MARKEL BERMUDA LIMITED

Consolidated Financial Statements

December 31, 2019 and 2018

KPMG Audit Limited
Crown House
4 Par-la-Ville Road
Hamilton
HM 08
Bermuda

Telephone +1 441 295 5063
Fax +1 441 295 8280
Internet www.kpmg.bm

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of Markel Bermuda Limited

We have audited the accompanying consolidated financial statements of Markel Bermuda Limited and its subsidiary (the "Company"), which comprise the consolidated balance sheets as of December 31, 2019 and 2018, and the related consolidated statements of income (loss) and comprehensive income (loss), changes in shareholder's equity, and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly in all material respects, the financial position of Markel Bermuda Limited and its subsidiary as of December 31, 2019 and 2018, and the results of their operations and their cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.

Emphasis of matter

As discussed in Note 2 to the consolidated financial statements, on January 1, 2018, the Company adopted new accounting guidance ASU No. 2016-01, Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. Our opinion is not modified with respect to this matter.

Other matter

Management has omitted certain disclosures related to short-duration contracts that U.S. generally accepted accounting principles require to be presented to supplement the basic consolidated financial statements. Such missing information, although not a part of the basic consolidated financial statements, is required by the Financial Accounting Standards Board who consider it to be an essential part of financial reporting for placing the basic consolidated financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic consolidated financial statements is not affected by this missing information.

KPMG Audit Limited

Chartered Professional Accountants
Hamilton, Bermuda
April 24, 2020

MARKEL BERMUDA LIMITED
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2019	2018
	(dollars in thousands)	
ASSETS		
Investments, at estimated fair value:		
Fixed maturities, available-for-sale (amortized cost of $1,658,234 in 2019 and $2,263,305 in 2018)	$ 1,929,034	$ 2,471,815
Equity securities (cost of $1,066,850 in 2019 and $1,213,933 in 2018)	1,663,558	1,547,597
Investments in affiliates, at fair value	40,608	47,268
Short-term investments (estimated fair value approximates cost)	93,959	141,988
Other investments	—	740
Total Investments	3,727,159	4,209,408
Cash and cash equivalents	261,154	249,870
Restricted cash and cash equivalents	116,028	187,358
Premiums receivable	733,281	719,674
Reinsurance recoverables	755,555	868,419
Deferred policy acquisition costs	104,146	111,520
Prepaid reinsurance premiums	33,458	53,793
Due from affiliates, net	645,680	493,617
Other assets	60,603	92,407
Total Assets	$ 6,437,064	$ 6,986,066
LIABILITIES		
Unpaid losses and loss adjustment expenses	$ 3,025,464	$ 3,691,655
Life and annuity benefits	1,005,591	1,012,816
Unearned property and casualty premiums	529,185	549,277
Reinsurance balances payable	41,907	86,654
Notes payable to affiliates	54,875	74,875
Other liabilities	175,858	75,226
Total Liabilities	4,832,880	5,490,503
SHAREHOLDER'S EQUITY		
Common shares (par value $1.00 per share); 58,829,354 shares issued and outstanding	58,829	58,829
Additional paid-in capital	1,157,948	1,157,948
Accumulated other comprehensive income	105,111	93,969
Retained earnings	282,296	184,817
Total Shareholder's Equity	1,604,184	1,495,563
Total Liabilities and Shareholder's Equity	$ 6,437,064	$ 6,986,066

See accompanying notes to consolidated financial statements.

MARKEL BERMUDA LIMITED
CONSOLIDATED STATEMENTS OF INCOME (LOSS) AND COMPREHENSIVE INCOME (LOSS)

	Years Ended December 31,	
	2019	2018
	(dollars in thousands)	
REVENUES		
Earned premiums	1,056,898	1,112,380
Net investment income	103,180	124,436
Net investment gains (losses):		
Net realized investment gains	43,226	1,445
Change in fair value of equity securities	421,705	(145,505)
Net investment gains (losses)	464,931	(144,060)
Other revenues	10,395	1,660
Total Revenues	1,635,404	1,094,416
LOSSES AND EXPENSES		
Losses and loss adjustment expenses	691,098	844,873
Claims and policy benefits	29,425	34,597
Acquisition costs	316,371	332,216
General and administrative expenses	53,217	59,933
Foreign exchange gains	(14,736)	(27,895)
Interest expense	2,150	1,634
Total Losses and Expenses	1,077,525	1,245,358
Income (Loss) Before Income Taxes	557,879	(150,942)
Income tax expense (benefit)	110,400	(19,531)
Net Income (Loss)	$ 447,479	$ (131,411)
OTHER COMPREHENSIVE INCOME (LOSS)		
Change in net unrealized gains on investments, net of taxes:		
Net holding gains (losses) arising during the period (tax impact: 2019 - $22,347 expense; 2018 - $20,914 benefit)	$ 84,067	$ (78,676)
Reclassification adjustments for net gains included in net income (loss) (tax impact: 2019 - $9,183 expense; 2018 - $43 expense)	(34,545)	(162)
Change in net unrealized gains on investments, net of taxes	49,522	(78,838)
Impact of net unrealized (losses) gains on life and annuity benefits, net of taxes (tax impact: 2019 - $10,203 benefit; 2018 - $5,051 expense)	(38,380)	19,001
Total Other Comprehensive Income (Loss)	$ 11,142	$ (59,837)
Comprehensive Income (Loss)	$ 458,621	$ (191,248)

See accompanying notes to consolidated financial statements.

MARKEL BERMUDA LIMITED
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

	December 31,	
	2019	2018
	(dollars in thousands)	
COMMON SHARES		
Balance - Beginning And End Of Year	$ 58,829	$ 58,829
ADDITIONAL PAID-IN CAPITAL		
Balance - Beginning And End Of Year	1,157,948	1,157,948
ACCUMULATED OTHER COMPREHENSIVE INCOME		
Unrealized Holding Gains:		
Balance - beginning of year	123,015	507,762
Cumulative effect of adoption of ASU No. 2016-01, net of taxes	—	(336,395)
Cumulative effect of adoption of ASU No. 2018-02	—	11,485
Holding gains (losses) on available for sale securities arising in year, net of tax	84,067	(78,676)
Net realized gains on available for sale securities included in net income (loss), net of tax	(34,545)	(162)
Impact of net unrealized investment (losses) gains on life and annuity benefits, net of tax	(38,380)	19,001
Unrealized Holding Gains Balance - End Of Year	134,157	123,015
Cumulative Foreign Currency Translation Adjustment:		
Balance - beginning of year	(29,046)	(31,687)
Cumulative effect of adoption of ASU No. 2016-01, net of taxes	—	2,641
Cumulative Foreign Currency Translation Adjustment Balance - End Of Year	(29,046)	(29,046)
Total Accumulated Other Comprehensive Income - End Of Year	105,111	93,969
RETAINED EARNINGS		
Balance - beginning of year	184,817	86,535
Cumulative effect of adoption of ASU No. 2016-01, net of taxes	—	333,754
Cumulative effect of adoption of ASU No. 2018-02	—	(11,485)
Net Income (Loss)	447,479	(131,411)
Dividends	(350,000)	(92,576)
Balance - End Of Year	282,296	184,817
TOTAL SHAREHOLDER'S EQUITY	$ 1,604,184	$ 1,495,563

See accompanying notes to consolidated financial statements.

MARKEL BERMUDA LIMITED
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,	
	2019	2018
	(dollars in thousands)	
OPERATING ACTIVITIES		
Net Income (Loss)	$ 447,479	$ (131,411)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Net investment (gains) losses	(464,931)	144,060
Foreign exchange gains	(14,736)	(27,895)
Deferred tax expense (benefit)	69,880	(6,946)
(Increase) decrease in premium receivable	(45,388)	16,222
Decrease (increase) in reinsurance recoverables	113,219	(29,924)
(Increase) decrease in deferred policy acquisition costs	(17,526)	41,716
Decrease in prepaid reinsurance premiums	20,350	9,429
Increase in due from affiliates	(4,973)	(8,333)
Decrease in other assets	37,781	41,212
(Decrease) increase in unpaid losses and loss adjustment expenses	(45,566)	289,762
Decrease in life and annuity benefits	(43,301)	(42,723)
Increase (decrease) in unearned property and casualty premiums	56,122	(116,463)
Increase (decrease) in reinsurance balances payable	15,297	(27,808)
Increase (decrease) in other liabilities	14,011	(12,291)
Other	(1,293)	(11,352)
Net Cash Provided By Operating Activities	136,425	127,255
INVESTING ACTIVITIES		
Purchases of fixed maturities and equity securities	(321,393)	(383,561)
Sales of fixed maturities and equity securities	211,895	179,904
Redemptions of fixed maturities	114,058	131,425
Redemption of cost and equity securities	45	—
Net change in short term investments	39,827	82,843
Sales and redemptions of other investments	—	1,397
Proceeds from redemption of investments in affiliates	7,363	29,225
Cost of subscriptions to investments in affiliates	—	(25,000)
Due from affiliates	(150,000)	(60,000)
Net Cash Used By Investing Activities	(98,205)	(43,767)
FINANCING ACTIVITIES		
Dividend	(74,632)	—
Repayment of notes to affiliates	(50,000)	(117,625)
Addition of notes due to affiliates	30,000	50,005
Other	(3,498)	(4,062)
Net Cash Used By Financing Activities	(98,130)	(71,682)
Effect of foreign currency rate changes on cash, cash equivalents, restricted cash and restricted cash equivalents	(136)	(295)
(Decrease) increase in cash, cash equivalents, restricted cash and restricted cash equivalents	(60,046)	11,511
Cash, cash equivalents, restricted cash and restricted cash equivalents at beginning of year	437,228	425,717
CASH, CASH EQUIVALENTS, RESTRICTED CASH AND RESTRICTED CASH EQUIVALENTS AT END OF YEAR	$ 377,182	$ 437,228
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION		
Taxes received	$ 20,459	$ 50,023

See accompanying notes to consolidated financial statements.

1. General

Markel Bermuda Limited (“Markel Bermuda” or “the Company”) was incorporated on August 20, 1999 under the laws of Bermuda to provide diversified specialty insurance and reinsurance products to corporations, public entities and property and casualty insurers. The Company is registered as both a Class 4 commercial insurer and Class C long-term insurer under the insurance laws of Bermuda. The Company's ultimate parent company is Markel Corporation ("Markel"), a publicly traded, diversified financial holding company (NYSE: MKL) headquartered in Richmond, Virginia. Alterra Diversified Strategies Limited (“ADS”), a company organized under the laws of Bermuda, is the Company’s wholly-owned subsidiary.

2. Summary of Significant Accounting Policies

a) Basis of Presentation. The accompanying consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (“U.S. GAAP”) and include the accounts of Markel Bermuda Limited and its subsidiary. All significant intercompany balances and transactions have been eliminated in consolidation.

b) Comparative Information. Certain balances in the 2018 consolidated financial statements have been reclassified to the 2019 consolidated financial statement presentation.

c) Use of Estimates. The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. Management periodically reviews its estimates and assumptions. Quarterly reviews include evaluating the adequacy of reserves for unpaid losses and loss adjustment expenses, life and annuity reinsurance benefit reserves, litigation contingencies, as well as analyzing the recoverability of deferred tax assets. Actual results may differ materially from the estimates and assumptions used in preparing the consolidated financial statements.

d) Investments. Available-for-sale investments and equity securities are recorded at estimated fair value. Unrealized gains and losses on available-for sale investments, net of income taxes, are included in accumulated other comprehensive income in shareholder’s equity. The Company completes a detailed analysis each quarter to assess whether the decline in the fair value of any available-for-sale investment below its cost basis is deemed other-than-temporary.

Premiums and discounts are amortized or accreted over the lives of the related fixed maturities as an adjustment to the yield using the effective interest method. Dividend and interest income are recognized when earned. Realized investment gains or losses are included in earnings. Realized gains or losses from sales of investments are derived using the first-in, first-out method on the trade date.

Effective January 1, 2018, the Company adopted Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2016-01,Financial Instruments (Topic 825): Recognition and Measurement of Financial Assets and Financial Liabilities. Upon adoption of the ASU, equity securities are no longer classified as available-for-sale and unrealized gains and losses on equity securities, net of income taxes, are included in earnings. In accordance with the provisions of the ASU, prior periods have not been restated to conform to the new presentation.

Investments accounted for under the equity method of accounting are recorded at cost within other assets on the consolidated balance sheets and subsequently increased or decreased by the Company's proportionate share of the net income or loss of the investee. The Company records its proportionate share of net income or loss of the investee in net investment income. The Company records its proportionate share of other comprehensive income or loss of the investee as a component of other comprehensive income. Dividends or other equity distributions in excess of the Company's cumulative equity in earnings of the investee are recorded as a reduction of the investment. The Company reviews equity method investments for impairment when events or circumstances indicate that a decline in the fair value of the investment below its carrying value is other-than-temporary.

The changes in unrealized gains and losses for certain investments in affiliates recorded at fair value are recognized in net income.

e) Cash and Cash Equivalents. The Company considers all investments with original maturities of 90 days or less to be cash equivalents. The carrying value of the Company's cash and cash equivalents approximates fair value.

f) Restricted Cash and Cash Equivalents. Cash and cash equivalents that are restricted as to withdrawal or use are recorded as restricted cash and cash equivalents. The carrying value of the Company's restricted cash and cash equivalents approximates fair value.

g) Receivables. Receivables include amounts receivable from agents, brokers and insureds, which represent premiums that are both currently due and amounts not yet due on insurance and reinsurance policies. Premiums for insurance policies are generally due at inception. Premiums for reinsurance policies generally become due over the period of coverage based on the policy terms. The Company monitors the credit risk associated with premiums receivable, taking into consideration the fact that in certain instances credit risk may be reduced by the Company's right to offset loss obligations or unearned premiums against premiums receivable. Amounts deemed uncollectible are charged to net income in the period they are determined. Changes in the estimate of reinsurance premiums written will result in an adjustment to premiums receivable in the period they are determined.

h) Reinsurance Recoverables. Amounts recoverable from reinsurers are estimated in a manner consistent with the claim liability associated with the reinsured business. Allowances are established for amounts deemed uncollectible and reinsurance recoverables are recorded net of these allowances. The Company evaluates the financial condition of its reinsurers and monitors concentration risk to minimize its exposure to significant losses from individual reinsurers.

i) Deferred Policy Acquisition Costs. Costs directly related to the acquisition of insurance and reinsurance premiums are deferred and amortized over the related policy period, generally one year. The Company only defers acquisition costs incurred that are related directly to the successful acquisition of new or renewal insurance contracts, including commissions to agents and brokers and premium taxes. Commissions received related to reinsurance premiums ceded are netted against broker commissions in determining acquisition costs eligible for deferral. To the extent that future policy revenues on existing policies are not adequate to cover related costs and expenses, deferred policy acquisition costs are charged to earnings. The Company does not consider anticipated investment income in determining whether a premium deficiency exists.

j) Income Taxes. The Company records deferred income taxes to reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and their tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in years in which those temporary differences are expected to be recovered or settled. Deferred tax assets are reduced by a valuation allowance when management believes it is more likely than not that some, or all, of the deferred tax assets will not be realized. The Company recognizes the tax benefit from an uncertain tax position taken or expected to be taken in income tax returns only if it is more likely than not that the tax position will be sustained upon examination by tax authorities, based on the technical merits of the position. Tax positions that meet the more likely than not threshold are then measured using a probability weighted approach, whereby the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement is recognized. The Company recognizes interest and penalties related to uncertain tax positions in income tax expense.

k) Unpaid Losses and Loss Adjustment Expenses. Unpaid losses and loss adjustment expenses on the Company's property and casualty insurance business are based on evaluations of reported claims and estimates for losses and loss adjustment expenses incurred but not reported. Estimates for losses and loss adjustment expenses incurred but not reported are based on reserve development studies, among other things. The Company does not discount reserves for losses and loss adjustment expenses to reflect estimated present value. Recorded reserves are estimates, and the ultimate liability may be greater or less than the estimates.

l) Life and Annuity Benefits. Long duration reinsurance contracts for life and annuity benefits subject the Company to mortality, longevity and morbidity risks. The assumptions used to determine policy benefit reserves were determined at contract inception and are generally locked-in for the life of the contract unless an unlocking event occurs. To the extent existing policy reserves, together with the present value of future gross premiums and expected investment income earned thereon, are not adequate to cover the present value of future benefits, settlement and maintenance costs, the locked-in assumptions are revised to current best estimate assumptions and a charge to earnings for life and annuity benefits is recognized at that time. Because of the assumptions and estimates used in establishing reserves for life and annuity benefit obligations and the long-term nature of these reinsurance contracts, the ultimate liability may be greater or less than the estimates. Results attributable to the run-off of life and annuity reinsurance business are included in services and other revenues and claims and policy benefits in the Company's consolidated statements of income and comprehensive income.

m) Revenue Recognition. Insurance premiums written are generally recorded at the inception of a policy and earned on a pro rata basis over the policy period, typically one year. The cost of reinsurance ceded is initially recorded as prepaid reinsurance premiums and is amortized over the reinsurance contract period in proportion to the amount of insurance protection provided. Premiums ceded are netted against premiums written. For multi-year contracts where insurance premiums are payable in annual installments, written premiums are recorded at the inception of the contract based on management's best estimate of total premiums to be received. For contracts where the cedent has the ability to unilaterally commute or cancel coverage within the term of the policy, premiums are generally recorded on an annual basis or up to the contract cancellation point. The remaining premiums are estimated and included as written at each successive anniversary date within the multi-year term.

Assumed reinsurance premiums are recorded at the inception of each contract based upon contract terms and information received from cedents and brokers and are earned on a pro rata basis over the coverage period, or for multi-year contracts, in proportion with the underlying risk exposure to the extent there is variability in the exposure through the coverage period. Changes in reinsurance premium estimates are expected and may result in significant adjustments in any period. These estimates change over time as additional information regarding changes in underlying exposures is obtained. Any subsequent differences arising on such estimates are recorded as premiums written in the period they are determined, and are earned on a pro rata basis over the coverage period. The Company uses the periodic method to account for assumed reinsurance from foreign reinsurers. The Company's foreign reinsurers provide sufficient information to record foreign assumed business in the same manner as the Company records assumed business from U.S. reinsurers.

Certain contracts that the Company writes provide for reinstatement of coverage. Reinstatement premiums are the premiums for the restoration of the insurance or reinsurance limit of a contract to its full amount after a loss occurrence by the insured or reinsured. The Company accrues for reinstatement premiums resulting from losses recorded. Such accruals are based upon contractual terms and management judgment is involved with respect to the amount of losses recorded.

Deposits

Short duration reinsurance contracts entered into by the Company that are not deemed to transfer significant underwriting and timing risk are accounted for as deposits, whereby liabilities are initially recorded at the same amount as assets received. An initial accretion rate is established based on actuarial estimates whereby the deposit liability is increased to the estimated amount payable over the term of the contract. This accretion charge is presented in the period as interest expense or losses and loss adjustment expenses, as appropriate. Long duration contracts written by the Company that do not transfer significant mortality or morbidity risks are also accounted for as deposits. The Company periodically reassesses the amount of deposit liabilities. Changes to the estimated ultimate liability are recognized as an adjustment to earnings to reflect the cumulative effect since the inception of the contract. For certain contracts the future accretion rate of the liability is also adjusted over the remaining estimated contract term. For the years ended December 31, 2019 and 2018, losses and loss adjustment expenses includes $0.1 million, respectively, due to changes in the estimated ultimate liability related to short duration reinsurance contracts accounted for as deposits.

n) Leases. Following the adoption of FASB ASU No. 2016-02, *Leases (Topic 842)*, effective January 1, 2019, the present value of future lease payments for the Company's leases with terms greater than 12 months are included on the consolidated balance sheet as lease liabilities and right-of-use assets.

The Company's lease portfolio primarily consists of operating leases for real estate. Total expected lease payments are based on the lease payments specified in the contract and the stated term, including any options to extend or terminate that the Company is reasonably certain to exercise. The Company has elected the practical expedient to account for lease components and any associated non-lease components as a single lease component, and therefore allocates all of the expected lease payments to the lease component.

The lease liability, which represents the Company's obligation to make lease payments arising from the lease, is calculated based on the present value of expected lease payments over the remaining lease term, discounted using the Company's collateralized incremental borrowing rate at the commencement date. The lease liability is then adjusted for any prepaid rent, lease incentives received or capitalized initial direct costs to determine the lease asset, which represents the Company's right to use the underlying asset for the lease term. Lease liabilities and lease assets are included in other liabilities and other assets, respectively, on the consolidated balance sheet.

Total lease costs are primarily comprised of rental expense for operating leases. Rental expense is recognized on a straight line basis over the lease term and includes amortization of the right-of-use lease asset and imputed interest on the lease liability. Rental expense attributable to the Company's operations is included in general and administrative expenses in the consolidated statements of income and comprehensive income.

o) Stock-based Compensation. Stock-based compensation expense is recognized as part of general and administrative expenses over the requisite service period.

p) Foreign Currency Translation. The U.S. Dollar is the Company’s reporting and functional currency.

Foreign currency transaction gains and losses are the result of exchange rate changes on transactions denominated in currencies other than the functional currency. Monetary assets and liabilities are remeasured to the functional currency at current exchange rates, with resulting gains and losses included in net foreign exchange losses (gains) within net income. Non-monetary assets and liabilities are remeasured to the functional currency at historic exchange rates. Available-for-sale securities are recorded at fair value with resulting gains and losses, including the portion attributable to movements in exchange rates, included in the change in net unrealized gains on available-for-sale investments, net of taxes within other comprehensive income. While we attempt to naturally hedge our exposure to foreign currency fluctuations by matching assets and liabilities in the same currencies, there is a financial statement mismatch between the gains or losses recorded in net income related to insurance reserves denominated in non-functional currencies and the gains or losses recorded in other comprehensive income related to the available-for-sale securities held in non-functional currencies supporting the reserves.

Historically, the Company also designated certain additional currencies, including the British Pound Sterling, the Euro, and the Canadian Dollar, as functional currencies within its foreign underwriting operations that were deemed to contain distinct and separable operations in those foreign economic environments. However, over time the Company’s foreign underwriting operations have evolved and are now managed on a global basis. Effective January 1, 2018, management reassessed its functional currency determination as required by ASC 830, *Foreign Currency Matters* , and concluded that its foreign underwriting operations have evolved to function as an extension, or integral component, of the Company’s global underwriting operations, and are no longer deemed to contain distinct and separable operations. As a result, more foreign currency denominated transactions are designated as non-functional, with related remeasurement gains and losses included in net income. The change in the Company’s functional currency determination has been applied on a prospective basis in accordance with ASC 830. Therefore, any translation gains and losses that were previously recorded in accumulated other comprehensive income through December 31, 2017 remain unchanged through December 31, 2019.

q) Comprehensive Income. Comprehensive income represents all changes in equity that result from recognized transactions and other economic events during the period. Other comprehensive income refers to revenues, expenses, gains and losses that under U.S. GAAP are included in comprehensive income but excluded from net income, such as unrealized gains or losses on available-for-sale investments, foreign currency translation adjustments and changes in net actuarial pension loss.

r) Recent Accounting Pronouncements. Effective January 1, 2019, the Company adopted FASB ASU No. 2016-02, *Leases (Topic 842)* and several other ASUs that were issued as amendments to ASU No. 2016-02, which require lessees to record most leases in their balance sheets as a lease liability with a corresponding right-of-use asset, but continue to recognize the related rent expense within net income. The Company elected to apply the optional transition method, under which an entity initially applies the new lease standard to existing leases at the beginning of the period of adoption. The Company continues to apply the previous guidance to 2018 and prior periods. The Company also elected the package of practical expedients permitted under the transition guidance within the new standard, which, among other things, allowed companies to carry forward their historical lease classification. As a result of adopting ASU No. 2016-02, the Company recorded a right-of-use lease asset and a lease liability of $4.8 million and $4.7 million, respectively as of January 1, 2019. ASU No. 2016-02 also requires expanded lease disclosures, which are included in note 8. Adoption of this standard did not have a material impact on the Company’s results of operations or cash flows.

ASU No. 2017-08, *Receivables-Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization on Purchased Callable Debt Securities* is relevant to the Company's operations and was adopted effective January 1, 2019. This ASU did not have a material impact on the Company's financial position, results of operations or cash flows.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments.* The FASB subsequently issued several ASUs as amendments to ASU No. 2016-13. The standard replaces the current incurred loss model used to measure impairment losses with a current expected credit loss (CECL) model for financial instruments measured at amortized cost, including reinsurance recoverables and trade receivables. For available-for-sale fixed maturities, which are measured at fair value, the ASU requires entities to record impairments as an allowance, rather than a reduction of the amortized cost, as is currently required under the other-than-temporary impairment model. The Company will early adopt ASU No. 2016-13 during the first quarter of 2020 using a modified retrospective approach through a cumulative-effect adjustment to retained earnings as of January 1, 2020. Application of the CECL model will not impact the Company's investment portfolio, none of which is measured at amortized cost, but will impact certain of the Company's other financial assets, including its reinsurance recoverables and receivables. The adjustment to retained earnings at January 1, 2020 will not be material. Upon adoption of this ASU, any impairment losses on the Company's available-for-sale fixed maturities will be recorded as an allowance, subject to reversal, rather than as a reduction in amortized cost. None of these changes are expected to have a material impact on the Company's financial position, results of operations or cash flows.

In August 2018, the FASB issued ASU No. 2018-12, *Financial Services-Insurance (Topic 944): Targeted Improvements to the Accounting for Long-Duration Contracts.* The ASU requires insurance entities with long duration contracts to: (1) review and, if there is a change, update the assumptions used to measure cash flows at least annually, as well as update the discount rate assumption at each reporting date; (2) measure all market risk benefits associated with deposit (or account balance) contracts at fair value; and (3) disclose liability rollforwards and information about significant inputs, judgments, assumptions and methods used in measurement, including changes thereto and the effect of those changes on measurement. In November 2019, the FASB issued ASU No. 2019-09, *Financial Services-Insurance (Topic 944): Effective Date*, which deferred the effective date of ASU No. 2018-12 for the Company until the first quarter of 2024. ASU No. 2018-12 will, among other things, impact the discount rate used in estimating reserves for the Company’s life and annuity reinsurance portfolio, which is in runoff. Currently, the discount rate assumption is locked-in for the life of the contracts, unless there is a loss recognition event. The Company is currently evaluating ASU No. 2018-12 to determine the impact that adopting this standard will have on its consolidated financial statements.

The following ASUs are relevant to the Company's operations and are not yet effective. These ASUs are not expected to have a material impact on the Company's financial position, results of operations or cash flows:

- ASU No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement
- ASU No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes

3. Investments

a) The following tables summarize the Company's available-for-sale investments. Commercial and residential mortgage-backed securities include securities issued by U.S. government-sponsored enterprises and U.S. government agencies. The net unrealized holding gains in the tables below are presented before taxes and the reserve deficiency adjustment for life and annuity benefit reserves. See note 7.

	December 31, 2019			
(dollars in thousands)	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
Fixed maturities:				
U.S. Treasury securities	$ 25,602	$ 340	$ —	$ 25,942
U.S. government-sponsored enterprises	71,679	8,374	—	80,053
Obligations of states, municipalities and political subdivisions	390,797	28,935	—	419,732
Foreign governments	624,114	193,754	(1,637)	816,231
Commercial mortgage-backed securities	187,126	5,335	(153)	192,308
Residential mortgage-backed securities	192,277	7,247	(33)	199,491
Asset-backed securities	4,817	65	(9)	4,873
Corporate bonds	161,822	29,255	(673)	190,404
Total fixed maturities	1,658,234	273,305	(2,505)	1,929,034
Short-term investments	93,949	10	—	93,959
Total	$ 1,752,183	$ 273,315	$ (2,505)	$ 2,022,993

	December 31, 2018			
(dollars in thousands)	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
Fixed maturities:				
U.S. Treasury securities	$ 29,749	$ 88	$ —	$ 29,837
U.S. government-sponsored enterprises	95,897	3,186	(282)	98,801
Obligations of states, municipalities and political subdivisions	719,447	22,275	(3,887)	737,835
Foreign governments	593,071	171,983	(3,034)	762,020
Commercial mortgage-backed securities	288,587	1,452	(7,665)	282,374
Residential mortgage-backed securities	270,710	1,582	(2,758)	269,534
Asset-backed securities	8,517	—	(21)	8,496
Corporate bonds	257,327	26,386	(795)	282,918
Total fixed maturities	2,263,305	226,952	(18,442)	2,471,815
Short-term investments	142,374	8	(394)	141,988
Total	$ 2,405,679	$ 226,960	$ (18,836)	$ 2,613,803

b) The following tables summarize gross unrealized investment losses on available-for-sale investments by the length of time that securities have continuously been in an unrealized loss position.

	December 31, 2019					
	Less than 12 months		12 months or longer		Total	
(dollars in thousands)	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses
Fixed maturities:						
Foreign governments	27,161	(851)	35,121	(786)	62,282	(1,637)
Commercial mortgage-backed securities	23,601	(141)	2,254	(12)	25,855	(153)
Residential mortgage-backed securities	—	—	3,967	(33)	3,967	(33)
Asset-backed securities	—	—	2,063	(9)	2,063	(9)
Corporate bonds	15,265	(518)	2,847	(155)	18,112	(673)
Total fixed maturities	$ 66,027	$ (1,510)	$ 46,252	$ (995)	$ 112,279	$ (2,505)

At December 31, 2019, the Company held 23 securities with a total estimated fair value of $112.3 million and gross unrealized losses of $2.5 million. Of these 23 securities, 11 securities had been in a continuous unrealized loss position for one year or longer and had a total estimated fair value of $46.3 million and gross unrealized losses of $1.0 million. The Company does not intend to sell or believe it will be required to sell these available-for-sale securities before recovery of their amortized cost.

	December 31, 2018					
	Less than 12 months		12 months or longer		Total	
(dollars in thousands)	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses	Estimated Fair Value	Gross Unrealized Holding Losses
Fixed maturities:						
U.S. government-sponsored enterprises	$ —	$ —	$ 28,954	$ (282)	$ 28,954	$ (282)
Obligations of states, municipalities and political subdivisions	132,154	(2,961)	45,445	(926)	177,599	(3,887)
Foreign governments	66,836	(3,034)	—	—	66,836	(3,034)
Commercial mortgage-backed securities	62,829	(723)	132,371	(6,942)	195,200	(7,665)
Residential mortgage-backed securities	108,209	(1,005)	58,635	(1,753)	166,844	(2,758)
Asset-backed securities	8,496	(21)	—	—	8,496	(21)
Corporate bonds	36,595	(626)	9,014	(169)	45,609	(795)
Total fixed maturities	415,119	(8,370)	274,419	(10,072)	689,538	(18,442)
Short-term investments	25,078	(394)	—	—	25,078	(394)
Total	$ 440,197	$ (8,764)	$ 274,419	$ (10,072)	$ 714,616	$ (18,836)

At December 31, 2018, the Company held 131 securities with a total estimated fair value of $714.6 million and gross unrealized losses of $18.8 million. Of these 131 securities, 64 securities had been in a continuous unrealized loss position for one year or longer and had a total estimated fair value of $274.4 million and gross unrealized losses of $10.1 million.

The Company completes a detailed analysis each quarter to assess whether the decline in the fair value of any investment below its cost basis is deemed other-than-temporary. All available-for-sale securities with unrealized losses are reviewed. The Company considers many factors in completing its quarterly review of securities with unrealized losses for other-than-temporary impairment, including the length of time and the extent to which fair value has been below cost and the financial condition and near-term prospects of the issuer.

For fixed maturities, the Company considers whether it intends to sell the security or if it is more likely than not that it will be required to sell the security before recovery, the implied yield-to-maturity, the credit quality of the issuer and the ability to recover all amounts outstanding when contractually due. For fixed maturities where the Company intends to sell the security or it is more likely than not that the Company will be required to sell the security before recovery of its amortized cost, a decline in fair value is considered to be other-than-temporary and is recognized in net income based on the fair value of the security at the time of assessment, resulting in a new cost basis for the security. If the decline in fair value of a fixed maturity below its amortized cost is considered to be other-than-temporary based upon other considerations, the Company compares the estimated present value of the cash flows expected to be collected to the amortized cost of the security. The extent to which the estimated present value of the cash flows expected to be collected is less than the amortized cost of the security represents the credit related portion of the other-than-temporary impairment, which is recognized in net income, resulting in a new cost basis for the security. Any remaining decline in fair value represents the non-credit portion of the other-than-temporary impairment, which is recognized in other comprehensive income.

c) The following table sets forth certain information regarding the investment ratings of the Company's fixed maturities as of December 31, 2019 and 2018.

	Years Ended December 31,			
	2019	2019	2018	2018
(dollars in thousands)	Estimated Fair Value	%	Estimated Fair Value	%
AAA	$ 1,205,792	62.5	$ 1,410,382	57.1
AA	618,048	32.0	860,024	34.8
A	77,873	4.0	128,950	5.2
BBB	26,309	1.4	71,431	2.9
BB	—	—	—	—
B	—	—	—	—
CCC or lower	—	—	—	—
Not Rated	1,012	0.1	1,028	—
Total fixed maturities	$ 1,929,034	100.0	$ 2,471,815	100.0

d) The amortized cost and estimated fair value of fixed maturities at December 31, 2019 are shown below by contractual maturity.

(dollars in thousands)	Amortized Cost	Estimated Fair Value
Due in one year or less	$ 74,579	$ 73,258
Due after one year through five years	202,439	210,249
Due after five years through ten years	385,872	435,422
Due after ten years	611,124	813,433
	1,274,014	1,532,362
Commercial mortgage-backed securities	187,126	192,308
Residential mortgage-backed securities	192,277	199,491
Asset-backed securities	4,817	4,873
Total fixed maturities	$ 1,658,234	$ 1,929,034

Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties, and the lenders may have the right to put the securities back to the borrower. Based on expected maturities, the estimated average duration of fixed maturity securities at December 31, 2019 was 7.8 years.

e) The following table presents the components of net investment income.

	Years Ended December 31,	
(dollars in thousands)	2019	2018
Interest:		
Fixed maturities	$ 74,197	$ 83,794
Short-term investments, including overnight deposits	5,487	5,250
Other investments	60	243
Loans to parent & affiliates	20,433	16,340
Dividends on equity securities	26,176	23,405
Dividends on investments in affiliates	—	18,370
Investment expenses	(23,173)	(22,966)
Net investment income	$ 103,180	$ 124,436

f) The following table presents net investment gains (losses) and the change in net unrealized gains on investments included in other comprehensive income (loss).

(dollars in thousands)	Years Ended December 31, 2019	2018
Realized gains:		
Sales and maturities of fixed maturities	$ 46,241	$ 4,227
Sales and maturities of short-term investments	—	600
Other investments	—	1,238
Total realized gains	46,241	6,065
Realized losses:		
Sales of fixed maturities	(1,925)	(2,651)
Sales and maturities of short-term investments	(396)	(1,969)
Other investments	(694)	—
Total realized losses	(3,015)	(4,620)
Net realized investment gains	43,226	1,445
Change in fair value of equity securities:		
Equity securities sold during the period	64,336	6,632
Equity securities held at the end of the period	357,369	(152,137)
Change in fair value of equity securities	421,705	(145,505)
Net investment gains (losses)	$ 464,931	$ (144,060)
Change in net unrealized gains included in other comprehensive income (loss):		
Fixed maturities	$ 62,290	$ (99,391)
Short-term investments	396	(404)
Reserve deficiency adjustment for life and annuity benefit reserves (see note 7)	(48,583)	24,051
Net increase (decrease)	$ 14,103	$ (75,744)

g) Total restricted assets are included on the Company's consolidated balance sheets as follows.

(dollars in thousands)	December 31, 2019	2018
Investments	$ 2,267,585	$ 2,966,631
Cash and cash equivalents	116,028	187,358
Investment in affiliate, at fair value	12,774	17,573
Other investments, at cost	—	740
Total	$ 2,396,387	$ 3,172,302

The following table presents the components of restricted assets.

(dollars in thousands)	December 31, 2019	December 31, 2018
Restricted assets held in trust or on deposit to support underwriting activities	$ 2,054,200	$ 2,846,145
Investments and cash and cash equivalents pledged as security for letters of credit	329,413	307,844
Investments restricted from withdrawal	12,774	18,313
Total	$ 2,396,387	$ 3,172,302

h) The Company holds investments in Markel CATCo Reinsurance Fund Ltd., a Bermuda exempted mutual fund company comprised of multiple segregated accounts (Markel CATCo Funds). The Company accounts for the investments based on the fair value option, with changes in fair value reflected in net realized investment gains (losses) in the income statement. Investments in Markel CATCo Funds are reflected as investments in affiliates at fair value on the consolidated balance sheets, and include investments in the Markel Diversified Fund and the Markel CATCo Aquilo Fund Ltd. The Company's exposure to risk from Markel CATCo Funds is generally limited to its investments. The fair value of our investments in Markel CATCo Funds totaled $40.6 million and $47.3 million at December 31, 2019 and 2018, respectively. See note 4 for discussion of the inputs and valuation techniques used to measure the fair value of our investments in Markel CATCo Funds.

4. Fair Value Measurements

ASC 820, *Fair Value Measurements and Disclosures,* establishes a three-level hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). If the inputs used to measure the assets or liabilities fall within different levels of the hierarchy, the classification is based on the lowest level input that is significant to the fair value measurement of the asset or liability.

Classification of assets and liabilities within the hierarchy considers the markets in which the assets and liabilities are traded and the reliability and transparency of the assumptions used to determine fair value. The hierarchy requires the use of observable market data when available. The levels of the hierarchy are defined as follows:

Level 1 - Inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities traded in active markets.

Level 2 - Inputs to the valuation methodology include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability and market-corroborated inputs.

Level 3 - Inputs to the valuation methodology are unobservable for the asset or liability and are significant to the fair value measurement.

In accordance with ASC 820, the Company determines fair value based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In determining fair value, the Company uses various methods, including the market, income and cost approaches. The Company uses valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. The following section describes the valuation methodologies used by the Company to measure assets and liabilities at fair value, including an indication of the level within the fair value hierarchy in which each asset or liability is generally classified.

Available-for-sale investments and equity securities. Available-for-sale investments and equity securities are recorded at fair value on a recurring basis. Available-for-sale investments include fixed maturities and short-term investments. Short-term investments include certificates of deposit, commercial paper, discount notes and treasury bills with original maturities of one year or less. Fair value for available-for-sale investments and equity securities are determined by the Company after considering various sources of information, including information provided by a third party pricing service. The pricing service provides prices for substantially all of the Company's fixed maturities and equity securities. In determining fair value, the Company generally does not adjust the prices obtained from the pricing service. The Company obtains an understanding of the pricing service's valuation methodologies and related inputs, which include, but are not limited to, reported trades, benchmark yields, issuer spreads, bids, offers, duration, credit ratings, estimated cash flows and prepayment speeds. The Company validates prices provided by the pricing service by reviewing prices from other pricing sources and analyzing pricing data in certain instances.

The Company has evaluated the various types of securities in its investment portfolio to determine an appropriate fair value hierarchy level based upon trading activity and the observability of market inputs. Level 1 investments include those traded on an active exchange, such as the New York Stock Exchange. Level 2 investments include U.S. Treasury securities, U.S. government-sponsored enterprises, municipal bonds, foreign government bonds, commercial mortgage-backed securities, residential mortgage-backed securities, asset-backed securities, and corporate debt securities. Level 3 investments include the Company's investments in Markel CATCo Funds, as further described in note 3, which are not traded on an active exchange and are valued using unobservable inputs.

Fair value for available-for-sale investments and equity securities is measured based upon quoted prices in active markets, if available. Due to variations in trading volumes and the lack of quoted market prices, fixed maturities are classified as Level 2 investments. The fair value of fixed maturities is normally derived through recent reported trades for identical or similar securities, making adjustments through the reporting date based upon available market observable data described above. If there are no recent reported trades, the fair value of fixed maturities may be derived through the use of matrix pricing or model processes, where future cash flow expectations are developed based upon collateral performance and discounted at an estimated market rate. Significant inputs used to determine the fair value of obligations of states, municipalities and political subdivisions, corporate bonds and obligations of foreign governments include reported trades, benchmark yields, issuer spreads, bids, offers, credit information and estimated cash flows. Significant inputs used to determine the fair value of commercial mortgage-backed securities, residential mortgage-backed securities and asset-backed securities include the type of underlying assets, benchmark yields, prepayment speeds, collateral information, tranche type and volatility, estimated cash flows, credit information, default rates, recovery rates, issuer spreads and the year of issue.

Due to the significance of unobservable inputs required in measuring the fair value of the Company's investments in the Markel CATCO Funds, these investments are classified as Level 3 within the fair value hierarchy. The fair value of the securities are derived using the reported net asset value ("NAV") as the primary input, as well as other observable and unobservable inputs as deemed necessary by management. Management has obtained an understanding of the inputs, assumptions, process, and controls used to determine NAV, which is calculated by an independent third party. Unobservable inputs to the NAV calculations include assumptions around premium earnings patterns and loss reserve estimates for the underlying securitized reinsurance contracts in which the Markel CATCo Funds invest. Significant unobservable inputs used in the valuation of these investments include an adjustment to include the fair value of the equity that was issued by one of the Markel CATCO Funds in exchange for notes receivable, rather than cash, which is excluded from NAV. The determination of fair value of the securities also considers external market data, including the trading price relative to its NAV of CATCo Reinsurance Opportunities Fund Ltd., a comparable security traded on a market operated by the London Stock Exchange and on the Bermuda Stock Exchange. In July 2019, the Markel CATCo Funds were placed into run-off and capital is being returned to investors as it becomes available. However, due to significant loss events on the underlying securitized reinsurance contracts in 2017 and 2018, portions of the Company's investments may be restricted up to three years.

The Company's valuation policies and procedures for Level 3 investments are determined by management. Fair value measurements are analyzed quarterly to ensure the change in fair value from prior periods is reasonable relative to management's understanding of the underlying investments, recent market trends and external market data.

The following tables present the balances of assets measured at fair value on a recurring basis by level within the fair value hierarchy.

	December 31, 2019			
(dollars in thousands)	Level 1	Level 2	Level 3	Total
Fixed maturities, available-for-sale:				
U.S. Treasury securities	$ —	$ 25,942	$ —	$ 25,942
U.S. government-sponsored enterprises	—	80,053	$ —	80,053
Obligations of states, municipalities and political subdivisions	—	419,732	—	419,732
Foreign governments	—	816,231	—	816,231
Commercial mortgage-backed securities	—	192,308	—	192,308
Residential mortgage-backed securities	—	199,491	—	199,491
Asset-backed securities	—	4,873	—	4,873
Corporate bonds	—	190,404	—	190,404
Total fixed maturities, available-for-sale	—	1,929,034	—	1,929,034
Equity securities:				
Insurance, banks and other financial institutions	538,760	—	—	538,760
Industrial, consumer and all other	1,124,798	—	—	1,124,798
Total equity securities	1,663,558	—	—	1,663,558
Short-term investments, available-for-sale	93,959	—	—	93,959
Investments in affiliates	—	—	40,608	40,608
Total investments	$ 1,757,517	$ 1,929,034	$ 40,608	$ 3,727,159

	December 31, 2018			
(dollars in thousands)	Level 1	Level 2	Level 3	Total
Fixed maturities, available-for-sale:				
U.S. Treasury securities	$ —	$ 29,837	$ —	$ 29,837
U.S. government-sponsored enterprises	—	98,801	$ —	98,801
Obligations of states, municipalities and political subdivisions	—	737,835	—	737,835
Foreign governments	—	762,020	—	762,020
Commercial mortgage-backed securities	—	282,374	—	282,374
Residential mortgage-backed securities	—	269,534	—	269,534
Asset-backed securities	—	8,496	—	8,496
Corporate bonds	—	282,918	—	282,918
Total fixed maturities, available-for-sale	—	2,471,815	—	2,471,815
Equity securities:				
Insurance, banks and other financial institutions	585,244	—	—	585,244
Industrial, consumer and all other	962,353	—	—	962,353
Total equity securities	1,547,597	—	—	1,547,597
Short-term investments, available-for-sale	141,988	—	—	141,988
Investments in affiliates	—	—	47,268	47,268
Total investments	$ 1,689,585	$ 2,471,815	$ 47,268	$ 4,208,668

The following table summarizes changes in Level 3 investments measured at fair value on a recurring basis.

(dollars in thousands)	2019	2018
Investments in affiliates at fair value, beginning of period	$ 47,268	$ 125,312
Purchases	—	25,000
Sales	(7,363)	(29,225)
Total gains (losses) included in:	—	—
Net gains (losses)	703	(73,819)
Other comprehensive income (loss)	—	—
Transfers into Level 3	—	—
Transfers out of Level 3	—	—
Investments in affiliates at fair value, end of period	$ 40,608	$ 47,268
Net unrealized gains (losses) included in net gain (loss) relating to assets held at December 31, 2019 and 2018	$ 703	$ (73,819)

There were no transfers into or out of Level 1, Level 2 or Level 3 during 2019 or 2018.

The Company did not have any assets or liabilities measured at fair value on a non-recurring basis during the years ended December 31, 2019 and 2018.

5. Unpaid Losses and Loss Adjustment Expenses

a) The following table presents a reconciliation of consolidated beginning and ending reserves for losses and loss adjustment expenses.

(dollars in thousands)	Years Ended December 31, 2019	2018
Gross balance at January 1	$ 3,691,655	$ 3,401,893
Less: Reinsurance recoverables on unpaid losses	(846,585)	(795,791)
Net balance at January 1	2,845,070	2,606,102
Effect of foreign currency movement on beginning of year balance	1,530	(5,964)
Incurred losses related to:		
Current accident year	808,102	902,316
Prior accident years	(117,112)	(57,549)
Total incurred	690,990	844,767
Paid losses related to:		
Current accident year	(135,454)	(148,732)
Prior accident years	(565,321)	(436,008)
Total paid	(700,775)	(584,740)
Commutations	(702,165)	(15,723)
Reserves assumed as a result of a Part VII transaction	142,571	—
Effect of foreign currency movement on current year activity	5,405	628
Net balance at December 31	2,282,626	2,845,070
Plus: Reinsurance recoverables on unpaid losses	742,838	846,585
Gross balance at December 31	$ 3,025,464	$ 3,691,655

Commutations for the year ended December 31, 2019 include a $698.4 reduction in reserves due to the commutation of the reinsurance agreement between the Company and Markel Global Reinsurance Company ("MGRC"). See Note 10 for additional information on the Company's reinsurance agreement with MGRC and the commutation.

In 2019 the Company assumed $142.6 million of reserves for losses and loss adjustment expenses from Markel International S.E. ("MISE"). During 2019 insurance assets and liabilities were transferred to MISE as a result of a Part VII transaction. The Company assumed a portion of the novated insurance assets and liabilities through a reinsurance agreement with MISE. There was no impact on incurred loss expenses on the consolidated statements of operations and comprehensive income (loss). See Note 10 for additional information on the Company's reinsurance agreement with MISE and the Part VII transaction.

In 2019, incurred losses and loss adjustment expenses included $117.1 million of net favorable development on prior years' loss reserves, which was comprised of net favorable development for the Company’s reinsurance reserves of $39.7 and of net favorable development for the Company’s insurance reserves of $77.4. The net favorable development for the reinsurance reserves was across several lines of business, but principally related to the whole account, professional liability and property lines of business ($18.5, $12.5 and $4.6 of net favorable development, respectively). The net favorable development for the insurance reserves was across several lines of business but principally related to the professional liability, property and personal lines of business ($62.6, $19.2 and $5.8 of net favorable development, respectively).

In 2018, incurred losses and loss adjustment expenses included $57.5 million of net favorable development on prior years' loss reserves, which was comprised of net favorable development for the Company’s reinsurance reserves of $4.0 million and of net favorable development for the Company’s insurance reserves of $53.6 million. The net favorable development for the reinsurance reserves was across several lines of business but principally related to the marine and energy, whole account and credit/surety lines of business ($17.5 million, $14.3 million and $8.4 million of net favorable development, respectively) partially offset by unfavorable development related to the professional liability, general liability and property lines of business ($16.6 million, $12.9 million and $11.8 million of net unfavorable development, respectively). The net favorable development for the insurance reserves was across several lines of business but principally related to the professional liability, general liability and marine and energy lines of business ($24.7 million, $15.5 million and $9.1 million of net favorable development, respectively).

The Company uses a variety of techniques to establish the liabilities for unpaid losses and loss adjustment expenses based upon estimates of the ultimate amounts payable. The Company maintains reserves for specific claims incurred and reported ("case reserves") and reserves for claims incurred but not reported ("IBNR" reserves), which include expected development on reported claims. The Company does not discount its reserves for losses and loss adjustment expenses to reflect estimated present value.

As of any balance sheet date, all claims have not yet been reported, and some claims may not be reported for many years. As a result, the liability for unpaid losses and loss adjustment expenses includes significant estimates for incurred but not reported claims.

There is normally a time lag between when a loss event occurs and when it is actually reported to the Company. The actuarial methods that the Company uses to estimate losses have been designed to address the lag in loss reporting as well as the delay in obtaining information that would allow the Company to more accurately estimate future payments. There is also a time lag between cedents establishing case reserves and re-estimating their reserves, and notifying the Company of the new or revised case reserves. As a result, the reporting lag is more pronounced in reinsurance contracts than in the insurance contracts due to the reliance on ceding companies to report their claims. On reinsurance transactions, the reporting lag will generally be 60 to 90 days after the end of a reporting period, but can be longer in some cases. Based on the experience of the Company's actuaries and management, loss development factors and trending techniques are selected to mitigate the difficulties caused by reporting lags. The loss development and trending factor selections are evaluated at least annually and updated using cedent specific and industry data.

IBNR reserves are based on the estimated ultimate cost of settling claims, including the effects of inflation and other social and economic factors, using past experience adjusted for current trends and any other factors that would modify past experience. IBNR reserves, which include expected development on reported claims, are generally calculated by subtracting paid losses and loss adjustment expenses and case reserves from estimated ultimate losses and loss adjustment expenses. IBNR reserves were 67% of total unpaid losses and loss adjustment expenses at December 31, 2019 and December 31, 2018, respectively.

In establishing liabilities for unpaid losses and loss adjustment expenses, the Company's actuaries estimate an ultimate loss ratio, by accident year or policy year, for each product line with input from underwriting and claims associates. For product lines in which loss reserves are established on a policy year basis, the Company has developed a methodology to convert from policy year to accident year for financial reporting purposes. In estimating an ultimate loss ratio for a particular line of business, the actuaries may use one or more actuarial reserving methods and select from these a single point estimate. To varying degrees, these methods include detailed statistical analysis of past claim reporting, settlement activity, claim frequency and severity, policyholder loss experience, industry loss experience and changes in market conditions, policy forms and exposures. Greater judgment may be required when new product lines are introduced or when there have been changes in claims handling practices, as the statistical data available may be insufficient. These estimates also reflect implicit and explicit assumptions regarding the potential effects of external factors, including economic and social inflation, judicial decisions, changes in law, general economic conditions and recent trends in these factors. Management believes the process of evaluating past experience, adjusted for the effects of current developments and anticipated trends, is an appropriate basis for predicting future events.

Loss reserves are established at management's best estimate, which is generally higher than the corresponding actuarially calculated point estimate. The actuarial point estimate represents the actuaries' estimate of the most likely amount that will ultimately be paid to settle the loss reserves that are recorded at a particular point in time; however, there is inherent uncertainty in the point estimate as it is the expected value in a range of possible reserve estimates. In some cases, actuarial analyses, which are based on statistical analysis, cannot fully incorporate all of the subjective factors that affect development of losses. In other cases, management's perspective of these more subjective factors may differ from the actuarial perspective. Subjective factors where management's perspective may differ from that of the actuaries include: the credibility and timeliness of claims information received from third parties, economic and social inflation, judicial decisions, changes in law, changes in underwriting or claims handling practices, general economic conditions, the risk of moral hazard and other current and developing trends within the insurance and reinsurance markets, including the effects of competition. As a result, the actuarially calculated point estimates for each of line of business represents starting points for management's quarterly review of loss reserves.

Inherent in the Company's reserving practices is the desire to establish loss reserves that are more likely redundant than deficient. As such, the Company seeks to establish loss reserves that will ultimately prove to be adequate. Furthermore, the Company's philosophy is to price its insurance products to make an underwriting profit. Management continually attempts to improve its loss estimation process by refining its ability to analyze loss development patterns, claim payments and other information, but uncertainty remains regarding the potential for adverse development of estimated ultimate liabilities.

Management currently believes the Company's gross and net reserves are adequate. However, there is no precise method for evaluating the impact of any significant factor on the adequacy of reserves, and actual results will differ from original estimates.

b) The following tables present undiscounted loss development information, by accident year, for the Company's Insurance and Reinsurance operations, including cumulative incurred and paid losses and allocated loss adjustment expenses, net of reinsurance, as well as the corresponding amount of IBNR reserves as of December 31, 2019. This level of disaggregation is consistent with how the Company analyzes loss reserves for both internal and external reporting purposes. The loss development information for the years ended December 31, 2016 through December 31, 2018 is presented as supplementary information. Loss development information for years prior to 2016, which would also be supplementary information, has not been presented. Insurance business written by the Company's affiliates and ceded to the Company are included in Insurance operations. Assumed reinsurance business written by the Company's affiliates and ceded to the Company are included in Reinsurance operations. All amounts included in the tables below related to transactions denominated in a foreign currency have been translated into U.S. dollars using the exchange rates in effect at December 31, 2019.

The difference between the Insurance segment loss development implied by the tables for the year ended December 31, 2019 and actual losses and loss adjustment expenses on prior accident years for the Insurance segment for the year ended December 31, 2019 is primarily attributed the reserves the Company assumed from MISE resulting from the Part VII transaction.

The difference between the Reinsurance segment loss development implied by the tables for the year ended December 31, 2019 and actual losses and loss adjustment expenses on prior accident years for the Reinsurance segment for the year ended December 31, 2019 is primarily attributed the reduction in reserves due to the commutation of the reinsurance agreement between the Company and MGRC.

The remaining difference between the segment loss development implied by the tables for the year ended December 31, 2019 and actual losses and loss adjustment expenses on prior accident years is attributed to the fact that amounts presented in these tables exclude amounts attributed to the 2015 and prior accident years, exclude unallocated loss adjustment expenses, and the differences in the presentation of foreign currency movements, as described above.

The Insurance operations table below also includes claim frequency information, by accident year. The Company defines a claim as a single claim incident, per policy, which may include multiple claimants and multiple coverages on a single policy. Claim counts include claims closed without a payment as well as claims where the Company is monitoring to determine if an exposure exists, even if a reserve has not been established.

All of the business contained within the Company's Reinsurance operations represents treaty business that is assumed from other insurance or reinsurance companies, for which the Company does not have access to the underlying claim counts. Further, this business includes both quota share and excess of loss treaty reinsurance, through which only a portion of each reported claim results in losses to the Company. As such, the Company excluded claim count information from the Reinsurance operations disclosures.

Insurance operations

	Ultimate Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance					
	Unaudited				Total of Incurred- but-Not-Reported Liabilities, Net of Reinsurance	Cumulative Number of Reported Claims (thousands)
(in thousands)	As of December 31,					
Accident Year	2016	2017	2018	2019	December 31, 2019	
2016	$ 153,966	$ 217,440	$ 175,882	$ 247,225	$ 86,430	4
2017		432,880	474,019	426,999	210,072	5
2018			423,076	504,279	293,721	5
2019				554,017	404,131	5
				$ 1,732,520		

	Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance			
	Unaudited			
(in thousands)	As of December 31,			
Accident Year	2016	2017	2018	2019
2016	$ 21,446	$ 68,057	$ 90,748	$ 152,608
2017		67,969	195,506	294,341
2018			71,730	182,057
2019				90,379
				$ 719,385
All outstanding liabilities for unpaid losses and loss adjustment expenses before 2016, net of reinsurance				363,876
Total liabilities for unpaid losses and loss adjustment expenses, net of reinsurance				$ 1,377,011

Reinsurance operations

	Ultimate Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance				Total of Incurred- but-Not-Reported Liabilities, Net of Reinsurance
	Unaudited				
(in thousands)	As of December 31,				
Accident Year	2016	2017	2018	2019	December 31, 2019
2016	$ 239,429	$ 271,554	$ 279,546	$ 199,319	$ 31,835
2017		503,686	569,327	353,931	48,072
2018			453,075	291,051	117,633
2019				169,044	107,555
				$ 1,013,345	

	Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance			
	Unaudited			
(in thousands)	As of December 31,			
Accident Year	2016	2017	2018	2019
2016	$ 37,650	$ 89,121	$ 128,084	$ 164,603
2017		82,252	176,994	261,567
2018			61,674	135,231
2019				19,769
				$ 581,170
All outstanding liabilities for unpaid losses and loss adjustment expenses before 2016, net of reinsurance				435,887
Total liabilities for unpaid losses and loss adjustment expenses, net of reinsurance				$ 868,062

The following table presents supplementary information about average historical claims duration as of December 31, 2019 based on cumulative incurred and paid losses and allocated loss adjustment expenses presented above.

	Average Annual Percentage payout of Incurred Losses by Age (in Years), Net of Reinsurance			
Unaudited	1	2	3	4
Insurance	13.8%	23.5%	16.2%	25.0%
Reinsurance	18.8%	26.0%	21.7%	18.3%

The following table reconciles the net incurred and paid loss development tables to the liability for losses and loss adjustment expenses in the consolidated balance sheet.

(dollars in thousands)		December 31, 2019
Net outstanding liabilities		
Insurance	$	1,377,011
Reinsurance		868,064
Other		5,647
Liabilities for unpaid losses and loss adjustment expenses, net of reinsurance		2,250,722
Reinsurance recoverable on unpaid losses		
Insurance		542,518
Reinsurance		191,510
Other		8,810
Total reinsurance recoverable on unpaid losses		742,838
Unallocated loss adjustment expenses		31,904
Total gross liability for unpaid losses and loss adjustment expenses	$	3,025,464

6. Reinsurance

The Company uses reinsurance and retrocessional reinsurance to manage its net retention on individual risks and overall exposure to losses while providing it with the ability to offer policies with sufficient limits to meet policyholder needs. In a reinsurance transaction, an insurance company transfers, or cedes, all or part of its exposure in return for a portion of the premium. In a retrocessional reinsurance transaction, a reinsurance company transfers, or cedes, all or part of its exposure in return for a portion of the premium. The ceding of insurance does not legally discharge the Company from its primary liability for the full amount of the policies, and the Company will be required to pay the loss and bear collection risk if the reinsurer fails to meet its obligations under the reinsurance or retrocessional agreement.

A credit risk exists with ceded reinsurance to the extent that any reinsurer is unable to meet the obligations assumed under the reinsurance or retrocessional contracts. Allowances are established for amounts deemed uncollectible. The Company evaluates the financial condition of its reinsurers and monitors concentration of credit risk arising from its exposure to individual reinsurers.

As of December 31, 2019, 84.4% of reinsurance recoverable on paid and unpaid losses were with reinsurers rated "A" or above by A.M. Best Company, 3.3% are rated "A-" and the remaining 12.3% of reinsurance recoverables are with "NR-not rated" reinsurers. To further reduce credit exposure to reinsurance recoverable balances, the Company has received collateral, including letters of credit and trust accounts, from certain reinsurers. Collateral related to these reinsurance agreements is available, without restriction, when the Company pays losses covered by the reinsurance agreements.

At both December 31, 2019 and 2018, balances recoverable from the ten largest reinsurers represented 67% of the reinsurance recoverable on paid and unpaid losses, before considering reinsurance allowances and collateral. At December 31, 2019 the largest reinsurance balance was due from AXIS Reinsurance Company and represented 13% of the reinsurance recoverable on paid and unpaid losses, before considering reinsurance allowances and collateral.

The following table summarizes the effect of reinsurance and retrocessional reinsurance on premiums written and earned.

(dollars in thousands)	Years Ended December 31,			
	Written		Earned	
Property and Casualty	2019	2018	2019	2018
Direct	$ 300,782	$ 236,640	$ 265,028	$ 224,480
Assumed	970,714	969,943	987,053	1,090,162
Ceded	(174,883)	(194,691)	(195,183)	(202,262)
Net premiums	$ 1,096,613	$ 1,011,892	$ 1,056,898	$ 1,112,380

The percentage of ceded earned premiums to gross earned premiums was 15.6% and 15.4% for the years ended December 31, 2019 and 2018, respectively.

Incurred losses and loss adjustment expenses were net of ceded incurred losses and loss adjustment expenses of $56.4 million and $172.1 million for the years ended December 31, 2019 and 2018, respectively.

7. Life and Annuity Benefits

The following table presents life and annuity benefits.

(dollars in thousands)	December 31,	
	2019	2018
Life	$ 132,611	$ 128,745
Annuities	819,849	827,136
Accident and health	53,131	56,935
Total	$ 1,005,591	$ 1,012,816

Life and annuity benefits are compiled on a reinsurance contract-by-contract basis and are discounted using standard actuarial techniques and cash flow models. Since the development of the life and annuity reinsurance reserves is based upon cash flow projection models, the Company must make estimates and assumptions based on cedent experience, industry mortality tables, and expense and investment experience, including a provision for adverse deviation. The assumptions used to determine policy benefit reserves are generally locked-in for the life of the contract unless an unlocking event occurs. Loss recognition testing is performed to determine if existing policy benefit reserves, together with the present value of future gross premiums and expected investment income earned thereon, are adequate to cover the present value of future benefits, settlement and maintenance costs. If existing policy benefit reserves are not sufficient, the locked-in assumptions are revised to current best estimate assumptions and a charge to earnings for life and annuity benefits is recognized at that time.

Life and annuity benefits are also adjusted to the extent unrealized gains on the investments supporting the policy benefit reserves would result in a reserve deficiency if those gains were realized. During 2019, the Company recognized a reserve deficiency resulting from a decrease in market yield on the investment portfolio supporting the policy benefit reserves by increasing life and annuity benefits by $48.6 million and decreasing the change in net unrealized holding gains included in other comprehensive income by a corresponding amount. During 2018, the Company recorded a decrease to life and annuity benefits of $24.1 million as a result of this review.

Because of the assumptions and estimates used in establishing the Company's reserves for life and annuity benefit obligations and the long-term nature of these reinsurance contracts, the ultimate liability may be greater or less than the estimates. The average discount rate for the life and annuity benefit reserves was 3.75% as at December 31, 2019 and 2018, respectively.

As of December 31, 2019, the largest life and annuity benefits reserve for a single contract was 33% of the total.

No annuities included in life and annuity benefits in the consolidated balance sheet are subject to discretionary withdrawal. Included in deposit liabilities as of December 31, 2019 and 2018 are annuities of $1.2 million and $1.3 million, respectively, which are subject to discretionary withdrawal. Deposit liabilities also include $20.2 million and $22.1 million as of December 31, 2019 and 2018, respectively, representing the account value of a universal life reinsurance contract.

8. Leases

The Company's leases primarily consist of operating leases for real estate and have remaining terms up to 3.5 years. Total lease costs for operating leases were $0.7 million for both 2019 and 2018, respectively.

The following table summarizes details for the Company's operating lease recorded on the consolidated balance sheet as of December 31, 2019.

(dollars in thousands)		
Right-of-use lease assets	$	3,544
Lease liabilities	$	3,544
Weighted average remaining lease term		3.5 years
Weighted average discount rate		3.35%

The table below summarizes maturities of the Company's operating lease liabilities as of December 31, 2019, which reconciles to total lease liabilities included in other liabilities in the Company's consolidated balance sheet.

Years Ending December 31,		*(dollars in thousands)*
2019	$	1,080
2020		1,080
2021		1,080
2022		507
2023		—
2025 and thereafter		—
Total lease payments		3,747
Less imputed interest		(203)
Total operating lease liabilities	$	3,544

9. Income Taxes

Markel Bermuda is incorporated in Bermuda and pursuant to Bermuda law is not taxed on either income or capital gains. The Company has received an assurance from the Bermuda Minister of Finance under the Exempted Undertaking Tax Protection Act, 1966 of Bermuda that if legislation is enacted in Bermuda that imposes tax computed on profits or income, or computed on any capital asset, gain or appreciation, then the imposition of any such tax will not be applicable until March 2035.

Effective May 2, 2013, Markel Bermuda made an irrevocable election under Section 953(d) of the United States Internal Revenue Code ("IRC"), as amended, to be taxed as a U.S. domestic corporation. As a result of this election, the Company is subject to U.S. taxation on its world-wide income as if it were a U.S. corporation.

The Company records income taxes based on the enacted tax laws and rates applicable in the relevant jurisdictions. Interest and penalties related to uncertain tax positions, of which there have been none, would be recognized in income tax expense.

The amount of income taxes paid may vary in comparison to the current income tax expense recognized in the period due to differences in the timing between the tax expense recognition and the required tax remittance.

The components of income taxes attributable to operations for the years ended December 31, 2019 and 2018 were as follows.

	Years Ended December 31,	
(dollars in thousands)	2019	2018
Current:		
United States	$ 40,520	$ (12,585)
Total current tax expense (benefit)	40,520	(12,585)
Deferred:		
United States	69,880	(6,946)
Total deferred tax expense (benefit)	69,880	(6,946)
Income tax expense (benefit)	$ 110,400	$ (19,531)
Income tax expense (benefit) in net income (loss)	110,400	(19,531)
Income tax expense (benefit) on other comprehensive income (loss)	$ 2,961	$ (15,906)
Total income tax expense (benefit)	$ 113,361	$ (35,437)

All of the Company's income (loss) before income tax expense (benefit) for the years ended December 31, 2019 and 2018, is from Bermuda-based operations subject to U.S tax.

The following table presents a reconciliation of income taxes computed using the U.S. corporate tax rate to the Company's income expense (benefit).

	Years Ended December 31,	
(dollars in thousands)	2019	2018
Income tax expense (benefit) computed on pre-tax loss at U.S corporate tax rate	$ 117,154	$ (31,698)
(Decrease) increase to income tax benefit resulting from:		
Prior period adjustment	(3,253)	—
TCJA	—	3,872
Permanent differences:		
Nondeductible loss on Markel CATCo Funds	—	15,502
Tax exempt investment income	(2,915)	(6,693)
Other	(586)	(514)
Income tax expense (benefit)	$ 110,400	$ (19,531)

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act ("TCJA"), which made significant modifications to U.S. federal income tax law, most of which were effective January 1, 2018. In 2018, the Company completed its determination of the accounting implications of the TCJA which resulted in additional tax expense of $3.9 million.

The following table presents the components of foreign deferred tax assets and liabilities.

(dollars in thousands)	December 31, 2019	December 31, 2018
Deferred tax asset:		
Impact of net unrealized losses on life and annuity benefits	$ 47,388	$ 37,186
Life and annuity benefits	36,084	41,235
Property and casualty losses	24,117	29,771
Net unearned property and casualty premiums	20,835	20,840
Other differences between financial reporting and tax bases	3,422	4,226
Deferred tax asset	131,846	133,258
Deferred tax liability:		
Investments	162,667	89,196
Deferred ceding commissions, net	20,255	21,304
Insurance reserves transition adjustment	3,988	6,118
Other differences between financial reporting and tax bases	3,139	1,999
Deferred tax liability	190,049	118,617
Net deferred tax (liability) asset	$ (58,203)	$ 14,641

Based on the Company's historical and expected future taxable earnings and the expected reversal of existing gross deferred tax liabilities, management believes that it is more likely than not that the Company will realize the benefit of its deferred tax assets at December 31, 2019 and does not have a valuation allowance on its deferred tax assets.

The Company does not have any unrecognized tax benefits at December 31, 2019 and 2018.

The tax years open to examination by U.S tax authorities are 2016 to the present. The Internal Revenue Service is currently examining the Company's 2017 U.S. federal income tax return. The Company believes its income tax liabilities were adequate as of December 31, 2019; however, these liabilities could be adjusted as a result of this examination.

10. Related Party Transactions

a) Due from affiliates, net

The amounts due from affiliates, net presented in the table below are at carrying value, which approximates fair value.

(dollars in thousands)	December 31, 2019	December 31, 2018
Promissory Note from Markel Corporation	$ 285,000	$ 285,000
Promissory Notes from Markel Ventures, Inc.	340,000	190,000
Other amounts due from affiliates, net	20,680	18,617
Total	$ 645,680	$ 493,617

On December 16, 2015, ADS entered into a $285.0 million promissory note with Markel Corporation. The loan bears interest at a fixed rate of 4.18% per annum. The loan is due on December 31, 2025.

On August 11, 2017, the Company entered into a $130.0 million promissory note with Markel Ventures, Inc, a wholly-owned subsidiary of Markel Corporation. The loan bears interest at a fixed rate of 3.67% per annum. The loan is due on August 11, 2027 and is guaranteed by Markel Corporation. On February 1, 2018 $50.0 million of this loan was repaid.

On September 26, 2018, the Company entered into a $110.0 million promissory note with Markel Ventures, Inc. The loan bears interest at a fixed rate of 4.54% per annum. The loan is due on September 26, 2028 and is guaranteed by Markel Corporation.

On November 4, 2019, the Company entered into a $45.0 million promissory note with Markel Ventures, Inc. The loan bears interest at a fixed rate of 3.15% per annum. The loan is due on November 4, 2029 and is guaranteed by Markel Corporation.

On November 22, 2019, the Company entered into a $105.0 million promissory note with Markel Ventures, Inc. The loan bears interest at a fixed rate of 3.21% per annum. The loan is due November 22, 2029 and is guaranteed by Markel Corporation.

The other amounts due from affiliates, net represent amounts receivable and payable from/to companies consolidated by Markel Corporation. The balances arise in the normal course of business and are due on demand and are non-interest bearing.

b) Notes payable to affiliates

The amounts notes payable to affiliates presented in the table below are at carrying value, which approximates fair value

	December 31,	
(dollars in thousands)	2019	2018
On-Demand Funding Commitment Note to Markel Diversified Fund	$ 24,875	$ 24,875
Demand Note to Markel CATCo Investment Management Ltd.	30,000	—
Demand Note to Markel Corporation	—	50,000
Total	$ 54,875	$ 74,875

On January 1, 2016, the Company entered into a $62.5 million on-demand funding commitment note agreement with Markel Diversified Fund, a segregated account of Markel CATCo Reinsurance Fund Ltd. On January 12, 2018 $37.6 million of the note was repaid. The note bore interest at a fixed rate of 3.49% per annum for the year ended December 31, 2019 and 2018, respectively. Subsequent to December 31, 2019, the note was amended to extend the maturity date to December 31, 2020 at a fixed interest rate of 3.49% per annum.

On December 26, 2018, the Company entered into an $50.0 million demand note with Markel Corporation. The note bears interest at a variable rate per annum equal to the short-term annual Applicable Federal Rate published by the U.S. Internal Revenue Service, reset monthly. The demand note was repaid on April 5, 2019.

On October 1, 2019, the Company entered into a $30.0 million demand note with Markel CATCo Investment Management Ltd., a consolidated subsidiary of Markel Corporation. The note is due on demand and bears interest at a variable rate per annum equal to the twelve-month U.S. Dollar London Inter-Bank Offered Rate ("LIBOR").

c) Markel CATCo

The Company enters into reinsurance contracts that are ceded to Markel CATCo Re Ltd. (Markel CATCo Re), an unconsolidated subsidiary of Markel. Under this program, the Company retains underwriting risk for annual aggregate agreement year losses in excess of a limit the Company believes is unlikely to be exceeded. To the extent losses under this program exceed the prescribed limit, the Company is obligated to pay such losses to the cedents without recourse to Markel CATCo Re. For the years ended December 31, 2019 and 2018, gross premiums written on behalf of Markel CATCo Re were $5.5 million and $10.9 million, respectively.

In early 2019 the Company entered into various reinsurance contracts with third parties on behalf of Markel CATCo Re, in exchange for ceding fees. These reinsurance contracts primarily cover losses for events that occurred during 2019, however, in some instances, coverage is also provide for adverse development on 2018 and prior accident years' loss events. Incurred losses on these contracts are fully ceded to Markel CATCo Re. The loss exposures on these contracts are fully collateralized by Markel CATCo Re up to an amount that the Company believes is unlikely to be exceeded. For the year ended December 31, 2019, the Company earned $8.8 million of ceding fees attributed to these contracts, which was included in other revenues in the Company's consolidated statements of income and comprehensive income. As of December 31, 2019, the Company's estimate of ultimate incurred losses and loss adjustment expenses on these reinsurance contracts totaled $4.9 million, all of which was ceded to Markel CATCo Re. The corresponding reinsurance recoverables due from Markel CATCo Re are fully collateralized.

d) Markel Global Reinsurance Company

The Company provides reinsurance to Markel Global Reinsurance Company ("MGRC"), formerly known as Alterra Reinsurance USA, Inc., a company related by common control. Management believes the terms of the reinsurance agreement are similar to those of an arm's length transaction with an unrelated party. On June 28, 2018 the Company and MGRC entered into a termination agreement such that the Company no longer reinsured new or renewal treaties effective July 1, 2018. On July 1, 2019 the Company entered into a commutation agreement with MGRC, which discharged the Company from any and all liabilities and obligations under the reinsurance agreement. The net outstanding result from the reinsurance agreement was settled prior to December 31, 2019 at no gain or loss to the Company. The accompanying consolidated balance sheets and consolidated statements of income and comprehensive income include the following amounts related to the reinsurance agreement with MGRC.

	December 31,	
(dollars in thousands)	2019	2018
Balance Sheet		
Premiums receivable	$ —	$ 148,624
Deferred policy acquisition costs	—	47,162
Unpaid losses and loss adjustment expenses	—	714,288
Unearned property and casualty premiums	—	145,610
Reinsurance balances payable	—	32,092
Income Statement		
Gross premiums written	$ 11,511	$ 195,372
Net earned premiums	80,157	288,548
Losses and loss adjustment expenses	60,169	242,892
Acquisition costs	27,259	99,636

e) Lloyd's Syndicates

The Company provides reinsurance to Lloyd's syndicates and corporate capital providers which are related by common control. Management believes the terms of the reinsurance agreements are similar to those of an arm's length transaction with an unrelated party. The accompanying consolidated balance sheets and consolidated statements of income and comprehensive income include the following amounts related to such reinsurance agreements.

	December 31,	
(dollars in thousands)	2019	2018
Balance Sheet		
Premiums receivable	$ 479,895	$ 394,862
Deferred policy acquisition costs	45,615	49,832
Unpaid losses and loss adjustment expenses	504,385	493,166
Unearned property and casualty premiums	189,149	168,284
Income Statement		
Gross premiums written	$ 484,068	$ 477,918
Net earned premiums	464,703	500,066
Losses and loss adjustment expenses	331,023	355,167
Acquisition costs	189,325	204,802

The Company has also deposited funds at Lloyd's for the benefit of Lloyd's syndicates related by common control. The amount held in deposit was $562.6 million and $552.7 million as of December 31, 2019 and 2018, respectively, and this amount is included in restricted assets in Note 3.

f) Markel International Insurance Company Limited

The Company provides reinsurance to Markel International Insurance Company Limited ("MIICL"), a company related by common control. Management believes the terms of the reinsurance agreements are similar to those of an arm's length transaction with an unrelated party. The accompanying consolidated balance sheets and consolidated statements of income and comprehensive income include the following amounts related to the reinsurance agreements with MIICL.

	December 31,	
(dollars in thousands)	2019	2018
Balance Sheet		
Premiums receivable	$ 8,211	$ 9,150
Deferred policy acquisition costs	1,657	2,291
Unpaid losses and loss adjustment expenses	197,278	237,853
Unearned property and casualty premiums	8,164	12,282
Reinsurance balances payable	10,777	1,410
Income Statement		
Gross premiums written	$ 21,087	$ 31,724
Net earned premiums	24,143	28,754
Losses and loss adjustment expenses	10,173	5,873
Acquisition costs	6,295	6,169

g) Markel International S.E.
The Company provides reinsurance to Markel International S.E. ("MISE"), a company related by common control. Management believes the terms of the reinsurance agreement are similar to those of an arm's length transaction with an unrelated party. The accompanying consolidated balance sheets and consolidated statements of income and comprehensive income include amounts related to the reinsurance agreement with MISE.

During 2019, the Company entered into multiple policy level guarantee agreements with MISE. Under the terms of the agreements, the Company guaranteed payment of amounts due and payable on policies written or renewed by MISE. The guarantees serve to enhance MISE's financial strength, and provides protection against limit losses on certain product lines. The Company estimates the maximum potential exposure under the guarantees to be no more than $50.0 million.

On March 29, 2019, MIICL entered into a Part VII transaction with MISE, the effect of which is to novate MIICL's insurance assets and liabilities with European exposure to MISE. That transaction included a portion of the balances pertaining to the Company's reinsurance agreement with MIICL. Under the terms of the reinsurance agreement with MISE, the Company assumed a portion of the novated insurance assets and liabilities. There was no impact on the consolidated statements of operations and comprehensive income (loss).

	December 31,	
(dollars in thousands)	2019	2018
Balance Sheet		
Premiums receivable	$ 86,088	$ —
Deferred policy acquisition costs	26,212	111
Unpaid losses and loss adjustment expenses	207,693	38
Unearned property and casualty premiums	69,869	507
Income Statement		
Gross premiums written	$ 172,198	$ 599
Net earned premiums	140,041	96
Losses and loss adjustment expenses	73,745	38
Acquisition costs	51,474	21

h) State National Insurance Company, Inc.

State National Companies, Inc. ("SNC") fronts catastrophe-exposed primary property insurance policies for selected general agents appointed by Nephila Capital Ltd. for risks in the United States. Using intercompany reinsurance agreements with the SNC fronting carriers, a specified portion of the tail risk from these transactions will be assumed by the Company during January 2020. These risks will then be ceded in their entirety to a newly formed Bermuda registered Special Purpose Insurer ("SPI"), Stratosphere Re Ltd. The SPI will issue principal-at-risk variable rate notes transferring risk to third-party investors. The proceeds paid to the SPI from the sale of the notes will be deposited in a trust account and will fully collateralize the obligations of the SPI to the Company. The Company will receive a commercially priced fronting fee for its role in facilitating the transaction.

11. Commitments and Contingencies

a) Concentrations of credit risk

The Company's portfolio of cash, fixed maturity securities, equity securities, and hybrid financial instruments is managed following prudent standards of diversification. The Company's investment guidelines limit the allowable holdings of a single issue and issuers. The Company believes that there are no significant concentrations of credit risk associated with its portfolio of cash and fixed maturity securities.

At December 31, 2019, investments in securities issued by the U.S. government-sponsored enterprises and German Government were the only investments in any one issuer that exceeded 10% of shareholder's equity. At December 31, 2018, investments in securities issued by the U.S. government-sponsored enterprises, German Government, and Berkshire Hathaway Inc. were the only investments in any one issuer that exceeded 10% of shareholder's equity.

At December 31, 2019, the Company's ten largest equity holdings represented $564.0 million, or 34%, of the equity portfolio. Investments in the property and casualty insurance industry represented $266.7 million, or 16% of the equity portfolio at December 31, 2019.

Premiums receivable comprise amounts due within one year or amounts not yet due. As of December 31, 2019 and 2018, the Company’s largest premiums receivable balance from a single unrelated party were 3% and 2% of total premiums receivable, respectively.

For the years ended December 31, 2019 and 2018, brokered transactions accounted for the majority of the Company’s property and casualty gross premiums written. For the years ended December 31, 2019 and 2018, the top three independent producing intermediaries and brokerage firms accounted for 18%, 8% and 7%; and 16%, 8% and 5%, respectively, of property and casualty gross premiums written.

b) Credit facilities

The Company holds a letter of credit facility with $100.0 million of committed and $200.0 million of uncommitted capacity that expires on November 25, 2020. This facility allows for the issuance of letters of credit in U.S. dollars and other currencies. At December 31, 2019 and 2018, $208.2 million and $226.0 million of letters of credit, respectively, denominated in various currencies, were issued and outstanding under this credit facility.

At December 31, 2019, the Company was in compliance with all covenants contained in its credit facilities. To the extent that the Company is not in compliance with its covenants, the Company's access to these credit facilities could be restricted.

12. Statutory Financial Information

Statutory capital and surplus and statutory net income (loss) for the Company as of December 31, 2019 and 2018 and for the years ended December 31, 2019 and 2018 is summarized below.

(dollars in thousands)	2019	2018
Actual statutory capital and surplus	1,604,184	1,495,563
Statutory net income (loss)	$ 447,479	$ (131,411)

Under the Bermuda Insurance Act, 1978 and related regulations, the Company is subject to capital requirements calculated using the Bermuda Solvency and Capital Requirement, or BSCR model, which is a standardized statutory risk-based capital model used to measure the risk associated with the Company’s assets, liabilities and premiums. The Company's required statutory capital and surplus under the BSCR model is referred to as the enhanced capital requirement ("ECR"). The Company is required to calculate and submit the ECR to the Bermuda Monetary Authority ("BMA"), annually. Following receipt of the submission of the Company's ECR the BMA has the authority to impose additional capital requirements (capital add-ons) if it deems necessary. If a company fails to maintain or meet its ECR, the BMA may take various degrees of regulatory action. As of December 31, 2019, the Company met its ECR.

The Company is also required under its Class 4 license to maintain a minimum liquidity ratio whereby the value of its relevant assets is not less than 75% of the amount of its relevant liabilities for general business. Relevant assets include cash, cash equivalents, restricted cash, restricted cash equivalents, fixed maturities, other investments, accrued interest income, premiums receivable, and funds withheld. The relevant liabilities are total general business insurance reserves and total other liabilities, less sundry liabilities. As of December 31, 2019, the Company met the minimum liquidity ratio requirement.

The Company may declare dividends subject to it continuing to meet its solvency and capital requirements, which includes continuing to hold statutory capital and surplus equal to or exceeding its ECR. The Company is prohibited from declaring or paying in any fiscal year dividends of more than 25% of its prior year's statutory capital and surplus unless the Company files with the BMA an affidavit signed by at least two members of the Board of Directors attesting that a dividend would not cause the Company to fail to meet its relevant margins. As of December 31, 2019 and 2018, the Company could pay dividends to the holding company during the subsequent year up to $401.0 million and $373.9 million, respectively, without providing an affidavit to the BMA.

The payment of dividends is limited by applicable regulations and statutory requirements of Bermuda. The Company is prohibited from declaring or paying a dividend if such payment would reduce its respective regulatory capital below the required minimum as required by law and regulatory practice. The Company is also subject to certain restrictions under its credit facilities that affect its ability to pay dividends. The Company paid dividends of $350.0 million and $92.6 million during 2019 and 2018, respectively.

The Company must obtain the BMA's prior approval for a reduction of 15% or more of the total statutory capital, as set forth in its previous year's financial statements. In addition, as a long-term insurer, the Company may not declare or pay a dividend to any person other than a policyholder unless the value of the assets in its long-term business fund, as certified by the Company's approved actuary, exceeds the liabilities of its long-term business.

13. Pensions

The Company provides pension benefits to eligible employees and their dependents through various defined contribution plans. Under these plans, the Company and its employees each contribute a certain percentage of the employee’s gross salary into the plan each month. The Company’s contributions are immediately 100% vested. Pension expenses totaled $1.3 million and $0.9 million for the year ended December 31, 2019 and 2018, respectively.

14. Significant Non-Cash Transactions

The company engaged in the following significant non-cash operating, investing and financing activities during the year:

(dollars in thousands)	2019	2018
Dividend of fixed maturities and equity securities to Alterra Capital Holdings Limited	$ (275,368)	$ —
Commutation settlement of fixed maturities, equity securities and short term investments to MGRC	(714,035)	—
Part VII settlement of fixed maturities from MISE	70,692	—
MCAP reinsurance agreement settlement	(39,839)	—
Return of capital in equity securities from investment in affiliate	—	54,447
Dividend in equity securities from investment in affiliate	—	10,800
Dividend of investment in affiliate, at cost	—	(92,576)

15. Subsequent Events

The outbreak and continuous spread of the coronavirus ("COVID-19") and the related disruption to the worldwide economy are impacting companies across all industries. Equity markets have declined worldwide and continue to face significant volatility. The Company recognized pre-tax net unrealized investment losses of $351 million on its equity portfolio for the quarter ended March 31, 2020 which significantly impacted the Company’s capital and surplus.

COVID-19 will also have an impact on the Company's insurance losses. The Company recognized pre-tax net losses of $130 million arising from coverages with direct exposure to COVID-19. Additionally, the Company is in the process of evaluating the long-term secondary economic impacts of COVID-19 and will record any change in loss frequencies within each of its product lines in future periods.

Despite the equity losses and insurance losses the Company's capital and surplus is still above that required by the BMA.

Subsequent events have been evaluated through April 24, 2020.