WATFORD RE LTD. AND SUBSIDIARIES

Consolidated Financial Statements

For the Years Ended
December 31, 2020 and 2019

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March 12, 2021

Report of Independent Auditors

To the Board of Directors and Shareholder of Watford Re Ltd.

We have audited the accompanying consolidated financial statements of Watford Re Ltd. and its subsidiaries, which comprise the consolidated balance sheets as of December 31, 2020 and December 31, 2019, 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.

Management's responsibility for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; 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.

Auditors' responsibility

Our responsibility is to express an opinion on the 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 our 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, we consider 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 Watford Re Ltd. and its subsidiaries as of December 31, 2020 and December 31, 2019, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

PricewaterhouseCoopers Ltd., Chartered Professional Accountants, P.O. Box HM 1171, Hamilton HM EX, Bermuda
T: +1 (441) 295 2000, F:+1 (441) 295 1242, www.pwc.com/bermuda

Other Matter

Accounting principles generally accepted in the United States of America require that the required supplemental information under Accounting Standards Update 2015-09, Disclosure about Short-Duration Contracts labelled as Unaudited within Note 5 on pages 22 to 24 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Financial Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

PricewaterhouseCoopers Ltd.

Chartered Professional Accountants

WATFORD RE LTD. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(U.S. dollars in thousands, except share and per share data)

	December 31,	
	2020	**2019**
Assets		
Investments:		
Term loans, fair value option (Amortized cost: $890,996 and $1,113,212)	$ 851,539	$ 1,061,934
Fixed maturities, fair value option (Amortized cost: $477,548 and $432,576)	455,162	416,594
Short-term investments, fair value option (Cost: $412,762 and $325,542)	418,690	329,303
Equity securities, fair value option	64,994	59,799
Other investments, fair value option	—	30,461
Investments, fair value option	1,790,385	1,898,091
Fixed maturities, available for sale (Amortized cost: $638,075 and $739,456)	655,249	745,708
Equity securities, fair value through net income	53,207	65,338
Total investments	2,498,841	2,709,137
Cash and cash equivalents	211,283	102,258
Accrued investment income	14,679	14,025
Premiums receivable	224,377	273,657
Reinsurance recoverable on unpaid and paid losses and loss adjustment expenses	286,590	170,974
Prepaid reinsurance premiums	122,339	132,577
Deferred acquisition costs, net	53,705	64,044
Receivable for securities sold	37,423	16,288
Intangible assets	7,650	7,650
Funds held by reinsurers	45,989	42,505
Amounts due from affiliates	21,632	13,343
Other assets	28,977	17,486
Total assets	$ 3,553,485	$ 3,563,944
Liabilities		
Reserve for losses and loss adjustment expenses	$ 1,519,583	$ 1,263,628
Unearned premiums	407,714	438,907
Losses payable	59,397	61,314
Reinsurance balances payable	63,269	77,066
Payable for securities purchased	16,916	18,180
Payable for securities sold short	21,975	66,257
Revolving credit agreement borrowings	211,640	484,287
Investment management and performance fees payable	21,641	17,762
Other liabilities	40,972	25,542
Total liabilities	2,363,107	2,452,943
Shareholder's equity		
Common shares ($1.00 par; shares authorized, issued and outstanding: 1,000,000)	1,000	1,000
Additional paid-in capital	1,034,313	1,034,313
Retained earnings	139,071	70,059
Accumulated other comprehensive income (loss)	15,994	5,629
Total Shareholder's Equity	1,190,378	1,111,001
Total Liabilities and Shareholder's Equity	$ 3,553,485	$ 3,563,944

See Notes to Consolidated Financial Statements

WATFORD RE LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME (LOSS) AND COMPREHENSIVE INCOME (LOSS)

(U.S. dollars in thousands, except share data)

	Year Ended December 31,	
	2020	**2019**
Revenues		
Gross premiums written	$ 728,546	$ 754,881
Gross premiums ceded	(190,957)	(222,019)
Net premiums written	537,589	532,862
Change in unearned premiums	22,762	23,828
Net premiums earned	560,351	556,690
Other underwriting income (loss)	2,045	2,412
Interest income	140,391	163,639
Investment management fees - related parties	(17,193)	(18,392)
Borrowing and miscellaneous other investment expenses	(16,807)	(29,285)
Net interest income	106,391	115,962
Realized and unrealized gains (losses) on investments	19,629	24,243
Investment performance fees - related parties	(12,037)	(12,191)
Net investment income (loss)	113,983	128,014
Total revenues	676,379	687,116
Expenses		
Loss and loss adjustment expenses	(440,482)	(453,135)
Acquisition expenses	(125,541)	(126,788)
General and administrative expenses	(23,821)	(26,153)
Net foreign exchange gains (losses)	(1,387)	(8,247)
Total expenses	(591,231)	(614,323)
Income (loss) before income taxes	85,148	72,793
Income tax expense	(26)	(20)
Net income (loss) before dividends	$ 85,122	$ 72,773
Other comprehensive income (loss) net of income tax		
Available for sale investments:		
Unrealized holding gains (losses) arising during the year	$ 16,695	$ 12,649
Unrealized foreign currency gains (losses) arising during the year	5,360	3,372
Credit loss recognized in income (loss)	197	—
Reclassification of net realized (gains) losses, included in net income	(11,133)	(5,611)
Foreign currency translation gains (losses)	(754)	(51)
Other comprehensive income (loss) net of income tax	10,365	10,359
Total comprehensive income (loss)	$ 95,487	$ 83,132

See Notes to Consolidated Financial Statements

WATFORD RE LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY
(U.S. dollars in thousands)

	Year Ended December 31,	
	2020	**2019**
Common shares		
Balance at beginning and end of year	$ 1,000	$ 1,000
Additional paid-in capital		
Balance at beginning of year	1,034,313	1,113,635
Return of capital	—	(79,322)
Balance at end of year	1,034,313	1,034,313
Accumulated other comprehensive income (loss)		
Balance at beginning of year	5,629	(4,730)
Unrealized holding gains (losses) of available for sale investments:		
Balance at beginning of year	6,252	(4,158)
Unrealized holding gains (losses) of available for sale investments, net of reclassification adjustment	11,119	10,410
Balance at end of year	17,371	6,252
Currency translation adjustment:		
Balance at beginning of year	(623)	(572)
Currency translation adjustment	(754)	(51)
Balance at end of year	(1,377)	(623)
Balance at end of year	15,994	5,629
Retained earnings (deficit)		
Balance at beginning of year	70,059	10,688
Cumulative effect of adoption of updated accounting guidance for credit losses at January 1, 2020	(428)	—
Net income (loss)	85,122	72,773
Dividends paid to parent	(15,682)	(13,402)
Balance at end of year	139,071	70,059
Total shareholder's equity	$ 1,190,378	$ 1,111,001

See Notes to Consolidated Financial Statements

WATFORD RE LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(U.S. dollars in thousands)

	Year Ended December 31,	
	2020	**2019**
Operating Activities		
Net income (loss) available to common shareholder	$ 85,122	$ 72,773
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Net realized and unrealized (gains) losses on investments	(19,629)	(24,243)
Amortization of fixed assets	7	86
Changes in:		
Accrued investment income	(648)	5,441
Premiums receivable	50,586	(39,849)
Reinsurance recoverable on unpaid and paid losses and loss adjustment expenses	(109,265)	(84,737)
Prepaid reinsurance premiums	10,239	(70,990)
Deferred acquisition costs, net	8,458	19,577
Reserve for losses and loss adjustment expenses	237,076	216,596
Unearned premiums	(33,001)	47,162
Reinsurance balances payable	(17,430)	57,554
Funds held with reinsurers	(1,333)	2,915
Share based compensation	163	—
Other liabilities	1,790	48,760
Other items	(12,918)	(8,469)
Net Cash Provided By Operating Activities	199,217	242,576
Investing Activities		
Purchase of term loans	(331,350)	(443,550)
Purchase of fixed maturity investments	(1,315,679)	(1,247,573)
Purchase of short-term investments with maturities over three months	(11,118)	(45,106)
Proceeds from sale, redemptions and maturity of term loans	505,037	324,142
Proceeds from sales, redemptions and maturities of fixed maturity investments	1,360,450	1,508,008
Proceeds from sales, redemptions and maturities of other investments	35,222	47,281
Proceeds from sales, redemptions and maturities of short-term investments with maturities over three months	6,515	6,953
Net (purchases) sales of short-term investments with maturities of less than three months	(75,213)	(6,015)
Purchases of equity securities	(11,021)	(75,164)
Proceeds from sales of equity securities	33,682	26,112
Net settlements of derivative instruments	(2,841)	2,471
Purchases of furniture, equipment and other assets	(13)	—
Net Cash Provided By (Used For) Investing Activities	193,671	97,559
Financing Activities		
Dividends paid	(15,682)	(13,402)
Return of capital	—	(79,322)
Repayments on borrowings	(359,000)	(273,155)
Proceeds from borrowings	86,353	62,800
Net Cash Provided By (Used For) Financing Activities	(288,329)	(303,079)
Effects of exchange rate changes on foreign currency cash	4,466	1,676
Increase (decrease) in cash	109,025	38,732
Cash and cash equivalents, beginning of year	102,258	63,525
Cash and cash equivalents, end of year	$ 211,283	$ 102,258
Supplementary information		
Income taxes paid	$ 379	$ 20
Interest paid	$ 15,012	$ 27,696
Non-cash exchange of investments	$ 101,100	$ 45,541

1. Organization

Watford Re Ltd. ("Watford Re") was incorporated under the laws of Bermuda on July 19, 2013 and is a wholly-owned subsidiary of Watford Holdings Ltd. (the "Parent"). The Parent was incorporated under the laws of Bermuda on July 19, 2013.

As used herein, the terms "Company" or "Companies" collectively refer to Watford Re and/or, as applicable, its subsidiaries. Watford Re is licensed as a Class 4 multi-line insurer under the Insurance Act 1978 of Bermuda, as amended, and related regulations (the "Insurance Act") and is licensed to underwrite general business on an insurance and reinsurance basis. The Company primarily underwrites reinsurance on exposures worldwide.

In the first quarter of 2014, the Parent raised approximately $1.1 billion of capital consisting of $907.3 million in common equity ($895.6 million net of issuance costs) and $226.6 million in preference equity ($219.2 million net of issuance costs and discount). Through its wholly-owned subsidiary, Arch Reinsurance Ltd. ("ARL"), Arch Capital Group Ltd. ("ACGL") invested $100.0 million and acquired approximately 11% of the Parent's common equity and a warrant to purchase up to 975,503 of common shares. See Note 15 - "Shareholders' equity" for further details.

On March 28, 2019, the Parent completed a direct listing of its common shares on the Nasdaq Global Select Market. On June 28, 2019, the Parent completed a direct listing of its 8½% Cumulative Redeemable Preference Shares (the "preference shares") on the Nasdaq Global Select Market. The Parent did not issue any new common shares or preference shares, nor did the Parent receive any proceeds from the sale of common shares or preference shares by the selling shareholders.

Watford Re and Watford Insurance Company Europe Limited ("WICE") have engaged Arch Underwriters Ltd. ("AUL"), a company incorporated in Bermuda and a wholly-owned subsidiary of Arch Capital Group Ltd. ("ACGL"), to act as their insurance and reinsurance manager pursuant to services agreements between AUL and Watford Re and WICE, respectively. AUL manages the day-to-day underwriting activities of Watford Re and WICE, subject to the provisions of the services agreement and the oversight of our board of directors. See Note 12 - "Transactions with related parties" for further details.

In May 2018, WICE formed a branch in Romania and commenced underwriting operations in June 2018. WICE is a wholly-owned subsidiary of Watford Re. The Romanian branch ceased accepting new business from September 1, 2020.

Watford Specialty Insurance Company ("WSIC") and Watford Insurance Company ("WIC"), which are wholly-owned, indirect subsidiaries of Watford Re, have engaged Arch Underwriters Inc. ("AUI"), a company incorporated in Delaware and a wholly-owned subsidiary of ACGL, to act as their insurance and reinsurance manager pursuant to services agreements between AUI and WSIC and WIC, respectively. AUI manages the day-to-day underwriting activities of WSIC and WIC, subject to the provisions of the services agreement and the oversight of our board of directors. See Note 12 - "Transactions with related parties" for further details.

The Company has engaged HPS Investment Partners, LLC ("HPS"), as Investment Manager of the assets in its non-investment grade portfolio pursuant to various investment management agreements. HPS invests the Company's non-investment grade assets and a portion of its investment grade assets, subject to the terms of the applicable investment management agreements and the oversight of our senior management and board of directors. See Note 12 - "Transactions with related parties" for further details.

The Company has engaged Arch Investment Management Ltd. ("AIM"); a Bermuda exempted company and a subsidiary of ACGL, as Investment Manager of assets in its investment grade portfolio pursuant to various investment management agreements. AIM manages the majority of the Company's investment grade assets pursuant to the terms of the investment management agreements and the oversight of our senior management and board of directors. See Note 12 - "Transactions with related parties" for further details.

2. Basis of presentation and significant accounting policies

(a) Basis of presentation

The consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP") and include the accounts of the Company and its subsidiaries. All significant intercompany transactions and balances have been eliminated in consolidation. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates and assumptions.

To facilitate comparison of information across periods, certain reclassifications have been made to prior year amounts to conform to the current year's presentation.

(b) Premium revenues and related expenses

Reinsurance premiums written are recorded based on the type of contracts the Company writes. Premiums on the Company's excess of loss and pro rata reinsurance contracts are estimated when the business is underwritten. For excess of loss contracts, premiums are recorded as written, on the inception date, based on the terms of the contract. Estimates of premiums written under pro rata contracts are recorded in the period in which the underlying risks are expected to incept and are based on information provided by the brokers and the ceding companies. For multi-year reinsurance treaties which are payable in annual installments, premium recognition depends on whether the contract is non-cancellable. If either party retains the ability to cancel or commute coverage prior to expiration, only the initial annual installment is included as premiums written at policy inception. The remaining annual installments would then be included as premiums written at each successive anniversary date within the multi-year term. If, on the other hand, the contract is non-cancellable, the full multi-year premiums would be recognized as written at policy inception.

Reinsurance premiums written and assumed include amounts reported by brokers and ceding companies, supplemented by the Company's own estimates of premiums where reports have not been received. The determination of premium estimates requires a review of the ceding companies, familiarity with each market, the timing of the reported information, an analysis and understanding of the characteristics of each line of business, and management's judgment of the impact of various factors, including premium or loss trends, on the volume of business written and ceded to the Company. On an ongoing basis, the Company reviews the amounts reported by these third parties for reasonableness based on their experience and knowledge of the subject class of business. In addition, reinsurance contracts under which the Company assumes business generally contain specific provisions which allow the Company to perform audits of the ceding company to ensure compliance with the terms and conditions of the contract, including accurate and timely reporting of information. Based on a review of all available information, management establishes premium estimates where reports have not been received. Premium estimates are updated when new information is received and differences between such estimates and actual amounts are recorded in the period in which estimates are changed or the actual amounts are determined. Adjustments to premium estimates could be material and such adjustments could directly and significantly impact earnings favorably or unfavorably in the period they are determined because the estimated premium may be fully or substantially earned.

Reinstatement premiums are recognized at the time a loss event occurs, where coverage limits for the remaining life of the contract are reinstated under pre-defined contract terms. Reinstatement premiums, if obligatory, are fully earned when recognized. The accrual of reinstatement premiums is based on an estimate of losses and loss adjustment expenses, which reflects management's judgment.

Reinsurance premiums written, irrespective of the class of business, are generally earned on a pro rata basis over the term of the underlying policies or reinsurance contracts. Contracts and policies written on a "losses occurring" basis cover claims that may occur during the term of the contract or policy, which is typically 1 year. Accordingly, the premium is earned evenly over the term. Contracts which are written on a "risks attaching" basis cover claims which attach to the underlying insurance policies written during the terms of such contracts. Premiums earned on such

contracts usually extend beyond the original term of the reinsurance contract, typically resulting in recognition of premiums earned over a 2 year period. Certain of the Company's reinsurance contracts include provisions that adjust premiums or acquisition expenses based upon the experience under the contracts. Premiums written and earned, as well as related acquisition expenses are recorded based upon the projected experience under such contracts.

Acquisition expenses consist primarily of brokerage fees, ceding commissions, premium taxes, underwriting fees payable to Arch under our services agreements and other direct expenses that relate to our contracts and policies and are presented net of commissions received from reinsurance we purchase. We amortize deferred acquisition expenses over the related contract term in the same proportion that the premiums are earned. Our acquisition expenses may also include profit commissions paid to our sources of business in the event of favorable underwriting experience.

Deferred acquisition costs, which are based on the related unearned premiums, are carried at their estimated realizable value and take into account anticipated losses and loss adjustment expenses, based on historical and current experience, and anticipated investment income. A premium deficiency occurs if the sum of anticipated losses and loss adjustment expenses, unamortized acquisition costs and anticipated investment income exceed unearned premiums. A premium deficiency is recorded by charging any unamortized acquisition costs to expense to the extent required in order to eliminate the deficiency. If the premium deficiency exceeds unamortized acquisition costs then a liability is accrued for the excess deficiency. No premium deficiency charges were recorded by the Company during December 31, 2020 and 2019.

(c) Retroactive Reinsurance Accounting

Retroactive reinsurance reimburses a ceding company for liabilities incurred as a result of past insurable events covered by the underlying policies reinsured. For retroactive contracts that meet the established criteria for reinsurance accounting, written premiums are fully earned and corresponding losses and loss expense are recognized at inception. The initial gain, if applicable, is deferred and amortized into income over an actuarially determined expected payout period. Any future loss is recognized immediately and charged against earnings. The contracts can cause significant variances in gross premiums written, net premiums written, net premiums earned, and net incurred losses in the years in which they are written. Reinsurance contracts sold not meeting the established criteria for reinsurance accounting are recorded using the deposit method.

In certain instances, reinsurance contracts cover losses both on a prospective basis and on a retroactive basis and, accordingly, the Company bifurcates the prospective and retrospective elements of these reinsurance contracts and accounts for each element separately where practical. Underwriting income generated in connection with retroactive reinsurance contracts is deferred and amortized into income over the settlement period while losses are charged to income immediately. Subsequent changes in estimated or actual cash flows under such retroactive reinsurance contracts are accounted for by adjusting the previously deferred amount to the balance that would have existed had the revised estimate been available at the inception of the reinsurance transaction, with a corresponding charge or credit to income.

(d) Reinsurance ceded

The accompanying consolidated statements of income (loss) reflect premiums and losses and loss adjustment expenses and acquisition expenses, net of reinsurance ceded (see Note 3, "Reinsurance"). Ceded unearned premiums are reported as prepaid reinsurance premiums and estimated amounts of reinsurance recoverable on unpaid losses are reported as unpaid losses and loss adjustment expenses recoverable. Reinsurance premiums ceded and unpaid losses and loss adjustment expenses recoverable are estimated in a manner consistent with that of the original policies issued and the terms of the reinsurance contracts. If the reinsurers are unable to satisfy their obligations under the agreements, the Company would be liable for such defaulted amounts. Reinsurance ceding commissions are recognized as income on a pro rata basis over the period of risk. Reinsurance ceding commissions that represent a recovery of acquisition costs are recognized as a reduction to acquisition expenses while the remaining portion is deferred.

(e) Cash and cash equivalents

Cash includes cash equivalents, which are investments with original maturities of three months or less that are not managed by the external Investment Managers. Short-term investments include certain cash equivalents which are part of investment portfolios under the management of our Investment Managers.

(f) Investments

The Company has elected the fair value option for the majority of its long and short-term investments in accordance with Financial Accounting Standards Board ("FASB") Accounting Standard Codification ("ASC") 825, *Financial Instruments.* As a result, the Company's non-investment grade investments are reported at fair value with changes in fair value included in "realized and unrealized gain (loss) on investments" in the consolidated statements of income (loss). See Note 7 - "Investment information" for further information about the investment portfolios.

The fair values of investments are based on quotations received from nationally recognized pricing services, or when such prices are not available, by reference to broker or underwriter bid indications. Short-term investments are comprised of securities due to mature within one year of the date of issue. Investment transactions are recorded on a trade date basis with balances pending settlement recorded separately in the consolidated balance sheets as receivable for securities sold or payable for securities purchased. See Note 8 - "Fair value" for further details.

Beginning January 1, 2018, the Company elected to classify newly acquired debt investments in its investment grade portfolio as "available for sale." Accordingly, they are carried at estimated fair value (also known as fair value) with the changes in fair value recorded as an unrealized gain or loss component of accumulated other comprehensive income in shareholders' equity.

Investment Impairments

The Company conducts a periodic review to identify and evaluate invested assets that may have credit impairments.

Credit Impairments of Available For Sale Fixed Maturities

The Company derives estimated credit losses for fixed maturities by comparing expected future cash flows to be collected to the amortized cost of the security. Estimates of expected future cash flows consider among other things, macroeconomic conditions as well as the financial condition of the issuer, near-term and long-term prospects for the issuer, and the likelihood of the recoverability of principal and interest.

Beginning on January 1, 2020, credit losses are recognized through an allowance account subject to reversal, rather than a reduction in amortized cost. Declines in value attributable to factors other than credit are reported in other comprehensive income while the allowance for credit loss is charged to "realized and unrealized gains (losses) on investments" in the Company's consolidated statements of income (loss).

For fixed maturity investments the Company intends to sell or for which it is more likely than not that the Company will be required to sell before an anticipated recovery in value, the full amount of the impairment is included in "realized and unrealized gains (losses) on investments" on the Company's consolidated statements of income (loss). The new cost basis of the investment is the previous amortized cost basis less the impairment recognized in "realized and unrealized gains (losses) on investments." The new cost basis is not adjusted for any subsequent recoveries in fair value.

The Company reports accrued investment income separately from available for sale fixed maturities, and has elected not to measure an allowance for credit losses for accrued investment income. Uncollectible accrued interest is written off when the Company determines that no additional interest payments will be received.

Investment gains or losses realized on the sale of investments are determined on a first-in, first-out basis and are reflected in net income. Unrealized appreciation or decline in the value of available for sale securities, which are carried at fair value, is excluded from net income and recorded as a separate component of accumulated other comprehensive income, net of applicable deferred income tax.

Net interest income includes interest income together with amortization of market premiums and discounts, net of investment management fees, interest expense and custody fees. Anticipated prepayments and expected maturities are used in applying the interest method for certain investments, such as asset-backed securities. When actual prepayments differ significantly from anticipated prepayments, the effective yield is recalculated to reflect actual payments to date and anticipated future payments. The investment in such securities is adjusted to the amount that would have existed had the new effective yield been applied since the acquisition of the security. Such adjustments, if any, are included in interest income when determined. Investment gains or losses realized on the sale of investments are determined on a first-in, first-out basis and are reflected in "realized and unrealized gain (loss) on investments" in the consolidated statements of income (loss).

Performance fees related to the non-investment grade portfolio equal to 10% of income plus an additional performance fee equal to 25% of any Excess Income (as defined in such investment management agreements) in excess of a net 10% return to Watford after deduction for paid and accrued management fees and base performance fees, with the total performance fees not to exceed 17.5% of the Income or Aggregate Income, as applicable, are reflected in "investment performance fees - related parties" in the consolidated statements of income (loss). See Note 7 - "Investment information" for further details.

The Company invests in limited partnerships and limited liability companies. Such amounts are included in other investments, fair value option. These investments can often have characteristics of a variable interest entity ("VIE"). A VIE refers to entities that have characteristics such as (i) insufficient equity at risk to allow the entity to finance its activities without additional financial support or (ii) instances where the equity investors, as a group, do not have the characteristic of a controlling financial interest. If the Company is determined to be the primary beneficiary, it is required to consolidate the VIE. The primary beneficiary is defined as the variable interest holder that is determined to have the controlling financial interest as a result of having both (i) the power to direct the activities of a VIE that most significantly impact the economic performance of the VIE and (ii) the obligation to absorb losses or right to receive benefits from the VIE that could potentially be significant to the VIE. At inception of the VIE as well as on an ongoing basis, the Company determines whether it is the primary beneficiary based on an analysis of the Company's level of involvement in the VIE, the contractual terms, and the overall structure of the VIE. The Company's maximum exposure to loss with respect to these investments is limited to the investment carrying amounts reported in the Company's consolidated balance sheet and any unfunded commitment.

(g) Derivative instruments

The Company recognizes all derivative financial instruments, including embedded derivative instruments, at fair value in the consolidated balance sheets. The Company's investment and underwriting strategy allows for the use of derivative instruments to enhance investment performance, replicate investment positions or manage market exposures and duration risk that would be allowed under the Company's investment guidelines if implemented in other ways. For such investment derivative instruments, changes in assets and liabilities measured at fair value are recorded as a component of "realized and unrealized gain (loss) on investments." In addition, the Company's derivative instruments include amounts related to underwriting activities where an insurance or reinsurance contract meets the accounting definition of a derivative instrument. For such contracts, changes in fair value are reflected in "other underwriting income" in the consolidated statements of income (loss), as the underlying contract originates from the Company's underwriting operations. See Note 10 - "Derivative instruments" for further details.

(h) Reserves for losses and loss adjustment expenses

The reserve for losses and loss adjustment expenses consists of estimates of unpaid reported losses and loss adjustment expenses and estimates for losses incurred but not reported. The reserve for unpaid reported losses and loss adjustment expenses, established by management based on reports from ceding companies and claims from insureds, represents the estimated ultimate cost of events or conditions that have been reported to or specifically identified by the Company. Such reserves are supplemented by management's estimates of reserves for losses incurred for which reports or claims have not been received. The Company's reserves are based on a combination of reserving methods, incorporating ceding company and industry loss development patterns. The Company selects the initial expected loss and loss adjustment expense ratios based on information derived by AUL and AUI managers during the initial pricing of the business, supplemented by industry data where appropriate. Such ratios consider, among other things, rate changes and changes in terms and conditions that have been observed in the market. The

Company, in conjunction with data and analysis supplied by AUL and AUI, reviews the reserves regularly and, as experience develops and new information becomes known, the reserves are adjusted as necessary. Such adjustments, if any, are reflected in income in the period in which they are determined. Inherent in the estimates of ultimate losses and loss adjustment expenses are expected trends in claims severity and frequency and other factors which may vary significantly as claims are settled. Accordingly, ultimate losses and loss adjustment expenses may differ materially from the amounts recorded in the accompanying consolidated financial statements. Losses and loss adjustment expenses are recorded on an undiscounted basis. See Note 4 - "Reserve for losses and loss adjustment expenses" for further details.

(i) Foreign exchange

Monetary assets and liabilities, such as premiums receivable and the reserve for losses and loss adjustment expenses, denominated in foreign currencies are revalued at the exchange rate in effect at the balance sheet date with the resulting foreign exchange gains and losses included in net income. Accounts that are classified as non-monetary, such as deferred acquisition costs and the unearned premium reserves, are not subsequently re-measured. In the case of foreign currency-denominated cash and investments, the change in exchange rates between the local currency and the Company's functional currency at each balance sheet date is included as a component of net foreign exchange gains and losses included in the consolidated statements of income (loss). In the case of foreign currency denominated fixed maturity securities which are classified as "available for sale," the change in exchange rates between the local currency in which the investments are denominated and the Company's functional currency at each balance sheet date is included in unrealized appreciation or decline in value of securities, a component of accumulated other comprehensive income, net of applicable deferred income tax.

Assets and liabilities of foreign operations whose functional currency is not the U.S. dollar are translated at the prevailing exchange rates at each balance sheet date. Revenues and expenses of such foreign operations are translated at average exchange rates during the year. The net effect of the translation adjustments for foreign operations is included in accumulated other comprehensive income.

(j) Intangible assets

The Company's intangible assets with indefinite lives include licenses held by its U.S. insurance subsidiary which allow such subsidiary to write insurance business in various jurisdictions. These indefinite-lived intangible assets are carried at or below fair value and are tested annually for impairment, either qualitatively or quantitatively, and between annual tests if events or change in circumstances indicate that it is more likely than not that the asset is impaired. If intangible assets are impaired, such assets are written down to their fair values with the related expense recorded in the Company's results of operations.

(k) Income taxes

Deferred income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and amounts used for income tax purposes. A valuation allowance is recorded if it is more likely than not that some or all of a deferred tax asset may not be realized. The Company considers future taxable income and feasible tax planning strategies in assessing the need for a valuation allowance. In the event the Company determines that it will not be able to realize all or part of its deferred income tax assets in the future, an adjustment to the deferred income tax assets would be charged to income in the period in which such determination is made. In addition, if the Company subsequently assesses that the valuation allowance is no longer needed, a benefit would be recorded to income in the period in which such determination is made. See Note 11 - "Income taxes" for more information.

The Company recognizes a tax benefit where it concludes that it is more likely than not that the tax benefit will be sustained on audit by the taxing authority based solely on the technical merits of the associated tax position. If the recognition threshold is met, the Company recognizes a tax benefit measured at the largest amount of the tax benefit that, in the Company's judgment, is greater than 50% likely to be realized. The Company records related interest and penalties in income tax expense.

(l) Reinsurance recoverables

In the normal course of business, the Company's subsidiaries cede a portion of their premium and losses through pro rata and excess of loss reinsurance agreements on a treaty or facultative basis. Reinsurance recoverables are recorded as assets, predicated on the reinsurers' ability to meet their obligations under the reinsurance agreements. In certain instances, the Company obtains collateral, including letters of credit and trust accounts, to further reduce the credit exposure on its reinsurance recoverables. The Company reports its reinsurance recoverables net of an allowance for expected credit loss in the Company's consolidated balance sheets. The allowance is based upon the Company's ongoing review of amounts outstanding, the financial condition of its reinsurers, amounts and form of collateral obtained and other relevant factors. A ratings based probability-of-default and loss-given-default methodology is used to estimate the allowance for expected credit loss. Any allowance for credit losses is charged to the Company's consolidated statements of income (loss) in the period the recoverable is recorded and revised in subsequent periods to reflect changes in the Company's estimate of expected credit losses.

(m) Premiums receivable and unearned premium reserves

Premiums are recognized as revenues pro rata over the policy period. Unearned premium reserves represent the unexpired portion of policy premiums. Accrued retrospective premiums are included in premiums receivable balances. Premiums receivable balances are reported net of an allowance for expected credit losses. The Company monitors credit risk associated with premiums receivable through its ongoing review of amounts outstanding, aging of the receivable, historical loss data and counterparty financial strength measures. The allowance also includes estimated uncollectible amounts related to dispute risk. Amounts deemed to be uncollectible, are written off against the allowance. In certain instances, credit risk may be reduced by the Company's right to offset loss obligations or unearned premiums against premiums receivable. Any allowance for credit losses is charged to the Company's consolidated statements of income (loss) in the period the receivable is recorded and revised in subsequent periods to reflect changes in the Company's estimate of expected credit losses.

(n) Recent accounting pronouncements

Issued and effective as of December 31, 2020 - Credit Losses

Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments

The Company adopted ASU 2016-13, Financial Instruments - Credit Losses (Topic 326) ("ASU 2016-13") which was issued in June 2016. This ASU applies a new credit loss model (current expected credit losses, or "CECL") for determining credit-related impairments for financial instruments measured at amortized cost (including reinsurance recoverables) and requires an entity to estimate the credit losses expected over the life of an exposure or pool of exposures. The estimate of expected credit losses should consider historical information, current information, as well as reasonable and supportable forecasts, including estimates of prepayments. The expected credit losses, and subsequent adjustments to such losses, are recorded through an allowance account that is deducted from the amortized cost basis of the financial asset, with the net carrying value of the financial asset presented on the Company's consolidated balance sheet.

This ASU also amends the previous other-than-temporary impairment model for available for sale debt securities by requiring the recognition of impairments relating to credit losses through an allowance account and limiting the amount of credit loss to the difference between a security's amortized cost basis and its fair value. In addition, the length of time a security has been in an unrealized loss position will no longer impact the determination of whether a credit loss exists.

The Company adopted this ASU as of January 1, 2020. For available for sale debt securities, the updated guidance was applied prospectively. For financial instruments measured at amortized cost, the updated guidance was applied by recognizing a cumulative effect adjustment of $0.4 million, net of tax, to the opening balance of retained earnings as of January 1, 2020, the beginning of the period of adoption. This adjustment is associated with "premiums receivable" and "reinsurance recoverables on unpaid and paid losses and loss adjustment expenses" in the Company's consolidated balance sheets. The cumulative effect of the adjustment decreased retained earnings as of January 1, 2020 and increased the allowance for estimated uncollectible reinsurance.

The accounting policies have been updated to reflect the Company's adoption of ASU 2016-13, as described above. Results for the reporting periods beginning January 1, 2020 and thereafter are presented under ASC 326, while prior period amounts continue to be reported in accordance with previous applicable GAAP.

Issued and effective as of December 31, 2020

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820), Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurements ("ASU 2018-13"). ASU 2018-13 modifies the disclosure requirements on fair value measurements. This ASU was adopted on January 1, 2020, and the Company considers the impact to be immaterial to the Company's consolidated financial statements and disclosures.

In April 2019, the FASB issued ASU 2019-04, which identified and clarified issues relevant to ASU 2017-12, Derivatives and Hedging (Topic 815), Targeted Improvements to Accounting for Hedging Activities ("ASU 2017-12"). For amendments related to ASU 2017-12, the effective date is as of the beginning of the first annual reporting period beginning after April 25, 2019. This ASU was adopted on January 1, 2020 and did not have a material impact on the Company's consolidated financial statements.

In March 2020, the FASB issued ASU 2020-03, Codification Improvements ("ASU 2020-03"), which provides updates to a wide variety of Topics in the Codification. For public business entities, this ASU was effective upon issuance. This ASU was adopted upon issuance, and did not have a material impact on the Company's consolidated financial statements.

Recently issued accounting standards not yet adopted

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740), Simplifying the Accounting for Income Taxes* ("ASU 2019-12"). ASU 2019-12 simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740. ASU 2019-12 will be effective for fiscal years beginning after December 31, 2021, and interim periods within fiscal years beginning after December 15, 2022. The Company has assessed the impact of the implementation of this ASU and considers the impact to be immaterial to the Company's consolidated financial statements and disclosures.

In March 2020, the FASB issued ASU 2020-04, Reference Rate Reform (Topic 848) ("ASU 2020-04"), and in January 2021, the FASB issued ASU 2021-01, *Reference Rate Reform (Topic 848), Scope* ("ASU 2021-01"). These ASUs provide practical expedients and exceptions for applying GAAP to contracts and transactions affected by reference rate reform if such contracts or transactions reference LIBOR or another reference rate expected to be discontinued. Amendments in this ASU for contract modifications may be applied as of March 12, 2020 through December 31, 2022. Once adopted, this ASU must be applied prospectively for all eligible contract modifications. The Company is currently assessing the impact the implementation of this ASU will have on its consolidated financial statements and disclosures, but does not believe that such impact will be material.

3. Reinsurance

Through reinsurance agreements with Arch Reinsurance Ltd. ("ARL") and Arch Reinsurance Company ("ARC"), which are subsidiaries of ACGL, as well as through other third-party reinsurance agreements, the Company cedes a portion of its premiums. The effects of reinsurance on the Company's written and earned premiums, losses and loss adjustment expenses were as follows:

	Year Ended December 31,	
	2020	2019
	($ in thousands)	
Premiums written		
Direct	$ 395,993	$ 339,170
Assumed	332,553	415,711
Ceded	(190,957)	(222,019)
Net	$ 537,589	$ 532,862
Premiums earned		
Direct	$ 376,870	$ 290,328
Assumed	387,461	419,778
Ceded	(203,980)	(153,416)
Net	$ 560,351	$ 556,690
Losses and loss adjustment expenses		
Direct	$ 326,249	$ 244,354
Assumed	298,689	347,378
Ceded	(184,456)	(138,597)
Net	$ 440,482	$ 453,135

The Company monitors the financial condition of its reinsurers and attempts to place coverages only with financially sound carriers. At December 31, 2020 and 2019, 100% of ceded loss and loss adjustment reserves were due from carriers which had an A.M. Best or Standard & Poor's rating of "A-" or better.

At December 31, 2020 and 2019, approximately 44% and 47%, respectively, of the Company's reinsurance recoverables on paid and unpaid losses (not including prepaid reinsurance premiums) were due from ARL and ARC, each of which have ratings of "A+" from A.M. Best. Although the Company has not experienced any material credit losses to date, an inability of its reinsurers to meet their obligations to it over the relevant exposure periods for any reason could have a material adverse effect on its financial condition and results of operations.

4. Reserve for losses and loss adjustment expenses

The following table represents an analysis of losses and loss adjustment expenses and a reconciliation of the beginning and ending reserve for losses and loss adjustment expenses for the years ended December 31, 2020 and 2019:

	Year Ended December 31,	
	2020	2019
	($ in thousands)	
Gross reserve for losses and loss adjustment expenses at beginning of year	$ 1,263,628	$ 1,032,760
Unpaid losses and loss adjustment expenses recoverable	165,549	81,267
Net reserve for losses and loss adjustment expenses at beginning of year	1,098,079	951,493
Net incurred losses and loss adjustment expenses relating to losses occurring in:		
Current year	441,175	429,322
Prior years	(693)	23,813
Total net losses and loss adjustment expenses	440,482	453,135
Foreign exchange losses (gains)	21,029	15,286
Net paid losses and loss adjustment expenses relating to losses occurring in:		
Current year	(69,571)	(73,723)
Prior years	(240,338)	(248,112)
Total paid losses and loss adjustment expenses	(309,909)	(321,835)
Net reserve for losses and loss adjustment expenses at end of year	1,249,681	1,098,079
Unpaid losses and loss adjustment expenses recoverable	269,902	165,549
Gross reserve for losses and loss adjustment expenses at end of year	$ 1,519,583	$ 1,263,628

During 2020, the Company recorded net favorable development on prior year loss reserves of $0.7 million. Net favorable development was experienced on other specialty reinsurance losses of $5.8 million, casualty reinsurance losses of $4.9 million, and property catastrophe reinsurance losses of $3.3 million. This favorable development was partially offset by unfavorable development on insurance programs and coinsurance losses of $13.3 million.

During 2019, the Company recorded net unfavorable development on prior year loss reserves of $23.8 million. Net unfavorable development was experienced on casualty reinsurance losses of $24.4 million and insurance programs of $3.2 million. This unfavorable development was partially offset by favorable development on property catastrophe reinsurance of $3.2 million and other specialty reinsurance of $0.6 million.

The loss reserve strengthening in 2019 is in response to higher than projected reported losses, mainly in U.S. casualty reinsurance and certain casualty exposures where losses are expected to have been incurred but have yet to be reported.

5. Short duration contracts

The Company is required by applicable insurance laws and regulations and U.S. GAAP to establish reserves for losses and loss adjustment expenses (“loss reserves”) that arise from the business it underwrites. Loss reserves are balance sheet liabilities representing estimates of future amounts required to pay losses and loss adjustment expenses for insured or reinsured events which have occurred at or before the balance sheet date. Loss reserves do not reflect contingency reserve allowances to account for future loss occurrences. Losses arising from future events will be estimated and recognized at the time the losses are incurred and could be substantial.

Loss reserves are comprised of (1) case reserves for claims reported, (2) additional case reserves, or ACRs, and (3) IBNR reserves. Loss reserves are established to provide for loss adjustment expenses and represent the estimated expense of settling claims, including legal and other fees and the general expenses of administering the claims adjustment process. Periodically, adjustments to the reported or case reserves may be made as additional information regarding the claims is reported or payments are made.

IBNR reserves are established to provide for incurred claims which have not yet been reported at the balance sheet date as well as to adjust for any projected variance in case reserving. Actuaries estimate ultimate losses and loss adjustment expenses using various generally accepted actuarial methods applied to known losses and other relevant information. Like case reserves, IBNR reserves are adjusted as additional information becomes known or payments are made. The process of estimating reserves involves a considerable degree of judgment by management and, as of any given date, is inherently uncertain.

Ultimate losses and loss adjustment expenses are generally determined by extrapolation of claim emergence and settlement patterns observed in the past that can reasonably be expected to persist into the future. In forecasting ultimate losses and loss adjustment expenses with respect to any line of business, past experience with respect to that line of business is the primary resource, developed through both industry and company experience, but cannot be relied upon in isolation. Uncertainties in estimating ultimate losses and loss adjustment expenses are magnified by the time lag between when a claim actually occurs and when it is reported and settled. This time lag is sometimes referred to as the "claim-tail." The claim-tail for most property coverages is typically short (usually several months up to a few years). The claim-tail for certain professional liability, executive assurance and health care coverages, which are generally written on a claims-made basis, is typically longer than property coverages but shorter than casualty lines. The claim-tail for liability/casualty coverages, such as general liability, products liability, multiple peril coverage and workers' compensation, may be especially long as claims are often reported and ultimately paid or settled years, or even decades, after the related loss events occur. During the claims reporting and settlement period, additional facts regarding coverages written in prior accident years, as well as about actual claims and trends, may become known and, as a result, management may adjust its reserves. If management determines that an adjustment is appropriate, the adjustment is recorded in the accounting period in which such determination is made in accordance with U.S. GAAP. Accordingly, if loss reserves need to be increased or decreased in the future from amounts currently established, future results of operations would be negatively or positively impacted, respectively.

In addition, the inherent uncertainties of estimating such reserves are even greater for our reinsurance lines of business, due primarily to the following factors: (1) the claim-tail for reinsurers is generally longer because claims are first reported to the ceding company and then to the reinsurer through one or more intermediaries, (2) the reliance on premium estimates, where reports have not been received from the ceding company, in the reserving process, (3) the potential for writing a number of reinsurance contracts with different ceding companies with the same exposure to a single loss event, (4) the diversity of loss development patterns among different types of reinsurance contracts, (5) the necessary reliance on the ceding companies for information regarding reported claims and (6) the differing reserving practices among ceding companies.

In determining ultimate losses and loss adjustment expenses, the cost to indemnify claimants, provide needed legal defense and other services for insureds and administer the investigation and adjustment of claims are considered. These claim costs are influenced by many factors that change over time, such as expanded coverage definitions as a result of new court decisions, inflation in costs to repair or replace damaged property, inflation in the cost of medical services and legislated changes in statutory benefits, as well as by the particular, unique facts that pertain to each claim. As a result, the rate at which claims arose in the past and the costs to settle them may not always be representative of what will occur in the future. The factors influencing changes in claim costs are often difficult to isolate or quantify and developments in paid and incurred losses are frequently subject to multiple and conflicting interpretations. Changes in coverage terms or claims handling practices may also cause future experience and/or development patterns to vary from the past. A key objective of actuaries in developing estimates of ultimate losses and loss adjustment expenses, and resulting IBNR reserves, is to identify aberrations and systemic changes occurring within historical experience and accurately adjust for them so that the future can be projected reliably. Pricing actuaries devote considerable effort to understanding and analyzing a ceding company and program administrator's operations and loss history during the underwriting of the business, using a combination of ceding company, program administrator, and industry statistics. Such statistics normally include historical premium and

loss data by class of business, individual claim information for larger claims, distributions of insurance limits provided, loss reporting and payment patterns, and rate change history. Because of the factors previously discussed, this process requires the substantial use of informed judgment and is inherently uncertain.

As mentioned above, there can be a considerable time lag from the time a claim is reported to a ceding company to the time it is reported to the reinsurer. The lag can be several years in some cases and may be attributed to a number of reasons; including the time it takes to investigate a claim, delays associated with the litigation process, the deterioration in a claimant's physical condition many years after an accident occurs, the case reserving approach of the ceding company, etc. In the reserving process, the Company assumes that such lags are predictable, on average, over time and therefore the lags are contemplated in the loss reporting patterns used in their actuarial methods. This means that reserves for our reinsurance lines of business must rely on estimates for a longer period of time than for our insurance lines of business. Backlogs in the recording of assumed reinsurance can also complicate the accuracy of loss reserve estimation. As of December 31, 2020 there were no significant backlogs related to the processing of assumed reinsurance information for our reinsurance lines of business.

Although loss reserves are initially determined based on underwriting and pricing analysis, we apply several generally accepted actuarial methods, as discussed below, on a quarterly basis. Each quarter, as part of the reserving process, actuaries at our operations reaffirm that the assumptions used in the reserving process continue to form a sound basis for projection of liabilities. If actual loss activity differs substantially from expectations based on historical information, an adjustment to loss reserves may be supported. Estimated loss reserves for more mature underwriting years are based more on actual loss activity and historical patterns than on the initial assumptions based on pricing indications. More recent underwriting years rely more heavily on internal pricing assumptions. We place more or less reliance on a particular actuarial method based on the facts and circumstances at the time the estimates of loss reserves are made.

These methods generally fall into one of the following categories or are hybrids of one or more of the following categories:

- *Expected loss methods: these* methods are based on the assumption that ultimate losses vary proportionately with premiums. Expected loss and loss adjustment expense ratios are typically developed based upon the information derived by underwriters and actuaries during the initial pricing of the business, supplemented by industry data available from organizations, such as statistical bureaus and consulting firms, where appropriate. These ratios consider, among other things, rate changes and changes in terms and conditions that have been observed in the market. Expected loss methods are useful for estimating ultimate losses and loss adjustment expenses in the early years of long-tailed lines of business, when little or no paid or incurred loss information is available, and is commonly applied when limited loss experience exists for a company.

- *Historical incurred loss development methods:* these methods assume that the ratio of losses in one period to losses in an earlier period will remain constant in the future. These methods use incurred losses (i.e., the sum of cumulative historical loss payments plus outstanding case reserves) over discrete periods of time to estimate future losses. Historical incurred loss development methods may be preferable to historical paid loss development methods because they explicitly take into account open cases and the claims adjusters' evaluations of the cost to settle all known claims. However, historical incurred loss development methods necessarily assume that case reserving practices are consistently applied over time. Therefore, when there have been significant changes in how case reserves are established, using incurred loss data to project ultimate losses may be less reliable than other methods.

- *Historical paid loss development methods:* these methods, like historical incurred loss development methods, assume that the ratio of losses in one period to losses in an earlier period will remain constant. These methods use historical loss payments over discrete periods of time to estimate future losses and necessarily assume that factors that have affected paid losses in the past, such as inflation or the effects of litigation, will remain constant in the future. Because historical paid loss development methods do not use incurred losses to estimate ultimate losses, they may be more reliable than the other methods that use incurred losses in situations where there are significant changes in how incurred losses are established by a company's claims adjusters. However, historical paid loss development methods are more leveraged (meaning that small changes in payments have a larger impact on estimates of ultimate losses) than actuarial methods that use incurred losses because cumulative loss payments

take much longer to equal the expected ultimate losses than cumulative incurred amounts. In addition, and for similar reasons, historical paid loss development methods are often slow to react to situations when new or different factors arise than those that have affected paid losses in the past.

- *Adjusted historical paid and incurred loss development methods:* these methods take traditional historical paid and incurred loss development methods and adjust them for the estimated impact of changes from the past in factors such as inflation, the speed of claim payments or the adequacy of case reserves. Adjusted historical paid and incurred loss development methods are often more reliable methods of predicting ultimate losses in periods of significant change, provided the actuaries can develop methods to reasonably quantify the impact of changes. As such, these methods utilize more judgment than historical paid and incurred loss development methods.

- *Bornhuetter-Ferguson, or B-F, paid and incurred loss methods:* these methods utilize actual paid and incurred losses and expected patterns of paid and incurred losses, taking the initial expected ultimate losses into account to determine an estimate of expected ultimate losses. The B-F paid and incurred loss methods are useful when there are few reported claims and a relatively less stable pattern of reported losses.

- *Additional analysis:* other methodologies are often used in the reserving process for specific types of claims or events, such as catastrophic or other specific major events. These include vendor catastrophe models, which are typically used in the estimation of loss reserves at the early stage of known catastrophic events before information has been reported to an insurer or reinsurer, and analysis of specific industry events, such as large lawsuits or claims.

In the initial reserving process for short-tail lines, consisting of property catastrophe and other exposures, we rely on a combination of the reserving methods discussed above. For known catastrophic events, our reserving process also includes the usage of catastrophe models and a heavy reliance on analysis which includes ceding company inquiries and management judgment. The development of property losses may be unstable, especially where there is high catastrophic exposure, may be characterized by high severity, low frequency losses for excess and catastrophe-exposed business and may be highly correlated across contracts. As time passes, for a given underwriting year, additional weight is given to the paid and incurred B-F loss development methods and historical paid and incurred loss development methods in the reserving process. We make a number of key assumptions in reserving for short-tail lines, including that historical paid and reported development patterns are stable, catastrophe models provide useful information about our exposure to catastrophic events that have occurred and our underwriters' judgment and guidance received from ceding companies as to potential loss exposures may be relied on. The expected loss ratios used in the initial reserving process for our property exposures will vary over time due to changes in pricing, reinsurance structure, estimates of catastrophe losses, terms and conditions and geographical distribution. As losses in property lines are reported relatively quickly, expected loss ratios are selected for the current underwriting year incorporating the experience for earlier underwriting years, adjusted for rate changes, inflation, changes in reinsurance programs, expectations about present and future market conditions and expected attritional losses based on modeling. Due to the short-tail nature of property business, reported loss experience emerges quickly and ultimate losses are known in a comparatively short period of time.

In the initial reserving process for medium-tail and long-tail lines, consisting of casualty, other specialty, and other exposures, we primarily rely on the expected loss method. The development of medium-tail and long-tail business may be unstable, especially if there are high severity major events, with business written on an excess of loss basis typically having a longer tail than business written on a pro rata basis. As time passes, for a given exposure, additional weight is given to the paid and incurred B-F loss development methods and historical paid and incurred loss development methods in the reserving process. We make a number of key assumptions in reserving for medium-tail and long-tail lines, including that the pricing loss ratio is the best estimate of the ultimate loss ratio at the time the contract is entered into, historical paid and reported development patterns are stable and our claims personnel and underwriters analysis of our exposure to major events are assumed to be our best estimate of our exposure to the known claims on those events. The expected loss ratios used in initial reserving process for medium-tail and long-tail contracts will vary over time due to changes in pricing, terms and conditions and reinsurance structure. As the credibility of historical experience for earlier underwriting year's increases, the experience from these underwriting years will be used in the actuarial analysis to determine future underwriting year expected loss ratios, adjusted for changes in pricing, loss trends, terms and conditions and reinsurance structure.

Our reinsurance business receives reports of claims notices from ceding companies and record case reserves based upon the amount of reserves recommended by the ceding company. Case reserves on known events may be supplemented by ACRs, which are often estimated by our reinsurance operations' claims personnel ahead of official notification from the ceding company, or when our reinsurance operations' judgment regarding the size or severity of the known event differs from the ceding company. In certain instances, our reinsurance operations establish ACRs even when the ceding company does not report any liability on a known event. In addition, specific claim information reported by ceding companies or obtained through claim audits can alert our reinsurance operations to emerging trends such as changing legal interpretations of coverage and liability, claims from unexpected sources or classes of business, and significant changes in the frequency or severity of individual claims.

Our reinsurance business relies heavily on information reported by ceding companies, as discussed above. In order to determine the accuracy and completeness of such information, underwriters, actuaries, and claims personnel at our reinsurance operations often perform audits of ceding companies and regularly review information received from ceding companies for unusual or unexpected results. Material findings are usually discussed with the ceding companies. Our reinsurance operations sometimes encounter situations where they determine that a claim presentation from a ceding company is not in accordance with contract terms. In these situations, our reinsurance operations attempt to resolve the dispute with the ceding company. Most situations are resolved amicably and without the need for litigation or arbitration. However, in the infrequent situations where a resolution is not possible, our reinsurance operations will vigorously defend their position in such disputes.

For our insurance programs and coinsurance line of business, Arch's claim personnel, under our service arrangements, determine whether to establish a case reserve for the estimated amount of the ultimate settlement of individual claims. The estimate reflects the judgment of claims personnel based on general corporate reserving practices, the experience and knowledge of such personnel regarding the nature and value of the specific type of claim and, where appropriate, advice of counsel. We contract with a number of outside third-party administrators in the claims process who, in certain cases, have limited authority to establish case reserves. The work of these administrators is reviewed and monitored by such claims personnel.

Our reserves for loss and loss adjustment expenses primarily relate to short-duration contracts with various characteristics (e.g., type of coverage, geography, claims duration). We have considered such information in determining the level of disaggregation for disclosures related to our short-duration contracts, as detailed in the table below:

Level of disaggregation	Included product lines
Casualty reinsurance - pro rata	Executive assurance, medical malpractice liability, other professional liability, workers' compensation, excess and umbrella liability and excess auto liability all written primarily on a treaty pro rata basis
Casualty reinsurance - excess of loss	Executive assurance, medical malpractice liability, other professional liability, workers' compensation, excess and umbrella liability and excess auto liability all written primarily on a treaty excess of loss basis
Other specialty reinsurance	Personal and commercial auto (other than excess auto liability), surety, accident and health, and workers compensation catastrophe written primarily on a treaty basis
Property catastrophe reinsurance	Property catastrophe reinsurance
Insurance programs and coinsurance	Primary and excess general liability, umbrella liability, professional liability, workers' compensation, personal and commercial automobile, inland marine and property business with minimal catastrophe exposure written on a direct basis

We have determined the following product lines to be insignificant for disclosure purposes: (i) mortgage reinsurance, (ii) marine and aviation reinsurance; (iii) other property reinsurance; and (iv) agriculture reinsurance. Such amounts are included as reconciling items.

We do not include claim count information in our short duration triangles for reinsurance. A significant percentage of our reinsurance business is written on a proportional basis, for which individual loss information is typically unavailable.

For our insurance programs and coinsurance line of business, we generally consider a reported claim to be per claimant, and we include claims with nil or nominal payments and/or case reserves.

We write the majority of our reinsurance contracts on an underwriting year basis and therefore may involve multiple accident years. Pursuant to customary cedant/reinsurer reporting requirements, the cedant reports premium for a given contract to us in total for the contract period, not separated by accident year. Similarly, for certain contract structures, the paid and outstanding losses will also be reported in total for the contract period, not by accident year. The short duration disclosure requires us to separately disclose paid losses, case reserves and IBNR losses by accident year, which necessitates an allocation of the underwriting year data between each of the applicable accident years. To separate reported losses by accident year we employ certain assumptions, which can lead to anomalies in the presentation of individual accident year results.

The following tables present information on the short-duration contracts by line of business:

Casualty reinsurance - Pro Rata ($000's)

Incurred losses and allocated loss adjustment expenses, net of reinsurance

Accident year	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020	December 31, 2020: Total of IBNR liabilities plus expected development on reported claims
2014	$ 44,482	$ 43,295	$ 44,706	$ 46,353	$ 48,732	$ 50,420	$ 50,385	$ 5,050
2015		163,087	165,718	180,287	178,252	186,336	188,457	25,920
2016			168,422	187,602	188,316	197,390	203,217	38,244
2017				179,043	180,070	192,638	193,524	49,026
2018					148,019	143,278	144,213	52,175
2019						115,993	113,703	49,959
2020							74,069	47,186
						Total	$ 967,568	

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance

Accident year	2014	2015	2016	2017	2018	2019	2020
2014	$ 940	$ 6,881	$ 14,041	$ 20,847	$ 25,658	$ 32,218	$ 35,988
2015		13,093	38,051	71,260	87,129	115,013	132,491
2016			11,451	45,461	69,004	111,529	134,488
2017				15,410	40,689	82,326	109,040
2018					11,143	35,927	60,515
2019						16,607	36,934
2020							11,309
						Total	520,765
Liabilities for losses and loss adjustment expenses, net of reinsurance							$ 446,803

Casualty reinsurance - Excess of Loss ($000's)

Incurred losses and allocated loss adjustment expenses, net of reinsurance

Accident year	Year ended December 31, 2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020	December 31, 2020 Total of IBNR liabilities plus expected development on reported claims
2014	$ 4,904	$ 5,933	$ 5,480	$ 12,002	$ 10,975	$ 10,710	$ 11,787	$ 742
2015		28,735	29,933	37,384	39,000	39,300	40,571	2,794
2016			39,295	43,742	50,957	51,735	49,917	5,719
2017				60,126	37,118	40,363	50,181	4,853
2018					71,776	69,218	60,902	2,629
2019						81,505	70,210	26,018
2020							100,645	85,509
						Total	$ 384,213	

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance

Accident year	2014	2015	2016	2017	2018	2019	2020
2014	$ —	$ 2	$ 74	$ 692	$ 1,391	$ 3,476	$ 4,330
2015		104	650	2,089	7,114	8,977	16,055
2016			233	835	2,699	5,712	11,261
2017				107	971	2,494	8,644
2018					155	2,470	13,835
2019						302	2,804
2020							224
						Total	57,153
Liabilities for losses and loss adjustment expenses, net of reinsurance							$ 327,060

Other specialty reinsurance ($000's)

Incurred losses and allocated loss adjustment expenses, net of reinsurance

Accident year	Year ended December 31, 2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020	December 31, 2020 Total of IBNR liabilities plus expected development on reported claims
2014	$ 17,019	$ 17,363	$ 17,231	$ 17,720	$ 18,139	$ 18,145	$ 18,730	$ 425
2015		72,560	73,919	72,347	74,985	77,508	79,831	1,461
2016			68,946	59,343	59,003	56,623	62,014	3,130
2017				83,827	73,536	78,401	81,299	2,120
2018					80,831	83,314	81,385	4,892
2019						86,964	82,711	18,337
2020							78,263	42,536
						Total	$ 484,233	

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance

Accident year	2014	2015	2016	2017	2018	2019	2020
2014	$ 4,835	$ 12,492	$ 14,351	$ 15,501	$ 16,969	$ 17,264	$ 17,515
2015		30,181	49,417	58,412	67,847	70,815	73,748
2016			25,397	38,879	45,925	50,320	54,799
2017				31,522	55,493	61,834	66,923
2018					17,710	51,329	65,192
2019						21,248	31,720
2020							11,607
						Total	321,504
Liabilities for losses and loss adjustment expenses, net of reinsurance							$ 162,729

Property catastrophe reinsurance ($000's)

Incurred losses and allocated loss adjustment expenses, net of reinsurance

Accident year	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020	December 31, 2020 Total of IBNR liabilities plus expected development on reported claims
	Year ended December 31,							
2014	$ 1,574	$ 1,185	$ 863	$ 833	$ 704	$ 654	$ 613	$ 25
2015		4,732	3,627	2,836	2,127	2,038	2,012	(12)
2016			5,186	4,192	3,484	3,042	2,948	(1)
2017				22,567	18,243	17,476	16,624	200
2018					16,854	15,020	13,245	387
2019						10,695	10,194	1,160
2020							21,650	4,399
						Total	$ 67,286	

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance

Accident year	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020
2014	$ —	$ 238	$ 586	$ 619	$ 643	$ 652	$ 680
2015		392	820	1,407	1,492	1,532	1,576
2016			1,034	1,968	2,355	2,639	2,687
2017				6,627	12,130	13,294	14,340
2018					2,771	7,607	9,800
2019						605	4,093
2020							2,916
						Total	36,092
Liabilities for losses and loss adjustment expenses, net of reinsurance							$ 31,194

Insurance programs and coinsurance ($000's except claim count)

Incurred losses and allocated loss adjustment expenses, net of reinsurance

Accident year	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020	December 31, 2020 Total of IBNR liabilities plus expected development on reported claims (1)	Cumulative number of reported claims
	Year ended December 31,								
2015		$ 1,066	$ 1,066	$ 1,198	$ 1,207	$ 1,206	$ 1,163	$ (120)	775
2016			27,111	26,793	28,463	28,938	29,650	1,429	31,579
2017				61,857	60,724	64,480	65,170	6,480	55,361
2018					103,815	103,182	112,293	9,668	49,445
2019						130,806	135,007	16,894	66,676
2020							158,258	102,037	53,919
						Total	$ 501,541		

Cumulative paid losses and allocated loss adjustment expenses, net of reinsurance

Accident year	2014 unaudited	2015 unaudited	2016 unaudited	2017 unaudited	2018 unaudited	2019 unaudited	2020
2015		$ 9	$ 416	$ 758	$ 884	$ 951	$ 1,289
2016			6,228	16,217	21,763	23,909	26,543
2017				19,106	39,076	46,541	52,324
2018					32,600	69,161	79,365
2019						32,347	78,875
2020							26,887
						Total	265,283
Liabilities for losses and loss adjustment expenses, net of reinsurance							$ 236,258

(1) Total IBNR liabilities for the 2015 accident year contains the results of a multi-year program where results are considered over a three-year period. The IBNR for the multi-year program is positive, however our methodology results in negative IBNR allocations for certain years, offset by positive IBNR in other years.

The following table presents the average annual percentage payout of incurred losses and allocated loss adjustment expenses by age, net of reinsurance, as of December 31, 2020:

	Average annual percentage payout of incurred losses and loss adjustment expenses by age, net of reinsurance						
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**
Casualty reinsurance - pro rata	8.6%	15.0%	16.4%	14.2%	11.9%	11.1%	7.5%
Casualty reinsurance - excess of loss	0.3%	1.9%	5.9%	9.0%	7.2%	17.6%	7.3%
Other specialty reinsurance	29.4%	28.4%	11.5%	7.8%	6.3%	2.6%	1.3%
Property catastrophe reinsurance	19.2%	32.6%	24.5%	6.4%	2.5%	1.8%	4.6%
Insurance programs and coinsurance	20.2%	33.3%	17.2%	9.0%	7.3%	29.2%	N/A

For the year ended December 31, 2020, the Company did not make any significant changes in its methodologies or assumptions.

The following table represents a reconciliation of the disclosures of net incurred and paid loss development tables to the reserve for losses and loss adjustment expenses at December 31, 2020:

	December 31, 2020
	($ in thousands)
Net outstanding liabilities:	
Casualty reinsurance - pro rata	$ 446,803
Casualty reinsurance - excess of loss	327,060
Insurance programs and coinsurance	236,258
Other specialty reinsurance	162,729
Property catastrophe reinsurance	31,194
Other short duration lines not included in disclosures	41,018
Total for short duration lines	1,245,062
Unpaid losses and loss adjustment expenses recoverable:	
Insurance programs and coinsurance	216,128
Casualty reinsurance - excess of loss	24,285
Other specialty reinsurance	22,891
Casualty reinsurance - pro rata	4,698
Property catastrophe reinsurance	27
Other short duration lines not included in disclosures (1)	1,873
Total for short duration lines	269,902
Unallocated claims adjustment expenses	4,619
Reserve for losses and loss adjustment expenses	$ 1,519,583

(1) Other short duration lines includes liabilities acquired in the purchase of WIC, which are 100% reinsured pursuant to a 100% quota share agreement, and other miscellaneous items.

6. Allowance for expected credit losses

Premiums Receivable

The following table presents the balances of premiums receivable, net of the allowance for expected credit losses, at January 1, 2020 and December 31, 2020 and changes in the allowance for expected credit losses for the year ended December 31, 2020.

	At and For the Year Ended December 31, 2020	
	Premiums Receivable, Net of Allowance	Allowance for Expected Credit Losses
	($ in thousands)	
Balance at beginning of year	$ 273,657	$ —
Cumulative effect of adoption of updated accounting guidance for credit losses at January 1, 2020		156
Current period change for expected credit losses		—
Write-offs charged against the allowance		—
Balance at end of year	$ 224,377	$ 156

Reinsurance Recoverables

The following table presents the balances of reinsurance recoverables, net of the allowance for expected credit losses, at January 1, 2020 and December 31, 2020, and changes in the allowance for expected credit losses for the year ended December 31, 2020.

	At and For the Year Ended December 31, 2020	
	Reinsurance Recoverables, Net of Allowance	Allowance for Expected Credit Losses
	($ in thousands)	
Balance at beginning of year	$ 170,974	$ —
Cumulative effect of adoption of updated accounting guidance for credit losses at January 1, 2020 (1)		297
Current period change for expected credit losses		8
Write-offs charged against the allowance		—
Balance at end of year	$ 286,590	$ 305

(1) As at December 31, 2020, the allowance for credit losses is gross of deferred tax of $25 thousand.

7. Investment information

Available for Sale Investments

The following tables summarize the fair value of the Company's securities classified as available for sale as of December 31, 2020 and 2019:

	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses (1)	Fair Value
		($ in thousands)		
December 31, 2020				
Fixed maturities:				
U.S. government and government agency bonds	$ 201,114	$ 1,122	$ (22)	$ 202,214
Corporate bonds	188,473	9,176	(652)	196,997
Non-U.S. government and government agency bonds	146,594	10,837	(102)	157,329
Asset-backed securities	82,803	536	(3,081)	80,258
Mortgage-backed securities	17,405	5	(747)	16,663
Municipal government and government agency bonds	1,686	102	—	1,788
Total investments, available for sale	$ 638,075	$ 21,778	$ (4,604)	$ 655,249

1) Effective January 1, 2020, the Company adopted ASU 2016-13, and as a result any credit impairment losses on the Company's available for sale securities are recorded as an allowance, subject to reversal. See Note 2. "Basis of presentation and significant accounting policies-(p) Recent accounting pronouncements-Issued and effective as of December 31, 2020 - Credit Losses" above for more information about ASU 2016-13. Included within the gross unrealized losses for corporate bonds is a credit allowance of $0.2 million for securities with an unrealized loss of $0.8 million as of December 31, 2020.

	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		($ in thousands)		
December 31, 2019				
Fixed maturities:				
U.S. government and government agency bonds	$ 282,076	$ 1,708	$ (137)	$ 283,647
Corporate bonds	155,834	2,326	(41)	158,119
Asset-backed securities	145,555	614	(735)	145,434
Non-U.S. government and government agency bonds	129,456	3,530	(1,033)	131,953
Mortgage-backed securities	24,776	18	(44)	24,750
Municipal government and government agency bonds	1,759	46	—	1,805
Total investments, available for sale	$ 739,456	$ 8,242	$ (1,990)	$ 745,708

The following table summarizes, for all available for sale securities in an unrealized loss position, the fair value and gross unrealized losses by length of time the security has been in a continual unrealized loss position:

	Less than 12 Months		12 Months or More		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
			($ in thousands)			
December 31, 2020						
Fixed maturities:						
U.S. government and government agency bonds	$ 15,492	$ (22)	$ —	$ —	$ 15,492	$ (22)
Non-U.S. government and government agency bonds	14,296	(102)	—	—	14,296	(102)
Corporate bonds	19,862	(652)	—	—	19,862	(652)
Asset-backed securities	48,790	(2,538)	16,730	(543)	65,520	(3,081)
Mortgage-backed securities	13,194	(671)	2,909	(76)	16,103	(747)
Total	$ 111,634	$ (3,985)	$ 19,639	$ (619)	$ 131,273	$ (4,604)
December 31, 2019						
Fixed maturities:						
U.S. government and government agency bonds	$ 36,540	$ (137)	$ —	$ —	$ 36,540	$ (137)
Non-U.S. government and government agency bonds	51,779	(1,027)	5,410	(6)	57,189	(1,033)
Corporate bonds	9,854	(41)	—	—	9,854	(41)
Asset-backed securities	55,194	(504)	19,430	(231)	74,624	(735)
Mortgage-backed securities	14,481	(44)	—	—	14,481	(44)
Total	$ 167,848	$ (1,753)	$ 24,840	$ (237)	$ 192,688	$ (1,990)

At December 31, 2020, 47 positions out of a total of 144 positions were in an unrealized loss position. The unrealized loss position increased during the twelve-month period from $2.0 million to $4.6 million. The decrease in value can be attributed to the market movements resulting from the COVID-19 global pandemic, which primarily impacted the asset-backed securities during the year. The Company believes that such securities were temporarily impaired at December 31, 2020.

At December 31, 2019, 48 positions out of a total of 146 positions were in an unrealized loss position; however, the unrealized loss was less than 10% of the fair value for all 48 positions. The decrease in value can be attributed to movement in foreign exchange rates for the non-U.S. government agency bonds since purchase and the decrease in value for the asset-backed securities, primarily driven by market movements during the year. The Company believes that such securities were temporarily impaired at December 31, 2019.

Allowance for expected credit losses

The Company recognized changes in the allowance for expected credit losses on available for sale securities of $0.2 million for the year ended December 31, 2020. The credit allowance as of December 31, 2020 was $0.2 million. No credit losses were previously recognized and there were no write-offs charged against the allowance. The change in allowance is recognized in “realized and unrealized gains (losses) on investments” in the Company’s consolidated statements of income (loss). There were no impairments of securities which the Company intends to sell or more likely than not will be required to sell.

The amortized cost and fair value of our fixed maturities classified as available for sale, summarized by contractual maturity as of December 31, 2020 and December 31, 2019 are shown in the following tables.

	December 31, 2020		
	Amortized Cost	Estimated Fair Value	% of Fair Value
		($ in thousands)	
Due in one year or less	$ 27,469	$ 28,336	4.3 %
Due after one year through five years	367,343	378,427	57.8 %
Due after five years through ten years	123,253	132,165	20.2 %
Due after ten years	19,802	19,400	3.0 %
Asset-backed securities	82,803	80,258	12.2 %
Mortgage-backed securities	17,405	16,663	2.5 %
Total investments, available for sale	$ 638,075	$ 655,249	100.0 %

	December 31, 2019		
	Amortized Cost	Estimated Fair Value	% of Fair Value
		($ in thousands)	
Due in one year or less	$ 9,235	$ 9,248	1.3 %
Due after one year through five years	414,235	417,921	56.0 %
Due after five years through ten years	133,822	136,329	18.3 %
Due after ten years	11,833	12,026	1.6 %
Asset-backed securities	145,555	145,434	19.5 %
Mortgage-backed securities	24,776	24,750	3.3 %
Total investments, available for sale	$ 739,456	$ 745,708	100.0 %

Fair Value Option and Fair Value Through Net Income

The following tables summarize the fair value of the Company’s securities held as of December 31, 2020 and December 31, 2019, classified as fair value through net income or for which the fair value option was elected:

	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	($ in thousands)			
December 31, 2020				
Term loan investments	$ 890,996	$ 7,948	$ (47,405)	$ 851,539
Fixed maturities:				
Corporate bonds	313,212	17,772	(18,114)	312,870
U.S. government and government agency bonds	267	7	—	274
Asset-backed securities	162,644	2,154	(24,290)	140,508
Non-U.S. government and government agency bonds	1,425	85	—	1,510
Short-term investments	412,762	5,928	—	418,690
Equities	49,044	20,855	(4,905)	64,994
Investments, fair value option	$ 1,830,350	$ 54,749	$ (94,714)	$ 1,790,385
Fair Value Through Net Income:				
Equities, fair value through net income	$ 74,258	$ 5,126	$ (26,177)	$ 53,207

	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	($ in thousands)			
December 31, 2019				
Term loan investments	$ 1,113,212	$ 7,340	$ (58,618)	$ 1,061,934
Fixed maturities:				
Corporate bonds	221,024	8,430	(15,100)	214,354
U.S. government and government agency bonds	1,963	1	(2)	1,962
Asset-backed securities	200,361	3,329	(12,953)	190,737
Mortgage-backed securities	7,399	712	(405)	7,706
Non-U.S. government and government agency bonds	1,449	18	(11)	1,456
Municipal government and government agency bonds	380	—	(1)	379
Short-term investments	325,542	3,817	(56)	329,303
Other investments	28,672	2,264	(475)	30,461
Equities	54,893	10,690	(5,784)	59,799
Investments, fair value option	$ 1,954,895	$ 36,601	$ (93,405)	$ 1,898,091
Fair Value Through Net Income:				
Equities, fair value through net income	$ 78,031	$ 2,360	$ (15,053)	$ 65,338

The amortized cost and fair value of our term loans, fixed maturities and short-term investments, excluding securities classified as available for sale, summarized by contractual maturity as of December 31, 2020 and December 31, 2019 are shown in the following tables.

	December 31, 2020		
	Amortized Cost	Estimated Fair Value	% of Fair Value
		($ in thousands)	
Due in one year or less	$ 435,818	$ 440,003	25.5 %
Due after one year through five years	833,722	809,119	46.9 %
Due after five years through ten years	340,164	327,184	19.0 %
Due after ten years	8,958	8,577	0.5 %
Asset-backed securities	162,644	140,508	8.1 %
Total	$ 1,781,306	$ 1,725,391	100.0 %

	December 31, 2019		
	Amortized Cost	Estimated Fair Value	% of Fair Value
		($ in thousands)	
Due in one year or less	$ 368,452	$ 370,479	20.5 %
Due after one year through five years	779,643	742,960	41.1 %
Due after five years through ten years	514,961	495,416	27.4 %
Due after ten years	514	533	— %
Asset-backed securities	200,361	190,737	10.6 %
Mortgage-backed securities	7,399	7,706	0.4 %
Total	$ 1,871,330	$ 1,807,831	100.0 %

Variable Interest Entities

In the normal course of its investing activities, the Company invests in limited partnerships, limited liability companies and other investment securities. Due to the legal forms of the entities and the fact that the investors lack the ability, through voting rights or similar rights, to make decisions that have a significant effect on the entities, such investments are considered variable interest entities. Since the Company lacks the ability to control the activities that most significantly impact the economic performance of these variable interest entities, the Company is not considered the primary beneficiary and does not consolidate these investments.

The activities of these entities is generally limited to holding and managing the underlying investments. The Company’s maximum exposure to loss with respect to these investments is limited to the investment carrying amounts reported as “other investments” in the Company’s consolidated balance sheet and any unfunded commitments. Realized and unrealized gains and losses from such investments are included in “realized and unrealized gains (losses) on investments” in the Company’s consolidated statements of net income (loss).

The table below summarizes the credit quality of our total investments as of December 31, 2020 and December 31, 2019, as rated by Standard & Poor's Financial Services, LLC, or Standard & Poor's, Moody's Investors Service, or Moody's, Fitch Ratings Inc., or Fitch, Kroll Bond Rating Agency, or KBRA, or DBRS Morningstar, or DBRS, as applicable:

		Credit Rating (1)									
December 31, 2020	**Fair Value**	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**	**CCC**	**CC**	**C**	**Not Rated**
						($ in thousands)					
Term loan investments	$ 851,539	$ —	$ —	$ —	$ 11,352	$ 19,486	$ 588,215	$ 185,221	$ 7,406	$ 2,727	$ 37,132
Fixed maturities:											
Corporate bonds	509,867	—	19,812	82,379	87,913	38,232	194,418	59,421	8,280	1,894	17,518
U.S. government and government agency bonds	202,488	—	202,488	—	—	—	—	—	—	—	—
Asset-backed securities	220,766	—	—	15,675	133,471	31,822	8,385	8,262	837	—	22,314
Mortgage-backed securities	16,663	—	—	2,092	14,571	—	—	—	—	—	—
Non-U.S. government and government agency bonds	158,839	—	158,839	—	—	—	—	—	—	—	—
Municipal government and government agency bonds	1,788	783	592	413	—	—	—	—	—	—	—
Total fixed income instruments	1,961,950	783	381,731	100,559	247,307	89,540	791,018	252,904	16,523	4,621	76,964
Short-term investments	418,690	89,519	168,700	108,905	47,891	—	3,186	489	—	—	—
Total fixed income instruments and short-term investments	2,380,640	90,302	550,431	209,464	295,198	89,540	794,204	253,393	16,523	4,621	76,964
Equities	118,201										
Total	$ 2,498,841	$ 90,302	$ 550,431	$ 209,464	$ 295,198	$ 89,540	$ 794,204	$ 253,393	$ 16,523	$ 4,621	$ 76,964

(1) For individual fixed maturity investments, Standard & Poor's ratings are used. In the absence of a Standard & Poor's rating, ratings from Moody's are used, followed by ratings from Fitch, followed by ratings from KBRA, followed by ratings from DBRS.

	Credit Rating (1)											
December 31, 2019	**Fair Value**	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**	**CCC**	**CC**	**C**	**D**	**Not Rated**
						($ in thousands)						
Term loan investments	$ 1,061,934	$ —	$ —	$ —	$ —	$ 9,617	$ 761,168	$ 215,909	$ 6,823	$ 2,119	$ —	$ 66,298
Fixed maturities:												
Corporate bonds	372,473	—	36,128	81,401	41,103	9,003	58,345	135,613	—	—	—	10,880
U.S. government and government agency bonds	285,609	—	285,609	—	—	—	—	—	—	—	—	—
Asset-backed securities	336,171	2,006	—	29,179	223,956	29,695	18,381	—	—	—	—	32,954
Mortgage-backed securities	32,456	—	—	1,100	23,650	976	—	—	—	—	2,497	4,233
Non-U.S. government and government agency bonds	133,409	—	132,460	—	949	—	—	—	—	—	—	—
Municipal government and government agency bonds	2,184	1,135	573	476	—	—	—	—	—	—	—	—
Total fixed income instruments	2,224,236	3,141	454,770	112,156	289,658	49,291	837,894	351,522	6,823	2,119	2,497	114,365
Short-term investments	329,303	25,783	136,842	34,903	115,155	—	—	8,359	—	—	—	8,261
Total fixed income instruments and short-term investments	2,553,539	28,924	591,612	147,059	404,813	49,291	837,894	359,881	6,823	2,119	2,497	122,626
Other Investments	30,461											
Equities	125,137											
Total	$ 2,709,137	$ 28,924	$ 591,612	$ 147,059	$ 404,813	$ 49,291	$ 837,894	$ 359,881	$ 6,823	$ 2,119	$ 2,497	$ 122,626

(1) For individual fixed maturity investments, Standard & Poor's ratings are used. In the absence of a Standard & Poor's rating, ratings from Moody's are used, followed by ratings from Fitch, followed by ratings from KBRA, followed by ratings from DBRS.

Fair value option

The Company elected to carry the majority of fixed maturity securities and other investments at fair value under the fair value option afforded by accounting guidance regarding the fair value option for financial assets and liabilities. Changes in fair value of investments accounted for using the fair value option are included in "realized and unrealized gain (loss) on investments" in the Company's consolidated statements of income (loss). The Company elected to use this option as investments are not necessarily held to maturity, and in order to address simplification and cost-benefit considerations.

Net investment income (loss)

The components of net investment income (loss) for the years ended December 31, 2020 and 2019 were derived from the following sources:

	Year Ended December 31, 2020			
	Net Interest Income	Net Unrealized Gains (Losses)	Net Realized Gains (Losses)	Net Investment Income (Loss)
	($ in thousands)			
Net investment income (loss) by asset class:				
Term loan investments	$ 76,157	$ 11,821	$ (16,495)	$ 71,483
Fixed maturities - Fair value option	42,431	(5,834)	12,563	49,160
Fixed maturities - Available for sale (1)	13,805	—	10,624	24,429
Short-term investments	5,377	46	580	6,003
Equities (2)	—	11,042	198	11,240
Equities, fair value through net income (2)	951	(5,602)	(1,149)	(5,800)
Other investments	1,669	(1,788)	5,521	5,402
Other (3)	—	(2,273)	375	(1,898)
Investment management fees - related parties	(17,193)	—	—	(17,193)
Borrowing and miscellaneous other investment expenses	(16,807)	—	—	(16,807)
Investment performance fees - related parties	—	—	—	(12,037)
	$ 106,391	$ 7,412	$ 12,217	$ 113,983

(1) Net realized gains (losses) from the fixed maturities available for sale portfolio consists of realized gains and realized losses of $14.6 million and $4.0 million, respectively. Realized losses include an allowance for expected credit losses on available for sale securities of $0.2 million for the year ended December 31, 2020.

(2) Net interest income includes dividends for securities held in long and short positions.

(3) Other includes unrealized gains and unrealized losses for total return swaps.

	Year Ended December 31, 2019			
	Net Interest Income	Net Unrealized Gains (Losses)	Net Realized Gains (Losses)	Net Investment Income (Loss)
	($ in thousands)			
Net investment income (loss) by asset class:				
Term loan investments	$ 90,048	$ 3,526	$ (19,599)	$ 73,975
Fixed maturities - Fair value option	48,698	23,884	7,048	79,630
Fixed maturities - Available for sale (1)	17,893	—	5,673	23,566
Short-term investments	3,882	(277)	27	3,632
Equities (2)	203	4,337	—	4,540
Equities, fair value through net income (2)	2,201	(3,963)	(1,162)	(2,924)
Other investments	714	2,027	(2,719)	22
Other (3)	—	2,657	2,784	5,441
Investment management fees - related parties	(18,392)	—	—	(18,392)
Borrowing and miscellaneous other investment expenses	(29,285)	—	—	(29,285)
Investment performance fees - related parties	—	—	—	(12,191)
	$ 115,962	$ 32,191	$ (7,948)	$ 128,014

(1) Net realized gains (losses) from the fixed maturities available for sale portfolio consists of realized gains and realized losses of $6.1 million and $0.5 million, respectively.

(2) Net interest income includes dividends for securities held in long and short positions.

(3) Other includes unrealized gains and unrealized losses for total return swaps.

Fixed maturities that have been non-income producing for the twelve months preceding December 31, 2020 and 2019 have a market value of $9.7 million and $Nil, respectively.

Pledged and restricted assets

For the benefit of certain Arch entities and other third parties that cede business to the Company, the Company is required to post and maintain collateral to support its potential obligations under reinsurance contracts written. This collateral can be in the form of either investment assets held in collateral trust accounts or letters of credit. Under its secured credit facilities, in order for the Company to have the bank issue a letter of credit to the Company's reinsurance contract counterparty, the Company must post investment assets or cash as collateral to the bank. In either case, the amounts remain restricted for the duration of the term of the trust or letter of credit, as applicable.

At December 31, 2020 and 2019, the Company held $2.0 billion and $2.1 billion, respectively, in pledged assets in support of insurance and reinsurance liabilities as well as to collateralize the Company's secured credit facilities and investment derivatives. Included within total pledged assets, the Company held $7.8 million and $6.4 million, respectively, in deposits with U.S. regulatory authorities.

Non-cash investing activities

During 2020, $101.1 million of investments converted or exchanged in non-cash transactions from fixed maturities or preferred equity positions to short-term investments, fixed maturities or common stock equity positions, as presented on the consolidated statements of cash flows.

During 2019, the Company exchanged a preference share position of $28.7 million, which was held within "equity securities, fair value through net income," for a limited partnership interest of $28.7 million, held under "other investments, fair value option." HPS acts as the general partner and manager of the limited partnership. The fund fully redeemed during the third quarter of 2020.

During 2019, as a result of the restructuring of an investment position held by the Company, $16.9 million of term loans were converted to $23.0 million of common and preferred stock held within "equity securities, fair value through net income," along with cash funding from short-term investments of $6.5 million.

8. Fair value

Fair value hierarchy

Accounting guidance regarding fair value measurements addresses how companies should measure fair value when they are required to use a fair value measure for recognition or disclosure purposes under GAAP and provides a common definition of fair value to be used throughout GAAP. It defines fair value as 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 addition, it establishes a three-level valuation hierarchy for the disclosure of fair value measurements. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. The level in the hierarchy within which a given fair value measurement falls is determined based on the lowest level input that is significant to the measurement (Level 1 being the highest priority and Level 3 being the lowest priority).

The levels in the hierarchy are defined as follows:

- *Level 1:* Inputs to the valuation methodology are observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets;
- *Level 2:* Inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument; and
- *Level 3:* Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The availability of observable inputs can vary by financial instrument and is affected by a wide variety of factors including, for example, the type of financial instrument, whether the financial instrument is new and not yet established in the marketplace, and other characteristics particular to the transaction. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires significantly more judgment. The degree of judgment exercised by the Company in determining fair value is greatest for financial instruments categorized in Level 3. In periods of market dislocation, the observability of prices and inputs may be reduced for many financial instruments. This may lead to a change in the valuation techniques used to estimate the fair value measurement and cause an instrument to be reclassified between levels within the fair value hierarchy.

Fair value measurements on a recurring basis

The following is a description of the valuation methodologies used for securities measured at fair value, as well as the general classification of such securities pursuant to the valuation hierarchy.

The Company determines the existence of an active market based on its judgment as to whether transactions for the financial instrument occur in such market with sufficient frequency and volume to provide reliable pricing information. The independent pricing sources obtain market quotations and actual transaction prices for securities that have quoted prices in active markets. The Company uses quoted values and other data provided by nationally recognized independent pricing sources as inputs into its process for determining fair values of its fixed maturity investments. Each price source has its own proprietary method for determining the fair value of securities that are not actively traded. In general, these methods involve the use of "matrix pricing" in which the independent pricing source uses observable market inputs including, but not limited to, investment yields, credit risks and spreads, benchmarking of like securities, broker-dealer quotes, reported trades and sector groupings to determine a reasonable fair value.

Where multiple quotes or prices are obtained, a price source hierarchy is maintained in order to determine which price source would be used (*i.e.,* a price obtained from a pricing service with more seniority in the hierarchy will be

used over a less senior one in all cases). The hierarchy prioritizes pricing services based on availability and reliability and assigns the highest priority to index providers. Based on the above review, the Company will challenge any prices for a security or portfolio which are considered not to be representative of fair value.

In certain circumstances, when fair values are unavailable from these independent pricing sources, quotes are obtained directly from broker-dealers who are active in the corresponding markets. Such quotes are subject to the validation procedures noted above. Where quotes are unavailable, fair value is determined by the Investment Manager using quantitative and qualitative assessments such as internally modeled values, which are reviewed by the Company's management.

Of the $2.5 billion of net financial assets and liabilities measured at fair value at December 31, 2020, approximately $142.5 million, or 5.8%, were priced using non-binding broker-dealer quotes or modeled valuations. Of the $2.6 billion of net financial assets and liabilities measured at fair value at December 31, 2019, approximately $131.8 million, or 5.0%, were priced using non-binding broker-dealer quotes or modeled valuations.

The Company reviews its securities measured at fair value and discusses the proper classification of such investments with its Investment Managers and others. A discussion of the general classification of the Company's financial instruments follows:

Fixed Maturities. The Company uses the market approach valuation technique to estimate the fair value of its fixed maturity securities, when possible. The market approach includes obtaining prices from independent pricing services, such as index providers and pricing vendors, as well as to a lesser extent quotes from broker-dealers. The independent pricing sources obtain market quotations and actual transaction prices for securities that have quoted prices in active markets. Each source has its own proprietary method for determining the fair value of securities that are not actively traded. In general, these methods involve the use of “matrix pricing” in which the independent pricing source uses observable market inputs including, but not limited to, investment yields, credit risks and spreads, benchmarking of like securities, broker-dealer quotes, reported trades and sector groupings to determine a reasonable fair value.

The following describes the significant inputs generally used to determine the fair value of the Company's investment securities by asset class:

Term Loans. Fair values are estimated by using quoted prices obtained from independent pricing services for term loan investments with similar characteristics, pricing models or matrix pricing. Such investments are generally classified within Level 2. The fair values for certain of the Company's term loans are determined by the Investment Manager using quantitative and qualitative assessments such as internally modeled values, which are reviewed by the Company's management. The modeled values are based on peer loans and comparison to industry-specific market data. Significant unobservable inputs used to price these securities may include changes in peer and/or comparable credit spreads, accretion of any original issue discount and changes in the issuer's debt leverage since issue. Changes in peer credit spreads, comparable credits spreads, and issuer debt leverage are negatively correlated with the modeled fair value measurement. Such investments are generally classified within Level 3.

Corporate Bonds. Valuations are provided by independent pricing services, substantially all through index providers and pricing vendors with a small amount through broker-dealers. The fair values of these securities are generally determined using the spread above the risk-free yield curve. These spreads are generally obtained from the new issue market, secondary trading and from broker-dealers who trade in the relevant security market. As the significant inputs used in the pricing process for corporate bonds are observable market inputs, the fair value of the majority of these securities are classified within Level 2. The fair values for certain of the Company's corporate bonds are determined by the Investment Manager using quantitative and qualitative assessments such as internally modeled values, which are reviewed by the Company's management. The modeled values are based on peer bonds and comparison to industry-specific market data. In addition, the Investment Manager assesses the fair value based on the valuation of the underlying holdings in accordance with the bonds' governing documents. Significant unobservable inputs used to price these securities may include changes in peer and/or comparable credit spreads, accretion of any original issue discount and changes in the issuer's debt leverage since issue. Changes in peer credit spreads, comparable credits spreads, and issuer debt leverage are negatively correlated with the modeled fair value measurement. Such investments are generally classified within Level 3.

Asset-Backed Securities. Valuations are provided by independent pricing services, substantially all through index providers and pricing vendors with a small amount through broker-dealers. The fair values of these securities are generally determined through the use of pricing models (including option adjusted spread) which use spreads to determine the appropriate average life of the securities. These spreads are generally obtained from the new issue market, secondary trading and from broker-dealers who trade in the relevant security market. The pricing services also review prepayment speeds and other indicators, when applicable. As the significant inputs used in the pricing process for asset-backed securities are observable market inputs, the fair value of these securities are classified within Level 2.

Mortgage-Backed Securities. Valuations are provided by independent pricing services, substantially all through pricing vendors and index providers with a small amount through broker-dealers. The fair values of these securities are generally determined through the use of pricing models (including option adjusted spread) which use spreads to determine the expected average life of the securities. These spreads are generally obtained from the new issue market, secondary trading and from broker-dealers who trade in the relevant security market. The pricing services also review prepayment speeds and other indicators, when applicable. As the significant inputs used in the pricing process for mortgage-backed securities are observable market inputs, the fair value of these securities are classified within Level 2.

U.S. Government and Government Agencies. Valuations are provided by independent pricing services, with all prices provided through index providers and pricing vendors. The Company determined that all U.S. Treasuries would be classified as Level 1 securities due to observed levels of trading activity, the high number of strongly correlated pricing quotes received on U.S. Treasuries and other factors. The fair values of U.S. government agency securities are generally determined using the spread above the risk-free yield curve. As the yields for the risk-free yield curve and the spreads for these securities are observable market inputs, the fair values of U.S. government agency securities are classified within Level 2.

Non-U.S. Government Securities. Valuations are provided by independent pricing services, with all prices provided through index providers and pricing vendors. The fair values of these securities are generally based on international indices or valuation models which include daily observed yield curves, cross-currency basis index spreads and country credit spreads. As the significant inputs used in the pricing process for non-U.S. government securities are observable market inputs, the fair value of these securities are classified within Level 2.

Municipal Government Bonds. Valuations are provided by independent pricing services, with all prices provided through index providers and pricing vendors. The fair values of these securities are generally determined using spreads obtained from broker-dealers who trade in the relevant security market, trade prices and the new issue market. As the significant inputs used in the pricing process for municipal bonds are observable market inputs, the fair value of these securities are classified within Level 2.

Short-Term Investments. The Company determined that certain of its short-term investments, held in highly liquid money market-type funds, and equities would be included in Level 1 as their fair values are based on quoted market prices in active markets. The fair values of other short-term investments are generally determined using the spread above the risk-free yield curve and are classified within Level 2.

Equity Securities. The Company determined that exchange-traded equity securities would be included in Level 1 as their values are based on quoted market prices in active markets. Other equity securities are initially valued at cost which approximates fair value. In subsequent measurement periods, the fair values of these securities are determined using non-binding broker-dealer quotes. These equity securities are included in Level 2 of the valuation hierarchy. Where such quotes are unavailable, fair value is determined by the Investment Manager using quantitative and qualitative assessments such as internally modeled values, which are reviewed by the Company's management. As the significant inputs used to price these securities are unobservable, the fair value of these securities are classified as Level 3. Significant unobservable inputs used to price preferred stock may include changes in peer and/or comparable credit spreads, accretion of any original issue discount and changes in the issuer's debt leverage since issue. Changes in peer credit spreads, comparable credit spreads, and issuer debt leverage are negatively correlated with the modeled fair value measurement.

Underwriting Derivative Instruments. The Company values the government-sponsored enterprise credit-risk sharing transactions using a valuation methodology based on observable inputs from non-binding broker-dealer quotes and/or recent trading activity. As the inputs used in the valuation process are observable market inputs, the fair value of these securities are classified within Level 2. Refer to Note 10 - "Derivative instruments" for more information.

Investment Derivative Instruments. The Company values the investment derivatives, including total return swaps and options, at fair value. As the underlying investments have observable inputs, the fair value of these securities are classified within Level 2. Refer to Note 10 - "Derivative instruments" for more information.

Other Investments. The fair value of the Company's investments in private funds are measured using the most recently available net asset valuations, or NAVs, as advised by the third-party administrators.

Measuring the Fair Value of Other Investments Using Net Asset Valuations

The fair value of the Company's investments in private funds are measured using the most recently available NAVs as advised by the third-party administrators. The fund NAVs are based on the administrator's valuation of the underlying holdings in accordance with the fund's governing documents and in accordance with GAAP.

The Company often does not have access to financial information relating to the underlying securities held within the fund therefore management is unable to corroborate the fair values placed on the securities underlying the asset valuations provided by the fund manager or fund administrator. In order to assess the reasonableness of the NAVs, the Company performs a number of monitoring procedures on a quarterly basis, to assess the quality of the information provided by the fund manager and fund administrator. These procedures include, but are not limited to, regular review and discussion of the fund's performance with its manager.

The fair value of the private funds are measured using the NAVs as a practical expedient, therefore the fair value of the funds have not been categorized within the fair value hierarchy.

The following tables present the Company's financial assets and liabilities measured at fair value by level as of December 31, 2020 and 2019:

		Fair Value Measurement Using:		
December 31, 2020	**Estimated Fair Value**	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
		($ in thousands)		
Assets measured at fair value:				
Term loans	$ 851,539	$ —	$ 801,660	$ 49,879
Fixed maturities:				
Corporate bonds	509,867	—	508,882	985
U.S. government and government agency bonds	202,488	202,378	110	—
Asset-backed securities	220,766	—	220,766	—
Mortgage-backed securities	16,663	—	16,663	—
Non-U.S. government and government agency bonds	158,839	—	158,839	—
Municipal government and government agency bonds	1,788	—	1,788	—
Short-term investments	418,690	415,014	3,676	—
Equities	118,201	624	13,025	104,552
Other underwriting derivative assets	25	—	25	—
Investment derivative assets (1)	255	—	255	—
Total assets measured at fair value	$ 2,499,121	$ 618,016	$ 1,725,689	$ 155,416
Investment derivative liabilities (1)	$ 1,117	$ —	$ 1,117	$ —
Payable for securities sold short:				
Corporate bonds	21,680	—	21,680	—
Equities	295	—	295	—
Total liabilities measured at fair value	$ 23,092	$ —	$ 23,092	$ —

(1) Investment derivative assets and liabilities represent the fair value of total return swaps, which are recorded in other assets and other liabilities, respectively, in the consolidated balance sheets as of December 31, 2020.

December 31, 2019	Estimated Fair Value	Fair Value Measurement Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
		($ in thousands)		
Assets measured at fair value:				
Term loans	$ 1,061,934	$ —	$ 1,025,886	$ 36,048
Fixed maturities:				
Corporate bonds	372,473	—	371,540	933
U.S. government and government agency bonds	285,609	285,500	109	—
Asset-backed securities	336,171	—	336,171	—
Mortgage-backed securities	32,456	—	32,456	—
Non-U.S. government and government agency bonds	133,409	—	133,409	—
Municipal government and government agency bonds	2,184	—	2,184	—
Short-term investments	329,303	318,012	11,291	—
Equities	125,137	13,548	2,998	108,591
Other underwriting derivative assets	148	—	148	—
Investment derivative assets (1)	1,667	—	1,667	—
Other investments measured at net asset value (2)	30,461	—	—	—
Total assets measured at fair value	$ 2,710,952	$ 617,060	$ 1,917,859	$ 145,572
Investment derivative liabilities (1)	$ 257	$ —	$ 257	$ —
Payable for securities sold short:				
Corporate bonds	66,257	—	66,257	—
Total liabilities measured at fair value	$ 66,514	$ —	$ 66,514	$ —

(1) Investment derivative assets and liabilities represent the fair value of total return swaps, which are recorded in other assets and other liabilities, respectively, in the consolidated balance sheets as of December 31, 2019.

(2) In accordance with applicable accounting guidance, other investments that are measured at fair value using the net asset value practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated balance sheets.

When the fair value of financial assets and financial liabilities cannot be derived from active markets, the fair value is determined using a variety of valuation techniques that include the use of models. The inputs to these models are taken from observable markets where possible, but where this is not feasible, estimation is required to establish fair values. Changes in assumptions about these factors could affect the reported fair value of financial instruments and the level where the instruments are disclosed in the fair value hierarchy.

The following tables present a reconciliation of the beginning and ending balances for all the financial assets measured at fair value on a recurring basis using Level 3 inputs for the year ending December 31, 2020 and 2019:

Year Ended December 31, 2020	Beginning Balance	Net Purchases (Sales)(1)	Net Unrealized Gains (Losses)(2)	Ending Balance
Term loans	$ 36,048	$ 13,701	$ 130	$ 49,879
Corporate bonds	933	65	(13)	985
Equities	108,591	(22,840)	18,801	104,552
Total	$ 145,572	$ (9,074)	$ 18,918	$ 155,416

Year Ended December 31, 2019	Beginning Balance	Transfers in (out) of Level 3 (3)	Net Purchases (Sales)(1)	Net Unrealized Gains (Losses)(2)	Ending Balance
Term loans	$ 47,479	$ —	$ (15,402)	$ 3,971	$ 36,048
Corporate bonds	24,277	—	(23,341)	(3)	933
Asset-backed securities	22,560	(22,560)	—	—	—
Equities	70,451	—	39,705	(1,565)	108,591
Total	$ 164,767	$ (22,560)	$ 962	$ 2,403	$ 145,572

(1) For the year ended December 31, 2020, the net purchases (sales) consisted of purchases of $49.8 million of term loans, $12.9 million of equities and $65 thousand of corporate bonds, offset in part by the sale of $27.4 million of equities and $7.1 million of term loans, as well as the $29.0 million of redemptions of term loans and $8.3 million of redemptions of equities. For the year ended December 31, 2019, the net purchases (sales) consisted of purchases of $75.0 million of equities and $0.6 million of term loans, offset in part by the sale of $35.3 million of equities, $15.8 million of term loans and $90 thousand of corporate bonds, as well as the redemption of $0.3 million of term loans and $23.3 million of corporate bonds.

(2) Realized and unrealized gains or losses on Level 3 investments are included in "realized and unrealized gain (loss) on investments" in the Company's consolidated statements of income (loss).

(3) During the year ended December 31, 2019, the Company obtained pricing for an asset-backed security, in which pricing was not available as of December 31, 2018. As such, the security was transferred from Level 3 to Level 2 at its fair value as of December 31, 2018.

Financial instruments disclosed, but not carried, at fair value

The Company uses various financial instruments in the normal course of its business. The carrying values of cash and cash equivalents, accrued investment income, receivable for securities sold, certain other assets, payable for securities purchased and certain other liabilities approximated their fair values at December 31, 2020 and 2019 due to their respective short maturities. As these financial instruments are not actively traded, their respective fair values are classified within Level 2.

Fair value measurements on a non-recurring basis

The Company measures the fair value of certain assets on a non-recurring basis, generally quarterly, annually, or when events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. The Company uses a variety of techniques such as discounted expected future cash flows, to determine the fair value of these assets when appropriate. There were no such triggering events or changes in circumstances as of December 31, 2020 and 2019. There were no additional assets measured at fair value on a non-recurring basis as of December 31, 2020 and 2019.

Intangible Assets

The Company tests intangible assets for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. When the Company determines intangible assets may be impaired, the Company uses techniques including discounted expected future cash flows, to measure fair value. There were no such triggering events or changes in circumstances as of December 31, 2020 and 2019.

9. Borrowings to purchase investments

Bank of America secured credit facility

On November 30, 2017, Watford Re amended and restated its $800.0 million secured credit facility with Bank of America, N.A. ("Bank of America") through Watford Asset Trust I, ("Watford Trust.") Watford Re owns all of the beneficial interests of Watford Trust. On August 27, 2020, Watford Re elected to reduce the borrowing capacity from $800.0 million to $640.0 million, and on November 9, 2020, further reduced the borrowing capacity from $640.0 million to $440.0 million, under the terms of the amended and restated agreement. The facility expires on November 30, 2021 and is backed by a portion of Watford Re's non-investment grade portfolio which has been transferred to Watford Trust and which continues to be managed by HPS pursuant to an investment management agreement between HPS and Watford Trust. The purpose of the facility is to provide borrowing capacity, including for the purchase of loans, securities and other assets and distributing cash or any such loans, securities or other assets to Watford Re.

Borrowings on the facility may be made at LIBOR or an alternative base rate at our option, in either case plus an applicable margin. The applicable margin varies based on the applicable base rate and, in the case of LIBOR rate borrowings, the currency in which the borrowing is denominated. In addition, the facility allows for us to issue up to $220.0 million, reduced from $400.0 million as of August 27, 2020, and from $320.0 million as of November 9, 2020, in evergreen standby letters of credit in favor of primary insurance or reinsurance counterparties with which we have entered into reinsurance arrangements. We pay a fee on each letter of credit equal to the amount available to be drawn under such letter of credit multiplied by an applicable percentage. The applicable percentage varies based on the currency in which the letter of credit is denominated.

As of December 31, 2020 and 2019, Watford Re, through Watford Trust, had borrowed approximately $155.7 million and $484.3 million respectively. Bank of America requires the Company to hold cash and investments in deposit with, or in trust accounts with respect to the borrowed funds and outstanding letters of credit. As of December 31, 2020 and 2019, the Company was required to hold $255.5 million and $791.0 million, respectively, in such deposits and trust accounts. Watford Re has deferred the issuance and extension costs relating to the borrowings of $14.5 million and is subsequently amortizing the deferred costs over the term of the borrowing arrangements.

Custodian bank facilities

As of December 31, 2020 and 2019, the Company had borrowed $56.0 million and $Nil, respectively, from the Company's custodian banks to purchase U.S. dollar denominated securities. The Company pays interest based on LIBOR or the Overnight Bank Funding Rate ("OBFR"), plus a margin and the borrowed amount is payable upon demand.

The custodian banks require the Company to hold cash and investments in deposit with, or in an investment account with respect to the borrowed funds. As at December 31, 2020 and 2019, the Company was required to hold $96.3 million and $Nil, respectively, in such deposits and investment accounts.

Revolving credit agreement borrowings

As of December 31, 2020 and 2019, the Company had total revolving credit agreement borrowings of $211.6 million and $484.3 million, respectively, which consist of the borrowings from the secured credit facility and the custodian bank facilities as discussed above.

During the years ending December 31, 2020 and 2019, interest expense incurred on the secured credit facility and the custodian bank facilities was $15.0 million and $27.7 million, respectively. The interest expense incurred is included as a component of borrowings and miscellaneous other investment expenses in the Company's consolidated statements of income (loss).

As of December 31, 2020 and 2019, the fair value of the Company's outstanding borrowings approximated their carrying value.

10. Derivative instruments

Underwriting Derivatives

The Company's underwriting strategy allows it to enter into government-sponsored enterprise credit-risk sharing transactions. These transactions are accounted for as derivatives. The derivative assets and derivative liabilities relating to these transactions are included in "other assets" and "other liabilities", respectively, in the Company's consolidated balance sheets. Realized and unrealized gains and losses from other derivatives are included in "other underwriting income (loss)" in the Company's consolidated statements of income (loss). The risk in force of these transactions is considered the notional amount.

As of December 31, 2020 and 2019, the Company posted $9.2 million and $13.1 million, respectively, in assets as collateral. These assets are included in "fixed maturities," which are recorded at fair value in the Company's consolidated balance sheets.

Investment Derivatives

The Company's investment strategy allows for the use of derivative securities. The Company invests in call options to manage specific market risks; such derivative instruments are recorded at fair value, and shown as part of "payable for securities sold short" on its consolidated balance sheets. Additionally, the Company invests in put options to manage specific market risks; such derivative instruments are recorded at fair value, and shown as part of "equity securities" on its consolidated balance sheets.

The Company began investing in total return swaps ("swaps") during 2018, through a Master Confirmation of Total Return Swap Transactions agreement, and recognizes the swap derivatives at fair value. The derivative assets and derivative liabilities relating to these transactions are included in "other assets" and "other liabilities," respectively, in the Company's consolidated balance sheets. At December 31, 2020 and 2019, the Company had collateral funds held by the counterparty of $67.1 million and $64.1 million, respectively, included in "short-term investments" in the Company's consolidated balance sheets.

The fair value of such options and swaps are based on observable inputs and classified in Level 2 of the valuation hierarchy. Realized and unrealized gains and losses from investment derivatives are included in "realized and unrealized gains (losses) on investments" in the Company's consolidated statements of income (loss).

The Company did not hold any derivatives designated as hedging instruments at December 31, 2020 and 2019.

The following table summarizes information on the fair values and notional amount of the Company's derivative instruments at December 31, 2020 and 2019:

	Estimated Fair Value			
	Asset Derivatives	Liability Derivatives	Net Derivatives	Notional Amount (1)
		($ in thousands)		
December 31, 2020				
Other underwriting derivatives	$ 25	$ —	$ 25	$ 39,165
Options	796	296	500	4,918
Total return swaps	255	1,117	(862)	113,852
Total	$ 1,076	$ 1,413	$ (337)	$ 157,935
December 31, 2019				
Other underwriting derivatives	$ 148	$ —	$ 148	$ 59,879
Total return swaps	1,667	257	1,410	162,678
Total	$ 1,815	$ 257	$ 1,558	$ 222,557

(1) The notional amount represents the absolute value of all outstanding contracts.

The realized and unrealized gains and losses on the Company's derivative instruments are reflected in the consolidated statements of income (loss), as summarized in the following table:

	Year Ended December 31,	
	2020	2019
	($ in thousands)	
Underwriting derivatives:		
Other underwriting income (loss)	$ 2,045	$ 2,412
Investment derivatives:		
Net realized and unrealized gains (losses):		
Options	(3,511)	799
Total return swaps	(1,898)	5,441

11. Income taxes

Watford Re is incorporated under the laws of Bermuda and, under current law, is not obligated to pay any taxes in Bermuda based upon income or capital gains. In the event that any legislation is enacted in Bermuda imposing such taxes, a written undertaking has been received from the Bermuda Minister of Finance under the Exempted Undertakings Tax Protection Act 1966 that such taxes will not be applicable to Watford Re until March 31, 2035.

WICE is incorporated under the laws of Gibraltar and regulated by the Gibraltar Financial Services Commission (the "FSC") under the Financial Services (Insurance Company) Act (the "Gibraltar Act"). In addition to its operations in Gibraltar, WICE operates a branch in Romania. The Romanian branch ceased accepting new business from September 1, 2020. The current rates of tax on applicable profits in Gibraltar and Romania are 10% and 16%, respectively. The open tax years that are potentially subject to examination are 2019 and 2020 in Gibraltar and 2018 through 2020 in Romania.

Watford Holdings (U.K.) Limited is incorporated in the United Kingdom and is subject to U.K. corporate income tax. The current U.K. corporate income tax rate is 19%. The open tax years that are potentially subject to examination by U.K. tax authorities are 2019 and 2020.

Watford Holdings (U.S.) Inc. is incorporated in the United States and files a consolidated U.S. federal tax return with its subsidiaries, WSIC, WIC and Watford Services Inc. The U.S. federal tax rate is 21% for tax years beginning after December 31, 2017. The open tax years that are potentially subject to examination by U.S. tax authorities are 2017 through 2020.

The components of income taxes attributable to operations were as follows:

	Year Ended December 31,	
	2020	**2019**
	($ in thousands)	
Current income tax expense (benefit):		
United States	$ 434	$ 20
Gibraltar	16	—
	450	20
Deferred income tax expense (benefit):		
United States	(424)	—
	(424)	—
Total income tax expense (benefit)	$ 26	$ 20

The Company's income or loss before income taxes was earned in the following jurisdictions:

	Year Ended December 31,	
	2020	**2019**
	($ in thousands)	
Income (loss) before income taxes:		
Bermuda	$ 89,351	$ 70,803
United States	426	346
Other	(4,629)	1,644
Total income (loss) before income taxes	$ 85,148	$ 72,793

The reconciliation between the Company's income tax expense and the expected income tax expense at the Bermuda statutory income tax rate is as follows:

	Year Ended December 31,	
	2020	**2019**
	($ in thousands)	
Expected income tax expense (benefit) at Bermuda statutory rate	$ —	$ —
Addition (reduction) in income tax expense (benefit) resulting from:		
Foreign taxes at local expected rates	(176)	280
Change in valuation allowance	215	(120)
Other	(13)	(140)
Total income tax expense (benefit)	$ 26	$ 20

Deferred income tax assets and liabilities reflect temporary differences based on enacted tax rates between the carrying amounts of assets and liabilities for financial reporting and income tax purposes. Significant components of the Company's deferred income tax assets and liabilities were as follows:

	Year Ended December 31,	
	2020	2019
	($ in thousands)	
Deferred income tax assets:		
Net operating loss	$ 519	$ 84
Unearned premium reserve	314	291
Loss reserves	301	138
Ceding commissions	1,255	1,006
Capitalized expenses	84	92
Other accruals	26	18
Deferred tax assets before valuation allowance	2,499	1,629
Valuation allowance	(1,483)	(1,269)
Deferred tax assets net of valuation allowance	1,016	360
Deferred income tax liabilities:		
Intangible assets	(376)	(260)
Investment basis differences	(216)	(100)
Total deferred tax liabilities	(592)	(360)
Net deferred income tax assets (liabilities)	$ 424	$ —

The Company provides a valuation allowance to reduce certain deferred tax assets to an amount which management expects to more likely than not be realized. As of December 31, 2020 and 2019, the Company's valuation allowance was $1.5 million and $1.3 million, respectively. After consideration of the valuation allowance, the Company had net deferred tax assets of $0.4 million and $Nil as of December 31, 2020 and 2019, respectively.

After taking into account the impact of the change in the valuation allowance, the Company recognized income tax expense of $26.0 thousand and $20.0 thousand in the consolidated statements of income (loss) during the year ended December 31, 2020 and 2019, respectively.

The Company recognizes a tax benefit where it concludes that it is more likely than not that the tax benefit will be sustained on audit by the taxing authority based solely on the technical merits of the associated tax position. The Company records interest and penalties related to unrecognized tax benefits in the provision for income taxes. As of both December 31, 2020 and 2019, the Company's total unrecognized tax benefits, including interest and penalties, were $Nil.

The United States also imposes an excise tax on insurance and reinsurance premiums paid to non-U.S. insurers or reinsurers with respect to risks located in the United States. The rate of tax, unless reduced by an applicable U.S. tax treaty, is 1% for all reinsurance premiums. The Company incurs federal excise taxes on certain of its reinsurance transactions.

12. Transactions with related parties

In March 2014, ARL invested $100.0 million in the Parent and acquired approximately 11% of its common equity.

AUL acts as the insurance and reinsurance manager for Watford Re and WICE while AUI acts as the insurance and reinsurance manager for WSIC and WIC, all under separate long-term services agreements. HPS manages the Company's non-investment grade portfolio and a portion of the Company's investment grade portfolio as Investment Manager, and AIM manages a portion of the Company's investment grade portfolio as Investment Manager, each under separate long-term services agreements. ARL and HPS were granted warrants to purchase additional common equity based on performance criteria; such warrants were unexercised and expired on March 25, 2020. In recognition of the sizable ownership interest, two senior executives of ACGL were appointed to the Company's board of directors. The services agreements with AUL and AUI and the investment management

agreements with HPS and AIM provide for services for an extended period of time with limited termination rights by the Company. In addition, these agreements allow for AUL, AUI and HPS to participate in the favorable results of the Company in the form of performance fees.

AUL and AUI

Watford Re and WICE entered into services agreements with AUL. WSIC and WIC entered into services agreements with AUI. AUL and AUI provide services related to the management of the underwriting portfolio for a term ending in December 2025. The services agreements perpetually renew automatically in five-year increments unless either the Company or Arch gives notice to not renew at least 24 months before the end of the then-current term.

As part of the services agreements, AUL and AUI make available to the Companies, on a non-exclusive basis, certain designated employees who serve as officers of the Companies and underwrite business on behalf of the Companies (the "Designated Employees"). AUL and AUI also provide portfolio management, Designated Employee supervision, exposure modeling, loss reserve recommendations, claims-handling, accounting and other related services as part of the services agreements.

In return for their services, AUL and AUI receive fees from the Companies, including an underwriting fee and profit commission, as well as reimbursement for the services of the Designated Employees and reimbursements for an allocated portion of the expenses related to seconded employees, plus other expenses incurred on behalf of the Company. A profit commission is earned for each underwriting year where the performance meets defined thresholds within the service agreements.

The related AUL and AUI fees and reimbursements incurred in the consolidated statements of income (loss) for the years ended December 31, 2020 and 2019 were as follows:

	Year Ended December 31,	
	2020	2019
	($ in thousands)	
Consolidated statements of income (loss) items:		
Acquisition expenses	$ 29,219	$ 20,808
General and administrative expenses	5,155	6,899
Total	$ 34,374	$ 27,707

(1) For the years ended December 31, 2020 and 2019, the Company incurred profit commission fees due to Arch of $1.8 million and $Nil, respectively, included within acquisition expenses above.

Reinsurance transactions with ACGL affiliates

The Company reinsures ARL and other ACGL subsidiaries and affiliates for property and casualty risks on a quota share basis. ACGL cedes business to the Company pursuant to inward retrocession agreements the Company's operating subsidiaries have entered into with ACGL. Pursuant to these inward retrocession agreements the Company pays a ceding fee based on the business ceded and the terms of the applicable retrocession agreement. Such fees, in addition to origination fees, are reflected in "acquisition expenses" on the Company's consolidated statements of income (loss).

The related consolidated statements of income (loss) for the years ended December 31, 2020 and 2019 were as follows:

	Year Ended December 31,	
	2020	**2019**
	($ in thousands)	
Consolidated statements of income (loss) items:		
Gross premiums written	$ 202,113	$ 201,110
Net premiums earned	232,241	235,923
Losses and loss adjustment expenses	174,145	198,386
Acquisition expenses (1)	58,311	71,302

(1) Acquisition expenses relating to the ACGL inward quota share agreements referred to above. For the years ended December 31, 2020 and 2019, the Company incurred ceding fees to Arch, in aggregate, of $17.0 million and $16.6 million, respectively, under these inward retrocession agreements.

Separately, the Company's operating subsidiaries have entered into outward quota share retrocession or reinsurance agreements with ACGL subsidiaries. Specifically, each of Watford Re and WICE has entered into a separate outward quota share retrocession or reinsurance agreement with ARL, and each of WSIC and WIC has entered into a separate outward quota share reinsurance agreement with ARC.

The related consolidated statements of income (loss) for the years ended December 31, 2020 and 2019 for the outward retrocession transactions were as follows:

	Year Ended December 31,	
	2020	**2019**
	($ in thousands)	
Consolidated statements of income (loss) items:		
Gross premiums ceded	$ (73,763)	$ (112,701)
Net premiums earned	(85,377)	(65,234)
Losses and loss adjustment expenses	(69,492)	(56,164)
Acquisition expenses (1)	(16,602)	(13,672)

(1) Acquisition expenses relating to the ACGL outward quota share agreements referred to above.

The related consolidated balance sheet account balances as of December 31, 2020 and 2019 were as follows:

	December 31, 2020	December 31, 2019
	($ in thousands)	
Consolidated balance sheet items:		
Total investments	$ 744,998	$ 815,528
Premiums receivable	84,155	106,462
Reinsurance recoverable on unpaid and paid losses and loss adjustment expenses	126,294	79,597
Prepaid reinsurance premiums	64,074	75,249
Deferred acquisition costs, net	19,010	31,609
Funds held by reinsurers	31,639	29,867
Other assets - prepaid expenses	3,991	—
Reserve for losses and loss adjustment expenses	712,478	693,861
Unearned premiums	113,724	143,852
Losses payable	54,028	39,619
Reinsurance balances payable	41,812	62,301
Amounts due to affiliates	7,708	4,467
Other liabilities - contingent commissions	4,416	5,516

AIM

Watford Re, WSIC, WICE and WIC entered into investment management agreements with AIM pursuant to which AIM manages a portion of our investment grade portfolio. Each of the Watford Re, WICE, WSIC and WIC investment management agreements with AIM has a one-year term, with the terms ending annually on March 31, July 31, January 31 and July 31, respectively. The terms will continue to renew for successive one-year periods; provided, however, that either party may terminate any of the investment management agreements with AIM at any time upon 45 days prior written notice. To date, there has been no such notice filed under such agreements.

In return for its investment management services, AIM receives a monthly management fee. The management fee is based on a percentage of the aggregate asset value of the AIM managed portfolio. For the purposes of calculating the management fees, asset value is determined by AIM in accordance with the investment management agreements and is measured before deduction of any management fees or expense reimbursement. The Company has also agreed to reimburse AIM for additional services related to investment consulting and oversight services, administrative operations and risk analytic support services related to the management of the Company's portfolio, as set forth in the investment management agreements.

The related consolidated statements of income (loss) for the years ended December 31, 2020 and 2019 were as follows:

	Year Ended December 31, 2020	Year Ended December 31, 2019
	($ in thousands)	
Consolidated statements of income (loss) items:		
Investment management fees - related parties	$ 937	$ 1,062

Merger Agreement and Arch Voting Agreement

On October 9, 2020, the Parent entered into an Agreement and Plan of Merger with ACGL and Greysbridge Ltd., a Bermuda exempted company limited by shares and wholly-owned subsidiary of ACGL ("Merger Sub.") On November 2, 2020 the merger agreement was amended and ACGL assigned its rights thereunder to Greysbridge Holdings Ltd. ("HoldCo,") a newly formed Bermuda exempted company limited by shares of which ACGL will own approximately 40% and funds managed by Warburg Pincus LLC and Kelso & Company will each own approximately 30%. Pursuant to the merger agreement, as amended, Merger Sub will merge with and into the Parent, with the Parent surviving as a wholly-owned subsidiary of HoldCo, with each holder of the Parent's common shares receiving consideration of $35.00 per common share. Refer to Note 13, "Commitments and contingencies" for additional information.

At the time it entered into the merger agreement on October 9, 2020, the Parent also entered into a voting and support agreement (the "Arch Voting Agreement") with ARL and Gulf Reinsurance Ltd., another subsidiary of ACGL, pursuant to which each of ARL and Gulf Reinsurance Ltd. committed to vote all of its shares in favor of the merger and to not transfer any such shares, subject to the conditions set forth in the Arch Voting Agreement.

Enstar Group Limited Voting Agreement

At December 31, 2020, Cavello Bay Reinsurance Limited ("Cavello Bay"), a wholly-owned subsidiary of Enstar Group Limited, ("Enstar"), held 1,815,858 common shares, or 9.1% of the Parent's common equity. On November 2, 2020, Enstar, Cavello Bay, ACGL and the Parent entered into a voting and support agreement pursuant to which Cavello Bay has committed to vote all of its shares in favor of the merger.

HPS

Certain HPS principals and management own common and preference shares of the Parent.

In return for its investment services, HPS receives a management fee, a performance fee and allocated operating expenses. The management fee is calculated at an annual rate of 1.0% of the aggregate net asset value of the assets that are managed by HPS for the first $1.5 billion in net asset value, and 0.75% of the aggregate net value of assets exceeding $1.5 billion, payable quarterly in arrears. For purposes of calculating the management fees, net asset value is determined by HPS in accordance with the investment management agreements and is measured before reduction for any management fees, performance fees or any expense reimbursement and is adjusted for any non-routine intra-month withdrawals. The Company has also agreed to reimburse HPS for certain expenses related to the management of the Company's investment portfolios as set forth in the investment management agreements.

The base performance fee is equal to 10% of the Income (as defined in the investment management agreements relating to Watford Re, WICE and Watford Trust) or Aggregate Income (as defined in the investment management agreements relating to WSIC and WIC), as applicable, if any, on the assets managed by HPS, calculated and payable as of each fiscal year-end and the date on which the investment management agreements are terminated and not renewed, and HPS is eligible to earn an additional performance fee equal to 25% of any Excess Income (as defined in the investment management agreements) in excess of a net 10% return to Watford after deduction for paid and accrued management fees and base performance fees, with the total performance fees not to exceed 17.5% of the Income or Aggregate Income, as applicable. No performance fees will be paid to HPS if the high water mark (as described in the investment management agreements with HPS) is not met.

During 2017, the Company invested $50.0 million in a private fund ("Master Fund") as part of HPS's investment strategy. HPS acts as the Trading Manager and provides certain administrative management services to the Master Fund. During 2019, the Company fully redeemed its investment in the Master Fund.

During 2019, the Company invested $28.7 million in a limited partnership as part of HPS's investment strategy. HPS acts as the general partner and manager of the limited partnership. During 2020, the Company fully redeemed its investment in the limited partnership. The management fees and performance fees on the limited partnership will be subject to the existing fee structure of the existing investment management agreement between the Company and HPS, as discussed above.

The related consolidated statements of income (loss) for the years ended December 31, 2020 and 2019, and consolidated balance sheet account balances for HPS management fees and performance fees as of December 31, 2020 and 2019 were as follows:

	Year Ended December 31,	
	2020	2019
	($ in thousands)	
Consolidated statements of income (loss) items:		
Investment management fees - related parties	$ 16,256	$ 17,330
Investment performance fees - related parties	12,037	12,191
	$ 28,293	$ 29,521

	December 31,	
	2020	2019
	($ in thousands)	
Consolidated balance sheet items:		
Other investments, at fair value	$ —	$ 30,461
Investment management and performance fees payable	21,641	17,762

Artex

In 2015, WICE and AUL entered into an insurance management services agreement with Artex Risk Solutions (Gibraltar) Limited, or Artex, pursuant to which Artex provides services to WICE relating to management, secretarial, governance, underwriting, claims, reinsurance, financial management, investment, regulatory, compliance, risk management and Solvency II. In addition, two principals of Artex have been appointed directors of WICE. In exchange for these services, the Company pays Artex fees based on WICE's gross premiums written, subject to a minimum amount of £150,000 per annum and a maximum amount of £400,000 per annum, in each case subject to an inflation increase on an annual basis. The insurance management services agreement may be terminated by either Artex or WICE upon twelve months prior written notice; provided that the agreement is subject to earlier termination by WICE or Artex upon the occurrence of certain events.

The table below provides the aggregate fees the Company paid to Artex under the insurance management services agreement for the years ended December 31, 2020 and 2019:

	Year Ended December 31,	
	2020	2019
	($ in thousands)	
Fees paid to Artex under insurance management services agreement	$ 544	$ 431

For the years ended December 31, 2020 and 2019, the Company paid no fees to Arch under this insurance management services agreement.

13. Commitments and contingencies

Concentrations of credit risk

For our reinsurance agreements, the creditworthiness of a counterparty is evaluated by the Company, taking into account credit ratings assigned by independent agencies. The credit approval process involves an assessment of factors, including, among others, the counterparty country and industry exposures. Collateral may be required, at the discretion of the Company, on certain transactions based on the creditworthiness of the counterparty.

The areas where significant concentrations of credit risk may exist include unpaid losses and loss adjustment expenses recoverable, prepaid reinsurance premiums and paid losses and loss adjustment expenses recoverable net of reinsurance balances payable (collectively, “net reinsurance recoverables”), investments and cash and cash equivalent balances.

The Company’s reinsurance recoverables and prepaid reinsurance premiums, net of reinsurance balances payable, resulting from reinsurance agreements entered into with ARL and ARC as of December 31, 2020 and 2019 amounted to $148.6 million and $92.5 million, respectively. ARL and ARC have “A+” credit ratings from A.M. Best.

A credit exposure exists with respect to reinsurance recoverables as they may become uncollectible. The Company manages its credit risk in its reinsurance relationships by transacting with reinsurers that it considers financially sound and, if necessary, the Company may hold collateral in the form of funds, trust accounts and/or irrevocable letters of credit. This collateral can be drawn on for amounts that remain unpaid beyond specified time periods on an individual reinsurer basis.

In addition, the Company underwrites a significant amount of its business through brokers and a credit risk exists should any of these brokers be unable to fulfill their contractual obligations with respect to the payments of insurance and reinsurance balances owed to the Company.

The Company’s investment portfolios are managed in accordance with investment guidelines that include standards of diversification, which limit the allowable holdings of any single issuer. There were no investments in any entity in excess of 10% of the Company’s shareholders’ equity at December 31, 2020 and 2019, other than cash and cash equivalents held in operating and investment accounts with financial institutions with credit ratings between “A” and “AA-.”

Lloyds letter of credit facility

On May 15, 2020, Watford Re renewed its letter of credit facility with Lloyds Bank Corporate Markets Plc, New York Branch (the “Lloyds Facility”). The Lloyds Facility amount is $100.0 million and was renewed through to May 16, 2021. Under the renewed Lloyds Facility, the Company may request an increase in the facility amount, up to an aggregate of $50.0 million. The principal purpose of the Lloyds Facility is to issue, as required, evergreen standby letters of credit in favor of primary insurance or reinsurance counterparties with which the Company has entered into reinsurance arrangements to ensure that such counterparties are permitted to take credit for reinsurance obtained from the Company as required under insurance regulations in the United States. The amount of letters of credit issued is driven by, among other things, the timing and payment of catastrophe losses, loss development of existing reserves, the payment pattern of such reserves, the further expansion of the Company’s business and the loss experience of such business. When issued, the letters of credit are secured by certificates of deposit or cash. In addition, the Lloyds Facility also requires the maintenance of certain covenants, with which the Company was in compliance at December 31, 2020 and 2019. At such dates, the Company had $47.9 million and $51.0 million, respectively, in restricted assets as collateral for outstanding letters of credit issued from the Lloyds Facility, which were secured by certificates of deposit. These collateral amounts are reflected as short-term investments in the Company’s consolidated balance sheets.

Unsecured letter of credit facility

On September 17, 2020, Watford Re renewed and amended its 364-day letter of credit agreement with Lloyds Bank Corporate Markets Plc and BMO Capital Markets Corp. (the “Unsecured Facility”). The Unsecured Facility amount was reduced from $100.0 million to $50.0 million, and will be automatically extended for a period of one year unless canceled or not renewed by either counterparty prior to expiration. The principal purpose of the Unsecured Facility is to issue, as required, evergreen standby letters of credit in favor of primary insurance or reinsurance counterparties with which the Company has entered into reinsurance arrangements to ensure that such counterparties are permitted to take credit for reinsurance obtained from the Company as required under insurance regulations in the United States. The amount of letters of credit issued is driven by, among other things, the timing and payment of catastrophe losses, loss development of existing reserves, the payment pattern of such reserves, the further expansion of the Company’s business and the loss experience of such business. The Unsecured Facility requires the

maintenance of certain covenants, as well as certain representations and warranties that are customary for facilities of this type. At December 31, 2020 and 2019, the Company had $49.9 million and $19.3 million, respectively, in outstanding letters of credit issued from the Unsecured Facility and was in compliance with all covenants contained in the Unsecured Facility requirements.

Bank of America secured credit facility

On November 30, 2017, Watford Re amended and restated its $800.0 million secured credit facility (the “Secured Facility”) with Bank of America, N.A., which expires on November 30, 2021. On August 27, 2020, Watford Re elected to reduce the borrowing capacity from $800.0 million to $640.0 million, and on November 9, 2020, further reduced the borrowing capacity from $640.0 million to $440.0 million, under the terms of the amended and restated agreement. The purpose of the Secured Facility is to provide borrowings, backed by Watford Re’s investment portfolios.

In addition, the Secured Facility allows for Watford Re to issue up to $220.0 million, reduced from $400.0 million as of August 27, 2020, and from $320.0 million as of November 9, 2020, in evergreen standby letters of credit in favor of primary insurance or reinsurance counterparties with which the Company has entered into reinsurance arrangements. At December 31, 2020, Watford Re had $155.7 million and $28.2 million in borrowings and outstanding letters of credit, respectively. At December 31, 2019, Watford Re had $484.3 million and $52.5 million in borrowings and outstanding letters of credit, respectively. At December 31, 2020 and 2019, Watford Re was in compliance with all covenants contained in the Secured Facility.

Custodian bank facilities

As of December 31, 2020 and 2019, Watford Re had $56.0 million and $Nil, respectively, in borrowings from its custodian banks to purchase U.S. dollar denominated securities. The Company pays interest based on LIBOR or OBFR, plus a margin and the borrowed amount is payable upon demand.

The custodian banks require the Company to hold cash and investments on deposit, or in an investment account with respect to the borrowed funds. At December 31, 2020 and 2019, the Company was required to hold $96.3 million and $Nil, respectively, in such deposits and investment accounts.

Employment and other arrangements

The Company has employment agreements with certain of its executive officers. Such employment arrangements provide for compensation in the form of base salary, annual bonus, participation in the Company’s employee benefit programs, the Company’s share-based compensation plans and the reimbursements of expenses.

Investment commitments

As of December 31, 2020, the Company had unfunded commitments of $3.9 million relating to term loans within its investment portfolios. As of December 31, 2019, the Company had unfunded commitments of $8.4 million relating to term loans and $26.4 million relating to equities within its investment portfolios.

Acquisition commitments

The Company has entered into an agreement to acquire Axeria IARD, a property and casualty insurance company based in France. The Company has committed to acquiring 100% of the capital stock of Axeria IARD from the APRIL group. The completion of this transaction is subject to regulatory approval and other customary closing conditions, and is expected to close in the first quarter of 2021.

Proposed merger

On October 9, 2020, the Parent entered into an Agreement and Plan of Merger (the "Original Merger Agreement") with ACGL and Merger Sub. Further, on November 2, 2020, the Parent entered into Amendment No. 1 to the Original Merger Agreement (the Original Merger Agreement, as amended by such Amendment No. 1, the (“Merger Agreement”) with ACGL and Merger Sub, and ACGL assigned its interests and obligations under the Merger

Agreement to HoldCo. ACGL remains contractually responsible for the performance of its obligations under the Merger Agreement.

Pursuant to the Merger Agreement, Merger Sub will merge with and into the Parent, with the Parent surviving as a wholly-owned subsidiary of HoldCo (the “Merger”). At the effective time of the Merger, holders of the Parent’s common shares will be entitled to receive consideration of $35.00 in cash for each common share they own. The Parent's preference shares will remain outstanding following the effective time of the Merger and will be entitled to the same dividend and other rights and preferences as are now provided to the preference shares. The Merger is expected to close in the first half of 2021, subject to customary closing conditions, including regulatory and shareholder approval.

If the Merger Agreement is terminated under specified circumstances, including if: (i) Watford terminates prior to receipt of shareholder approval in order to enter into a definitive written agreement providing for a superior proposal, or (ii) HoldCo terminates prior to the shareholders meeting to approve the Merger Agreement and after the Parent’s board has acted in a way that constitutes an adverse recommendation change, the Parent will be required to pay HoldCo a termination fee of $28.1 million.

14. Leases

The Company has entered into a lease agreement for real estate that is used for office space in the ordinary course of business. The lease is accounted for as an operating lease, whereby the lease expense is recognized on a straight-line basis over the term of the lease.

The lease includes an option to extend or renew the lease term. The exercise of the renewal option is at the Company’s discretion. The operating lease liability includes lease payments related to options to extend or renew the lease term if the Company is reasonably certain of exercising those options. Such options relating to the extension or renewal of the lease term are not included in the operating lease liability at this time.

Lease expense is included in “general and administrative expenses” in the Company’s consolidated statements of income (loss). Additional information regarding the Company’s real estate operating lease is as follows.

	Year Ended December 31, 2020
	($ in thousands)
Lease cost:	
Operating lease	$ 251
Other information on operating lease:	
Cash payments included in the measurement of lease liability reported in operating cash flows	283
Right-of-use assets (1)	719
Operating lease liability (2)	719
Weighted average discount rate	3.9 %
Weighted average remaining lease term in years	2.75 years

(1) Included in “other assets” on the Company’s consolidated balance sheet.
(2) Included in “other liabilities” on the Company’s consolidated balance sheet.

The following tables present the contractual maturity of the Company's lease liability:

	December 31, 2020
	($ in thousands)
2021	283
2022	283
2023	189
Total undiscounted lease payments	755
Less: present value adjustment	(36)
Operating lease liability	719

	December 31, 2019
	($ in thousands)
2020	283
2021	283
2022	283
2023	189
Total undiscounted lease payments	1,038
Less: present value adjustment	(68)
Operating lease liability	970

15. Shareholders' equity

Common shares

The authorized and issued share capital of the Company consists of 1,000,000 common shares, par value of $1.00 per share, at December 31, 2020 and 2019.

16. Retirement plans

For purposes of providing employees with retirement benefits, the Company maintains defined contribution retirement plans. Contributions are based on the participants' eligible compensation. For the years ended December 31, 2020 and 2019, the Company expensed approximately $0.3 million and $0.3 million, respectively, related to these retirement plans.

17. Legal proceedings

The Company, in common with the insurance industry in general, is subject to litigation and arbitration in the normal course of its business. As of December 31, 2020, the Company was not a party to any litigation or arbitration which is expected by management to have a material adverse effect on the Company's results of operations or financial condition and liquidity.

18. Statutory information

The Company's subsidiaries are subject to insurance and/or reinsurance laws and regulations in the jurisdictions in which they operate. These regulations include certain restrictions on the amount of dividends or other distributions available to shareholders without prior approval of the regulatory authorities.

The actual and required statutory capital and surplus for the Company's significant regulatory jurisdictions at December 31, 2020 and 2019 was as follows:

	December 31,			
	2020		2019	
	Actual	Required	Actual	Required
	($ in thousands)			
Statutory capital and surplus:				
Bermuda (1)	$ 1,184,170	$ 675,000	$ 1,106,576	$ 649,994
Watford Specialty Insurance Company	57,636	5,517	59,763	4,603
Watford Insurance Company	28,145	3,701	29,749	2,280
United States	85,781	9,218	89,512	6,883
Gibraltar	27,858	19,069	29,113	15,710

(1) The Company is currently completing its 2020 group Bermuda Solvency Capital Requirement Model ("BSCR Model"), which must be filed with the BMA on or before May 31, 2021.. The December 31, 2020 required statutory capital and surplus presented is an estimate of the enhanced capital requirement. At this time, the Company believes it will exceed the target level of required statutory economic capital and surplus

There were no state-prescribed or permitted regulatory accounting practices for any of the Company's subsidiaries that resulted in reported statutory surplus that differed from that which would have been reported under the prescribed practices of the respective regulatory authorities, including the National Association of Insurance Commissioners. The differences between statutory financial statements and statements prepared in accordance with GAAP vary by jurisdiction, however, with the primary differences being that statutory financial statements may not reflect deferred acquisition costs, certain net deferred tax assets, intangible assets, unrealized appreciation or depreciation on debt securities and certain unauthorized reinsurance recoverables and include contingency reserves.

The statutory net income (loss) for the Company's significant regulatory jurisdictions at December 31, 2020, 2019 and 2018 was as follows:

	Year Ended December 31,		
	2020	2019	2018
	($ in thousands)		
Statutory net income (loss):			
Bermuda	$ 85,121	$ 72,771	$ (25,110)
Watford Specialty Insurance Company	2,117	426	525
Watford Insurance Company	(2,075)	(730)	(2,488)
United States	42	(304)	(1,963)
Gibraltar	(4,610)	1,681	653

Bermuda

Under the Insurance Act, Watford Re, is registered as a Class 4 insurer and is required to maintain minimum statutory capital and surplus equal to the greater of a minimum solvency margin and the enhanced capital requirement as determined by the Bermuda Monetary Authority ("BMA").

The enhanced capital requirement is calculated based on the "BSCR Model", a risk-based model that takes into account the risk characteristics of different aspects of the Company's business. At December 31, 2020 and 2019, all such requirements were met.

The ability to pay dividends is limited under Bermuda laws and regulations. Under the Insurance Act, Watford Re is restricted with respect to the payment of dividends. Watford Re is prohibited from declaring or paying in any financial year dividends of more than 25% of its total statutory capital and surplus (as shown on its previous financial year's statutory balance sheet) unless it files, at least 7 days before payment of such dividends, with the BMA, an affidavit stating that it will continue to meet the required margins following the declaration of those dividends. Accordingly, Watford Re can pay dividends or return capital of approximately $296.0 million during 2021 without providing an affidavit to the BMA.

Gibraltar

WICE is licensed by the Gibraltar Financial Services Commission ("GFSC") under the Gibraltar Financial Services (Insurance Companies) Act ("the Gibraltar Act") to underwrite various insurance businesses across Europe. Under the Gibraltar Act, WICE is subject to capital requirements and is required to prepare and submit annual financial statements to the GFSC as outlined in the Gibraltar Act and in accordance with Gibraltar Generally Accepted Accounting Practice.

WICE shall notify the GFSC of any proposals to declare or pay a dividend on any of its share capital. WICE shall not declare or pay any dividend within 14 days of the date of notification. As of December 31, 2020 and 2019, WICE was in compliance with the GFSC dividend requirement.

United States

The Company's U.S. subsidiaries are subject to insurance laws and regulations in the jurisdictions in which they operate. The ability of the Company's regulated U.S. subsidiaries to pay dividends or make distributions is dependent on their ability to meet applicable regulatory standards. These regulations include restrictions that limit the amount of dividends or other distributions, such as loans or cash advances, available to common shareholders without prior approval of the insurance regulatory authorities.

Any dividends or distributions made by WSIC or WIC would result in an increase in available capital at Holdings U.S. During 2021, WSIC and WIC cannot declare dividends without prior approval from the New Jersey Commissioner of Insurance.

19. Subsequent events

On February 16, 2021, ARL sold an aggregate of 230,400 common shares to affiliates of Kelso & Company ("Kelso") and 230,400 common shares to an affiliate of Warburg Pincus LLC ("Warburg Pincus"), in each case, at a purchase price of $34.66 per common share, which was the then current market price of the common shares, based on the closing sale price of the common shares on the Nasdaq Global Select Market on February 12, 2021 (such sales collectively, the "Arch Sales"). Subsequent to the Arch Sales, ARL held approximately 10.3%, a decrease from 12.6% as of December 31, 2020, of the Parent's issued and outstanding common shares. In connection with the Arch Sales, on February 16, 2021, the Parent entered into a waiver to the Arch Voting Agreement with ARL and Gulf Reinsurance Ltd. in order to permit the Arch Sales to Kelso and Warburg Pincus.

The Parent also entered into Voting and Support Agreements with Kelso and Warburg Pincus, which are substantially similar to the Arch Voting Agreement and pursuant to which the parties agreed, among other things, to vote any common shares or preference shares owned by then (i) in favor of the adoption of the Merger Agreement and (ii) against any proposal or action that would reasonably be expected to impede or adversely affect in any material respect the merger or any of the other transactions contemplated by the Merger Agreement.