



**Management's Discussion & Analysis of
Financial Condition and Results of Operations**

Year Ended December 31, 2018

Management's Discussion & Analysis of Financial Condition and Results of Operations

The following discussion highlights significant factors influencing results of operations and changes in financial position of Liberty Mutual Holding Company Inc., the parent corporation of the Liberty Mutual Insurance group of entities (the "Company" or "LMHC"), for the three and twelve months ended December 31, 2018 and 2017. This Management's Discussion & Analysis of Financial Condition and Results of Operations ("MD&A") should be read in conjunction with the Company's December 31, 2018 Audited Consolidated Financial Statements located on the Company's Investor Relations website at www.libertymutualgroup.com/investors. The Company's discussions related to net income are presented in conformity with U.S. generally accepted accounting principles ("GAAP") on an after-tax basis. All other discussions are presented on a pre-tax GAAP basis, unless otherwise noted. Further, the Company notes that it may make material information regarding the Company available to the public, from time to time, via the Company's Investor Relations website at www.libertymutualgroup.com/investors (or any successor site).

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Cautionary Statement Regarding Forward Looking Statements

This report contains forward looking statements that are intended to enhance the reader's ability to assess the Company's future financial and business performance. Forward looking statements include, but are not limited to, statements that represent the Company's beliefs concerning future operations, strategies, financial results or other developments, and contain words and phrases such as "may," "expects," "should," "believes," "anticipates," "estimates," "intends" or similar expressions. Because these forward looking statements are based on estimates and assumptions that are subject to significant business, economic and competitive uncertainties, many of which are beyond the Company's control or are subject to change, actual results could be materially different.

Some of the factors that could cause actual results to differ include, but are not limited to the following: the occurrence of catastrophic events (including terrorist acts, hurricanes, hail, tornados, tsunamis, earthquakes, floods, snowfall and winter conditions); inadequacy of loss reserves; adverse developments involving asbestos, environmental or toxic tort claims and litigation; adverse developments in the cost, availability or ability to collect reinsurance; disruptions to the Company's relationships with its independent agents and brokers; financial disruption or a prolonged economic downturn; the performance of the Company's investment portfolios; a rise in interest rates; risks inherent in the Company's alternative investments in private limited partnerships ("LP"), limited liability companies ("LLC"), commercial mortgages and direct investments in natural resources; difficulty in valuing certain of the Company's investments; subjectivity in the determination of the amount of impairments taken on the Company's investments; unfavorable outcomes from litigation and other legal proceedings, including the effects of emerging claim and coverage issues and investigations by state and federal authorities; the Company's exposure to credit risk in certain of its business operations; the Company's inability to obtain price increases or maintain market share due to competition or otherwise; inadequacy of the Company's pricing models; changes to insurance laws and regulations; changes in the amount of statutory capital that the Company must hold to maintain its financial strength and credit ratings; regulatory restrictions on the Company's ability to change its methods of marketing and underwriting in certain areas; assessments for guaranty funds and mandatory pooling arrangements; a downgrade in the Company's claims-paying and financial strength ratings; the ability of the Company's subsidiaries to pay dividends to the Company; inflation, including inflation in medical costs and automobile and home repair costs; the cyclical nature of the property and casualty insurance industry; political, legal, operational and other risks faced by the Company's international business; potentially high severity losses involving the Company's surety products; loss or significant restriction on the Company's ability to use credit scoring in the pricing and underwriting of personal lines policies; inadequacy of the Company's controls to ensure compliance with legal and regulatory standards; changes in federal or state tax laws; risks arising out of the Company's securities lending program; the Company's utilization of information technology systems and its implementation of technology innovations; difficulties with technology or data security; insufficiency of the Company's business continuity plan in the event of a disaster; the Company's ability to successfully integrate operations, personnel and technology from its acquisitions; insufficiency of the Company's enterprise risk management models and modeling techniques; and changing climate conditions. The Company's forward looking statements speak only as of the date of this report or as of the date they are made and should be regarded solely as the Company's current plans, estimates and beliefs. For a detailed discussion of these and other cautionary statements, visit the Company's Investor Relations website at www.libertymutualgroup.com/investors. The Company undertakes no obligation to update these forward looking statements.

The United Kingdom's withdrawal from the European Union could have a negative impact on economic conditions in the United Kingdom and could result in unintended consequences in other countries as well. The Company acknowledges that there are risks and uncertainties associated with the United Kingdom's withdrawal from the European Union and has developed a course of action if the impending withdrawal is upheld in the first quarter of 2019.

EXECUTIVE SUMMARY

The following highlights do not address all of the matters covered in the other sections of Management's Discussion & Analysis of Financial Condition and Results of Operations or contain all of the information that may be important to the investing public. This summary should be read in conjunction with the other sections of Management's Discussion & Analysis of Financial Condition and Results of Operations and the Company's 2018 Audited Consolidated Financial Statements.

Consolidated Results of Operations

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|---|------------------------------------|---------|--------|-------------------------------------|----------|--------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Net written premium ("NWP") | \$9,406 | \$8,861 | 6.2% | \$39,100 | \$36,789 | 6.3% |
| Pre-tax operating income (loss) before partnerships, LLC and other equity method income | 277 | 165 | 67.9 | 1,453 | (1,004) | NM |
| Partnerships, LLC and other equity method income | 285 | 100 | 185.0 | 978 | 570 | 71.6 |
| Net realized (losses) gains | (139) | 122 | NM | (147) | 468 | NM |
| Ironshore Inc. ("Ironshore") acquisition & integration costs | (55) | (12) | NM | (86) | (86) | - |
| Restructuring costs | (37) | (68) | (45.6) | (94) | (91) | 3.3 |
| Loss on extinguishment of debt | - | - | - | (8) | (1) | NM |
| Discontinued operations, net of tax | (2) | 52 | NM | 528 | 213 | 147.9 |
| Consolidated net income | 249 | 205 | 21.5 | 2,161 | 19 | NM |
| Less: Net income attributable to non-controlling interest | - | - | - | 1 | 2 | (50.0) |
| Net income attributable to LMHC | 249 | 205 | 21.5 | 2,160 | 17 | NM |
| Cash flow provided by continuing operations | \$1,136 | \$360 | NM | \$3,548 | \$1,824 | 94.5% |

NM = Not Meaningful

| | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|---|------------------------------------|--------|--------------------|-------------------------------------|--------|--------------------|
| | 2018 | 2017 | Change (Points) | 2018 | 2017 | Change (Points) |
| Combined ratio before catastrophes ¹ , net incurred losses attributable to prior years ² , and current accident year re-estimation ³ | 94.7% | 94.2% | 0.5 | 94.4% | 94.2% | 0.2 |
| Combined ratio ⁴ | 100.4% | 100.5% | (0.1) | 99.2% | 105.6% | (6.4) |

1 Catastrophes are defined as a natural catastrophe or terror event exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums.

2 Net incurred losses attributable to prior years is defined as incurred losses attributable to prior years (including prior year losses related to catastrophes and prior year catastrophe reinstatement premium) including earned premium attributable to prior years.

3 Re-estimation of the current accident year loss reserves for the nine months ended September 30, 2017.

4 The combined ratio, expressed as a percentage, is a measure of underwriting profitability. This measure should only be used in conjunction with, and not in lieu of, underwriting income and may not be comparable to other performance measures used by the Company's competitors. The combined ratio is computed as the sum of the following property and casualty ratios: the ratio of claims and claim adjustment expense less managed care income to earned premium; the ratio of insurance operating costs plus amortization of deferred policy acquisition costs less third-party administration income and fee income (primarily related to the Company's involuntary market servicing carrier operations) and installment charges to earned premium; and the ratio of policyholder dividends to earned premium. Provisions for uncollectible premium and reinsurance are not included in the combined ratio unless related to an asbestos and environmental commutation and certain other run off. Restructuring and Ironshore acquisition and integration costs are not included in the combined ratio.

| | As of December 31, | As of December 31, | |
|--------------------------------------|-------------------------------|-------------------------------|---------------|
| \$ in Millions | 2018 | 2017 | Change |
| Short-term debt | \$- | \$11 | (100.0%) |
| Long-term debt | 8,233 | 8,314 | (1.0) |
| Total debt | \$8,233 | \$8,325 | (1.1%) |
| Unassigned equity | \$24,114 | \$21,687 | 11.2% |
| Accumulated other comprehensive loss | (3,379) | (1,026) | NM |
| Non-controlling interest | 27 | 27 | - |
| Total equity | \$20,762 | \$20,688 | 0.4% |

NM = Not Meaningful

Subsequent Events

On February 13, 2019, following a strategic review of certain operations, the Company has classified its investments in Pembroke Managing Agency Ltd., Visionary Underwriting Agency Ltd., Ironshore Europe Designated Activity Company, and Ironshore Corporate Capital 3 Ltd. as held for sale. The Company is evaluating the impact of this classification.

On January 28, 2019, Liberty Mutual Group Inc. (“LMGI”) exchanged \$1 billion par value of Senior Notes due 2029 (the “2029 Notes”) for \$270 million of its 5.00% Notes due 2021, \$277 million of its 4.95% Notes due 2022 and \$453 million of its 4.25% senior notes due 2023. LMGI paid an aggregate of \$40 million cash consideration, including accrued and unpaid interest, for the existing notes accepted for exchange. Interest on the 2029 Notes is payable semi-annually at a fixed rate of 4.569%. The 2029 Notes mature on February 1, 2029.

Management has assessed material subsequent events through February 26, 2019, the date the financial statements were available to be issued.

CONSOLIDATED RESULTS OF OPERATIONS

The Company has identified consolidated pre-tax operating income (“PTOI”), and PTOI before partnerships, LLC and other equity method income as non-GAAP financial measures. PTOI is defined by the Company as pre-tax income excluding net realized gains, loss on extinguishment of debt, extraordinary items, discontinued operations, integration, other acquisition and restructuring related costs and cumulative effects of changes in accounting principles. PTOI before partnerships, LLC and other equity method income is defined as PTOI excluding LP and LLC results recognized on the equity method and revenue and expenses from direct investments in natural resources. PTOI before partnerships, LLC and other equity method income and PTOI are considered by the Company to be appropriate indicators of underwriting and operating results and are consistent with the way the Company internally evaluates performance. Net realized gains and partnerships, LLC and other equity method investment results are significantly impacted by both discretionary and economic factors and are not necessarily indicative of operating results, and the timing and amount of integration, other acquisition and restructuring related costs and the extinguishment of debt are not connected to the management of the insurance and underwriting aspects of the Company’s business. Income taxes are significantly impacted by permanent differences. References to NWP represent the amount of premium recorded for policies issued during a fiscal period including audits, retrospectively rated premium related to loss sensitive policies, and assumed premium, less ceded premium. Assumed and ceded reinsurance premiums include premium adjustments for reinstatement of coverage when a loss has used some portion of the reinsurance provided, generally under catastrophe treaties (“reinstatement premium”), and changes in estimated premium. In addition, the majority of workers compensation premium is adjusted to the “booked as billed” method through the Corporate and Other segment. The Company believes that NWP is a performance measure useful to investors as it generally reflects current trends in the Company’s sale of its insurance products.

The Company’s discussions related to net income are presented on an after-tax GAAP basis. All other discussions are presented on a pre-tax GAAP basis, unless otherwise noted.

Property and casualty operations’ investment income is allocated to the businesses based on planned ordinary investment income returns by investment category. Effective in 2017, the amount allocated to the businesses was updated to better reflect the current yield environment. The difference between allocated net investment income and actual net investment income is included in Corporate and Other.

On May 3, 2018, the Company’s Spanish subsidiary, Liberty Seguros Compania de Seguros y Reaseguros S.A., completed the sale of its entire 99.44% interest in its Turkish insurance affiliate, Liberty Sigorta A.S., to Talanx International.

On May 1, 2018, the Company completed the sale of Liberty Life Assurance Company of Boston (“LLAC”), which provides group disability, group life, individual life and annuity products, to Lincoln Financial Group. The results of LLAC are presented as discontinued operations in the accompanying Consolidated Statements of Income and are no longer included within Liberty Mutual Benefits (formerly in Commercial Insurance) or within Corporate and Other. The prior periods have been restated to reflect this change.

On January 19, 2018, the Company announced the realignment of its businesses to enhance its ability to meet the changing needs of consumer and business customers. The Company’s realignment featured the following changes:

- Global Risk Solutions brings together Liberty’s Global Specialty, Ironshore (formerly in Global Specialty), National Insurance (formerly in Commercial Insurance) and the Global Reinsurance Strategy Group (formerly in Corporate and Other) into a single business. Dennis J. Langwell, formerly the Company’s Chief Financial Officer, has been appointed to lead Global Risk Solutions.
- Global Retail Markets combines Global Consumer Markets with Business Insurance and Accident and Health organizations (both formerly in Commercial Insurance). Timothy Sweeney, formerly the President of Global Consumer Markets, has been appointed to lead Global Retail Markets.
- Christopher L. Peirce, formerly the President of Global Specialty, has been appointed Liberty’s Chief Financial Officer.

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act of 2017 (the “Act”). The Act reduced the U.S. Federal corporate income tax rate from 35% to 21%, required companies to pay a one-time transition tax on earnings

of certain foreign subsidiaries that were previously tax deferred and created new taxes on certain foreign-sourced earnings. More details can be found in “Critical Accounting Estimates” under “Deferred Income Taxes”.

On May 1, 2017, the Company acquired Ironshore for approximately \$2.9 billion. Transaction related costs primarily consist of non-recurring banking, legal, tax, and accounting expenses. These expenses and integration related costs are reflected on the Consolidated Statements of Income separately. Concurrent with the acquisition, the Company combined its existing Liberty International Underwriters’ U.S. business and Ironshore’s U.S. specialty lines business under the Ironshore brand. Effective May 1, 2017, the Company also entered into a reinsurance transaction with National Indemnity Company (“NICO”), a subsidiary of Berkshire Hathaway Inc., on a combined aggregate excess of loss agreement providing coverage for substantially all of Ironshore’s reserves (“Ironshore Reinsurance”). On May 2, 2017, Ironshore exercised its option to redeem in full its outstanding \$250 million Ironshore Holdings (US) Inc. 8.5% Senior Notes maturing in 2020 in accordance with the contractual make whole provisions.

On April 17, 2017, the Company completed the acquisition of TRU Services, LLC, specializing in providing medical stop loss products to mid and large-size medical plan sponsors. The transaction is not material to the Company.

On March 27, 2017, Liberty Mutual Finance Europe DAC (“LMFE”) issued €500 million par value of Senior Notes due 2024 (the “2024 Notes”). Interest is payable annually at a fixed rate of 1.75%. The 2024 Notes mature on March 27, 2024.

On February 27, 2017, the United Kingdom’s Ministry of Justice announced a reduction in the discount rate utilized for certain lump sum personal injury compensation claims from 2.5% to (.75%) effective March 20, 2017. The Company’s reserve estimation process provided for the impact of a range of events such as this.

On January 5, 2017, the Company completed the sale of its 10 St. James and 75 Arlington properties. The Company has entered into a sale lease back agreement for such properties with a term of 15 years and resulting in a net lease obligation of \$258 million. The sale resulted in a gain of \$297 million, of which \$188 million was deferred over the terms of the lease and \$109 million was recognized in the Consolidated Statements of Income. During 2018, an additional asset relating to owning the building was written off, resulting in a revised gain of \$258 million.

The Company’s two businesses are as follows:

- Global Retail Markets combines the Company’s local expertise in growth markets outside the U.S. with strong and scalable U.S. capabilities in order to take advantage of opportunities to grow its business globally. Global Retail Markets is organized into the following three market segments: U.S., West, and East.
- Global Risk Solutions offers a wide array of property, casualty, specialty and reinsurance coverage distributed through brokers and independent agents globally. Global Risk Solutions is organized into the following four market segments: Liberty Specialty Markets, National Insurance, North America Specialty, and Global Surety.

Overview – Consolidated

Consolidated NWP by significant line of business was as follows:

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|--|------------------------------------|----------------|-------------|-------------------------------------|-----------------|-------------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Private passenger automobile | \$3,323 | \$3,370 | (1.4%) | \$13,987 | \$13,717 | 2.0% |
| Homeowners | 1,560 | 1,469 | 6.2 | 6,546 | 6,295 | 4.0 |
| Global Risk Solutions specialty insurance ¹ | 1,169 | 1,013 | 15.4 | 4,547 | 3,606 | 26.1 |
| Global Risk Solutions reinsurance | 461 | 392 | 17.6 | 2,487 | 2,056 | 21.0 |
| Commercial multiple-peril | 533 | 496 | 7.5 | 2,217 | 2,136 | 3.8 |
| Workers compensation | 532 | 506 | 5.1 | 2,110 | 2,060 | 2.4 |
| Commercial automobile | 508 | 485 | 4.7 | 2,066 | 1,993 | 3.7 |
| General liability | 390 | 367 | 6.3 | 1,639 | 1,592 | 3.0 |
| Surety | 218 | 187 | 16.6 | 910 | 827 | 10.0 |
| Commercial property | 224 | 174 | 28.7 | 818 | 728 | 12.4 |
| Global Risk Solutions inland marine | 138 | 141 | (2.1) | 538 | 550 | (2.2) |
| Corporate reinsurance ² | (37) | (99) | (62.6) | (350) | (242) | 44.6 |
| Other ³ | 387 | 360 | 7.5 | 1,585 | 1,471 | 7.7 |
| Total NWP | \$9,406 | \$8,861 | 6.2% | \$39,100 | \$36,789 | 6.3% |

1 Specialty insurance is reported within Global Risk Solutions and includes marine, energy, construction, aviation, property, casualty, warranty and indemnity, excess casualty, directors and officers, errors and omissions, environmental impairment liability, railroad, trade credit, excess and surplus property, crisis management, contingent lines and other.

2 NWP associated with internal reinsurance assumed into Corporate, net of corporate external placements.

3 Primarily includes NWP from allied lines, domestic inland marine, and life and health reported within Global Retail Markets.

NWP for the three months ended December 31, 2018 was \$9.406 billion, an increase of \$545 million over the same period in 2017.

Significant changes by major line of business for the three months ended December 31, 2018 include:

- Homeowners' NWP increased \$91 million. The increase reflects rate increases within Global Retail Markets' U.S. market segment.
- Global Risk Solutions specialty insurance increased \$156 million. The increase reflects new business growth and favorable rate increases, partially offset by unfavorable foreign exchange due to the strengthening of the U.S. dollar versus the euro, British pound and Australian dollar as compared to the average rates in 2017 and additional reinsurance purchased in the current year.
- Global Risk Solutions reinsurance NWP increased \$69 million. The increase reflects new business growth and favorable rate increases, partially offset by unfavorable ultimate premium adjustments in 2018 versus favorable ultimate premium adjustments in 2017 and unfavorable foreign exchange due to the strengthening of the U.S. dollar versus the euro, British pound and Australian dollar as compared to the average rates in 2017.
- Corporate reinsurance NWP increased \$62 million. The increase reflects an accounting change to book ceded written premium for excess of loss contracts at inception of the contract.

NWP for the twelve months ended December 31, 2018 was \$39.100 billion, an increase of \$2.311 billion over the same period in 2017.

Significant changes by major line of business for the twelve months ended December 31, 2018 include:

- Private passenger automobile NWP increased \$270 million. The increase reflects increased rate to keep pace with U.S. industry loss cost trends, organic growth and higher retention in Global Retail Markets' East and West market segments.
- Homeowners' NWP increased \$251 million. The increase reflects rate increases within Global Retail Markets' U.S. market segment.
- Global Risk Solutions specialty insurance increased \$941 million. The increase reflects the Ironshore acquisition, new business growth, favorable rate increases, and favorable foreign exchange due to the weakening of the U.S. dollar versus the euro and British pound as compared to the average rates in 2017. These increases are partially offset by additional reinsurance purchased in the current year.
- Global Risk Solutions reinsurance NWP increased \$431 million. The increase reflects new business growth, favorable rate increases and favorable foreign exchange due to the weakening of the U.S. dollar versus the euro and British pound as compared to the average rates in 2017. These increases were partially offset by net inwards reinstatement premiums earned in 2017 that did not recur in 2018 and unfavorable ultimate premium adjustments in 2018 versus favorable ultimate premium adjustments in 2017.
- Corporate reinsurance NWP decreased \$108 million. The decrease reflects the net impact of increased property catastrophe reinsurance costs.

More detailed explanations of the changes in NWP by line of business are included in the related discussion of financial results for each segment.

Consolidated NWP by business was as follows:

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|--|------------------------------------|---------|--------|-------------------------------------|----------|--------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Global Retail Markets | \$6,607 | \$6,420 | 2.9% | \$27,599 | \$26,601 | 3.8% |
| Global Risk Solutions | 2,840 | 2,542 | 11.7 | 11,856 | 10,426 | 13.7 |
| Corporate and Other | (41) | (101) | (59.4) | (355) | (238) | 49.2 |
| Total NWP | \$9,406 | \$8,861 | 6.2% | \$39,100 | \$36,789 | 6.3% |
| Foreign exchange effect on growth | | | (1.1) | | | - |
| NWP growth excluding foreign exchange ¹ | | | 7.3% | | | 6.3% |

¹ Determined by assuming constant foreign exchange rates between periods.

Major drivers of NWP growth were as follows:

| \$ in Millions | Three Months Ended December 31, | | | | Twelve Months Ended December 31, | | | |
|---|------------------------------------|----------------|--------------|-----------------------|-------------------------------------|-----------------|----------------|-----------------------|
| | 2018 | 2017 | \$ Change | Points Attribution | 2018 | 2017 | \$ Change | Points Attribution |
| Components of growth: | | | | | | | | |
| Domestic personal automobile | 2,687 | 2,705 | (18) | (0.2) | 11,432 | 11,237 | 195 | 0.5 |
| Domestic homeowners | 1,507 | 1,415 | 92 | 1.0 | 6,339 | 6,102 | 237 | 0.6 |
| Global Retail Markets East West (ex foreign exchange) ¹ | 1,118 | 1,023 | 95 | 1.1 | 4,266 | 3,957 | 309 | 0.8 |
| Global Risk Solutions specialty insurance (ex foreign exchange) ¹ | 1,184 | 1,013 | 171 | 1.9 | 4,513 | 3,606 | 907 | 2.5 |
| Global Risk Solutions reinsurance (ex foreign exchange) ¹ | 467 | 392 | 75 | 0.9 | 2,468 | 2,056 | 412 | 1.1 |
| Domestic workers compensation | 508 | 482 | 26 | 0.3 | 1,984 | 1,941 | 43 | 0.1 |
| Surety | 210 | 179 | 31 | 0.3 | 884 | 796 | 88 | 0.2 |
| Global Risk Solutions inland marine (ex foreign exchange) ¹ | 140 | 141 | (1) | - | 534 | 550 | (16) | - |
| Corporate reinsurance (ex foreign exchange) ^{1,2} | (37) | (99) | 62 | 0.7 | (350) | (242) | (108) | (0.3) |
| Other lines | 1,719 | 1,610 | 109 | 1.3 | 7,038 | 6,786 | 252 | 0.8 |
| Foreign exchange ¹ | (97) | - | (97) | (1.1) | (8) | - | (8) | - |
| Total NWP | \$9,406 | \$8,861 | \$545 | 6.2 | \$39,100 | \$36,789 | \$2,311 | 6.3 |

1 Determined by assuming constant foreign exchange rates between periods.

2 NWP associated with internal reinsurance assumed into Corporate, net of corporate external placements.

Consolidated NWP by geographic distribution channels was as follows:

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|------------------|------------------------------------|----------------|-------------|-------------------------------------|-----------------|-------------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| U.S. | \$7,536 | \$7,065 | 6.7% | \$31,137 | \$29,750 | 4.7% |
| International | 1,870 | 1,796 | 4.1 | 7,963 | 7,039 | 13.1 |
| Total NWP | \$9,406 | \$8,861 | 6.2% | \$39,100 | \$36,789 | 6.3% |

For a more complete description of the Company's business operations, products and distribution channels, and other material information, please visit the Company's Investor Relations web site at www.libertymutualgroup.com/investors.

Results of Operations – Consolidated

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|---|--|-------------|---------------|---|-------------|---------------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Revenues | \$10,556 | \$10,228 | 3.2% | \$41,568 | \$39,409 | 5.5% |
| PTOI before catastrophes, net incurred losses attributable to prior years, current accident year re-estimation and partnerships, LLC and other equity method income | \$771 | \$701 | 10.0% | \$3,285 | \$3,036 | 8.2% |
| Catastrophes ¹ | (534) | (452) | 18.1 | (1,903) | (3,608) | (47.3) |
| Net incurred losses attributable to prior years: | | | | | | |
| - Asbestos and environmental ² | (2) | (6) | (66.7) | (270) | (168) | 60.7 |
| - All other ^{2,3} | 42 | 16 | 162.5 | 341 | (264) | NM |
| Current accident year re-estimation ⁴ | - | (94) | (100.0) | - | - | - |
| Pre-tax operating income (loss) before partnerships, LLC and other equity method income | 277 | 165 | 67.9 | 1,453 | (1,004) | NM |
| Partnerships, LLC and other equity method income ⁵ | 285 | 100 | 185.0 | 978 | 570 | 71.6 |
| Pre-tax operating income (loss) | 562 | 265 | 112.1 | 2,431 | (434) | NM |
| Net realized (losses) gains | (139) | 122 | NM | (147) | 468 | NM |
| Ironshore acquisition & integration costs | (55) | (12) | NM | (86) | (86) | - |
| Restructuring costs | (37) | (68) | (45.6) | (94) | (91) | 3.3 |
| Loss on extinguishment of debt | - | - | - | (8) | (1) | NM |
| Pre-tax income (loss) | 331 | 307 | 7.8 | 2,096 | (144) | NM |
| Income tax expense | 80 | 154 | (48.1) | 463 | 50 | NM |
| Consolidated net income (loss) from continuing operations | 251 | 153 | 64.1 | 1,633 | (194) | NM |
| Discontinued operations, net of tax | (2) | 52 | NM | 528 | 213 | 147.9 |
| Consolidated net income | 249 | 205 | 21.5 | 2,161 | 19 | NM |
| Less: Net income attributable to non-controlling interest | - | - | - | 1 | 2 | (50.0) |
| Net income attributable to LMHC | \$249 | \$205 | 21.5% | \$2,160 | \$17 | NM |
| Cash flow provided by continuing operations before pension contributions | \$1,136 | \$365 | NM | \$3,548 | \$2,232 | 59.0% |
| Pension contributions | - | (5) | (100.0) | - | (408) | (100.0) |
| Cash flow provided by continuing operations | \$1,136 | \$360 | NM | \$3,548 | \$1,824 | 94.5% |

1 Catastrophes are defined as a natural catastrophe or terror event exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums.

2 Asbestos and environmental is gross of the related adverse development reinsurance (the “NICO Reinsurance Transaction”), and All other includes all cessions related to the NICO Reinsurance Transaction, which is described further in “Reinsurance”.

3 Net of earned premium and reinstatement premium attributable to prior years of (\$51) million and \$8 million for the three and twelve months ended December 31, 2018, and (\$25) million and (\$23) million for the same periods in 2017.

4 Re-estimation of the current accident year loss reserves for the nine months ended September 30, 2017.

5 Partnerships, LLC and other equity method income includes LP, LLC and other equity method income within net investment income in the accompanying Consolidated Statements of Income and revenue and expenses from direct investments in natural resources.

NM = Not Meaningful

| Partnerships, LLC and Other Equity Method Income \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|--|---------------------------------|-------|--------|----------------------------------|-------|--------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| LP, LLC and other equity method income ¹ | \$271 | \$122 | 122.1% | \$930 | \$624 | 49.0% |
| Direct investments in natural resources - revenues ² | 105 | 68 | 54.4 | 370 | 235 | 57.4 |
| Direct investments in natural resources - expenses ³ | (91) | (90) | 1.1 | (322) | (289) | 11.4 |
| Partnerships, LLC and other equity method income | \$285 | \$100 | 185.0% | \$978 | \$570 | 71.6% |

1 Included within net investment income in the accompanying Consolidated Statements of Income.

2 Included within fee & other revenues in the accompanying Consolidated Statements of Income.

3 Included within operating costs and expenses in the accompanying Consolidated Statements of Income.

| Net Investment Income \$ in Millions | Three Months Ended December 31, | | Twelve Months Ended December 31, | |
|---|---------------------------------|-------|----------------------------------|---------|
| | 2018 | 2017 | 2018 | 2017 |
| Taxable interest income | \$445 | \$388 | \$1,686 | \$1,500 |
| Tax-exempt interest income | 45 | 55 | 182 | 241 |
| Dividends | 32 | 13 | 80 | 60 |
| LP, LLC and other equity method income | 271 | 122 | 930 | 624 |
| Commercial mortgage loans | 21 | 18 | 75 | 76 |
| Other investment income | 2 | 2 | 8 | 7 |
| Gross investment income | 816 | 598 | 2,961 | 2,508 |
| Investment expenses ¹ | (64) | (54) | (239) | (212) |
| Total net investment income | \$752 | \$544 | \$2,722 | \$2,296 |

1 Fees paid to external managers are included within the components of gross investment income.

| Net Realized (Losses) Gains \$ in Millions | Sales & Dispositions | Impairments | Change in Derivatives Value | Total |
|---|-------------------------|-------------|-----------------------------------|---------|
| Three Months Ended December 31, 2018: | | | | |
| Fixed maturities | (\$52) | \$- | \$- | (\$52) |
| Equities | 2 | - | - | 2 |
| Other | 19 | (85) | (23) | (89) |
| Total | (\$31) | (\$85) | (\$23) | (\$139) |
| Three Months Ended December 31, 2017: | | | | |
| Fixed maturities | \$25 | (\$9) | \$- | \$16 |
| Equities | 258 | (3) | - | 255 |
| Other | 23 | (177) | 5 | (149) |
| Total | \$306 | (\$189) | \$5 | \$122 |

| Net Realized (Losses) Gains \$ in Millions | Sales & Dispositions | Impairments | Change in Derivatives Value | Total |
|---|-------------------------|-------------|-----------------------------------|---------|
| Twelve Months Ended December 31, 2018: | | | | |
| Fixed maturities | (\$107) | (\$29) | \$- | (\$136) |
| Equities | 15 | (6) | - | 9 |
| Other | 359 | (383) | 4 | (20) |
| Total | \$267 | (\$418) | \$4 | (\$147) |
| Twelve Months Ended December 31, 2017: | | | | |
| Fixed maturities | \$135 | (\$23) | \$- | \$112 |
| Equities | 540 | (69) | - | 471 |
| Other | 136 | (252) | 1 | (115) |
| Total | \$811 | (\$344) | \$1 | \$468 |

Fourth Quarter Results:

Pre-tax operating income before partnerships, LLC and other equity method income for the three months ended December 31, 2018 was \$277 million, an increase of \$112 million over the same period in 2017. The increase reflects current accident year re-estimation in 2017 that did not recur, the profit margin on growth in earned premium, lower current year non-catastrophe loss activity in Global Retail Markets, and more favorable net incurred losses attributable to prior years in 2018 due to catastrophe reserve releases primarily on 2017 events. These increases were partially offset by higher current year catastrophe losses due to higher recoveries on external reinsurance treaties during the same period in 2017 and higher current year non-catastrophe loss activity in Global Risk Solutions.

Partnerships, LLC and other equity method income, including operating income from direct investments in natural resources, for the three months ended December 31, 2018 was \$285 million, an increase of \$185 million over the same period in 2017. The increase reflects more favorable valuations and distributions in LP, LLC, and other equity method investments in 2018 as compared to the same period in 2017, primarily driven by traditional private equity investments. The increase also reflects more favorable net operating income from direct investments in oil and gas in 2018 as compared to the same period in 2017.

Revenues for the three months ended December 31, 2018 were \$10.556 billion, an increase of \$328 million over the same period in 2017. The major components of revenues are net premium earned, net investment income, net realized (losses) gains, and fee and other revenues.

Net premium earned for the three months ended December 31, 2018 was \$9.639 billion, an increase of \$318 million over the same period in 2017. The increase primarily reflects the premium earned associated with the changes in NWP previously discussed.

Net investment income for the three months ended December 31, 2018 was \$752 million, an increase of \$208 million over the same period in 2017. The increase reflects more favorable valuations and distributions in LP, LLC, and other equity method investments in 2018 as compared to the same period in 2017, primarily driven by traditional private equity investments. The increase also reflects a higher net invested asset base in 2018 as compared to the same period in 2017.

Net realized (losses) gains for the three months ended December 31, 2018 were (\$139) million versus \$122 million for the same period in 2017. The net realized losses in the current quarter reflect (\$85) million in impairments, primarily related to natural resource investments and company-owned real estate, as well as fixed maturity net losses. The prior period was impacted by equity gains realized from sales due to portfolio repositioning in 2017 that did not recur in 2018, partially offset by impairments on internally developed software and energy investments.

Fee and other revenues for the three months ended December 31, 2018 were \$304 million, an increase of \$63 million over the same period in 2017. The increase primarily reflects higher oil and gas revenues as a result of increased prices and production.

Claims, benefits and expenses for the three months ended December 31, 2018 were \$10.133 billion, an increase of \$292 million over the same period in 2017. The increase reflects higher current year catastrophe losses due to higher recoveries on external reinsurance treaties during the same period in 2017, attritional losses due to business growth and higher current year non-catastrophe loss activity in Global Risk Solutions. These increases were partially offset by current accident year re-estimation in 2017 that did not recur, lower current year non-catastrophe loss activity in Global Retail Markets, and more favorable incurred losses attributable to prior years in 2018 due to catastrophe reserve releases primarily on 2017 events.

Income tax expense on continuing operations for the three months ended December 31, 2018 was \$80 million, a decrease of \$74 million from the same period in 2017. The Company's effective tax rate on continuing operations for the three months ended December 31, 2018 was 24%, compared to 50% for the same period in 2017. The decrease in the effective tax rate on continuing operations in 2018 from 2017 was primarily due to the one-time provisional expense recognized in 2017 and a reduction of the corporate income tax rate in 2018, both related to the Act.

Discontinued operations, net of tax, for the three months ended December 31, 2018 were (\$2) million versus \$52 million for the same period in 2017. The activity in 2017 represents the operations of LLAC, which was sold on May 1, 2018.

Net income attributable to LMHC for the three months ended December 31, 2018 was \$249 million, an increase of \$44 million over the same period in 2017.

Cash flow provided by continuing operations for the three months ended December 31, 2018 was \$1.136 billion, an increase of \$776 million over the same period in 2017. The increase reflects higher premium collections in Global Retail Markets and Global Risk Solutions, favorable catastrophe and underwriting expense payments in Global Retail Markets, and favorable paid loss activity in Global Risk Solutions. These increases were partially offset by loss payments related to the Ironshore acquisition, unfavorable paid loss activity in Global Retail Markets and increased property catastrophe reinsurance costs.

Year-to-date Results:

Pre-tax operating income (loss) before partnerships, LLC and other equity method income for the twelve months ended December 31, 2018 was \$1.453 billion versus (\$1.004) billion for the same period in 2017. The change reflects lower current year catastrophe losses, the profit margin on growth in earned premium, lower current year non-catastrophe loss activity, favorable foreign exchange and the Ironshore acquisition and related integration savings in Global Risk Solutions. Additionally, the change reflects favorable net incurred losses attributable to prior years in 2018 due to catastrophe reserve releases primarily on 2017 events partially offset by casualty lines net strengthening versus unfavorable net incurred losses attributable to prior years in 2017 due to significant commercial automobile strengthening. These changes were partially offset by higher employee related expenses.

Partnerships, LLC and other equity method income, including operating income from direct investments in natural resources, for the twelve months ended December 31, 2018 was \$978 million, an increase of \$408 million over the same period in 2017. The increase reflects more favorable valuations and distributions across the LP, LLC, and other equity method investments as well as more favorable net operating income from direct investments in oil and gas in 2018 as compared to the same period in 2017.

Revenues for the twelve months ended December 31, 2018 were \$41.568 billion, an increase of \$2.159 billion over the same period in 2017. The major components of revenues are net premium earned, net investment income, net realized (losses) gains, and fee and other revenues.

Net premium earned for the twelve months ended December 31, 2018 was \$37.909 billion, an increase of \$2.120 billion over the same period in 2017. The increase primarily reflects the premium earned associated with the changes in NWP previously discussed.

Net investment income for the twelve months ended December 31, 2018 was \$2.722 billion, an increase of \$426 million over the same period in 2017. The increase reflects more favorable valuations and distributions across the LP, LLC, and other equity method investments in 2018 as compared to the same period in 2017. The increase also reflects a higher invested asset base in 2018 as compared to the same period in 2017.

Net realized (losses) gains for the twelve months ended December 31, 2018 were (\$147) million versus \$468 million for the same period in 2017. The net realized losses in the current period were primarily driven by impairments on natural resource investments and company-owned real estate as well as fixed maturity net losses, partially offset by a \$162 million gain as a result of the acquisition of a previously held equity method investment and a \$148 million gain from the sale of privately held equity security. The gains in the prior period included a \$109 million gain on the sale of company-owned real estate as well as equity gains realized from sales due to portfolio repositioning that did not recur in 2018, partially offset by impairments on natural resource investments and internally developed software.

Fee and other revenues for the twelve months ended December 31, 2018 were \$1.084 billion, an increase of \$228 million over the same period in 2017. The increase primarily reflects higher oil and gas revenues as a result of increased prices and production.

Claims, benefits and expenses for the twelve months ended December 31, 2018 were \$39.284 billion, a decrease of \$91 million from the same period in 2017. The decrease reflects lower current year catastrophe losses, lower current year non-catastrophe loss activity, favorable foreign exchange and Ironshore integration savings in Global Risk Solutions. Additionally, the decrease reflects favorable incurred losses attributable to prior years in 2018 due to catastrophe reserve releases primarily on 2017 events, partially offset by casualty lines net strengthening versus unfavorable incurred losses attributable to prior years in 2017 due to significant commercial automobile strengthening. These decreases were partially offset by attritional losses due to business growth, higher employee related expenses, and the Ironshore acquisition in Global Risk Solutions.

Income tax expense on continuing operations for the twelve months ended December 31, 2018 was \$463 million, an increase of \$413 million over the same period in 2017. The Company's effective tax rate on continuing operations for the twelve months ended December 31, 2018 was 22%, compared to (35%) for the same period in 2017. The Company reported an income tax expense on pre-tax income for the twelve months ended December 31, 2018, compared to an income tax expense on a pre-tax loss for the twelve-months ended December 31, 2017. This was a result of the one-time provisional expense related to the Act. The Company's effective tax rate on continuing operations differs from the U.S. Federal statutory rate of 21% primarily due to the impact of non-U.S. operations, partially offset by tax-exempt investment income.

Discontinued operations, net of tax, for the twelve months ended December 31, 2018 were \$528 million, an increase of \$315 million over the same period in 2017. This was primarily driven by the net gain recognized on the sale of LLAC.

Net income attributable to LMHC for the twelve months ended December 31, 2018 was \$2.160 billion, an increase of \$2.143 billion over the same period in 2017.

Cash flow provided by continuing operations for the twelve months ended December 31, 2018 was \$3.548 billion, an increase of \$1.724 billion over the same period in 2017. The increase reflects higher premium collections and favorable catastrophe payments in Global Retail Markets, and an Ironshore reinsurance payment and pension funding in 2017 that did not recur in 2018. These increases were partially offset by loss payments related to the Ironshore acquisition and increased property catastrophe reinsurance costs.

| CONSOLIDATED | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|--|------------------------------------|---------------|--------------------|-------------------------------------|---------------|--------------------|
| | 2018 | 2017 | Change (Points) | 2018 | 2017 | Change (Points) |
| Combined ratio before catastrophes, net incurred losses attributable to prior years and current accident year re-estimation | | | | | | |
| Claims and claim adjustment expense ratio | 65.5% | 64.5% | 1.0 | 64.8% | 64.6% | 0.2 |
| Underwriting expense ratio | 29.1 | 29.7 | (0.6) | 29.6 | 29.6 | - |
| Dividend ratio | 0.1 | - | 0.1 | - | - | - |
| Subtotal | 94.7 | 94.2 | 0.5 | 94.4 | 94.2 | 0.2 |
| Catastrophes ¹ | 5.5 | 4.8 | 0.7 | 5.0 | 10.1 | (5.1) |
| Net incurred losses attributable to prior years: | | | | | | |
| - Asbestos and environmental | - | 0.1 | (0.1) | 0.7 | 0.5 | 0.2 |
| - All other ² | 0.2 | 0.4 | (0.2) | (0.9) | 0.8 | (1.7) |
| Current accident year re-estimation ³ | - | 1.0 | (1.0) | - | - | - |
| Total combined ratio⁴ | 100.4% | 100.5% | (0.1) | 99.2% | 105.6% | (6.4) |

1 Catastrophes are defined as a natural catastrophe or terror event exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums.

2 Net of earned premium and reinstatement premium attributable to prior years.

3 Re-estimation of the current accident year loss reserves for the nine months ended September 30, 2017.

4 The combined ratio, expressed as a percentage, is a measure of underwriting profitability. This measure should only be used in conjunction with, and not in lieu of, underwriting income and may not be comparable to other performance measures used by the Company's competitors. The combined ratio is computed as the sum of the following property and casualty ratios: the ratio of claims and claim adjustment expense less managed care income to earned premium; the ratio of insurance operating costs plus amortization of deferred policy acquisition costs less third-party administration income and fee income (primarily related to the Company's involuntary market servicing carrier operations) and installment charges to earned premium; and the ratio of policyholder dividends to earned premium. Provisions for uncollectible premium and reinsurance are not included in the combined ratio unless related to an asbestos and environmental commutation and certain other run off. Restructuring and Ironshore acquisition and integration costs are not included in the combined ratio.

Fourth Quarter Results:

The consolidated combined ratio before catastrophes, net incurred losses attributable to prior years and current accident year re-estimation for the three months ended December 31, 2018 was 94.7%, an increase of 0.5 points over the same period in 2017. The increase in the claims and claim adjustment expense ratio reflects the impact of higher current year non-catastrophe loss activity in Global Risk Solutions, partially offset by lower current year non-catastrophe loss activity in Global Retail Markets. The decrease in the underwriting expense ratio reflects earned premium growth and one-time expenses in Corporate in 2017 that did not recur in 2018, partially offset by higher employee related expenses.

Including the impact of catastrophes, net incurred losses attributable to prior years and current accident year re-estimation, the total combined ratio for the three months ended December 31, 2018 was 100.4%, a decrease of 0.1 points from the same period in 2017. The decrease primarily reflects current accident year re-estimation in 2017 that did not recur, partially offset by higher current year catastrophe losses and the changes in the combined ratio previously discussed.

Year-to-date Results:

The consolidated combined ratio before catastrophes and net incurred losses attributable to prior years for the twelve months ended December 31, 2018 was 94.4%, an increase of 0.2 points over the same period in 2017. The increase in the claims and claim adjustment expense ratio was primarily driven by a change in business mix. The underwriting expense ratio was flat year over year primarily due to earned premium growth offset by higher employee related expenses and changes in business mix.

Including the impact of catastrophes and net incurred losses attributable to prior years, the total combined ratio for the twelve months ended December 31, 2018 was 99.2%, a decrease of 6.4 points from the same period in 2017. The decrease reflects lower current year catastrophe losses and favorable net incurred losses attributable to prior years in 2018 due to catastrophe reserve releases primarily on 2017 events, partially offset by casualty lines net strengthening versus unfavorable net incurred losses attributable to prior years in 2017 due to significant commercial automobile strengthening.

GLOBAL RETAIL MARKETS

Overview – Global Retail Markets

In January 2018, the Company announced the realignment of its businesses to enhance its ability to meet the changing needs of consumer and business customers. Global Consumer Markets, comprising U.S. Consumer Markets and East | West Consumer Markets, combined with the Business Insurance and Accident and Health organizations (both formerly in Commercial Insurance) to form Global Retail Markets. Global Retail Markets combines the Company’s local expertise in growth markets outside the U.S. with strong and scalable U.S. capabilities in order to take advantage of opportunities to grow its business globally. Global Retail Markets comprises three market segments: U.S., West, and East.

U.S. consists of Personal Lines (formerly U.S. Consumer Markets) and Business Lines (formerly Business Insurance). U.S. Personal Lines sells automobile, homeowners and other types of property and casualty insurance coverage to individuals in the United States. These products are distributed through approximately 1,900 licensed employee sales representatives, 900 licensed telesales counselors, independent agents, third-party producers, the Internet, and sponsored affinity groups. U.S. Business Lines serves small commercial customers through an operating model that combines local underwriting, market knowledge and service with the scale advantages of a national company.

West sells property and casualty, health and life insurance products and services to individuals and businesses in Brazil, Colombia, Chile, Ecuador, Spain, Portugal, and Ireland. Private passenger automobile insurance is the single largest line of business.

East sells property and casualty, health and life insurance products and services to individuals and businesses in Thailand, Singapore, Hong Kong, Vietnam, Malaysia, India, China, and Russia. Private passenger automobile insurance is the single largest line of business.

On May 3, 2018, the Company’s Spanish subsidiary, Liberty Seguros Compania de Seguros y Reaseguros S.A., completed the sale of its entire 99.44% interest in its Turkish insurance affiliate, Liberty Sigorta A.S., to Talanx International.

Global Retail Markets NWP by market segment was as follows:

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|--|------------------------------------|---------|--------|-------------------------------------|----------|--------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| U.S. | \$5,564 | \$5,397 | 3.1% | \$23,398 | \$22,644 | 3.3% |
| West | 768 | 757 | 1.5 | 3,095 | 2,970 | 4.2 |
| East | 275 | 266 | 3.4 | 1,106 | 987 | 12.1 |
| Total NWP | \$6,607 | \$6,420 | 2.9% | \$27,599 | \$26,601 | 3.8% |
| Foreign exchange effect on growth | | | (1.2) | | | (0.2) |
| NWP growth excluding foreign exchange ¹ | | | 4.1% | | | 4.0% |

¹ Determined by assuming constant foreign exchange rates between periods.

Global Retail Markets NWP by line of business was as follows:

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|------------------------------|------------------------------------|----------------|-------------|-------------------------------------|-----------------|-------------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Private passenger automobile | \$3,323 | \$3,370 | (1.4%) | \$13,987 | \$13,717 | 2.0% |
| Homeowners | 1,560 | 1,469 | 6.2 | 6,546 | 6,295 | 4.0 |
| Commercial multiple-peril | 492 | 453 | 8.6 | 1,981 | 1,887 | 5.0 |
| Commercial automobile | 353 | 334 | 5.7 | 1,471 | 1,400 | 5.1 |
| General liability | 182 | 164 | 11.0 | 777 | 702 | 10.7 |
| Workers compensation | 178 | 170 | 4.7 | 736 | 709 | 3.8 |
| Commercial property | 125 | 90 | 38.9 | 484 | 383 | 26.4 |
| Life and health | 84 | 77 | 9.1 | 366 | 319 | 14.7 |
| Other ¹ | 310 | 293 | 5.8 | 1,251 | 1,189 | 5.2 |
| Total NWP | \$6,607 | \$6,420 | 2.9% | \$27,599 | \$26,601 | 3.8% |

1 Premium related to other personal and commercial lines including personal accident, bonds, small and medium enterprise, and marine and cargo lines of business.

Fourth Quarter Results:

NWP for the three months ended December 31, 2018 was \$6.607 billion, an increase of \$187 million over the same period in 2017. The growth was driven by the U.S. segment across all lines, except private passenger automobile, primarily due to higher average written premiums driven by continued rate and Chile primarily driven by commercial property. The increase was partially offset by foreign exchange primarily due to weakening of the Brazilian real versus the U.S. dollar as compared to the average rates in 2017.

Year-to-date Results:

NWP for the twelve months ended December 31, 2018 was \$27.599 billion, an increase of \$998 million over the same period in 2017. The growth was driven by the U.S. segment across all lines of business primarily due to higher average written premiums driven by continued rate, Brazil mainly due to new business and higher retention in private passenger automobile, commercial property in Chile, and both personal and commercial automobile in China.

Results of Operations – Global Retail Markets

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|---|------------------------------------|---------------|-----------|-------------------------------------|--------------|-----------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Revenues | \$7,199 | \$6,869 | 4.8% | \$28,337 | \$27,070 | 4.7% |
| PTOI before catastrophes, net incurred losses attributable to prior years and current accident year re-estimation | \$838 | \$774 | 8.3% | \$3,126 | \$2,886 | 8.3% |
| Catastrophes ¹ | (263) | (794) | (66.9) | (1,389) | (2,471) | (43.8) |
| Net incurred losses attributable to prior years | 51 | 5 | NM | 253 | (189) | NM |
| Current accident year re-estimation ² | - | (56) | (100.0) | - | - | - |
| Pre-tax operating income (loss) | \$626 | (\$71) | NM | \$1,990 | \$226 | NM |

1 Catastrophes are defined as a natural catastrophe or terror event exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums.

2 Re-estimation of the current accident year loss reserves for the nine months ended September 30, 2017.
NM = Not Meaningful

Fourth Quarter Results:

Pre-tax operating income (loss) for the three months ended December 31, 2018 was \$626 million versus (\$71) million for the same period in 2017. The change was driven by lower current year catastrophe losses due to lower severity and favorable development on prior months' events, profit margin on growth in earned premium due to strong topline results, and lower non-catastrophe losses in private passenger automobile. Additionally, the change reflects current accident year re-estimation in 2017 that did not recur and favorable net incurred losses attributable to prior years due to catastrophe reserve releases primarily on 2017 events. These changes were partially offset by higher non-catastrophe losses in U.S. Business Lines.

Revenues for the three months ended December 31, 2018 were \$7.199 billion, an increase of \$330 million over the same period in 2017. The increase reflects the premium earned associated with the changes in NWP previously discussed.

Claims, benefits and expenses for the three months ended December 31, 2018 were \$6.570 billion, a decrease of \$470 million from the same period in 2017. The decrease was driven by lower current year catastrophe losses due to lower severity and favorable development on prior months' events and lower non-catastrophe losses in private passenger automobile. Additionally, the decrease reflects current accident year re-estimation in 2017 that did not recur and favorable incurred losses attributable to prior years due to catastrophe reserve releases primarily on 2017 events. These decreases were partially offset by higher non-catastrophe losses in U.S. Business Lines.

Year-to-date Results:

Pre-tax operating income for the twelve months ended December 31, 2018 was \$1.990 billion, an increase of \$1.764 billion over the same period in 2017. The increase was driven by lower current year catastrophe losses due to lower severity and profit margin on growth in earned premium due to strong topline results, and favorable non-catastrophe losses in private passenger automobile. Additionally, the increase reflects favorable net incurred losses attributable to prior years in 2018 primarily due to reserve releases for prior year catastrophes and workers compensation partially offset by strengthening of commercial multiple-peril, general liability and commercial automobile versus unfavorable net incurred losses attributable to prior years in 2017 due to significant commercial automobile strengthening. These increases were partially offset by higher non-catastrophe losses in Business Lines and homeowners in the U.S. segment.

Revenues for the twelve months ended December 31, 2018 were \$28.337 billion, an increase of \$1.267 billion over the same period in 2017. The increase reflects the premium earned associated with the changes in NWP previously discussed.

Claims, benefits and expenses for the twelve months ended December 31, 2018 were \$26.348 billion, a decrease of \$597 million from the same period in 2017. The decrease was primarily driven by lower current year catastrophe losses due to lower severity, favorable non-catastrophe losses in U.S. private passenger automobile and favorable incurred losses attributable to prior years in 2018 primarily due to reserve releases for prior year catastrophes and workers compensation partially offset by strengthening of commercial multiple-peril, general liability and commercial automobile versus unfavorable incurred losses attributable to prior years in 2017 due to significant commercial automobile strengthening. These decreases were partially offset by higher non-catastrophe losses in Business Lines and homeowners in the U.S. segment.

| | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|--|------------------------------------|---------------|--------------------|-------------------------------------|---------------|--------------------|
| | 2018 | 2017 | Change (Points) | 2018 | 2017 | Change (Points) |
| GLOBAL RETAIL MARKETS | | | | | | |
| Combined ratio before catastrophes, net incurred losses attributable to prior years and current accident year re-estimation | | | | | | |
| Claims and claim adjustment expense ratio | 62.5% | 62.7% | (0.2) | 62.9% | 62.9% | - |
| Underwriting expense ratio | 27.7 | 28.3 | (0.6) | 28.0 | 28.6 | (0.6) |
| Subtotal | 90.2 | 91.0 | (0.8) | 90.9 | 91.5 | (0.6) |
| Catastrophes ¹ | 3.8 | 11.9 | (8.1) | 5.1 | 9.5 | (4.4) |
| Net incurred losses attributable to prior years | (0.7) | (0.1) | (0.6) | (0.9) | 0.8 | (1.7) |
| Current accident year re-estimation ² | - | 0.8 | (0.8) | - | - | - |
| Total combined ratio | 93.3% | 103.6% | (10.3) | 95.1% | 101.8% | (6.7) |

1 Catastrophes are defined as a natural catastrophe or terror event exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums.

2 Re-estimation of the current accident year loss reserves for the nine months ended September 30, 2017.

Fourth Quarter Results:

The Global Retail Markets combined ratio before catastrophes, net incurred losses attributable to prior years and current accident year re-estimation for the three months ended December 31, 2018 was 90.2%, a decrease of 0.8 points from the same period in 2017. The decrease was primarily driven by decreases in the underwriting expense ratio across all segments primarily due to earned premium growth.

Including the impact of catastrophes, net incurred losses attributable to prior years and current accident year re-estimation, the total combined ratio for the three months ended December 31, 2018 was 93.3%, a decrease of 10.3 points from the same period in 2017. The decrease was driven by lower current year catastrophe losses due to lower severity and favorable development on prior months' events and profit margin on growth in earned premium. Additionally, the decrease reflects current accident year re-estimation in 2017 that did not recur, favorable net incurred losses attributable to prior years in 2018 due to catastrophe reserve releases primarily on 2017 events, and the changes to the underwriting expense ratio previously discussed.

Year-to-date Results:

The Global Retail Markets combined ratio before catastrophes and net incurred losses attributable to prior years for the twelve months ended December 31, 2018 was 90.9%, a decrease of 0.6 points from the same period in 2017. The decrease was driven by decreases in the underwriting expense ratio across all segments primarily due to earned premium growth.

Including the impact of catastrophes and net incurred losses attributable to prior years, the total combined ratio for the twelve months ended December 31, 2018 was 95.1%, a decrease of 6.7 points from the same period in 2017. The decrease was driven by lower catastrophe losses due to lower severity, profit margin on growth in earned premium, and the changes to the underwriting expense ratio previously discussed. Additionally, the decrease reflects favorable net incurred losses attributable to prior years in 2018 primarily due to reserve releases for prior year catastrophes and workers compensation partially offset by strengthening of commercial multiple-peril, general liability and commercial automobile versus unfavorable net incurred losses attributable to prior years in 2017 due to significant commercial automobile strengthening.

GLOBAL RISK SOLUTIONS

Overview – Global Risk Solutions

In January 2018, the Company announced the realignment of its businesses to enhance its ability to meet the changing needs of consumer and business customers. Global Risk Solutions brings together Global Specialty including Ironshore and National Insurance into a single business. Global Risk Solutions offers a wide array of property, casualty, specialty and reinsurance coverage distributed through brokers and independent agents globally. Admitted market commercial property and casualty annual premiums in excess of \$150 thousand are included in Global Risk Solutions. The new segments for Global Risk Solutions are as follows:

- Liberty Specialty Markets (“LSM”) – Includes all Global Risk Solutions business outside of North America.
- National Insurance – Includes U.S. admitted property and casualty in excess of \$150 thousand annual premium.
- North America Specialty (“NAS”) – Primarily includes specialty lines and non-admitted property and casualty in North America.
- Global Surety – Leading global provider of contract and commercial surety bonds to businesses of all sizes.
- Other Global Risk Solutions primarily consists of internal reinsurance programs across the Liberty Mutual enterprise.

Global Risk Solutions NWP by market segment was as follows:

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|--|------------------------------------|---------|--------|-------------------------------------|----------|--------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Liberty Specialty Markets | \$986 | \$845 | 16.7% | \$4,390 | \$3,671 | 19.6% |
| National Insurance | 963 | 840 | 14.6 | 3,794 | 3,693 | 2.7 |
| North America Specialty | 425 | 377 | 12.7 | 1,767 | 1,272 | 38.9 |
| Global Surety | 203 | 174 | 16.7 | 861 | 777 | 10.8 |
| Other Global Risk Solutions | 263 | 306 | (14.1) | 1,044 | 1,013 | 3.1 |
| Total NWP | \$2,840 | \$2,542 | 11.7% | \$11,856 | \$10,426 | 13.7% |
| Foreign exchange effect on growth | | | (0.9) | | | 0.5 |
| NWP growth excluding foreign exchange ¹ | | | 12.6% | | | 13.2% |

¹ Determined by assuming constant foreign exchange rates between periods.

Global Risk Solutions’ major lines of business are as follows:

- (1) Specialty insurance: includes marine, energy, construction, aviation, property, casualty, warranty and indemnity, excess casualty, directors and officers, errors and omissions, environmental impairment liability, railroad, trade credit, excess and surplus property, crisis management, contingent lines and other;
- (2) Reinsurance: includes worldwide multi-line marine, property, casualty, specialty and internal reinsurance;
- (3) Surety: includes contract and commercial surety bonds;
- (4) Inland marine: handset protection coverage for lost or damaged wireless devices;
- (5) Workers compensation, general liability, commercial automobile, commercial property and commercial multiple-peril encompasses the domestic National Insurance business.

Global Risk Solutions NWP by line of business was as follows:

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|---------------------------|------------------------------------|---------|--------|-------------------------------------|----------|--------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Specialty insurance | \$1,169 | \$1,013 | 15.4% | \$4,547 | \$3,606 | 26.1% |
| Reinsurance | 461 | 392 | 17.6 | 2,487 | 2,056 | 21.0 |
| Workers compensation | 359 | 336 | 6.8 | 1,373 | 1,341 | 2.4 |
| Surety | 210 | 179 | 17.3 | 884 | 796 | 11.1 |
| General liability | 208 | 203 | 2.5 | 862 | 890 | (3.1) |
| Commercial automobile | 155 | 151 | 2.6 | 595 | 593 | 0.3 |
| Inland marine | 138 | 141 | (2.1) | 538 | 550 | (2.2) |
| Commercial property | 99 | 84 | 17.9 | 334 | 345 | (3.2) |
| Commercial multiple-peril | 41 | 43 | (4.7) | 236 | 249 | (5.2) |
| Total NWP | \$2,840 | \$2,542 | 11.7% | \$11,856 | \$10,426 | 13.7% |

Fourth Quarter Results:

NWP for the three months ended December 31, 2018 was \$2.840 billion, an increase of \$298 million over the same period in 2017. The increase was driven by specialty insurance and reinsurance growth primarily due to new business and favorable rate increases. National Insurance was favorably impacted by an increase in rate primarily within the automobile and property lines and Global Surety was favorable due to growth primarily within the contract bond business. These increases were partially offset by additional reinsurance purchased in the current year and unfavorable ultimate premium adjustments in 2018 versus favorable ultimate premium adjustments in 2017 within LSM. Foreign exchange was unfavorable due to the strengthening of the U.S. dollar versus the euro, British pound and Australian dollar as compared to the average rates in 2017. Additionally, certain internal reinsurance agreements were extended in 2018, creating additional premium within the segments offset in Other Global Risk Solutions.

Year-to-date Results:

NWP for the twelve months ended December 31, 2018 was \$11.856 billion, an increase of \$1.430 billion over the same period in 2017. The increase was driven by specialty insurance and reinsurance primarily due to the Ironshore acquisition, growth from targeted new business and favorable rate increases. National Insurance was favorably impacted by an increase in rate across most lines and Global Surety was favorable due to growth across all bond businesses. Foreign exchange was favorable due to the weakening of the U.S. dollar versus the euro and British pound as compared to the average rates in 2017. These increases were partially offset by additional reinsurance purchased in the current year, net inwards reinstatement premiums earned in 2017 that did not recur in 2018 and unfavorable ultimate premium adjustments in 2018 versus favorable ultimate premium adjustments in 2017 within LSM. National Insurance was also unfavorably impacted by lost business outpacing new business across most lines due to underwriting actions in the middle market and an extremely competitive market, particularly for large accounts.

Results of Operations – Global Risk Solutions

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|---|------------------------------------|---------|---------|-------------------------------------|-----------|--------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Revenues | \$3,139 | \$3,006 | 4.4% | \$12,294 | \$11,113 | 10.6% |
| PTOI before catastrophes, net incurred losses attributable to prior years and current accident year re-estimation | \$195 | \$160 | 21.9% | \$1,021 | \$792 | 28.9% |
| Catastrophes ¹ | (274) | (97) | 182.5 | (535) | (1,909) | (72.0) |
| Net incurred losses attributable to prior years ² | (24) | 5 | NM | 101 | (96) | NM |
| Current accident year re-estimation ³ | - | (38) | (100.0) | - | - | - |
| Pre-tax operating (loss) income | (\$103) | \$30 | NM | \$587 | (\$1,213) | NM |

1 Catastrophes are defined as a natural catastrophe or terror event exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums.

2 Net of earned premium and reinstatement premium attributable to prior years of (\$51) million and \$8 million for the three and twelve months ended December 31, 2018, and (\$25) million and (\$23) million for the same periods in 2017.

3 Re-estimation of the current accident year general liability loss reserves for the nine months ended September 30, 2017.

NM = Not Meaningful

Fourth Quarter Results:

Pre-tax operating (loss) income for the three months ended December 31, 2018 was (\$103) million versus \$30 million for the same period in 2017. The change reflects higher current year catastrophe losses, unfavorable net incurred losses attributable to prior years and higher current year non-catastrophe loss activity. These changes were partially offset by profit margin on growth in earned premium primarily within LSM and NAS, favorable foreign exchange, lower expenses due to a one-time reclassification of internally developed software (offset in Corporate), and current accident year re-estimation within National Insurance in 2017 that did not recur.

Revenues for the three months ended December 31, 2018 were \$3.139 billion, an increase of \$133 million over the same period in 2017. The increase reflects premium earned associated with the changes in NWP previously discussed.

Claims, benefits and expenses for the three months ended December 31, 2018 were \$3.254 billion, an increase of \$278 million over the same period in 2017. The increase reflects higher current year catastrophe losses, unfavorable incurred losses attributable to prior years, higher current year non-catastrophe loss activity, and attritional losses from growth. These increases were partially offset by favorable expenses primarily due to a one-time reclassification of internally developed software (offset in Corporate) and current accident year re-estimation within National Insurance in 2017 that did not recur.

Year-to-date Results:

Pre-tax operating income (loss) for the twelve months ended December 31, 2018 was \$587 million versus (\$1.213) billion for the same period in 2017. The change reflects lower current year catastrophe losses, Ironshore integration savings, profit margin on growth in earned premium, favorable foreign exchange and lower current year non-catastrophe loss activity. Additionally, the change reflects favorable net incurred losses attributable to prior years in 2018 primarily due to reserve releases for prior year catastrophes, workers compensation and non-catastrophe property partially offset by strengthening of general claim expenses, commercial auto liability and general liability versus commercial automobile strengthening within National Insurance in 2017. These changes were partially offset by higher employee related expenses.

Revenues for the twelve months ended December 31, 2018 were \$12.294 billion, an increase of \$1.181 billion over the same period in 2017. The increase reflects premium earned associated with the changes in NWP previously discussed and higher writings in prior years partially offset by net inwards reinstatement premiums earned in 2017 that did not recur in 2018.

Claims, benefits and expenses for the twelve months ended December 31, 2018 were \$11.716 billion, a decrease of \$610 million from the same period in 2017. The decrease reflects lower current year catastrophe losses, Ironshore integration savings and lower current year non-catastrophe loss activity. Additionally, the decrease reflects favorable incurred losses attributable to prior years in 2018 primarily due to reserve releases for prior year catastrophes, workers compensation and non-catastrophe property partially offset by strengthening of general claim expenses, commercial auto liability and general liability versus commercial automobile strengthening within National Insurance in 2017. These decreases were partially offset by the Ironshore acquisition, attritional losses from growth and higher employee related expenses.

| | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|--|------------------------------------|---------------|--------------------|-------------------------------------|---------------|--------------------|
| | 2018 | 2017 | Change (Points) | 2018 | 2017 | Change (Points) |
| GLOBAL RISK SOLUTIONS | | | | | | |
| Combined ratio before catastrophes, net incurred losses attributable to prior years and current accident year re-estimation | | | | | | |
| Claims and claim adjustment expense ratio | 72.5% | 70.1% | 2.4 | 67.6% | 67.9% | (0.3) |
| Underwriting expense ratio | 28.8 | 31.0 | (2.2) | 30.9 | 31.5 | (0.6) |
| Dividend ratio | 0.1 | 0.1 | - | 0.1 | 0.1 | - |
| Subtotal | 101.4 | 101.2 | 0.2 | 98.6 | 99.5 | (0.9) |
| Catastrophes ¹ | 9.5 | 3.6 | 5.9 | 4.8 | 19.0 | (14.2) |
| Net incurred losses attributable to prior years ² | 0.8 | (0.4) | 1.2 | (0.9) | 1.0 | (1.9) |
| Current accident year re-estimation ³ | - | 1.4 | (1.4) | - | - | - |
| Total combined ratio | 111.7% | 105.8% | 5.9 | 102.5% | 119.5% | (17.0) |

1 Catastrophes are defined as a natural catastrophe or terror event exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums.

2 Net of earned premium and reinstatement premium attributable to prior years.

3 Re-estimation of the current accident year general liability loss reserves for the nine months ended September 30, 2017.

Fourth Quarter Results:

The Global Risk Solutions combined ratio before catastrophes, net incurred losses attributable to prior years and current accident year re-estimation for the three months ended December 31, 2018 was 101.4%, an increase of 0.2 points over the same period in 2017. The increase in the claims and claim adjustment expense ratio reflects unfavorable current year non-catastrophe loss activity. The decrease in the underwriting expense ratio was primarily driven by higher earned premium and a one-time reclassification of internally developed software (offset in Corporate).

Including the impact of catastrophes, net incurred losses attributable to prior years and current accident year re-estimation, the total combined ratio for the three months ended December 31, 2018 was 111.7%, an increase of 5.9 points over the same period in 2017. The increase reflects the changes to the combined ratio mentioned above, higher current year catastrophe losses and unfavorable net incurred losses attributable to prior years. These increases were partially offset by current accident year re-estimation within National Insurance in 2017 that did not recur.

Year-to-date Results:

The Global Risk Solutions combined ratio before catastrophes and net incurred losses attributable to prior years for the twelve months ended December 31, 2018 was 98.6%, a decrease of 0.9 points from the same period in 2017. The

decrease in the claims and claim adjustment expense ratio reflects favorable current year non-catastrophe loss activity. The decrease in the underwriting expense ratio was driven by higher earned premium and Ironshore integration savings partially offset by higher employee related expenses.

Including the impact of catastrophes and net incurred losses attributable to prior years, the total combined ratio for the twelve months ended December 31, 2018 was 102.5%, a decrease of 17.0 points from the same period in 2017. The decrease reflects the changes to the combined ratio mentioned above and lower current year catastrophe losses. Additionally, the decrease reflects favorable net incurred losses attributable to prior years in 2018 primarily due to reserve releases for prior year catastrophes, workers compensation and non-catastrophe property partially offset by strengthening of general claim expenses, commercial auto liability and general liability versus commercial automobile strengthening within National Insurance in 2017.

CORPORATE AND OTHER

Overview – Corporate and Other

Corporate and Other includes the following significant items:

- Certain internal discontinued operations, which comprises: the run-off of certain commercial lines business, the run-off of the California workers compensation business of Golden Eagle Insurance Corporation and certain distribution channels related to Prudential Property and Casualty Insurance Company, Prudential General Insurance Company and Prudential Commercial Insurance Company (together, “PruPac”) and Liberty Re annuity business.
- Cessions related to certain retroactive reinsurance agreements, including the NICO Reinsurance Transaction, which is described further in “Reinsurance”.
- Effective January 1, 2015, Corporate began assuming certain pre-2014 voluntary and involuntary workers compensation claims from the businesses. The covered business materially aligns with the workers compensation business covered by the retroactive reinsurance agreement defined as the NICO Reinsurance Transaction, which is described further in “Reinsurance”.
- Interest expense on the Company’s outstanding debt.
- Certain risks of its businesses that the Company reinsures as part of its risk management program and risks on U.S. homeowners business covered by externally ceded homeowners quota share reinsurance treaties.
- The Company reports its written premium on workers compensation contracts on the "booked as billed" method. The businesses report workers compensation written premium on the "booked at inception" method. Corporate and Other results reflect the difference between these two methods.
- The Company discounts the long-term indemnity portion of its settled unpaid workers compensation claims at risk-free discount rates. The businesses report their discount based on statutory discount rates. Corporate and Other results reflect the difference between the statutory and risk-free rate.
- Costs associated with certain long-term compensation plans and other corporate costs not fully allocated to the businesses.
- Property and casualty operations’ investment income is allocated to the businesses based on planned ordinary investment income returns by investment category. The difference between allocated net investment income and actual net investment income is included in Corporate and Other.
- Investment-related realized gains (losses) and real estate impairments.
- Income related to LP, LLC and other equity method investments.
- Fee and other revenues include revenues from certain wholly owned non-insurance subsidiaries, primarily Liberty Energy. Liberty Energy generates revenue from the production and sale of oil and gas and related LP, LLC and other equity method investments.
- The results of LLAC presented as discontinued operations, including the net gain on the sale of LLAC.

Corporate and Other NWP by line of business was as follows:

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|-----------------------------------|------------------------------------|---------|---------|-------------------------------------|---------|--------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Reinsurance, net | (\$37) | (\$99) | (62.6%) | (\$350) | (\$242) | 44.6% |
| Workers compensation ¹ | (5) | - | NM | 1 | 10 | (90.0) |
| Other | 1 | (2) | NM | (6) | (6) | - |
| Total NWP | (\$41) | (\$101) | (59.4%) | (\$355) | (\$238) | 49.2% |

1 Booked as billed adjustment.
NM = Not Meaningful

Fourth Quarter Results:

NWP for the three months ended December 31, 2018 was (\$41) million, an increase of \$60 million over the same period in 2017. The increase reflects an accounting change to book ceded written premium for excess of loss contracts at inception of the contract.

Year-to-date Results:

NWP for the twelve months ended December 31, 2018 was (\$355) million, a decrease of \$117 million from the same period in 2017. The decrease reflects the net impact of increased property catastrophe reinsurance costs.

Results of Operations – Corporate and Other

| \$ in Millions | Three Months Ended December 31, | | | Twelve Months Ended December 31, | | |
|---|------------------------------------|---------|---------|-------------------------------------|---------|---------|
| | 2018 | 2017 | Change | 2018 | 2017 | Change |
| Revenues | \$218 | \$353 | (38.2%) | \$937 | \$1,226 | (23.6%) |
| Pre-tax operating loss before catastrophes, net incurred losses attributable to prior years, and partnerships, LLC and other equity method income | (\$262) | (\$233) | 12.4% | (\$862) | (\$642) | 34.3% |
| Catastrophes ¹ | 3 | 439 | (99.3) | 21 | 772 | (97.3) |
| Net incurred losses attributable to prior years: | | | | | | |
| -Asbestos and environmental ² | (2) | (6) | (66.7) | (270) | (168) | 60.7 |
| -All other ^{2,3} | 15 | 6 | 150.0 | (13) | 21 | NM |
| Pre-tax operating (loss) income before partnerships, LLC and other equity method income | (246) | 206 | NM | (1,124) | (17) | NM |
| Partnerships, LLC and other equity method income ⁴ | 285 | 100 | 185.0 | 978 | 570 | 71.6 |
| Pre-tax operating income (loss) | \$39 | \$306 | (87.3%) | (\$146) | \$553 | NM |

1 Catastrophes are defined as a natural catastrophe or terror event exceeding \$25 million in estimated ultimate losses, net of reinsurance, and before taxes. Catastrophe losses, where applicable, include the impact of accelerated earned catastrophe premiums and earned reinstatement premiums.

2 Asbestos and environmental is gross of the NICO Reinsurance Transaction, and All other includes all cessions related to the NICO Reinsurance Transaction, which is described further in "Reinsurance".

3 Net of earned premium attributable to prior years of zero for the three and twelve months ended December 31, 2018 and 2017.

4 Partnerships, LLC and other equity method income includes LP, LLC and other equity method income within net investment income in the accompanying Consolidated Statements of Income and revenue and expenses from direct investments in natural resources.

NM = Not Meaningful

Fourth Quarter Results:

Pre-tax operating income for the three months ended December 31, 2018 was \$39 million, a decrease of \$267 million from the same period in 2017. The decrease reflects the reduction of prior year expected recoveries on external reinsurance treaties in 2018 versus favorable expected recoveries on external reinsurance treaties in 2017. Additionally, the decrease was driven by lower profit margin within the reinsurance segment due to lower earned premium, higher technology expenses due to a one-time reclassification of internally developed software (offset in the businesses), and the write off of certain prepaid assets. These decreases were partially offset by higher partnerships, LLC and other equity method income, higher net investment income excluding partnerships, LLC and other equity method investments, and a charitable donation in 2017 that did not recur in 2018.

Revenues for the three months ended December 31, 2018 were \$218 million, a decrease of \$135 million from the same period in 2017. The major components of revenues are net premium earned, net investment income (including LP, LLC and other equity method investments), net realized (losses) gains, and fee and other revenues.

Net premium earned for the three months ended December 31, 2018 was (\$89) million, a decrease of \$28 million from the same period in 2017. The decrease reflects the net impact of increased property catastrophe reinsurance costs.

Net investment income for the three months ended December 31, 2018 was \$320 million, an increase of \$206 million over the same period in 2017. The increase reflects more favorable valuations and distributions in LP, LLC, and other equity method investments in 2018 as compared to the same period in 2017, primarily driven by traditional private equity investments. The increase also reflects a higher net invested asset base in 2018 as compared to the same period in 2017.

Net realized (losses) gains for the three months ended December 31, 2018 were (\$130) million versus \$222 million for the same period in 2017. The net realized losses in the current quarter reflect (\$85) million in impairments, primarily related to natural resource investments and company-owned real estate, as well as fixed maturity net losses. The prior period was impacted by equity gains realized from sales due to portfolio repositioning in 2017 that did not recur in 2018, partially offset by impairments on internally developed software and energy investments.

Fee and other revenues for the three months ended December 31, 2018 were \$117 million, an increase of \$39 million over the same period in 2017. The increase was primarily driven by higher oil and gas revenues as a result of increased prices and production.

Claims, benefits and expenses for the three months ended December 31, 2018 were \$309 million, an increase of \$484 million over the same period in 2017. The increase reflects the reduction of prior year expected recoveries on external reinsurance treaties in 2018 versus favorable expected recoveries on external reinsurance treaties in 2017. Additionally, the increase was driven by higher technology expenses due to a one-time reclassification of internally developed software (offset in the businesses) and the write off of certain prepaid assets, partially offset by a charitable donation in 2017 that did not recur in 2018.

Year-to-date Results:

Pre-tax operating (loss) income for the twelve months ended December 31, 2018 was (\$146) million versus \$553 million for the same period in 2017. The change reflects the reduction of prior year expected recoveries on external reinsurance treaties in 2018 (held in Corporate) due to the reserve releases for prior year catastrophes held in the businesses versus favorable expected recoveries on external reinsurance treaties in 2017. Additionally, the change reflects higher employee benefits expenses and lower profit margin within the reinsurance segment due to lower earned premium. These changes were partially offset by higher partnerships, LLC and other equity method income, the net favorable impact of the NICO Reinsurance Transaction on workers compensation releases and asbestos and environmental strengthening in 2018 versus unfavorable asbestos and environmental strengthening in 2017, and higher net investment income excluding partnerships, LLC and other equity method investments.

Revenues for the twelve months ended December 31, 2018 were \$937 million, a decrease of \$289 million from the same period in 2017. The major components of revenues are net premium earned, net investment income (including LP, LLC and other equity method investments), net realized (losses) gains, and fee and other revenues.

Net premium earned for the twelve months ended December 31, 2018 was (\$331) million, a decrease of \$112 million from the same period in 2017. The decrease reflects the net impact of increased property catastrophe reinsurance costs.

Net investment income for the twelve months ended December 31, 2018 was \$1.001 billion, an increase of \$377 million over the same period in 2017. The increase reflects more favorable valuations and distributions across the LP, LLC, and other equity method investments in 2018 as compared to the same period in 2017. The increase also reflects a higher invested asset base in 2018 as compared to the same period in 2017.

Net realized (losses) gains for the twelve months ended December 31, 2018 were (\$137) million versus \$569 million for the same period in 2017. The net realized losses in the current period were primarily driven by impairments on natural resource investments and company-owned real estate as well as fixed maturity net losses, partially offset by a \$162 million gain as a result of the acquisition of a previously held equity method investment and a \$148 million gain from the sale of privately held equity security. The gains in the prior period included a \$109 million gain on the sale of company-owned real estate as well as equity gains realized from sales due to portfolio repositioning that did not recur in 2018, partially offset by impairments on natural resource investments and internally developed software.

Fee and other revenues for the twelve months ended December 31, 2018 were \$404 million, an increase of \$152 million over the same period in 2017. The increase was primarily driven by higher oil and gas revenues as a result of increased prices and production.

Claims, benefits and expenses for the twelve months ended December 31, 2018 were \$1.220 billion, an increase of \$1.116 billion over the same period in 2017. The increase reflects the reduction of prior year expected recoveries on external reinsurance treaties in 2018 (held in Corporate) due to the reserve releases for prior year catastrophes held in the businesses versus favorable expected recoveries on external reinsurance treaties in 2017. Additionally, the increase was driven by higher employee benefits expenses and higher depreciation, depletion and amortization expenses related to Liberty Energy. These increases were partially offset by the net favorable impact of the NICO Reinsurance Transaction on workers compensation releases and asbestos and environmental strengthening in 2018 versus unfavorable asbestos and environmental strengthening in 2017.

INVESTMENTS

General

The Company's investment strategy seeks long-term returns through disciplined security selection, portfolio diversity and an integrated approach to risk management. The Company selects and monitors investments to balance the goals of safety, stability, liquidity, growth and after-tax total return with its need to comply with regulatory investment requirements. A relatively safe and stable income stream is achieved by maintaining a broadly based portfolio of investment grade bonds. These holdings are supplemented by investments in additional asset types with the objective of further enhancing the portfolio's diversification and expected returns. These additional asset types include commercial mortgages and other real estate financing investments, non-investment grade bonds, including leveraged loans, common and preferred stock, private equity and direct investments in natural resource ventures. Risk management is accomplished through asset liability management (including both interest rate risk and foreign currency risk), diversification, credit limits and a careful analytical review of each investment decision.

The Company's investment policy and strategy are reviewed and approved by the Investment Committee of its Board of Directors, which meets on a regular basis to review and consider investment activities, tactics and new investment classes. In addition, the Company predominantly uses a subsidiary investment advisor for managing and administering the investment portfolios of its domestic and foreign insurance operations.

Invested Assets (including cash and cash equivalents)

The following table summarizes the Company's invested assets by asset category as of December 31, 2018 and December 31, 2017:

| Invested Assets by Type \$ in Millions | As of December 31, 2018 | | As of December 31, 2017 | |
|---|-------------------------|---------------|-------------------------|---------------|
| | Carrying Value | % of Total | Carrying Value | % of Total |
| Fixed maturities, available for sale, at fair value | \$57,706 | 76.6% | \$54,040 | 76.4% |
| Equity securities, available for sale, at fair value ¹ | 3,511 | 4.6 | 2,608 | 3.7 |
| LP, LLC and other equity method investments | 6,148 | 8.2 | 6,223 | 8.8 |
| Commercial mortgage loans | 1,731 | 2.3 | 1,623 | 2.3 |
| Short-term investments | 416 | 0.6 | 494 | 0.7 |
| Other investments | 289 | 0.4 | 905 | 1.3 |
| Cash and cash equivalents | 5,466 | 7.3 | 4,827 | 6.8 |
| Total invested assets | \$ 75,267 | 100.0% | \$70,720 | 100.0% |

¹ Included in Equity securities, available for sale, at fair value as of December 31, 2018 and December 31, 2017 were \$936 million and \$1.217 billion of investments in bond ETFs, respectively.

Total invested assets as of December 31, 2018 were \$75.267 billion, an increase of \$4.547 billion or 6.4% over December 31, 2017. The increase was primarily related to an increase in fixed maturities, equities and cash partially offset by a decrease in other investments.

Fixed maturities as of December 31, 2018 were \$57.706 billion, an increase of \$3.666 billion or 6.8% over December 31, 2017. The increase was primarily related to LLAC assets held for sale as of December 31, 2017 that were transferred to continuing operations as part of an extraordinary dividend transacted in conjunction with the LLAC sale, and the reinvestment of cash from operations, partially offset by the unfavorable impact of the increase in treasury rates and widening credit spreads. As of December 31, 2018, included in fixed maturities are commitments to purchase various residential mortgage-backed securities at a cost and fair value of \$264 million and \$265 million, respectively.

Equity securities as of December 31, 2018 were \$3.511 billion (\$3.480 billion common stock and \$31 million preferred stock) versus \$2.608 billion as of December 31, 2017 (\$2.556 billion common stock and \$52 million preferred stock), an increase of \$903 million or 34.6% over December 31, 2017. Of the \$3.480 billion of common stock at December 31, 2018, \$598 million relates to securities associated with non-guaranteed unit linked products where the policyholder bears the investment risk. The increase in total equity securities is primarily due to purchases of equity ETFs.

The following table summarizes the Company's LP, LLC and other equity method investments as of December 31, 2018 and December 31, 2017:

| LP, LLC and other equity method investments ¹ | As of December 31, 2018 | | As of December 31, 2017 | |
|--|-------------------------|---------------|-------------------------|---------------|
| | Carrying Value | % of Total | Carrying Value | % of Total |
| \$ in Millions | | | | |
| Traditional private equity | \$2,727 | 44.4% | \$3,422 | 55.0% |
| Natural resources – Energy | 573 | 9.3 | 605 | 9.7 |
| Natural resources – Other ² | 661 | 10.7 | 338 | 5.4 |
| Real estate | 978 | 15.9 | 915 | 14.7 |
| Other | 1,209 | 19.7 | 943 | 15.2 |
| Total LP, LLC and other equity method investments | \$6,148 | 100.0% | \$6,223 | 100.0% |

1 December 31, 2018 reflects a change in classification of certain LP, LLC and other equity method investments. December 31, 2017 has not been restated and includes \$263 million in Traditional private equity that would be reported as Natural Resource-Other \$175 million and Other \$88 million, respectively under the new classification.

2 Included in Natural Resources – Other is \$184 million and \$244 million of investments in metals & mining as of December 31, 2018 and December 31, 2017 respectively, \$116 million and \$94 million of investments in agriculture and timber as of December 31, 2018 and December 31, 2017 respectively, and \$361 million and zero of investments in power and renewables as of December 31, 2018 and December 31, 2017 respectively.

LP, LLC and other equity method investments as of December 31, 2018 were \$6.148 billion, a decrease of \$75 million or 1.2% from December 31, 2017. The decrease in traditional private equity investments is primarily driven by the sale of certain LP investments in the secondary market.

Commercial mortgage loans as of December 31, 2018 were \$1.731 billion (net of \$2 million of loan loss reserves or 0.12% of the outstanding loan portfolio), an increase of \$108 million or 6.7% over December 31, 2017. The increase is primarily driven by \$262 million in funding and a decrease of \$1 million to the loan loss reserve, partially offset by \$155 million in principal reductions. The entire commercial loan portfolio is U.S.-based. The number of loans in the portfolio decreased from 4,827 at December 31, 2017 to 4,419 at December 31, 2018.

Other investments as of December 31, 2018 were \$289 million, a decrease of \$616 million or 68.1% from December 31, 2017. The decrease is primarily due to the sale of a privately held equity security.

Cash and cash equivalents as of December 31, 2018 were \$5.466 billion, an increase of \$639 million or 13.2% over December 31, 2017. The increase primarily reflects an increase in cash from operations and financing.

The following tables summarize the Company's available for sale portfolio by security type as of December 31, 2018 and December 31, 2017:

| \$ in Millions | As of December 31, 2018 | | | |
|---------------------------------------|--------------------------------|-------------------------------|--------------------------------|-------------------|
| | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
| U.S. government and agency securities | \$6,497 | \$47 | (\$33) | \$6,511 |
| Residential MBS ¹ | 5,710 | 31 | (95) | 5,646 |
| Commercial MBS | 2,965 | 27 | (36) | 2,956 |
| Other MBS and ABS ² | 4,595 | 16 | (77) | 4,534 |
| U.S. state and municipal | 8,452 | 181 | (64) | 8,569 |
| Corporate and other | 24,633 | 168 | (533) | 24,268 |
| Foreign government securities | 5,108 | 154 | (40) | 5,222 |
| Total fixed maturities | 57,960 | 624 | (878) | 57,706 |
| Common stock | 3,673 | 100 | (293) | 3,480 |
| Preferred stock | 29 | 2 | - | 31 |
| Total equity securities | 3,702 | 102 | (293) | 3,511 |
| Total securities available for sale | \$61,662 | \$726 | (\$1,171) | \$61,217 |

1 Mortgage-backed securities ("MBS")

2 Asset-backed securities ("ABS")

| \$ in Millions | As of December 31, 2017 | | | |
|---------------------------------------|--------------------------------|-------------------------------|--------------------------------|-------------------|
| | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
| U.S. government and agency securities | \$3,485 | \$13 | (\$32) | \$3,466 |
| Residential MBS | 5,819 | 51 | (47) | 5,823 |
| Commercial MBS | 2,711 | 19 | (16) | 2,714 |
| Other MBS and ABS | 3,265 | 25 | (18) | 3,272 |
| U.S. state and municipal | 9,088 | 271 | (35) | 9,324 |
| Corporate and other | 23,894 | 502 | (91) | 24,305 |
| Foreign government securities | 4,961 | 196 | (21) | 5,136 |
| Total fixed maturities | 53,223 | 1,077 | (260) | 54,040 |
| Common stock | 2,345 | 221 | (10) | 2,556 |
| Preferred stock | 45 | 7 | - | 52 |
| Total equity securities | 2,390 | 228 | (10) | 2,608 |
| Total securities available for sale | \$55,613 | \$1,305 | (\$270) | \$56,648 |

The following table summarizes the Company's mortgage and asset-backed fixed maturity portfolio by credit quality as of December 31, 2018:

| Mortgage & Asset-Backed Fixed Maturities by Credit Quality ¹ | As of December 31, 2018 | | | | | | | |
|---|-------------------------|-------|-------|-------|-------|------------|----------|------------|
| | AAA | AA | A | BBB | BB | B or Lower | Total | % of Total |
| \$ in Millions | | | | | | | | |
| Residential MBS | \$5,595 | \$12 | \$1 | \$- | \$5 | \$33 | \$5,646 | 43.0% |
| Commercial MBS | 2,726 | 188 | 26 | 3 | 13 | - | 2,956 | 22.5% |
| Other MBS and ABS | 3,336 | 399 | 172 | 475 | 134 | 18 | 4,534 | 34.5% |
| Total | \$11,657 | \$599 | \$199 | \$478 | \$152 | \$51 | \$13,136 | 100.0% |
| % of Total | 88.7% | 4.6% | 1.5% | 3.6% | 1.2% | 0.4% | 100.0% | |

¹ For purposes of this disclosure, credit quality is primarily based upon average credit ratings.

Approximately 64% of the Company's mortgage and asset-backed fixed maturity portfolio is explicitly backed by the U.S. government (SBA and GNMA) or by government-sponsored entities (FNMA and FHLMC). Approximately 89% of the holdings are rated AAA. Included in the commercial mortgage-backed securities at December 31, 2018, were \$1.603 billion in Agency CMBS and \$1.353 billion Non-agency CMBS. Included in the Other MBS and ABS at December 31, 2018 were \$1.264 billion AAA rated SBA Loans. The commercial mortgage-backed securities portfolio is well diversified and of high quality with approximately 92% rated AAA.

The following table summarizes the Company's U.S. state and municipal fixed maturity portfolio of securities which are obligations of states, municipalities and political subdivisions (collectively referred to as U.S. state and municipal bonds) by credit quality as of December 31, 2018 and December 31, 2017:

| U.S. State and Municipal by Credit Quality ¹ | As of December 31, 2018 | | | As of December 31, 2017 | | |
|---|-------------------------|------------|-----------------------|-------------------------|------------|-----------------------|
| | Fair Value | % of Total | Average Credit Rating | Fair Value | % of Total | Average Credit Rating |
| \$ in Millions | | | | | | |
| State general obligation | \$1,238 | 14.4% | AA | \$1,316 | 14.1% | AA |
| Local general obligation | 1,135 | 13.2 | AA | 1,113 | 11.9 | AA |
| Revenue | 6,143 | 71.8 | AA | 6,498 | 69.7 | AA |
| Pre-refunded | 53 | 0.6 | AAA | 397 | 4.3 | AAA |
| Total U.S. state and municipal | \$8,569 | 100.0% | AA | \$9,324 | 100.0% | AA |

¹ For purposes of this disclosure, credit quality is primarily based upon average credit ratings.

The municipal bond portfolio (taxable and tax-exempt) includes general obligation and revenue bonds issued by states, cities, counties, school districts, hospitals, educational institutions, and similar issuers. Included in the municipal bond portfolio at December 31, 2018 and December 31, 2017 were \$53 million and \$397 million, respectively, of pre-refunded bonds, which are bonds for which states or municipalities have established irrevocable trusts, which were created to satisfy their responsibility for payments of principal and interest.

The following table summarizes the Company's allocation of fixed maturities by credit quality as of December 31, 2018 and December 31, 2017:

| Fixed Maturities by Credit Quality ¹ | As of December 31, 2018 | | As of December 31, 2017 | |
|---|-------------------------|------------|-------------------------|------------|
| | Fair Value | % of Total | Fair Value | % of Total |
| \$ in Millions | | | | |
| AAA | \$20,539 | 35.6% | \$17,178 | 31.8% |
| AA+, AA, AA- | 8,541 | 14.8 | 8,859 | 16.4 |
| A+, A, A- | 11,617 | 20.1 | 11,354 | 21.0 |
| BBB+, BBB, BBB- | 13,708 | 23.8 | 12,956 | 24.0 |
| Total investment grade | 54,405 | 94.3 | 50,347 | 93.2 |
| BB+, BB, BB- | 2,007 | 3.4 | 1,851 | 3.4 |
| B+, B, B- | 1,048 | 1.8 | 1,486 | 2.8 |
| CCC or lower | 156 | 0.3 | 237 | 0.4 |
| Unrated ² | 90 | 0.2 | 119 | 0.2 |
| Total below-investment grade | 3,301 | 5.7 | 3,693 | 6.8 |
| Total fixed maturities | \$57,706 | 100.0% | \$54,040 | 100.0% |

1 For purposes of this disclosure, credit quality is primarily based upon average credit ratings.

2 Bank loans acquired as part of Ironshore acquisition.

The Company's holdings of below investment grade securities primarily consist of an actively managed diversified portfolio of high yield securities and leveraged loans within the domestic insurance portfolios and investments in emerging market sovereign and corporate debt primarily in support of the Company's international insurance operations. Overall, the average credit quality rating stands at A+ as of December 31, 2018.

The following table summarizes available for sale fixed maturity securities by contractual maturity at December 31, 2018 and December 31, 2017. Actual maturities may differ from contractual maturities because certain securities may be called or prepaid with or without call or prepayment penalties. Due to the potential for prepayment on MBS and ABS, they are not categorized by contractual maturity.

| Fixed Maturity by Maturity Date | As of December 31, 2018 | | As of December 31, 2017 | |
|-----------------------------------|-------------------------|------------|-------------------------|------------|
| | Fair Value | % of Total | Fair Value | % of Total |
| \$ in Millions | | | | |
| One year or less | \$2,970 | 5.1% | \$2,943 | 5.4% |
| Over one year through five years | 22,692 | 39.3 | 19,635 | 36.3 |
| Over five years through ten years | 12,346 | 21.4 | 12,867 | 23.8 |
| Over ten years | 6,562 | 11.4 | 6,786 | 12.6 |
| MBS and ABS | 13,136 | 22.8 | 11,809 | 21.9 |
| Total fixed maturities | \$57,706 | 100.0% | \$54,040 | 100.0% |

During 2018, after taking into consideration changes in investment opportunities and its view of the current and prospective business and economic environment, the Company has made only minor adjustments to the average duration of its investment portfolio. The average duration of the investment portfolio as of December 31, 2018 was 3.8 years.

The following tables summarize the Company's gross unrealized losses and fair value of fixed income and equity securities by the length of time that individual securities have been in a continuous unrealized loss position as of December 31, 2018 and December 31, 2017 that are not deemed to be other-than-temporarily impaired:

| | As of December 31, 2018 | | | |
|---|-------------------------|--|---------------------|--|
| \$ in Millions | Less Than 12 Months | | 12 Months or Longer | |
| Unrealized Losses & Fair Value by Security Type | Unrealized Losses | Fair Value of Investments with Unrealized Losses | Unrealized Losses | Fair Value of Investments with Unrealized Losses |
| U.S. Government and agency securities | (\$4) | \$827 | (\$29) | \$1,749 |
| Residential MBS | (12) | 738 | (83) | 3,187 |
| Commercial MBS | (5) | 374 | (31) | 1,369 |
| Other MBS and ABS | (38) | 1,812 | (39) | 1,555 |
| U.S. state and municipal | (4) | 472 | (60) | 2,567 |
| Corporate and other | (293) | 10,771 | (240) | 6,852 |
| Foreign government securities | (16) | 754 | (24) | 913 |
| Total fixed maturities | (372) | 15,748 | (506) | 18,192 |
| Common stock | (232) | 2,184 | (61) | 881 |
| Preferred stock | - | 4 | - | - |
| Total equity securities | (232) | 2,188 | (61) | 881 |
| Total securities available for sale | (\$604) | \$17,936 | (\$567) | \$19,073 |

| | As of December 31, 2017 | | | |
|---|-------------------------|--|---------------------|--|
| \$ in Millions | Less Than 12 Months | | 12 Months or Longer | |
| Unrealized Losses & Fair Value by Security Type | Unrealized Losses | Fair Value of Investments with Unrealized Losses | Unrealized Losses | Fair Value of Investments with Unrealized Losses |
| U.S. Government and agency securities | (\$20) | \$2,544 | (\$12) | \$486 |
| Residential MBS | (21) | 2,891 | (26) | 1,440 |
| Commercial MBS | (12) | 1,549 | (4) | 139 |
| Other MBS and ABS | (6) | 1,270 | (12) | 437 |
| U.S. state and municipal | (8) | 958 | (27) | 1,214 |
| Corporate and other | (64) | 7,575 | (27) | 1,115 |
| Foreign government securities | (11) | 1,260 | (10) | 411 |
| Total fixed maturities | (142) | 18,047 | (118) | 5,242 |
| Common stock | (8) | 599 | (2) | 21 |
| Preferred stock | - | - | - | - |
| Total equity securities | (8) | 599 | (2) | 21 |
| Total securities available for sale | (\$150) | \$18,646 | (\$120) | \$5,263 |

Unrealized losses increased from \$270 million as of December 31, 2017 to \$1.171 billion as of December 31, 2018. The increase was primarily driven by the unfavorable impact of the increase in treasury rates and widening credit spreads. Of the \$61 million of unrealized losses 12 months or longer on common stock, \$4 million relates to securities associated with non-guaranteed unit linked products where the policyholder bears the investment risk. The Company monitors the difference between the amortized cost and estimated fair value of fixed maturity securities to ascertain whether declines in value are temporary in nature. The Company currently does not have the intent to sell these securities and has determined it is not more likely than not that it would be required to sell these fixed maturity

securities before they recover their fair value. The Company has concluded that the gross unrealized losses of fixed maturity securities as of December 31, 2018 are temporary.

For equity securities, if the decline is believed to be other-than-temporary, the carrying value of the investment is written down to fair value and a realized loss is recorded. The Company has concluded that the gross unrealized losses of equity securities as of December 31, 2018 are temporary, and the Company has the intent and ability to hold these securities until recovery.

The following tables summarize the Company's issuer and sector exposure¹ as of December 31, 2018:

| Top 10 Issuers | As of December 31, 2018 | | | | |
|------------------------------|--------------------------------|---------------|-------------------|-----------------------|-----------------------------|
| \$ in Millions | Fixed Maturity | Equity | Short Term | Total Exposure | % of Invested Assets |
| Government of Brazil | \$692 | \$- | \$- | \$692 | 0.91% |
| Government of United Kingdom | 544 | - | 4 | 548 | 0.73 |
| Government of Canada | 391 | - | 4 | 395 | 0.52 |
| State of Illinois | 326 | - | 19 | 345 | 0.46 |
| Government of Spain | 339 | - | - | 339 | 0.45 |
| Government of Italy | 326 | - | - | 326 | 0.43 |
| Government of Colombia | 285 | - | - | 285 | 0.38 |
| Bank of America Corp | 283 | - | - | 283 | 0.38 |
| Banco Santander | 275 | - | - | 275 | 0.37 |
| Citigroup Inc | 247 | - | - | 247 | 0.33 |
| Total | \$3,708 | \$- | \$27 | \$3,735 | 4.96% |

| Top 10 Sectors | As of December 31, 2018 | | | | |
|-----------------------|--------------------------------|----------------|-------------------|-----------------------|-----------------------------|
| \$ in Millions | Fixed Maturity | Equity | Short Term | Total Exposure | % of Invested Assets |
| Banking | \$4,441 | \$20 | \$307 | \$4,768 | 6.33% |
| Foreign Government | 4,239 | - | 32 | 4,271 | 5.67 |
| Electric Utility | 1,755 | 291 | - | 2,046 | 2.72 |
| Technology | 1,646 | 234 | - | 1,880 | 2.50 |
| REITS | 310 | 968 | - | 1,278 | 1.70 |
| Pharmaceuticals | 1,216 | 47 | - | 1,263 | 1.68 |
| US Municipal – State | 1,239 | - | 18 | 1,257 | 1.67 |
| Food and Beverage | 1,203 | 30 | - | 1,233 | 1.64 |
| Insurance | 1,091 | 113 | - | 1,204 | 1.60 |
| US Municipal – Local | 1,135 | - | - | 1,135 | 1.51 |
| Total | \$18,275 | \$1,703 | \$357 | \$20,335 | 27.02% |

¹ Tables exclude U.S. Treasury and agency securities, mortgage-backed securities, ETFs, and municipal obligations that are pre-funded or escrowed to maturity.

As of December 31, 2018, investments in the energy sector accounted for \$2.928 billion or 3.9% of total invested assets. The energy sector is comprised of investments in the following sub-sectors: independent energy, integrated energy, midstream, oil field services, and refining (*classification per Bloomberg Barclays Industry Groups*). These individual energy sub-sectors are not material enough at an individual level to appear within the top 10 rankings in the sector table above. Energy investments consist of investment grade bonds of \$2.112 billion, bonds that were rated below investment grade of \$236 million, publicly traded equity securities of \$5 million, and natural resources partnerships and other equity method investments of \$575 million. In addition, the Company has direct investments in oil and gas wells of \$1.073 billion which are included in other assets on the Consolidated Balance Sheets.

The following table summarizes the Company's unfunded commitments as of December 31, 2018 and December 31, 2017:

| Unfunded Commitments ^{1,2} | As of December 31, 2018 | | As of December 31, 2017 | |
|--|-------------------------|---------------|-------------------------|---------------|
| | Total | % of Total | Total | % of Total |
| \$ in Millions | | | | |
| Traditional private equity | \$980 | 32.5% | \$1,554 | 45.3% |
| Natural resources – Energy | 521 | 17.3 | 715 | 20.8 |
| Natural resources – Other ³ | 99 | 3.3 | 20 | 0.6 |
| Real estate | 687 | 22.8 | 607 | 17.7 |
| Other | 726 | 24.1 | 537 | 15.6 |
| Total unfunded commitments | \$3,013 | 100.0% | \$3,433 | 100.0% |

1 Represents Liberty Mutual Holding Company Inc. view.

2 December 31, 2018 reflects a change in classification of certain LP, LLC and other equity method investments. December 31, 2017 has not been restated and includes \$350 million in Traditional private equity that would be reported as Natural Resource-Other under the new classification.

3 Includes both agriculture and timber commitments.

Unfunded commitments as of December 31, 2018 were \$3.013 billion, a decrease of \$420 million from December 31, 2017. The decrease is primarily driven by contributions net of new commitments related to traditional private equity partnerships and real estate investments as well as the removal of unfunded commitments related to the sale of private equity partnerships. The \$521 million unfunded energy investment commitments as of December 31, 2018 included \$160 million related to energy partnerships and \$361 million related to direct investments in oil and gas wells. The \$715 million unfunded energy investment commitments as of December 31, 2017 included \$355 million related to natural resource partnerships and \$360 million related to direct investments in oil and gas wells.

LIQUIDITY AND CAPITAL RESOURCES

The liquidity requirements of the insurance subsidiaries are met primarily by funds generated from operations, asset maturities and income received on investments. Cash provided from these sources is used primarily for claims, claim adjustment expenses and operating expenses (underwriting and corporate benefit costs). There are certain cash outflows such as catastrophes and continued settlements of asbestos reserves that are unpredictable in nature and could create increased liquidity needs. The Company believes that the insurance subsidiaries' future business liquidity needs will be met from all the above sources. However, the Company maintains back up borrowing facilities as an additional contingent source of funds. These include:

- On December 1, 2017, Liberty Mutual Insurance Company ("LMIC") replaced its \$1 billion repurchase agreement with a \$250 million repurchase agreement for a three-year period, which terminates December 1, 2020. At December 31, 2018, no funds were borrowed under the facility.
- On November 24, 2017, LMIC entered into a \$250 million repurchase agreement with an expiration date of November 24, 2020. At December 31, 2018, no funds were borrowed under the facility.
- LMIC, Peerless Insurance Company ("PIC"), Liberty Mutual Fire Insurance Company ("LMFIC"), Employers Insurance Company of Wausau ("EICOW"), Ironshore Specialty Insurance Company ("ISIC") and Ironshore Indemnity Insurance ("III") are members of the Federal Home Loan Bank. The Company has \$300 million of Federal Home Loan Bank borrowings with maturity dates in 2032. As of December 31, 2018, all of the outstanding Federal Home Loan Bank borrowings are fully collateralized.

Net cash flows are generally invested in marketable securities while keeping a certain amount in cash and short-term investments to meet unpredictable cash obligations. The Company monitors the duration of these investments, and purchases and sales are executed with the objective of having adequate cash available to satisfy its maturing liabilities. As the Company's investment strategy focuses on overall asset and liability durations, and not specific cash flows, asset sales may be required to satisfy obligations or rebalance asset portfolios. The Company's invested assets as of December 31, 2018 (including cash and cash equivalents) totaled \$75.267 billion.

Debt outstanding as of December 31, 2018 and December 31, 2017 was as follows:

Short-term debt:

| \$ in Millions | As of December 31, 2018 | As of December 31, 2017 |
|-----------------------|------------------------------------|------------------------------------|
| Short-term debt | \$ - | \$ 11 |

Long-term debt:

| \$ in Millions | As of December 31, 2018 | As of December 31, 2017 |
|---|------------------------------------|------------------------------------|
| Junior Subordinated notes, due 2067 ^{1, 2} | \$300 | \$300 |
| 5.00% Notes, due 2021 | 600 | 600 |
| 4.95% Notes, due 2022 | 750 | 750 |
| 4.25% Notes, due 2023 | 1,000 | 1,000 |
| 1.75% €500 Million Notes, due 2024 | 572 | 600 |
| 8.50% Surplus notes, due 2025 | 140 | 140 |
| 2.75% €750 Million Notes, due 2026 | 857 | 901 |
| 7.875% Surplus notes, due 2026 | 227 | 227 |
| 7.625% Notes, due 2028 | 3 | 3 |
| 3.91% - 4.25% Federal Home Loan Bank Borrowings, due 2032 | 300 | 300 |
| 7.00% Notes, due 2034 | 231 | 231 |
| 6.50% Notes, due 2035 | 471 | 471 |
| 7.50% Notes, due 2036 | 19 | 19 |
| 7.80% Junior Subordinated notes, due 2087 ² | 700 | 700 |
| 10.75% Junior Subordinated notes, due 2088 ³ | 52 | 66 |
| 6.50% Notes, due 2042 | 750 | 750 |
| 4.85% Notes, due 2044 | 1,050 | 1,050 |
| 7.697% Surplus notes, due 2097 | 260 | 260 |
| Subtotal | 8,282 | 8,368 |
| Unamortized discount | (11) | (13) |
| Long-term debt excluding unamortized debt issuance costs | 8,271 | 8,355 |
| Unamortized debt issuance costs | (38) | (41) |
| Total long-term debt | \$8,233 | \$8,314 |

1 7.00% fixed rate became 6.324% starting March 15, 2017 through a swap. Bondholders are paid 3-month LIBOR + 2.905%.

2 The par value call date and final fixed rate interest payment date is March 15, 2037, subject to certain requirements.

3 The par value call date and final fixed rate interest payment date is June 15, 2038, subject to certain requirements.

As part of its overall capital strategy, the Company previously announced that it may issue, repurchase or exchange debt depending on market conditions. Debt repurchases may be executed through open market or other appropriate transactions. The Company continues to evaluate market conditions and may periodically effect transactions in its debt, subject to applicable limitations.

Debt Transactions

During the three and twelve months ended December 31, 2018, the Company repurchased zero and \$14 million of the 10.75% Junior Subordinated notes due 2088 compared to zero and \$2 million for the same periods in 2017. Pre-tax losses of zero and \$8 million were recorded on these transactions for the three and twelve months ended December 31, 2018 compared to zero and \$1 million for the same periods in 2017 and are included in loss on extinguishment of debt in the accompanying Consolidated Statements of Income.

On November 29, 2017, LMIC terminated its \$1 billion repurchase agreement that was due to expire July 3, 2018.

On October 9, 2017, LMGI terminated its \$1 billion commercial paper program.

On June 1, 2017, in connection with the Ironshore acquisition, the Company repurchased \$250 million of Ironshore's 8.5% senior note maturing in 2020 for \$298 million, which reflects the fair value of the long term debt on the opening balance sheet.

On March 27, 2017, LMFE issued €500 million par value of the 2024 Notes. Interest is payable annually at a fixed rate of 1.75%. The 2024 Notes mature on March 27, 2024. The Company has designated non-derivative foreign-

currency denominated long-term debt and the related accrued interest as hedges of its net investment in certain foreign operations.

On January 20, 2012, LMGI entered into two interest rate swap transactions having a notional amount of \$300 million with respect to LMGI's \$300 million Junior Subordinated Notes due 2067. Pursuant to the terms of the swap agreements, commencing on March 15, 2017 and effective through March 15, 2037, LMGI has agreed with the counterparties to pay a fixed rate of interest on the notional amount and the counterparties have agreed to pay a floating rate of interest on the notional amount.

Interest Expense

Consolidated interest expense for the three and twelve months ended December 31, 2018 was \$110 million and \$441 million, respectively, no change from the same periods in 2017.

Holding Company Liquidity and Capital Resources

The Company conducts substantially all of its operations through its wholly owned insurance and service company subsidiaries, and therefore is primarily dependent on dividends, distributions, loans or other payments of funds from these entities to meet its current and future obligations. However, the subsidiaries are separate and distinct legal entities and have no obligation to make funds available to the Company, whether in the form of loans, dividends or other distributions. As of December 31, 2018, the Company, through its downstream subsidiaries LMGI and LMFE, had \$6.780 billion and \$572 million, respectively, of debt outstanding, excluding discount and issuance costs.

The insurance subsidiaries' ability to pay dividends on preferred or common stock is restricted under applicable insurance laws and regulations and may be paid only from unassigned surplus. Under the insurance laws of the domiciliary states of the insurance subsidiaries, an insurer may make an ordinary dividend payment if its surplus as regards policyholders, following such dividend, is reasonable in relation to its outstanding liabilities, is adequate to meet its financial needs, and does not exceed the insurer's unassigned surplus. However, no insurer may pay an extraordinary dividend without the approval or non-disapproval of the domiciliary insurance regulatory authority. Insurance subsidiaries owned directly by LMGI are LMIC, Liberty Mutual Personal Insurance Company ("LMPICO"), LMFIC and EICOW. Under the insurance laws of Massachusetts, the domiciliary state of LMIC and LMPICO, an extraordinary dividend is defined as a dividend whose fair market value, together with other dividends made within the preceding 12 months, exceeds the greater of 10% of the insurer's surplus as regards policyholders as of the preceding December 31, or the insurer's net income for the 12-month period ending on the preceding December 31. Under the insurance laws of Wisconsin, the domiciliary state of LMFIC and EICOW, an extraordinary dividend is defined as a dividend whose fair market value, together with other dividends paid within the preceding 12 months, exceeds the lesser of (a) 10% of the insurer's surplus as regards policyholders as of the preceding December 31, or (b) the greater of (1) the insurer's net income for the preceding calendar year, minus realized capital gains for that calendar year, or (2) the aggregate of the insurer's net income for the three preceding calendar years minus realized capital gains for those calendar years and minus dividends paid within the first two of the preceding three calendar years. Changes in the extraordinary dividend regulation of the domiciliary states of LMIC, LMFIC and EICOW could negatively affect LMGI's ability to pay principal and interest on its debt, as could a redomestication or merger of LMIC, LMPICO, LMFIC or EICOW to a different domiciliary state.

The authorized control level risk-based capital (as of December 31, 2018) and 2019 available dividend capacity prior to needing regulatory approval for LMIC, LMFIC and EICOW were as follows:

| \$ in Millions | RBC Ratio ¹ | | Dividend Capacity ² | Dividends Paid ³ |
|---|------------------------|------|--------------------------------|-----------------------------|
| | 2018 | 2017 | 2019 | 2018 |
| RBC Ratios and Dividend Capacity | | | | |
| LMIC | 399% | 354% | \$2,843 | \$65 |
| LMFIC | 494% | 452% | \$168 | \$15 |
| EICOW | 454% | 422% | \$165 | \$- |

1 Authorized control level risk-based capital as defined by the NAIC.

2 Represents the estimated maximum allowable dividend without prior regulatory approval in the state of domicile.

3 Dividends paid represent amounts paid during the twelve months ended December 31, 2018. Available dividend capacity as of December 31, 2018 is calculated as 2019 dividend capacity less dividends paid for the preceding 12 months.

LMGI also has access to the following sources of funding:

- An unsecured revolving credit facility of \$1 billion with an expiration date of March 5, 2020. To date, no funds have been borrowed under the facility.
- A management services agreement with LMIC pursuant to which LMGI is entitled to collect certain costs plus a management fee for services rendered by LMGI employees.
- Investment management agreements with affiliated entities pursuant to which an LMGI subsidiary investment advisor is entitled to recover annual expenses for investment management services performed by its employees.
- Liberty Corporate Services LLC (“LCS”), which through its subsidiaries collects fees and other revenues, primarily for claims administration, agency and IT services rendered for affiliated and non-affiliated entities. For the three and twelve months ended December 31, 2018, LCS recorded \$104 million and \$382 million, respectively, in pre-tax income.
- Approximately \$80 million of annual dividends related to non-redeemable perpetual preferred stock issuances by LMIC and LMFIC.

| \$ in Millions | As of December 31, 2018 | As of December 31, 2017 |
|--|----------------------------|----------------------------|
| Total debt | \$8,233 | \$8,325 |
| Adjusted debt ¹ | \$7,233 | \$7,325 |
| Total equity | \$20,762 | \$20,688 |
| Less: Accumulated other comprehensive loss | (3,379) | (1,026) |
| Total equity excluding accumulated other comprehensive loss | \$24,141 | \$21,714 |
| Total capital excluding accumulated other comprehensive loss | \$32,374 | \$30,039 |
| Adjusted debt-to-capital capitalization excluding accumulated other comprehensive loss | 22.3% | 24.4% |
| Statutory surplus | \$19,766 | \$17,493 |

1 Assumes that the Series A and B Junior Subordinated Notes receive 100% equity credit.

The adjusted debt-to-capital capitalization ratio excluding accumulated other comprehensive loss is calculated by dividing (a) adjusted debt by (b) total capital excluding accumulated other comprehensive loss. Net unrealized gains and losses on investments can be significantly impacted by both interest rate movements and other economic factors. Accordingly, in the opinion of the Company’s management, the debt-to-total capital ratio calculated on this basis provides another useful metric for investors to understand the Company’s financial leverage position. The Company’s ratio of debt-to-capital (excluding accumulated other comprehensive loss) of 22.3% at December 31, 2018 was within the Company’s target range.

REINSURANCE

Reinsurance Recoverables

The Company reported reinsurance recoverables of \$15.145 billion and \$16.899 billion at December 31, 2018 and December 31, 2017, respectively, net of allowance for doubtful accounts of \$204 million and \$218 million, respectively. Included in these balances are \$937 million and \$725 million of paid recoverables and \$14.412 billion and \$16.392 billion of unpaid recoverables (including retroactive reinsurance), respectively.

The decrease in the reported reinsurance recoverables, net of allowance for doubtful accounts, of \$1.754 billion primarily reflects reductions on the NICO Reinsurance Transaction treaty, property catastrophe treaties and the Company's service carrier operations. The NICO Reinsurance Transaction treaty reduction was driven by covered prior year workers compensation reserve releases partially offset by asbestos and environmental reserve strengthening. The property catastrophe reductions were driven by prior year catastrophe reserve releases and cash collections of recoverables. The Company's service carrier operations reduction was driven by prior year workers compensation reserve releases.

| S&P Rating ¹ | As of December 31, 2018 | | | |
|---|---------------------------------|------------------------------|-------------------------------|-----------------------------|
| | Gross Recoverables ² | Collateral Held ³ | Net Recoverables ⁴ | % of Total Net Recoverables |
| \$ in Millions | | | | |
| <u>Rated Entities</u> | | | | |
| AAA | \$ - | \$ - | \$ - | - |
| AA+, AA, AA- | 5,990 | 4,685 | 2,126 | 22% |
| A+, A, A- | 4,269 | 354 | 3,943 | 41% |
| BBB+, BBB, BBB- | - | - | - | - |
| BB+ or below | 1 | - | 1 | - |
| Subtotal | 10,260 | 5,039 | 6,070 | 63% |
| <u>Pools & Associations</u> | | | | |
| State mandated involuntary pools and associations | 2,744 | - | 2,744 | 29% |
| Voluntary | 198 | 107 | 191 | 2% |
| Subtotal | 2,942 | 107 | 2,935 | 31% |
| <u>Non-Rated Entities⁵</u> | | | | |
| Captives & fronting companies | 1,433 | 1,689 | 219 | 2% |
| Other | 714 | 1,452 | 335 | 4% |
| Subtotal | 2,147 | 3,141 | 554 | 6% |
| Grand Total | \$15,349 | \$8,287 | \$9,559 | 100% |

1 Standard & Poor's ratings are as of December 31, 2018.

2 Gross recoverables are defined as paid and unpaid claims and claim adjustment expense including IBNR and before both bad debt reserve set aside for potential uncollectible reinsurance and consideration of collateral.

3 Collateral refers to letters of credit, trust accounts, and funds held against outstanding and potential future claims and claim adjustment expenses related to reinsurance recoverable balances.

4 Net recoverables are defined as the difference between the amount of gross recoverables and collateral held for each reinsurer. If the collateral held for a reinsurer is greater than the gross recoverable, net recoverables are reported as \$0.

5 Reinsurers not rated by Standard & Poor's.

| Reinsurance Groups ¹ | As of December 31, 2018 | | |
|---|---------------------------------|------------------------------|-------------------------------|
| | Gross Recoverables ² | Collateral Held ³ | Net Recoverables ⁴ |
| \$ in Millions | | | |
| 1. Berkshire Hathaway Insurance Group | \$3,482 | \$3,784 | \$191 |
| 2. Nationwide Group | 1,405 | - | 1,405 |
| 3. Swiss Re Group | 1,346 | 749 | 911 |
| 4. Everest Re Group | 460 | 130 | 339 |
| 5. Munich Re Group | 435 | 13 | 427 |
| 6. Lloyd's of London | 425 | - | 425 |
| 7. Alleghany Corp | 402 | 40 | 362 |
| 8. UPINSCO | 360 | 557 | - |
| 9. Builders Reinsurance S.A. | 285 | 344 | - |
| 10. CUMIS Insurance Society Group | 257 | - | 257 |
| 11. Exchange Indemnity Company | 225 | 110 | 117 |
| 12. Partner Re Group | 218 | 26 | 196 |
| 13. Markel Corp | 206 | 3 | 204 |
| 14. Hannover Re Group | 174 | 16 | 162 |
| 15. AEGIS Group | 164 | 173 | - |
| State Mandated Involuntary pools and associations | 2,744 | - | 2,744 |
| Voluntary pools and associations | 198 | 107 | 191 |
| All Other | 2,563 | 2,235 | 1,628 |
| Total Reinsurance Recoverables | \$15,349 | \$8,287 | \$9,559 |

1 Reinsurance Groups are defined as all reinsurance subsidiaries owned by a common parent.

2 Gross recoverables are defined as paid and unpaid claims and claim adjustment expense including IBNR and before both bad debt reserve set aside for potential uncollectible reinsurance and consideration of collateral.

3 Collateral refers to letters of credit, trust accounts, and funds held against outstanding and potential future claims and claim adjustment expenses related to reinsurance recoverable balances.

4 Net recoverables are defined as the difference between the amount of gross recoverables and collateral held for each reinsurer. If the collateral held for a reinsurer is greater than the gross recoverable, net recoverables are reported as \$0.

Approximately 95% and 94% of the Company's reinsurance recoverable balance, net of collateral held and including voluntary and involuntary pools and associations, was from reinsurers rated A- or better from A.M. Best and Standard & Poor's, respectively, at December 31, 2018. Collateral held against outstanding gross reinsurance recoverable balances was \$8.287 billion at December 31, 2018.

The remaining 5% and 6% of the Company's net reinsurance recoverable balance is well diversified. No single reinsurer rated B++ or below by A.M. Best or below A- by Standard & Poor's accounts for more than 1% of GAAP equity. In addition, the average net reinsurance recoverable balance from individual reinsurers rated below A- or not rated by A.M. Best and Standard & Poor's was approximately \$1 million as of December 31, 2018.

The reinsurance recoverables from state mandated involuntary pools and associations primarily represent the Company's servicing carrier business. As a servicing carrier, the Company retains no direct underwriting risk but instead cedes 100% of the involuntary market premium and losses back to the pool. Payment of losses is shared by the pool participants in proportion to their pool participation. Reinsurer credit risk with respect to any such involuntary pool or association is a function of the creditworthiness of all the pool participants.

The Company's reinsurance recoverables from Nationwide Indemnity Company have been fully guaranteed by its parent, Nationwide Mutual Insurance Company, which has a financial strength rating of A+ from Standard & Poor's and A+ from A.M. Best.

Property Catastrophe Reinsurance

The Company has reinsurance coverage for its domestic business and certain specialty operations including: 1) hurricanes and earthquake reinsurance covering a substantial portion of \$3.1 billion of loss in excess of \$500 million of retained loss in the United States, Canada and the Caribbean, excluding certain reinsurance exposures; 2) aggregate

excess of loss programs; 3) quota share reinsurance programs; and 4) regional or country specific catastrophe reinsurance programs. These programs are structured to meet the Company's established tolerances under its Enterprise Risk Management Program.

Adverse Development Reinsurance

In conjunction with the Ironshore acquisition and effective May 1, 2017, the Company entered into a reinsurance transaction with NICO, a subsidiary of Berkshire Hathaway Inc., on a combined aggregate excess of loss agreement providing coverage for substantially all of Ironshore's reserves related to losses occurring prior to January 1, 2017. The first layer of the contract transfers \$400 million of held reserves at inception, for which the Company established reinsurance recoverables on the Consolidated Balance Sheet. The second layer of the contract provides adverse development coverage for 95% of \$500 million above a retention equal to \$2.991 billion, minus paid losses between January 1, 2017 and May 1, 2017, which retention approximates the total held reserves on the covered business on Ironshore's opening balance sheet. The Company paid NICO consideration of \$550 million, including interest accrued at the time of the settlement. The contract is accounted for on a prospective basis.

On July 17, 2014, LMIC entered into a reinsurance transaction with NICO on a combined aggregate excess of loss agreement for substantially all of the Company's U.S. workers compensation, asbestos and environmental liabilities, attaching at \$12.522 billion of combined aggregate reserves, with an aggregate limit of \$6.500 billion and sublimits of \$3.100 billion for asbestos and environmental liabilities and \$4.507 billion for certain workers compensation liabilities. At the closing of the NICO Reinsurance Transaction, but effective as of January 1, 2014, the Company ceded \$3.320 billion of existing undiscounted liabilities under this retroactive reinsurance agreement. NICO will provide \$3.180 billion of additional aggregate adverse development reinsurance. The Company paid NICO total consideration of \$3.046 billion and recorded a pre-tax loss of \$128 million. With respect to the ceded asbestos and environmental business, NICO has been given authority to handle claims, subject to the Company's oversight and control. With respect to the ceded workers compensation business, the Company will continue to handle claims. This contract is accounted for on a retroactive basis.

In general terms, the covered business includes post December 31, 2013 development on: (1) asbestos and environmental liabilities arising under policies of insurance and reinsurance with effective dates prior to January 1, 2005; and (2) workers compensation liabilities arising out of policies on the books of the Company's former Commercial Insurance SBU as of December 31, 2013, as respects injuries or accidents occurring prior to January 1, 2014.

Since the NICO Reinsurance Transaction is accounted for as retroactive reinsurance in the Company's GAAP Consolidated Financial Statements, to the extent there is unfavorable development of losses covered by this reinsurance, an additional reinsurance benefit is recognized in the Consolidated Statements of Income until those benefits exceed the loss on the transaction. Reinsurance benefits will be deferred and are amortized into earnings over the period when underlying claims are settled.

During 2018, the company had net reserve releases driven by favorable development in workers compensation, partially offset by unfavorable development in asbestos and environmental. This resulted in the net position of the contract changing from a gross deferred gain of \$240 million to a loss of \$210 million as of December 31, 2018.

The Company reported deferred gain amortization of (\$35) million and \$21 million at December 31, 2018 and 2017, respectively. As of December 31, 2018 and 2017, respectively, deferred gains were zero and \$205 million, and are included in other liabilities within the accompanying Consolidated Balance Sheets.

CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. The Company's principal estimates include (1) unpaid claims and claim adjustment expense reserves, including asbestos and environmental liability reserves and loss sensitive premium attributable to prior years, (2) reinsurance recoverables and associated uncollectible allowance, (3) fair value determination and other-than-temporary impairments of the investment portfolio and direct working interests in oil and gas properties, (4) valuation of goodwill and intangible assets, (5) deferred income tax valuation allowance, and (6) pension and postretirement benefit obligations.

While the amounts included in the Consolidated Financial Statements reflect management's best estimates and assumptions, these amounts ultimately could vary.

For additional discussion, please refer to footnote 1 in the Company's December 31, 2018 Audited Consolidated Financial Statements.

Unpaid Claims and Claim Adjustment Expenses

Property and casualty insurance unpaid claims and claim adjustment expenses represent the Company's best estimate of amounts necessary to settle all outstanding claims, including claims that are incurred but not reported as of the reporting date. The Company's reserve projections are based primarily on detailed analysis of the facts in each case, experience with similar cases and various historical development patterns. Consideration is given to such historical patterns as field reserving trends and claims settlement practices, loss payments, pending levels of unpaid claims and product mix, as well as court decisions, economic conditions and public attitudes. All of these factors can affect the estimation of reserves.

Establishing loss reserves, including loss reserves for catastrophic events that have occurred, is an estimation process. Many factors can ultimately affect the final settlement of a claim and, therefore, the necessary reserve.

For additional discussion, please refer to footnote 6 in the Company's December 31, 2018 Audited Consolidated Financial Statements.

Asbestos and Environmental

As a result of the significant uncertainty inherent in determining a company's asbestos and environmental liabilities and establishing related reserves, the amount of reserves required to adequately fund the Company's asbestos and environmental claims cannot be accurately estimated using conventional reserving methodologies based on historical data and trends. As a result, the use of conventional reserving methodologies frequently has to be supplemented by subjective considerations including managerial judgment. In that regard, the estimation of asbestos claims and associated liabilities and the analysis of environmental claims considered prevailing applicable law and certain inconsistencies of court decisions as to coverage, plaintiffs' expanded theories of liability, and the risks inherent in major litigation and other uncertainties, the Company believes that in future periods it is possible that the outcome of the continued uncertainties regarding asbestos and environmental related claims could result in an aggregate liability that differs from current reserves and would be covered under the NICO Reinsurance Transaction.

For additional discussion, please refer to footnote 6 in the Company's December 31, 2018 Audited Consolidated Financial Statements.

Reinsurance Recoverables

Amounts recoverable from reinsurers are estimated in a manner consistent with the claim liability associated with the reinsured business. The Company evaluates and monitors the financial condition of its reinsurers under voluntary reinsurance arrangements to minimize its exposure to significant losses from reinsurer insolvencies. The Company reports its reinsurance recoverables net of an allowance for estimated uncollectible reinsurance recoverables. The

allowance is based upon the Company's ongoing review of amounts outstanding, length of collection periods, changes in reinsurer credit standing and other relevant factors. Accordingly, the establishment of reinsurance recoverables and the related allowance for uncollectible reinsurance recoverables is also an inherently uncertain process involving estimates. Changes in these estimates could result in additional charges to the accompanying Consolidated Statements of Income.

Ceded transactions that transfer risk but are retroactive are included in reinsurance recoverables. The excess of estimated liabilities for claims and claim costs over the consideration paid net of experience adjustments is established as a deferred credit at inception. The deferred amounts are subsequently amortized using the effective interest method over the expected settlement period. The periodic amortization is reflected in the accompanying Consolidated Statements of Income through benefits, claims and claim adjustment expenses. In transactions where the consideration paid exceeds the estimated liabilities for claims and claim costs a loss is recognized. If the adverse development net of experience adjustments exceeds the original loss, deferred gains are recorded. The deferred gains are subsequently recognized into earnings over the expected settlement period of the reserves.

For additional discussion, please refer to footnote 5 in the Company's December 31, 2018 Audited Consolidated Financial Statements.

Fair Value Determination

Fair value is the price that would be received to sell an asset or would be paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Company primarily uses the market approach, which generally utilizes market transaction data for identical or similar instruments.

The hierarchy level assigned to each security in the Company's available for sale portfolio is based on the Company's assessment of the transparency and reliability of the inputs used in the valuation of each instrument at the measurement date. Securities are classified into three hierarchy levels: Level 1, Level 2 or Level 3.

Regarding fair value measurements, as of December 31, 2018, excluding other assets, the Company reflected \$9.782 billion (15.8%) as level 1 (quoted prices in active markets) primarily consisting of U.S. Treasuries and common equity securities. The majority of the Company's invested assets are reported as level 2 (quoted prices from other observable inputs). As of December 31, 2018, the Company reported \$51.374 billion (83.0%) as level 2, consisting primarily of fixed maturity securities. Finally, the Company reported \$737 million (1.2%) as level 3 (unobservable inputs), primarily consisting of international and privately held securities for which a market price is not readily observable.

For additional discussion, please refer to footnote 10 in the Company's December 31, 2018 Audited Consolidated Financial Statements.

Impairment Losses on Investments

The Company reviews fixed maturity securities, equity securities and other investments which include limited partnership and other equity method investments (primarily traditional private equity, natural resource and real estate) for impairment on a quarterly basis. These investments are reviewed for both quantitative and qualitative considerations including, but not limited to: (a) the extent of the decline in fair value below book value, (b) the duration of the decline, (c) significant adverse changes in the financial condition or near term prospects of the investment or issuer, (d) significant change in the business climate or credit ratings of the issuer, (e) general market conditions and volatility, (f) industry factors, (g) the past impairment of the security holding or the issuer, and (h) impact of foreign exchange rates on foreign currency denominated securities.

The Company is required to review its natural resource and other equity method investments when facts and circumstances indicate that carrying values may not be recoverable. In performing a quarterly review, the fair value of the Company's investment is estimated using indicators including, but not limited to, market comparables and analyses, commodity prices, and discounted cash flows and a realized loss is recognized for the excess, if any, of the investment's carrying value over its estimated fair value.

The Company is required to review its oil and gas properties when facts and circumstances indicate the possible existence of impairment. When a property's carrying value is greater than the expected future cash flows, impairment expense is recognized to the extent that the carrying value of the property exceeds its estimated fair market value. In employing the discounted cash flow method described, key inputs include commodity prices, locational basis difference, production, project development costs and the discount rate which are based on management's expectations about outcomes with respect to these variables. Unproved properties are assessed at least annually to determine whether impairment has occurred.

For additional discussion, please refer to footnote 1 in the Company's December 31, 2018 Audited Consolidated Financial Statements.

Goodwill and Intangible Assets

Goodwill is tested for impairment at least annually using either a qualitative or a quantitative process. Election of the approach can be made at the reporting unit level. The reporting unit has the option to skip the qualitative test and move directly to completion of the quantitative process. As of December 31, 2018, the Company has two reporting units – Global Retail Markets and Global Risk Solutions.

Indefinite-lived intangible assets held by the Company are reviewed for impairment on at least an annual basis using a qualitative process. The classification of the asset as indefinite-lived is reassessed, and an impairment is recognized if the carrying amount of the asset exceeds its fair value.

The Company had no material goodwill impairments or intangible asset impairments recognized in 2018 or 2017.

For additional discussion, please refer to footnote 1 in the Company's December 31, 2018 Audited Consolidated Financial Statements.

Deferred Income Taxes

The income tax provision is calculated under the liability method. Deferred income tax assets and liabilities are recorded based upon the difference between the financial statement and tax bases of assets and liabilities at the enacted tax rates. The principal assets and liabilities giving rise to such differences are insurance loss reserves, unearned premiums, net operating losses, employee benefits, accrued expenses, deferred policy acquisition costs, net unrealized gains and losses on investments, intangibles, equalization reserves and fixed assets.

On December 22, 2017, the U.S. enacted the Act which reduced the U.S. Federal corporate income tax rate from 35% to 21%, required companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and created new taxes on certain foreign-sourced earnings. At December 31, 2017, the Company made a reasonable estimate of the effects of the reduction in the U.S. Federal corporate income tax rate and the one-time transition tax, which resulted in a tax expense of \$252 million, of which \$240 million was considered provisional and \$12 million was due to the impact of proportional amortization on investments in qualified affordable housing projects.

Staff Accounting Bulletin No. 118 ("SAB 118") was issued to address the application of U.S. GAAP in situations when a company does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. The measurement period for purposes of SAB 118 ended December 22, 2018. We have completed our analysis which resulted in an additional tax benefit of \$9 million in the fourth quarter of 2018 and a total tax benefit of \$13 million for the year ended December 31, 2018. This total benefit includes \$4 million related to adjustments to the transition tax and \$9 million related to the re-measurement of certain deferred tax assets and liabilities. The effect of the measurement period adjustments on the 2018 effective tax rate are immaterial.

No additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax or any additional outside basis differences as these amounts continue to be indefinitely reinvested. Determining the amount of unrecognized deferred tax liability related to any remaining undistributed foreign earnings not subject to the transition tax or additional outside basis differences is not practicable.

As of December 31, 2018, the U.S. Treasury Department and the Internal Revenue Service (“IRS”) are still in the process of issuing various regulations in accordance with the Act. Accordingly, future adjustments to the financial statements may be necessary as regulations are issued and the 2018 tax returns are filed with the IRS and foreign tax authorities.

In addition, the Act includes a new provision, global intangible low-taxed income (“GILTI”), which impacts global companies. GILTI is treated by the Company as a period expense.

For additional discussion, please refer to footnote 8 in the Company’s December 31, 2018 Audited Consolidated Financial Statements.

Pension and Postretirement Benefit Obligations

On an annual basis, the Company reviews the discount rate assumption used to determine the benefit obligations and the composition of various yield curves to ensure that the assumed discount rate reflects the Company’s best estimate of the rate of return inherent in a portfolio of high-quality debt instruments that would provide the cash flows necessary to settle the Company’s projected benefit payments.

The discount rate assumption used to determine the benefit obligations was based on a yield curve approach where the cash flows related to the benefit plans’ liability stream were discounted at an interest rate specifically applicable to the timing of the cash flows. Effective January 1, 2016, service cost is calculated by discounting the future cash flows attributable to the current year of service using spot rates specifically applicable to the timing of the cash flows. Interest cost is determined by multiplying each benefit obligation cash flow by the spot rate applicable to that timing of the cash flow.

In choosing the expected long-term rate of return on plan assets, the Company’s Retirement Committee considered the historical returns of equity and fixed income markets in conjunction with current economic and financial market conditions.

For additional discussion, please refer to footnote 9 in the Company’s December 31, 2018 Audited Consolidated Financial Statements.

ABOUT THE COMPANY

Boston-based LMHC, the parent corporation of the Liberty Mutual Insurance group of entities, is a diversified global insurer and third largest property and casualty insurer in the U.S. based on 2017 direct written premium. The Company also ranks 68th on the Fortune 100 list of largest corporations in the U.S. based on 2017 revenue. As of December 31, 2018, LMHC had \$125.989 billion in consolidated assets, \$105.227 billion in consolidated liabilities, and \$41.568 billion in annual consolidated revenue.

LMHC, through its subsidiaries and affiliated companies, offers a wide range of property and casualty insurance products and services to individuals and businesses alike. In 2001 and 2002, the Company formed a mutual holding company structure, whereby the three principal mutual insurance companies, LMIC, LMFIC and EICOW, each became separate stock insurance companies under the ownership of LMHC.

Functionally, the Company conducts substantially all of its business through two business units, with each operating independently of the other in certain areas such as sales, underwriting, and claims, but, as appropriate, collaborating in other areas such as actuarial and financial. Management believes this structure provides increased synergy to the Company and permits each business unit to execute its business strategy and/or to make acquisitions without impacting or disrupting the operations of the other business unit.

LMHC employs nearly 50,000 people in over 800 offices throughout the world. For a full description of the Company's business operations, products and distribution channels, please visit Liberty Mutual's Investor Relations web site at www.libertymutualgroup.com/investors.