	192.1	214.1	181.5					
Five years later	434.0	74.7	196.8	347.9	187.5	210.4						
Six years later	428.3	70.4	194.1	346.5	178.6							
Seven years later	427.5	88.3	193.4	341.5								
Eight years later	426.2	88.3	191.8									
Nine years later	426.1	64.3										
Ten years later	423.1											
Current estimate of cumulative liability	423.1	64.3	191.8	341.5	178.6	210.4	181.5	176.6	177.7	362.1	290.4	2,598.0
Paid	(408.4)	(62.4)	(182.6)	(322.8)	(152.4)	(194.9)	(163.6)	(148.6)	(131.6)	(184.9)	(53.7)	(2,005.9)
Total Group net liability	14.7	1.9	9.2	18.7	26.2	15.5	17.9	28.0	46.1	177.2	236.7	592.1

1. Adjusted for revaluation of foreign currencies at the exchange rate as at 31 December 2018.

The inherent uncertainty in reserving gives rise to favourable or adverse development on the established reserves. The total favourable development on net losses and loss adjustment expenses, excluding the impact of foreign exchange revaluations, was as follows:

	2018 \$m	2017 \$m
2008 accident year and prior	3.1	0.1
2009 accident year	23.9	0.1
2010 accident year	1.6	1.8
2011 accident year	4.7	8.8
2012 accident year	8.8	5.0
2013 accident year	3.5	3.5
2014 accident year	3.4	9.2
2015 accident year	6.6	20.3
2016 accident year	33.3	16.3
2017 accident year	38.0	–
Total favourable development	126.9	65.1

The favourable prior year development in both 2018 and 2017 was primarily due to general IBNR releases across most lines of business due to a lack of reported claims. 2018 also included reductions on some prior accident year property and energy reserves. In 2017, the Group experienced some adverse development on prior accident year property and energy claims.

There were no individually significant net loss events for the year ended 31 December 2018. In September 2017, hurricanes Harvey, Irma and Maria made landfall in the Caribbean and U.S., causing significant damage and destruction to property. These events were followed by wildfires in California during October 2017 and December 2017. Management's current best estimates in relation to each of these events are shown in the table below.

The Group's estimated ultimate net losses, after reinstatement premiums, for these significant events are as follows:

	Harvey \$m	Irma \$m	Maria \$m	Combined 2017 California Wildfires \$m
Change in insurance losses and loss adjustment expenses	66.3	108.9	78.5	75.9
Change in insurance losses and loss adjustment expenses recoverable	(18.5)	(55.1)	(43.1)	(41.4)
Change in reinstatement premiums	(3.3)	(1.7)	(2.3)	(0.4)
Net ultimate losses as at 31 December 2017	44.5	52.1	33.1	34.1
Change in insurance losses and loss adjustment expenses	(23.8)	14.8	(1.2)	(13.1)
Change in insurance losses and loss adjustment expenses recoverable	3.7	(4.9)	(5.2)	6.0
Change in reinstatement premiums	1.4	0.1	0.8	(1.3)
Net ultimate losses as at 31 December 2018	25.8	62.1	27.5	25.7

14. Insurance, reinsurance and other receivables

All receivables are considered current other than \$54.1 million (31 December 2017 – \$53.7 million) of inwards premiums receivable related to multi-year contracts. The carrying value approximates fair value due to the short-term nature of the receivables. There are no significant concentrations of credit risk within the Group's receivables.

15. Provision for deferred tax

	2018 \$m	2017 \$m
Equity based compensation	(2.5)	(2.9)
Claims equalisation reserves	6.2	8.3
Syndicate underwriting profits	(3.6)	0.1
Syndicate participation rights	12.7	12.7
Other temporary differences	(1.6)	(1.2)
Tax losses carried forward	–	(0.5)
Net deferred tax liability	11.2	16.5

Deferred tax assets are recognised to the extent that realising the related tax benefit through future taxable profits is likely. It is anticipated that sufficient taxable profits will be available within the Group in 2019 and subsequent years to utilise the deferred tax assets recognised when the underlying temporary differences reverse.

For the years ended 31 December 2018 and 2017, the Group had no uncertain tax positions.

Changes to the UK main rate of corporation tax have been enacted under the Finance Act 2016 reducing the rate to 17.0 per cent from 1 April 2020.

All deferred tax assets and liabilities are classified as non-current.

Notes to the accounts: continued

16. Investment in associate

The Group holds a 10.0 per cent interest in the preference shares of each segregated account of KHL, a company incorporated in Bermuda. KHL's operating subsidiary, KRL, is authorised by the BMA as a Special Purpose Insurer. KRL commenced writing insurance business on 1 January 2014. As at 31 December 2018, the carrying value of the Group's investment in KHL was \$67.1 million (31 December 2017 – \$59.4 million). The Group's share of comprehensive loss for KHL for the period was \$7.1 million (2017 – \$9.4 million). Key financial information for KHL is as follows:

	2018 \$m	2017 \$m
Assets	905.2	736.4
Liabilities	234.2	141.9
Shareholders' equity	671.0	594.5
Gross premium earned	81.9	71.7
Comprehensive loss	(71.2)	(94.3)

The Group has the power to participate in the operational and financial policy decisions of KHL and KRL through the provision of essential technical information by KCML and has therefore classified its investment in KHL as an investment in associate.

When IFRS 9, Financial Instruments: Classification and Measurement is implemented, KHL will continue to classify all its financial assets at FVTPL. There will therefore be no impact on the estimated fair value of the assets disclosed in the table above.

Refer to note 23 for details of transactions between the Group and its associate.

17. Intangible assets

	Syndicate participation rights \$m	Goodwill \$m	Total \$m
Net book value as at 31 December 2018 and 2017	82.6	71.2	153.8

Indefinite life intangible assets are tested annually for impairment. For the purpose of impairment testing, the syndicate participation rights and goodwill have been allocated to the Lloyd's CGU.

The recoverable amount of the Lloyd's CGU is determined based on value in use. Value in use is calculated using projected cash flows of the Lloyd's CGU. These are approved by management and cover a three-year period. The most significant assumptions used to derive the projected cash flows include an assessment of business prospects, projected loss ratios, outwards reinsurance expenditure and investment returns. A pre-tax discount rate of 6.4 per cent (2017 – 6.2 per cent) has been used to discount the projected cash flows, which reflects a combination of factors including the Group's expected cost of equity and cost of borrowing. The growth rate used to extrapolate the cash flows is 3.0 per cent (2017 – 3.0 per cent) based on historical growth rates and management's best estimate of future growth rates.

The results of this exercise indicate that the recoverable amount exceeds the syndicate participation rights and the goodwill's carrying values and would not be sensitive to any reasonably possible changes in assumptions. No impairment has been recognised for the years ending 31 December 2018 and 2017.

18. Long-term debt and financing arrangements

Long-term debt

On 5 October 2012, LHL issued \$130.0 million 5.70 per cent senior unsecured notes due 2022 pursuant to a private offering to U.S. Qualified Institutional Buyers. Interest on the principal is payable semi-annually. The notes were listed and admitted to trading on the LSE on 16 October 2012.

On 15 December 2005, LHL issued \$97.0 million and €24.0 million in aggregate principal amount of floating rate subordinated loan notes. The U.S. dollar subordinated loan notes are repayable on 15 December 2035. Interest on the principal is based on a set margin, 3.70 per cent, above the three-month LIBOR rate and is payable quarterly. The loan notes were issued via a trust company. The Euro subordinated loan notes are repayable on 15 June 2035. Interest on the principal is based on a set margin, 3.70 per cent, above the EURIBOR rate and is payable quarterly. On 21 October 2011, the CSX admitted to the official list the LHL U.S. dollar and Euro subordinated loan notes.

In 2013, the Group assumed loan notes, issued by CCHL and listed on the ISE, as part of the Cathedral acquisition. The loan notes acquired are set out as follows:

- €12.0 million floating rate subordinated loan note issued on 18 November 2004 and repayable in September 2034, paying interest quarterly based on a set margin, 3.75 per cent, above the three-month EURIBOR;
- \$10.0 million floating rate subordinated loan note issued on 26 November 2004 and repayable in September 2034, paying interest quarterly based on a set margin, 3.75 per cent, above the three-month LIBOR;
- \$25.0 million floating rate subordinated loan note issued on 13 May 2005 and repayable in June 2035, paying interest quarterly based on a set margin, 3.25 per cent, above the three-month LIBOR; and
- \$25.0 million floating rate subordinated loan note issued on 18 November 2005 and repayable in December 2035, paying interest quarterly based on a set margin, 3.25 per cent, above the three-month LIBOR.

The Group has the option to redeem its senior unsecured notes and all of its subordinated loan notes, in whole or in part, prior to the respective maturity dates.

The terms of the \$130.0 million senior unsecured notes include standard default and cross-default provisions which require certain covenants to be adhered to. These include a maximum debt to capital ratio of 30.0 per cent, where the subordinated loan notes are included as both total consolidated debt and total consolidated capital in this calculation.

There are no such covenants for either the \$97.0 million and €24.0 million in aggregate floating rate subordinated loan notes or the loan notes issued by CCHL.

As at all reporting dates the Group was in compliance with all covenants under these facilities.

The carrying values of the notes are shown below:

As at 31 December	2018 \$m	2017 \$m
Long-term debt \$130.0 million	130.0	130.0
Long-term debt \$97.0 million	97.0	97.0
Long-term debt €24.0 million	27.5	28.8
Long-term debt €12.0 million	12.4	13.1
Long-term debt \$10.0 million	10.0	10.0
Long-term debt \$25.0 million	23.7	23.7
Long-term debt \$25.0 million	23.7	23.7
Carrying value	324.3	326.3

The Group is exposed to cash flow interest rate risk and currency risk on its long-term debt. Further information is provided in the risk disclosures section on page 126 to 127.

The fair value of the long-term debt is estimated as \$359.2 million (31 December 2017 – \$369.3 million). The fair value measurement is classified within Level (ii) of the fair value hierarchy. The fair value is estimated by reference to similar financial instruments quoted in active markets.

The interest accrued on the long-term debt was \$2.4 million (31 December 2017 – \$2.3 million) at the balance sheet date and is included in other payables.

Refer to note 8 for details of the interest expense for the year included in financing costs.

18. Long-term debt and financing arrangements continued

Interest rate swaps

The Group hedges a portion of its floating rate borrowings using interest rate swaps to transfer floating to fixed rate. These instruments are held at estimated fair value. Refer to the risk disclosures section from page 126 for further details. The Group has the right to net settle these instruments.

The net fair value position owed by the Group on the swap agreements is \$0.4 million (31 December 2017 – \$2.0 million). Further information is provided on pages 124 to 127. Cash settlements are completed on a quarterly basis and the total of the next cash settlements in the first quarter of 2019 on these instruments is \$nil. The net impact from cash settlements and changes in estimated fair value are included in financing costs.

The interest rate swaps are held at estimated fair value, priced using observable market inputs, and are therefore classified as Level (ii) securities in the fair value hierarchy.

Refer to note 8 for the net impact from cash settlement and changes in estimated fair value included in financing costs.

Letters of credit

As both LICL and LUK are non-admitted insurers or reinsurers throughout the U.S., the terms of certain contracts require them to provide LOCs to policyholders as collateral. The following LOCs have been issued:

As at 31 December	2018 \$m	2017 \$m
Issued to third parties	30.2	31.0

These LOCs are required to be fully collateralised.

LHL and LICL have a \$300.0 million syndicated collateralised credit facility with a \$75.0 million loan sub-limit that has been in place since 24 March 2016 which will expire on 24 March 2021. There was no outstanding debt under this facility as at 31 December 2018 and 2017.

The existing facility is available for the issue of LOCs to ceding companies. The facility is also available for LICL to issue LOCs to LUK to collateralise certain insurance balances.

The terms of the \$300.0 million syndicated collateralised credit facility include standard default and cross-default provisions, which require certain covenants to be adhered to. These include the following:

- an A.M. Best financial strength rating of at least B++;
- a maximum debt to capital ratio of 30.0 per cent, where the subordinated loan notes are excluded from this calculation;
- a maximum indebtedness regarding the subordinated loan notes of \$250.0 million; and
- a maximum indebtedness regarding the Syndicate 2010 and 3010 catastrophe facilities of \$150.0 million.

A \$130.0 million syndicated uncollateralised facility has been in place since 3 October 2017 and was cancelled during December 2018. It was available for utilisation by LICL and guaranteed by LHL for FAL purposes. As at 31 December 2018 \$nil (31 December 2017 - \$130.0 million) of LOCs were issued under this facility.

The terms of the \$130.0 million syndicated uncollateralised facility included standard default and cross-default provisions and require certain covenants to be adhered to. These include the following:

- an A.M. Best financial strength rating of at least B++;
- a maximum debt to capital ratio of 30.0 per cent, where the subordinated loan notes are excluded from this calculation;
- a maximum indebtedness regarding the subordinated loan notes of \$250.0 million; and
- maintenance of a minimum net worth requirement.

As at all reporting dates the Group was in compliance with all covenants under these facilities.

Syndicate bank facilities

As at 31 December 2018 and 2017, Syndicate 2010 had in place an \$80.0 million catastrophe facility. The facility is available to assist in paying claims and the gross funding of catastrophes for Syndicate 2010. Up to \$80.0 million can be utilised by way of an LOC or an RCF to assist Syndicate 2010's gross funding requirements.

There are no balances outstanding under the Syndicate bank facility as at 31 December 2018 or 2017. The Syndicate bank facility is not available to the Group other than through its participation on the syndicates it supports.

Trusts and restricted balances

The Group has several trust arrangements in place in favour of policyholders and ceding companies in order to comply with the security requirements of certain reinsurance contracts and/or the regulatory requirements of certain jurisdictions.

In 2012, LICL entered into an MBRT to collateralise its reinsurance liabilities associated with U.S. domiciled clients. As at and for the years ended 31 December 2018 and 2017, LICL had been granted accredited or trustee reinsurer status in all U.S. States. The MBRT is subject to the rules and regulations of the aforementioned states and the respective deeds of trust. These rules and regulations include minimum capital funding requirements, investment guidelines, capital distribution restrictions and regulatory reporting requirements.

As at and for the years ended 31 December 2018 and 2017, the Group was in compliance with all covenants under its trust facilities.

The Group is required to hold a portion of its assets as FAL to support the underwriting capacities of Syndicate 2010 and Syndicate 3010. FAL are restricted in their use and are only drawn down to pay cash calls to syndicates supported by the Group. FAL requirements are formally assessed twice a year and any funds surplus to requirements may be released at that time. See page 133 for more information regarding FAL requirements.

In addition to the FAL, certain cash and investments held by Syndicate 2010 and Syndicate 3010 are only available for paying the syndicates' claims and expenses. See page 133 for more information regarding the capital requirements for Syndicate 2010 and Syndicate 3010.

The following cash and cash equivalent and investment balances were held in trust, other collateral accounts in favour of third parties, or are otherwise restricted:

	2018			2017		
	Cash and cash equivalents \$m	Fixed maturity securities \$m	Total \$m	Cash and cash equivalents \$m	Fixed maturity securities \$m	Total \$m
As at 31 December						
MBRT accounts	1.4	174.7	176.1	50.7	132.4	183.1
FAL	6.2	306.7	312.9	18.4	132.5	150.9
Syndicate accounts	15.9	90.4	106.3	21.0	78.3	99.3
In favour of LOCs	2.3	38.7	41.0	5.4	35.7	41.1
In trust accounts for policyholders	3.4	24.9	28.3	0.8	24.6	25.4
In favour of derivative contracts	1.4	–	1.4	3.0	0.3	3.3
Total	30.6	635.4	666.0	99.3	403.8	503.1

19. Share capital

Authorised common shares of \$0.50 each	Number	\$m
As at 31 December 2018 and 2017	3,000,000,000	1,500
Allocated, called up and fully paid		
As at 31 December 2017 and 2016	201,341,918	100.7
Shares issued	600,000	0.3
As at 31 December 2018	201,941,918	101.0

The new common shares issued during 2018 were to fund future RSS exercises.

Own shares	Number held in treasury	\$m	Number held in trust	\$m	Total number of own shares	\$m
As at 31 December 2016	1,415,058	14.0	1,048,969	9.2	2,464,027	23.2
Shares distributed	–	–	(1,130,800)	(9.9)	(1,130,800)	(9.9)
Shares donated to trust	(1,415,058)	(14.0)	1,415,058	12.8	–	(1.2)
As at 31 December 2017	–	–	1,333,227	12.1	1,333,227	12.1
Shares distributed	–	–	(800,776)	(7.3)	(800,776)	(7.3)
Shares purchased by trust	–	–	600,000	4.6	600,000	4.6
As at 31 December 2018	–	–	1,132,451	9.4	1,132,451	9.4

The number of common shares in issue with voting rights (allocated share capital less shares held in treasury) as at 31 December 2018 was 201,941,918 (31 December 2017 – 201,341,918).

19. Share capital continued

Share repurchases

At the AGM held on 2 May 2018, LHL's shareholders approved a renewal of the Repurchase Programme authorising the repurchase of a maximum of 20,134,192 shares, with such authority to expire on the conclusion of the 2019 AGM or, if earlier, 15 months from the date the resolution approving the Repurchase Programme was passed. There were no share repurchases during either 2018 or 2017.

Dividends

The Board of Directors have authorised the following dividends:

Type	Per share amount	Record date	Payment date	\$m
Final	\$0.10	24 Feb 2017	22 Mar 2017	19.9
Interim	\$0.05	11 Aug 2017	6 Sep 2017	10.0
Final	\$0.10	23 Feb 2018	21 Mar 2018	20.0
Interim	\$0.05	17 Aug 2018	12 Sep 2018	10.1
Special	\$0.20	9 Nov 2018	12 Dec 2018	40.1

20. Other reserves

Other reserves consist of the following:

	Contributed surplus \$m	Equity based compensation \$m	Total other reserves \$m
As at 31 December 2016	839.5	42.1	881.6
Shares donated to the trust	(1.2)	–	(1.2)
Distributed by the trust	(13.8)	–	(13.8)
Equity based compensation – exercises	14.6	(14.6)	–
Equity based compensation – credit	–	(0.4)	(0.4)
As at 31 December 2017	839.1	27.1	866.2
Shares purchased by the trust	4.3	–	4.3
Distributed by the trust	(9.9)	–	(9.9)
Purchase of shares from non-controlling interest	(0.1)	–	(0.1)
Equity based compensation – exercises	10.3	(10.3)	–
Equity based compensation – expense	–	8.5	8.5
As at 31 December 2018	843.7	25.3	869.0

21. Commitments and contingencies

Lease commitments

The Group has payment obligations in respect of operating leases for certain items of office equipment and office space. Operating lease expenses for the year were \$3.4 million (2017 – \$3.4 million).

Future minimum lease payments under non-cancellable operating leases are as follows:

	2018 \$m	2017 \$m
Due in less than one year	3.5	3.6
Due between one and five years	13.9	10.0
Due in more than five years	24.4	28.3
Total	41.8	41.9

During 2014, the Group entered into a new lease agreement for larger office premises in the UK and assigned the leases in relation to the existing office premises in the UK to a third party who assumed responsibility for payments. Under the terms of the lease assignment the Group retains liability for lease payments in the event that the assignee and the assignee's guarantor fail to meet their obligations under the assignment agreements. The new lease agreement contains a break date of April 2029 and a lease end date of April 2034. The lease is guaranteed by LHL.

In December 2018, the Group committed to a new five-year lease agreement for its existing office premises in Bermuda. The new lease agreement is effective 1 January 2019.

Credit facility fund

As at 31 December 2018 the Group has a commitment of \$100.0 million (31 December 2017 – \$100.0 million) relating to two credit facility funds (refer to note 12).

Legal proceedings and regulations

The Group operates in the insurance industry and is subject to legal proceedings in the normal course of business. While it is not practicable to estimate or determine the final results of all pending or threatened legal proceedings, management does not believe that such proceedings (including litigation) will have a material effect on its results and financial position.

22. Earnings per share

The following reflects the profit and share data used in the basic and diluted earnings per share computations:

	2018 \$m	2017 \$m
Profit (loss) for the year attributable to equity shareholders of LHL	37.5	(71.1)

	2018 Number of shares	2017 Number of shares
Basic weighted average number of shares	200,655,440	199,723,434
Dilutive effect of RSS	1,960,322	1,780,368
Diluted weighted average number of shares	202,615,762	201,503,802

Earnings (loss) per share	2018	2017
Basic	\$0.19	(\$0.36)
Diluted ¹	\$0.19	(\$0.36)

1. Diluted EPS excludes dilutive effect of RSS when in a loss making position.

Equity based compensation awards are only treated as dilutive when their conversion to common shares would decrease earnings per share or increase loss per share from continuing operations. Unvested restricted shares without performance criteria are therefore included in the number of potentially dilutive shares. Incremental shares from ordinary restricted share options where relevant performance criteria have not been met are not included in the calculation of dilutive shares.

Notes to the accounts: continued

23. Related party disclosures

The consolidated financial statements include LHL and the entities listed below:

Name	Principal Business	Domicile
Subsidiaries¹		
CCHL	Investment company	United Kingdom
CCL	Holding company	United Kingdom
CCL 1998	Lloyd's corporate member	United Kingdom
CCL 1999	Non trading	United Kingdom
CCSL	Dormant	United Kingdom
CUL	Lloyd's managing agent	United Kingdom
KCML ²	Insurance management services	Bermuda
KCMMSL	Support services	United Kingdom
LICL	General insurance business	Bermuda
LHHL	Holding company	United Kingdom
LIMSL	Insurance mediation activities	United Kingdom
LISL	Support services	United Kingdom
LMSCS	Support services	Canada
LUK	General insurance business	United Kingdom
ORANGE FUND	Investment fund	United States
Associate		
KHL ³	Holding company	Bermuda
Other controlled entities		
EBT	Trust	Jersey
LHFT	Trust	United States

1. Unless otherwise stated, the Group owns 100 per cent of the ordinary share capital and voting rights in its subsidiaries listed below.

2. 93.5 per cent (2017: 92.7 per cent) owned by the Group.

3. 10.0 per cent interest in the preference shares of each segregated account of KHL.

The Group has issued subordinated loan notes via a trust vehicle – LHFT, refer to note 18. The Group effectively has 100.0 per cent of the voting rights in LHFT. These rights are subject to the property trustee's obligations to seek the approval of the holders of LHFT's preferred securities in case of default and other limited circumstances where the property trustee would enforce its rights. While the ability of the Group to influence the actions of LHFT is limited by the trust agreement, LHFT was set up by the Group with the sole purpose of issuing the subordinated loan notes, and is in essence controlled by the Group, and is therefore consolidated.

The EBT was established to assist in the administration of the Group's employee equity based compensation schemes. While the Group does not have legal ownership of the EBT and the ability of the Group to influence the actions of the EBT is limited by the trust deed, the EBT was set up by the Group with the sole purpose of assisting in the administration of these schemes, and is in essence controlled by the Group, and is therefore consolidated.

The Group has a Loan Facility Agreement (the 'Facility') with RBC Cees Trustee Limited, the trustee of the EBT. The Facility is an interest free revolving credit facility under which the trustee can request advances on demand, within the terms of the Facility, up to a maximum aggregate amount of \$80.0 million. The Facility may only be used by the trustee for the purpose of achieving the objectives of the EBT. During the year ended 31 December 2018, the Group had made advances of \$1.5 million (2017 – \$6.0 million) to the EBT under the terms of the Facility.

During the year ended 31 December 2018, the Group issued 600,000 shares to the EBT at a par value of \$0.3 million and a total value of \$4.6 million at the prevailing market rate. During the year ended 31 December 2017, the Group donated 1,415,058 treasury shares to the EBT at the prevailing market rate. The total value of the treasury share donation was \$12.8 million.

LICL holds \$191.9 million (31 December 2017 – \$245.3 million) of cash and cash equivalents, fixed maturity securities and accrued interest in trust for the benefit of LUK relating to intra-group reinsurance agreements. In addition, LICL is required to provide 85.0 per cent of the required FAL to support the underwriting activities of Syndicate 2010 and 3010 and holds \$267.9 million (31 December 2017 – \$109.2 million) of cash and cash equivalents and fixed maturity securities in FAL in relation to intra-group reinsurance agreements.

The senior management team shareholding in KCML represents a minority interest of 6.5 per cent (2017 – 7.3 per cent). This investment represents the non-controlling interest listed in the Group's consolidated balance sheet. During the year ended 31 December 2018, dividends of \$nil (31 December 2017 – \$0.6 million) were paid to minority interest holders.

As at 31 December 2018 and 2017, Mr Alex Maloney, a director of LHL, had a 1.2 per cent interest in KCML. During the year ended 31 December 2018, Mr Maloney received a dividend of \$nil (31 December 2017 – \$0.1 million) in relation to his interest in KCML.

Mr Maloney and his spouse acquired 100.0 per cent of the shares in Nameco on 7 November 2016. Nameco provides capacity to a number of Lloyd's syndicates including Syndicate 2010 which is managed by CUL. Nameco has provided \$0.2 million of capacity to Syndicate 2010 for the 2019 year of account (2018 year of account – \$0.2 million). Mr Maloney receives a proportionate share of the underwriting results of Syndicate 2010 to which he is contractually entitled through his participation.

Key management compensation

Remuneration for key management, the Group's Executive and Non-Executive Directors, was as follows:

For the year ended 31 December	2018 \$m	2017 \$m
Short-term compensation	2.3	2.9
Equity based compensation	1.2	0.2
Directors' fees and expenses	1.9	2.1
Total	5.4	5.2

Non-Executive Directors do not receive any benefits in addition to their agreed fees and expenses and do not participate in any of the Group's incentive, performance or pension plans.

Transactions with associate

In 2013, KCML entered into an underwriting services agreement with KRL and KHL to provide various services relating to underwriting, actuarial, premium payments and relevant deductions, acquisition expenses and receipt of claims. For the year ended 31 December 2018, the Group recognised \$6.6 million (2017 – \$11.7 million) of service fees and profit commissions in other income (refer to note 5) in relation to this agreement.

During 2018, the Group committed an additional \$35.8 million (31 December 2017 – \$57.5 million) of capital to KHL. During 2018, KHL returned \$21.0 million (31 December 2017 – \$38.4 million) of capital to the Group.

Refer to note 16 for further details on the Group's investment in associate.

Transactions with subsidiary of KHL

During 2017, the Group entered into a reinsurance agreement with KRL, which was not renewed during 2018. All reinsurance recoveries due as at 31 December 2017 were fully settled during 2018. The following balances were included in the Group's consolidated financial statements for the year ended 31 December 2017:

Consolidated balance sheet	2017 \$m
Reinsurance recoveries	22.1
Consolidated statement of comprehensive income (loss)	2017 \$m
Outwards reinsurance premiums	3.8
Insurance losses and loss adjustment expenses recoverable	22.1
Insurance acquisition expenses ceded	0.1

24. Subsequent events

Dividend

On 13 February 2019, the Board of Directors declared the payment of an ordinary dividend of \$0.10 per common share to shareholders of record on 22 February 2019, with a settlement date of 27 March 2019. The ordinary dividend payable will be approximately \$20.1 million. An amount equivalent to the dividend accrues on all RSS awards and is paid at the time of exercise, pro-rata according to the number of RSS options that vest.