

Chubb Tempest Life Reinsurance Ltd.
and its subsidiaries
(Incorporated in Bermuda)

Consolidated Financial Statements
December 31, 2020 and 2019
(in thousands of U.S. dollars)

Chubb Tempest Life Reinsurance Ltd. and its subsidiaries

Consolidated Balance Sheets

As at December 31, 2020 and 2019

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

	2020	2019
	\$	\$
Assets		
Fixed maturities available for sale, at fair value, net of valuation allowance of \$4,655 at December 31, 2020 (amortized cost \$13,422,582 and \$12,347,315)	14,234,513	12,772,480
Fixed maturities held to maturity, at amortized cost, net of valuation allowance of \$68 at December 31, 2020 (fair value \$4,897 and \$5,854)	4,433	5,519
Equity securities, at fair value	99,366	751
Short-term investments, at cost and fair value	477,759	735,719
Other investments, at fair value	5,515,249	3,832,881
Cash	190,846	230,314
Restricted cash	11,786	27,833
Total investments and cash	20,533,952	17,605,497
Securities lending collateral	175,762	146,863
Accrued investment income	115,903	115,396
Reinsurance balances receivable, net of valuation allowance - \$1,507 and \$1,176	753,746	863,253
Prepaid reinsurance premiums	211,161	182,597
Reinsurance recoverable, net of valuation allowance - \$19,477 and \$18,006	1,345,717	1,107,035
Value of reinsurance business assumed	115,174	137,501
Deferred policy acquisition costs	535,385	531,184
Goodwill	371,087	371,087
Amounts due from affiliates	35,068	14,862
Funds withheld	551,981	470,720
Separate account assets	3,985,397	3,191,030
Investments in partially-owned insurance companies	1,619,545	330,816
Other assets	629,908	84,375
Total assets	30,979,786	25,152,216
Liabilities		
Unpaid losses and loss expenses	7,206,325	6,510,589
Future policy benefits	518,994	511,874
Unearned premiums	1,251,822	1,238,536
Reinsurance balances payable	1,802,095	896,035
Securities lending payable	175,853	146,925
Separate account liabilities	3,985,397	3,191,030
Accounts payable, accrued expenses and other liabilities	1,727,024	1,147,919
Repurchase agreements	100,073	101,994
Amounts due to affiliates	32,421	8,678
Total liabilities	16,800,004	13,753,580
Shareholder's equity		
Chubb Tempest Life Reinsurance Ltd. shareholder's equity		
Common shares (\$1 par value, 370,000 authorized 370,000 issued and outstanding)	370	370
Additional paid-in capital	4,028,068	2,828,068
Retained earnings	8,579,929	7,589,165
Accumulated other comprehensive income (AOCI)	529,732	92,773
Total Chubb Tempest Life Reinsurance Ltd. shareholder's equity	13,138,099	10,510,376
Non-controlling interest	1,041,683	888,260
Total shareholder's equity	14,179,782	11,398,636
Total liabilities and shareholder's equity	30,979,786	25,152,216

The accompanying notes are an integral part of these consolidated financial statements.

Chubb Tempest Life Reinsurance Ltd. and its subsidiaries

Consolidated Statements of Operations and Comprehensive Income

For the years ended December 31, 2020 and 2019

(in thousands of US. dollars)

	2020 \$	2019 \$
Revenues		
Gross premiums written		
Property and casualty premiums	3,985,097	4,137,695
Life and annuity premiums	372,865	374,569
	4,357,962	4,512,264
Reinsurance premiums ceded	(583,179)	(520,605)
Net premiums written	3,774,783	3,991,659
Change in unearned premiums	(891)	(103,941)
Net premiums earned	3,773,892	3,887,718
Net investment income	500,950	524,112
Other income, net	765,586	502,667
Net realized gains (losses):		
Other-than-temporary impairment (OTTI) losses gross	-	(10,050)
Portion of OTTI losses recognized in other comprehensive income	-	2,722
Net OTTI losses recognized in income	-	(7,328)
Net realized gains (losses) excluding OTTI losses	(429,945)	(177,141)
Total net realized gains (losses) (includes \$(62,342) and \$(7,622) reclassified from AOCI)	(429,945)	(184,469)
Total revenues	4,610,483	4,730,028
Expenses		
Losses and loss expenses	1,927,794	1,736,485
Future policy benefits	196,256	205,504
Policy acquisition costs	974,476	1,014,083
Administrative expenses	44,044	38,142
Interest expense	15,191	7,916
Total expenses	3,157,761	3,002,130
Net income	1,452,722	1,727,898
Less: Net income attributable to the non-controlling interest	153,423	112,077
Net income attributable to Chubb Tempest Life Reinsurance Ltd.	1,299,299	1,615,821
Other comprehensive income (OCI)		
Unrealized appreciation (depreciation) on investments	312,734	554,612
Reclassification adjustments for net realized loss included in net income	62,342	7,622
	375,076	562,234
Change in:		
Cumulative foreign currency translation adjustments	61,883	(23,128)
Other comprehensive income (loss)	436,959	539,106
Comprehensive income	1,889,681	2,267,004
Less: Comprehensive income attributable to the non-controlling interest	153,423	112,077
Comprehensive income attributable to Chubb Tempest Life Reinsurance Ltd.	1,736,258	2,154,927

The accompanying notes are an integral part of these consolidated financial statements.

Chubb Tempest Life Reinsurance Ltd. and its subsidiaries

Consolidated Statements of Shareholder's Equity

For the years ended December 31, 2020 and 2019

(in thousands of US. dollars)

	2020	2019
	\$	\$
Common shares		
Balance – beginning and end of year	370	370
Additional paid-in capital		
Balance – beginning of year	2,828,068	2,828,068
Change in year	1,200,000	-
Balance - end of year	4,028,068	2,828,068
Retained earnings		
Balance – beginning of year	7,589,165	6,121,975
Cumulative effect of adoption of accounting standards (refer to Note 3)	(8,535)	1,369
Balance – beginning of year, as adjusted	7,580,630	6,123,344
Net income	1,299,299	1,615,821
Dividends declared on Common Shares	(300,000)	(150,000)
Balance - end of year	8,579,929	7,589,165
Accumulated other comprehensive income		
<i>Net unrealized appreciation (depreciation) on investments</i>		
Balance – beginning of year	324,136	(238,098)
Change in year, before reclassification from AOCI	312,734	554,612
Amounts reclassified from AOCI to net income	62,342	7,622
Balance - end of year	699,212	324,136
<i>Cumulative foreign currency translation adjustments</i>		
Balance – beginning of year	(231,363)	(208,235)
Change in year	61,883	(23,128)
Balance - end of year	(169,480)	(231,363)
Accumulated other comprehensive income (loss)	529,732	92,773
Total Chubb Tempest Life Reinsurance Ltd. shareholder's equity	13,138,099	10,510,376
Non-controlling interest		
Balance - beginning of year	888,260	776,183
Net income	153,423	112,077
Total non-controlling interest	1,041,683	888,260

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Consolidated Statements of Cash Flows

For the years ended December 31, 2020 and 2019

(in thousands of US. dollars)

	2020	2019
	\$	\$
Cash flows from (used in) operating activities		
Net income	1,452,722	1,727,898
Adjustments to reconcile net income to net cash flows from operating activities:		
Net realized (gains) losses	429,945	184,469
Amortization of premiums/discounts on fixed maturities	21,564	8,690
Unpaid losses and loss expenses, net of reinsurance recoverable	298,474	(95,343)
Future policy benefits, net of reinsurance recoverable	9,175	10,742
Unearned premiums	44,857	124,162
Reinsurance balances payable	915,014	653,439
Accounts payable, accrued expenses, other liabilities and funds withheld	3,237	(4,174)
Reinsurance balances receivable	107,597	(410,155)
Prepaid reinsurance premiums	(30,547)	(18,706)
Accrued investment income	5	(4,106)
Deferred policy acquisition costs	(1,191)	(29,039)
Amortization and depreciation	440	1,694
Value of reinsurance business assumed	22,327	23,464
Amounts received from (paid to) parent and affiliates	(3,213)	53,618
Equity earnings	(765,847)	(503,229)
Other	(70,142)	(174,255)
Net cash flows from operating activities	2,434,417	1,549,169
Cash flows from (used in) investing activities		
Purchases of fixed maturities (available for sale and held to maturity)	(4,737,999)	(3,999,994)
Purchases of equity securities	(3,754)	-
Sales of fixed maturities available for sale	1,311,126	2,586,426
Sales of equity securities	1,016	-
Maturities and redemptions of fixed maturities (available for sale and held to maturity)	2,341,523	1,374,915
Net change in short-term investments	257,499	(350,134)
Net derivative instruments settlements	(129,098)	(163,917)
Private equity contributions	(1,452,782)	(1,065,811)
Private equity distributions	429,074	579,829
Payment, including deposit, for Huatai Group interest	(1,609,379)	-
Other	996	(1,489)
Net cash flows used in investing activities	(3,591,778)	(1,040,175)
Cash flows from (used in) financing activities		
Contributed surplus	1,200,000	-
Repayment of repurchase agreements	-	(450,000)
Dividends paid	(300,000)	(150,000)
Net proceeds from affiliated notional cash pooling program	211,239	-
Policyholder contract deposits	26,692	47,886
Policyholder contract withdrawals	(28,346)	(603)
Net cash flows from (used in) financing activities	1,109,585	(552,717)
Effect of foreign currency rate change on cash and restricted cash	(7,739)	31,846
Net increase (decrease) in cash and restricted cash	(55,515)	(11,877)
Cash and restricted cash - beginning of year	258,147	270,024
Cash and restricted cash - end of year	202,632	258,147
Supplemental cash flow information		
Interest paid	15,407	16,784

The accompanying notes are an integral part of these consolidated financial statements.

Chubb Tempest Life Reinsurance Ltd. and its subsidiaries

Notes to Consolidated Financial Statements

For the years ended December 31, 2020 and 2019

1. *General*

Chubb Tempest Life Reinsurance Ltd. (the Company or we, us, or our) was incorporated under the laws of Bermuda and is ultimately a wholly owned subsidiary of Chubb Limited (Chubb). Chubb Tempest Reinsurance Ltd. (CTR) was incorporated under the laws of Bermuda and is a 100 percent owned subsidiary.

Effective November 28, 2019, Chubb Life Insurance Myanmar Limited (CLIM), a newly established wholly owned subsidiary of CTR, acquired a license to write life business in Myanmar.

ACE Europe Life SE, Oasis Investments Limited and Oasis Investments 2 Ltd are consolidated in these financial statements as CTR owns 100%, 66.7% and 66.7%, respectively. There has been no change in the ownership percentages held during 2020.

2. *Principal Business*

The Company provides life and annuity (Life) reinsurance and, through CTR, property catastrophe, property and casualty reinsurance as well as Life reinsurance for a diverse group of customers worldwide.

3. *Significant accounting policies:*

(a) **Basis of presentation**

The accompanying Consolidated financial statements, which include the accounts of the Company and its subsidiaries, have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) and, in the opinion of management, reflect all adjustments necessary for a fair statement of the results and financial position for such periods. All significant intercompany accounts and transactions including internal reinsurance transactions have been eliminated. Certain items in the prior year financial statements have been reclassified to conform to the current year presentation.

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, 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. Amounts included in the Consolidated financial statements reflect the Company's best estimates and assumptions; actual amounts could differ materially from these estimates. The Company's principal estimates include:

- unpaid loss and loss expense reserves and future policy benefits reserves;
- the amortization of deferred policy acquisition costs;
- value of reinsurance business assumed;
- reinsurance recoverable, including a valuation allowance for uncollectible reinsurance;
- the assessment of risk transfer for certain reinsurance contracts;
- the valuation of the investment portfolio and assessment of valuation allowance for expected credit losses;
- the valuation of certain derivatives including those related to guaranteed living benefits (GLB); and
- the assessment of goodwill for impairment.

(b) **Premiums**

Premiums are generally recorded as written upon inception of the policy. For multi-year policies for which premiums written are payable in annual installments, only the current annual premium is included as written at policy inception due to the ability of the insured/reinsured to commute or cancel coverage within the term of the policy. The remaining annual premiums are recorded as written at each successive anniversary date within the multi-year term.

For property and casualty (P&C) reinsurance products, premiums written are primarily earned on a pro-rata basis over the terms of the policies to which they relate. Unearned premiums represent the portion of premiums written applicable to the unexpired portion of the policies in force. For retrospectively-rated policies, written premiums are adjusted to

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reflect expected ultimate premiums consistent with changes to incurred losses, or other measures of exposure as stated in the policy, and earned over the policy coverage period.

Reinsurance premiums from traditional life and annuity policies with life contingencies are generally recognized as revenue when due from policyholders. Traditional life policies include those contracts with fixed and guaranteed premiums and benefits. Benefits and expenses are matched with such income to result in the recognition of profit over the life of the contracts.

Mandatory reinstatement premiums assessed on reinsurance policies are earned in the period of the loss event that gave rise to the reinstatement premiums. All remaining unearned premiums are recognized over the remaining coverage period.

Premiums from long duration contracts such as certain long duration personal accident and health (A&H) policies are generally recognized as revenue when due from policyholders. Benefits and expenses are matched with such income to result in the recognition of profit over the life of the contracts.

Retroactive loss portfolio transfer (LPT) contracts in which the insured loss events occurred prior to the inception of the contract are evaluated to determine whether they meet the established criteria for reinsurance accounting. If reinsurance accounting is appropriate, written premiums are fully earned and corresponding losses and loss expenses recognized at the inception of the contract. 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 premiums assumed are based on information provided by ceding companies supplemented by the Company's own estimates of premium when the Company has not received ceding company reports. Estimates are reviewed and adjustments are recorded in the period in which they are determined. Premiums are earned over the coverage terms of the related reinsurance contracts and range from one to three years.

(c) Deferred policy acquisition costs

Policy acquisition costs consist of commissions, premium taxes, and certain underwriting costs related directly to the successful acquisition of new or renewal insurance contracts. Policy acquisition costs are deferred and amortized. Amortization is recorded in Policy acquisition costs in the Consolidated statements of operations. Policy acquisition costs on P&C contracts are generally amortized ratably over the period in which premiums are earned. Policy acquisition costs are reviewed to determine if they are recoverable from future income, including investment income. Unrecoverable policy acquisition costs are expensed in the period identified.

Policy acquisition costs on traditional long-duration contracts are amortized over the estimated life of the contracts, generally in proportion to premium revenue recognized based upon the same assumptions used in estimating the liability for future policy benefits. For non-traditional long-duration contracts, the Company amortizes policy acquisition costs over the expected life of the contracts in proportion to expected gross profits. The effect of changes in estimates of expected gross profits is reflected in the period the estimates are revised. Policy acquisition costs are reviewed to determine if they are recoverable from future income, including investment income. Unrecoverable policy acquisition costs are expensed in the period identified.

(d) Reinsurance

The Company assumes and cedes reinsurance with other insurance companies to provide greater diversification of business and minimize the net loss potential arising from large risks. Ceded reinsurance contracts do not relieve the Company of its primary obligation to its policyholders.

For both ceded and assumed reinsurance, risk transfer requirements must be met in order to account for a contract as reinsurance, principally resulting in the recognition of cash flows under the contract as premiums and losses. To meet risk transfer requirements, a reinsurance contract must include insurance risk, consisting of both underwriting and timing risk, and a reasonable possibility of a significant loss for the assuming entity. To assess risk transfer for certain contracts, the Company generally develops expected discounted cash flow analyses at contract inception.

Reinsurance recoverable includes the balances due from reinsurance companies for paid and unpaid losses and loss expenses and future policy benefits that will be recovered from reinsurers, based on contracts in force. The method

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for determining the reinsurance recoverable on unpaid losses and loss expenses incurred but not reported (IBNR) involves actuarial estimates consistent with those used to establish the associated liability for unpaid losses and loss expenses as well as a determination of the Company's ability to cede unpaid losses and loss expenses under the terms of the reinsurance agreement.

Reinsurance recoverable is presented net of a valuation allowance for uncollectible reinsurance determined based upon a review of the financial condition of the reinsurers and other factors. The valuation allowance for uncollectible reinsurance is based on an estimate of the amount of the reinsurance recoverable balance that the Company will ultimately be unable to recover due to reinsurer insolvency, a contractual dispute, or any other reason. The valuation of this allowance includes several judgments including certain aspects of the allocation of reinsurance recoverable on IBNR claims by reinsurer and a default analysis to estimate uncollectible reinsurance. The primary components of the default analysis are reinsurance recoverable balances by reinsurer, net of collateral, and default factors used to determine the portion of a reinsurer's balance deemed uncollectible. The definition of collateral for this purpose requires some judgment and is generally limited to assets held in trust, letters of credit, and liabilities held by the Company with the same legal entity for which it believes there is a contractual right of offset. The determination of the default factor is principally based on the financial strength rating of the reinsurer. Default factors require considerable judgment and are determined using the current financial strength rating, or rating equivalent, of each reinsurer as well as other key considerations and assumptions. Changes in the valuation allowance for uncollectible reinsurance recoverables are recorded in Losses and loss expenses in the Consolidated statements of operations. The Company's methodology to calculate the valuation allowance was consistent with the new expected credit loss guidance adopted on January 1, 2020. Therefore, there was no material change to the valuation allowance upon adoption. The more significant considerations include, but are not necessarily limited to, the following:

- For reinsurers that maintain a financial strength rating from a major rating agency, and for which recoverable balances are considered representative of the larger population (i.e., default probabilities are consistent with similarly rated reinsurers and payment durations conform to averages), the financial rating is based on a published source and the default factor is based on published default statistics of a major rating agency applicable to the reinsurer's particular rating class. When a recoverable is expected to be paid in a brief period of time by a highly rated reinsurer, such as certain property catastrophe claims, a default factor may not be applied;
- For balances recoverable from reinsurers that are both unrated by a major rating agency and for which management is unable to determine a credible rating equivalent based on a parent, affiliate, or peer company, the Company determines a rating equivalent based on an analysis of the reinsurer that considers an assessment of the creditworthiness of the particular entity, industry benchmarks, or other factors as considered appropriate. The Company then applies the applicable default factor for that rating class. For balances recoverable from unrated reinsurers for which the ceded reserve is below a certain threshold, the Company generally applies a default factor of 34 percent, consistent with published statistics of a major rating agency;
- For balances recoverable from reinsurers that are either insolvent or under regulatory supervision, the Company establishes a default factor and resulting valuation allowance for uncollectible reinsurance based on reinsurer-specific facts and circumstances. Upon initial notification of an insolvency, the Company generally recognizes expense for a substantial portion of all balances outstanding, net of collateral, through a combination of write-offs of recoverable balances and increases to the valuation allowance for uncollectible reinsurance. When regulatory action is taken on a reinsurer, the Company generally recognizes a default factor by estimating an expected recovery on all balances outstanding, net of collateral. When sufficient credible information becomes available, the Company adjusts the valuation allowance for uncollectible reinsurance by establishing a default factor pursuant to information received; and
- For other recoverables, management determines the valuation allowance for uncollectible reinsurance based on the specific facts and circumstances of that dispute.

The methods used to determine the reinsurance recoverable balance and related valuation allowance for uncollectible reinsurance are regularly reviewed and updated and any resulting adjustments are reflected in earnings in the period identified.

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The methods used to determine the valuation allowance for uncollectible high deductible recoverable amounts and valuation allowance for insurance and reinsurance balances receivable are similar to the processes used to determine the valuation allowance for uncollectible reinsurance recoverable.

Prepaid reinsurance premiums represent the portion of premiums ceded to reinsurers applicable to the unexpired coverage terms of the reinsurance contracts in force.

The value of reinsurance business assumed is the deferred gain or loss related to loss portfolio transfers assumed and is calculated as the difference between the estimated ultimate value of the liabilities assumed under retroactive reinsurance contracts over consideration received. The gain or loss is amortized and recorded to Losses and loss expenses based on the payment pattern of the losses assumed. The unamortized value is reviewed regularly to determine if it is recoverable based upon the terms of the contract, estimated losses and loss expenses, and anticipated investment income. Unrecoverable amounts are expensed in the period identified.

(e) Investments

Fixed maturities, equity securities, and short-term investments

Fixed maturities are classified as either available for sale or held to maturity.

- Available for sale (AFS) portfolio is reported at fair value, net of a valuation allowance for credit losses, with changes in fair value recorded as a separate component of AOCI in Shareholder's equity.
- Held to maturity portfolio includes securities for which the Company has the ability and intent to hold to maturity or redemption and is reported at amortized cost, net of valuation allowance for credit losses.

Equity securities are reported at fair value with changes in fair value recorded in net realized gains (losses) on the Consolidated statement of operations.

Short-term investments comprise securities due to mature within one year of the date of purchase and are recorded at fair value which typically approximates cost.

Interest, dividend income, amortization of fixed maturity market premiums and discounts related to these securities are recorded in Net investment income, net of investment management and custody fees, in the Consolidated statement of operations.

For mortgage-backed securities (MBS) and any other holdings for which there is a prepayment risk, prepayment assumptions are evaluated and revised as necessary. Any adjustments required due to the resultant change in effective yields and maturities are recognized prospectively. Prepayment fees or call premiums that are only payable when a security is called prior to its maturity are earned when received and reflected in Net investment income.

Valuation allowance for fixed income securities

Management evaluates current expected credit losses (CECL) for all HTM securities each quarter. U.S. treasury and agency securities and U.S. government agency mortgage-backed securities are assumed to have no risk of non-payment and therefore are excluded from the CECL evaluation. The remaining HTM securities are evaluated for potential credit loss on a collective pool basis. The Company elected to pool HTM securities by 1) external credit rating and 2) time to maturity (duration). These characteristics are the most representative of similar risk characteristics within the Company's portfolio. The Company pools HTM securities and calculates an expected credit loss for each pool using Moody's corporate bond default average, corporate bond recovery rate, and an economic cycle multiplier. The multiplier is based on the leading economic index and will adjust the average default frequency for a forward-looking economic outlook.

Management monitors the credit quality of HTM securities through the review of external credit ratings on a quarterly basis.

Management evaluates expected credit losses (ECL) for AFS securities when fair value is below amortized cost. AFS securities are evaluated for potential credit loss on an individual security level but the evaluation may use assumptions consistent with expectations of credit losses for a group of similar securities. If management has the intent to sell or will be required to sell the security before recovery, the entire impairment loss will be recorded through income to net

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realized gains and losses. If management does not have the intent to sell or will not be required to sell the security before recovery, an allowance for credit losses is established and is recorded through income to net realized gains and the losses, and the non-credit loss portion is recorded through other comprehensive income.

Examples of criteria that are collectively evaluated to determine if a credit loss has occurred include the following:

- The extent to which the fair value is less than amortized cost;
- Adverse conditions related to the security, industry, or geographic area;
- Downgrades in the security's credit rating by a rating agency; and
- Failure of the issuer to make scheduled principal or interest payments

AFS securities that meet any one of the criteria included above will be subject to a discounted cash flow analysis by comparing the present value of expected future cash flows with the amortized cost basis. Projected cash flows are driven primarily by assumptions regarding probability of default and the timing and amount of recoveries associated with defaults. The Company developed the projected cash flows using market data, issuer-specific information, and credit ratings. In combination with contractual cash flows and the use of historical default and recovery data by Moody's Investors Service (Moody's) rating category the Company generates expected cash flows using the average cumulative issuer-weighted global default rates by letter rating.

If the present value of expected future cash flows is less than the amortized cost, a credit loss exists and an allowance for credit losses will be recognized. If the present value of expected future cash flows is equal to or greater than the amortized cost basis, management will conclude an expected credit loss does not exist.

Management reviews credit losses and the valuation allowance for expected credit losses each quarter. When all or a portion of a fixed maturity security is identified to be uncollectible and written off, the valuation allowance for expected credit losses is reduced by the same amount. In general, a security is considered uncollectible no later than when all efforts to collect contractual cash flows have been exhausted. Below are considerations for when a security may be deemed uncollectible:

- The Company has sufficient information to determine that the issuer of the security is insolvent;
- The Company receives notice that the issuer of the security has filed for bankruptcy, and the collectability is expected to be adversely impacted by the bankruptcy;
- The issuer of a security has violated multiple debt covenants;
- Amounts have been past due for a specified period of time with no response from the issuer;
- A significant deterioration in the value of the collateral has occurred;
- The Company has received correspondence from the issuer of the security indicating that it doesn't intend to pay the contractual principal and interest.

The Company elected to not measure an allowance for accrued investment income as uncollectible balances are written off in a timely manner, typically 30 to 45 days after uncollected balances are due.

Prior to January 1, 2020, fixed income securities were evaluated individually for other-than-temporary impairment (OTTI) and a realized loss was recognized once certain criteria were met.

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Other investments

Other investments principally comprise investment funds, limited partnerships and partially-owned investment companies.

Investment funds and limited partnerships

Investment funds, limited partnerships and all other investments over which the Company cannot exercise significant influence are accounted for as follows. Generally, the Company owns less than three percent of the investee's shares.

- Income and expenses from these funds are reported within Net investment income.
- These funds are carried at net asset value which approximates fair value with changes in fair value recorded in net realized gains (losses) on the Consolidated statement of operations. Refer to Note 10 for a further discussion on net asset value.
- As a result of the timing of the receipt of valuation data from the investment managers, these investments are generally reported on a three month lag.
- Sales of these investments are reported within Net realized gains (losses).

Partially-owned investment companies

Partially-owned investment companies where the Company's ownership interest is in excess of three percent are accounted for under the equity method because the Company exerts significant influence. These investments apply investment company accounting to determine operating results, and the Company retains the investment company accounting in applying the equity method.

- This means that investment income, realized gains or losses, and unrealized gains or losses are included in the portion of equity earnings reflected in Other (income) expense.
- As a result of the timing of the receipt of valuation data from the investment managers, these investments are generally reported on a three month lag.

Investments in partially-owned insurance companies

Investments in partially-owned insurance companies primarily represent direct investments in which the Company has significant influence and as such, meet the requirements for equity accounting. The Company reports its share of the net income or loss of the partially-owned insurance companies in Other (income) expense.

Other

- Policy loans are carried at outstanding balance and interest income is reflected in Net investment income.

Derivative instruments

The Company recognizes all derivatives at fair value in the Consolidated balance sheets in either Accounts payable, accrued expenses, and other liabilities or Other assets. Changes in fair value are included in Net realized gains (losses) in the Consolidated statements of operations. The Company did not designate any derivatives as accounting hedges during 2020 or 2019. The Company participates in derivative instruments in two principal ways:

- (i) To sell protection to customers as an insurance or reinsurance contract that meets the definition of a derivative for accounting purposes. This category principally comprised the Company's GLB contracts; and
- (ii) To mitigate financial risks and manage certain investment portfolio risks and exposures, including assets and liabilities held in foreign currencies. The Company uses derivative instruments including futures, swaps, and foreign currency forward contracts. Refer to Note 8 for additional information.

Collateral held by brokers equal to a percentage of the total value of open futures contracts is included in the investment portfolio.

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Securities lending programs

The Company participates in a securities lending program operated by a third party banking institution whereby certain assets are loaned to qualified borrowers and from which the Company earns an incremental return which is recorded within Net investment income in the Consolidated statement of operations.

Borrowers provide collateral, in the form of either cash or approved securities, at a minimum of 102 percent of the fair value of the loaned securities. Each security loan is deemed to be an overnight transaction. Cash collateral is invested in a collateral pool which is managed by the banking institution. The collateral pool is subject to written investment guidelines with key objectives which include the safeguard of principal and adequate liquidity to meet anticipated redemptions. The fair value of the loaned securities is monitored on a daily basis, with additional collateral obtained or refunded as the fair value of the loaned securities changes.

The collateral is held by the third party banking institution, and the collateral can only be accessed in the event that the institution borrowing the securities is in default under the lending agreement. As a result of these restrictions, the Company considers its securities lending activities to be non-cash investing and financing activities. An indemnification agreement with the lending agent protects the Company in the event a borrower becomes insolvent or fails to return any of the securities on loan. The fair value of the securities on loan is included in fixed maturities and equity securities in the Consolidated balance sheets. The securities lending collateral is reported as a separate line in the Consolidated balance sheets with a related liability reflecting the Company's obligation to return the collateral plus interest.

Repurchase agreements

Similar to securities lending arrangements, securities sold under repurchase agreements, whereby the Company sells securities and repurchases them at a future date for a predetermined price, are accounted for as collateralized investments and borrowings and are recorded at the contractual repurchase amounts plus accrued interest. Assets to be repurchased are the same or substantially the same as the assets transferred and the transferor, through right of substitution, maintains the right and ability to redeem the collateral on short notice. The fair value of the underlying securities is included in fixed maturities. In contrast to securities lending programs, the use of cash received is not restricted. The Company reports the obligation to return the cash as Repurchase agreements in the Consolidated balance sheets and record the fees under these repurchase agreements within Interest expense on the Consolidated statement of operations.

Refer to Note 10 for a discussion on the determination of fair value for the Company's various investment securities.

(f) Cash

Cash includes cash on hand and deposits with an original maturity of three months or less at time of purchase. Cash held by external money managers is included in Short-term investments.

Chubb has agreements with a third party bank provider which implemented two international multi-currency notional cash pooling programs. In each program, participating Chubb entities establish deposit accounts in different currencies with the bank provider and each day the credit or debit balances in every account are notionally translated into a single currency (U.S. dollars) and then notionally pooled. The bank extends overdraft credit to any participating Chubb entity as needed, provided that the overall notionally-pooled balance of all accounts in each pool at the end of each day is at least zero. Actual cash balances are not physically converted and are not commingled between legal entities. Any overdraft balances incurred under this program by a Chubb entity would be guaranteed by Chubb Limited (up to \$300 million in the aggregate). The syndicated letter of credit facility allows for same day drawings to fund a net pool overdraft should participating Chubb entities overdraw contributed funds from the pool. The Company is a participating Chubb entity.

Restricted cash

Restricted cash in the Consolidated balance sheets represents amounts held for the benefit of third parties and is legally or contractually restricted as to withdrawal or usage. Amounts include deposits with U.S. and non-U.S. regulatory authorities and trust funds set up for the benefit of ceding companies.

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The following table provides a reconciliation of cash and restricted cash reported within the Consolidated balance sheets that total to the amounts shown in the Consolidated statements of cash flows:

(in thousands of U.S. dollars)	2020	2019
Cash	\$ 190,846	\$ 230,314
Restricted Cash	11,786	27,833
Total cash and restricted cash shown in the Consolidated statements of cash flows	\$ 202,632	\$ 258,147

(g) Goodwill

Goodwill represents the excess of the cost of acquisitions over the fair value of net assets acquired and is not amortized. Goodwill is assigned at acquisition to the applicable reporting unit of the acquired entities giving rise to the goodwill. Goodwill impairment tests are performed annually, or more frequently if circumstances indicate a possible impairment. For goodwill impairment testing, the Company uses a qualitative assessment to determine whether it is more likely than not (i.e., more than a 50 percent probability) that the fair value of a reporting unit is greater than its carrying amount. If assessment indicates less than a 50 percent probability that fair value exceeds carrying value, the Company quantitatively estimates a reporting unit's fair value. Goodwill recorded in connection with investments in partially-owned insurance companies is recorded in Investments in partially-owned insurance companies and is also measured for impairment annually.

(h) Unpaid losses and loss expenses

A liability is established for the estimated unpaid losses and loss expenses under the terms of, and with respect to, the Company's treaties and agreements. Similar to premiums that are recognized as revenues over the coverage period of the policy, a liability for unpaid losses and loss expenses is recognized as expense when insured events occur over the coverage period of the policy. This liability includes a provision for both reported claims (case reserves) and incurred but not reported claims (IBNR reserves). IBNR reserve estimates are generally calculated by first projecting the ultimate cost of all losses that have occurred (expected losses), and then subtracting paid losses, case reserves, and loss expenses. The methods of determining such estimates and establishing the resulting liability are reviewed regularly and any adjustments are reflected in income in the period in which they become known. Future developments may result in losses and loss expenses materially greater or less than the recorded amounts. Except for certain reserves for unsettled claims, the Company does not discount its property and casualty loss reserves.

Prior period development arises from changes to loss estimates recognized in the current year that relate to loss reserves first reported in previous calendar years and excludes the effect of losses from the development of earned premiums from previous accident years.

For purposes of analysis and disclosure, management views prior period development to be changes in the nominal value of loss estimates from period to period, net of premium and profit commission adjustments on loss sensitive contracts. Prior period development generally excludes changes in loss estimates that do not arise from the emergence of claims, such as those related to uncollectible reinsurance, interest, unallocated loss adjustment expenses, or foreign currency. Accordingly, specific items excluded from prior period development include the following: gains/losses related to foreign currency remeasurement; losses recognized from the early termination or commutation of reinsurance agreements that principally relate to the time value of money; changes in the value of reinsurance business assumed reflected in losses incurred but principally related to the time value of money; and losses that arise from changes in estimates of earned premiums from prior accident years. Except for foreign currency remeasurement, which is included in Net realized gains (losses), these items are included in current year losses.

(i) Future policy benefits

The valuation of long-duration contract reserves requires management to make estimates and assumptions regarding expenses, mortality, persistency, and investment yields. Estimates are primarily based on historical experience and information provided by ceding companies and include a margin for adverse deviation. Interest rates used in calculating reserves range from less than 1.0 percent to 6.5 percent for both December 31, 2020 and 2019. Actual results could differ materially from these estimates. Management monitors actual experience and where circumstances

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warrant, will revise assumptions and the related reserve estimates. Revisions are recorded in the period they are determined.

(j) Assumed reinsurance programs involving minimum benefit guarantees under annuity contracts

The Company reinsures various death and living benefit guarantees associated with variable annuities issued primarily in the United States. We generally receive a monthly premium during the accumulation phase of the covered annuities (in-force) based on a percentage of either the underlying accumulated account values or the underlying accumulated guaranteed values. Depending on an annuitant's age, the accumulation phase can last many years. To limit the Company's exposure under these programs, all reinsurance treaties include annual or aggregate claim limits and many include an aggregate deductible.

The guarantees which are payable on death, referred to as guaranteed minimum death benefits (GMDB), principally cover shortfalls between accumulated account value at the time of an annuitant's death and either i) an annuitant's total deposits; ii) an annuitant's total deposits plus a minimum annual return; or iii) the highest accumulated account value attained at any policy anniversary date. In addition, a death benefit may be based on a formula specified in the variable annuity contract that uses a percentage of the growth of the underlying contract value. Liabilities for GMDBs are based on cumulative assessments or premiums to date multiplied by a benefit ratio that is determined by estimating the present value of benefit payments and related adjustment expenses divided by the present value of cumulative assessment or expected premiums during the contract period.

Under reinsurance programs covering GLBs, we assume the risk of guaranteed minimum income benefits (GMIB) associated with variable annuity contracts. The GMIB risk is triggered if, at the time the contract holder elects to convert the accumulated account value to a periodic payment stream (annuitize), the accumulated account value is not sufficient to provide a guaranteed minimum level of monthly income. The GLB reinsurance products meet the definition of a derivative for accounting purposes and are carried at fair value with changes in fair value recognized in Realized gains (losses) in the Consolidated statement of operations. Refer to Note 8 for additional information.

(k) Foreign currency remeasurement and translation

The functional currency for each of the Company's foreign operations is generally the currency of the local operating environment. Transactions in currencies other than a foreign operation's functional currency are remeasured into the functional currency and the resulting foreign exchange gains and losses are reflected in Net realized gains (losses) in the Consolidated statements of operations. Functional currency assets and liabilities are translated into the reporting currency, U.S. dollars, using period end exchange rates and the related translation adjustments are recorded as a separate component of AOCI in Shareholder's equity. Functional statement of operations amounts expressed in functional currencies are translated using average exchange rates.

(l) Administrative expenses

Administrative expenses generally include all operating costs other than policy acquisition costs.

(m) Cash flow information

Premiums received and losses paid associated with the GLB reinsurance products, which as discussed previously meet the definition of a derivative instrument for accounting purposes, are included within Cash flows from financing activities. Cash flows, such as settlements and collateral requirements, associated with other derivative instruments are included on a net basis within Cash flows from investing activities. Purchases, sales, and maturities of short-term investments are recorded on a net basis within Cash flows from investing activities.

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(n) Share-based compensation

The Company receives an allocation of share-based compensation costs from its ultimate parent, Chubb Limited. Chubb Limited measures and records compensation cost for all share-based payment awards at grant-date fair value. Compensation costs are recognized for vesting of share-based payment awards with only service conditions on a straight-line basis over the requisite service period for each separately vesting portion of the award as if the award were, in substance, multiple awards. For retirement-eligible participants, compensation costs for certain share-based payment awards are recognized immediately at the date of grant.

(o) New accounting pronouncements

Adopted in 2020

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

Effective January 1, 2020, the Company adopted, on a modified retrospective basis, new guidance on the accounting for credit losses of financial instruments that are measured at amortized cost, including held to maturity securities, reinsurance recoverables, and high deductible receivables, by applying an approach based on the current expected credit losses (CECL). The estimate of expected credit losses considers historical information, current information, as well as reasonable and supportable forecasts, including estimates of prepayments. In addition, the guidance also amended the current available for sale (AFS) debt security other-than-temporary impairment model by requiring an estimate of the expected credit loss (ECL) only when the fair value is below the amortized cost of the asset. The length of time the fair value of an AFS security has been below the amortized cost no longer impacts the determination of whether a potential credit loss exists. The AFS security model also requires the use of a valuation allowance as compared to the current practice of writing down the asset.

In 2020, the Company recognized a cumulative effect adjustment and decreased beginning retained earnings by approximately \$6.8 million, principally related to the valuation allowance for credit losses. We also adopted the required disclosures within Note 4 Investments and Note 6 Reinsurance. Result for reporting periods prior to January 1, 2020 are presented in accordance with the previous guidance.

Accounting guidance not yet adopted

Effects of Reference Rate Reform on Financial Reporting

In March 2020, the FASB issued guidance which provides optional expedients and exceptions for applying GAAP to investments, derivatives, or other transactions that reference the London Interbank Offered Rate (LIBOR) or another reference rate expected to be discontinued because of reference rate reform. Along with the optional expedients, the amendments include a general principle that permits an entity to consider contract modifications due to reference reform to be an event that does not require contract re-measurement at the modification date or reassessment of a previous accounting determination. Additionally, a company may make a one-time election to sell, transfer, or both sell and transfer debt securities classified as held to maturity that reference a rate affected by reference rate reform and that were classified as held to maturity before January 1, 2020. This standard may be elected over time through December 31, 2022 as reference rate reform activities occur. The Company's exposure to LIBOR is limited and, accordingly, the Company does not expect reference rate reform to have a material impact on the Company's consolidated financial statements.

Targeted Improvements to the Accounting for Long-Duration Contracts

In August 2018, the FASB issued guidance to improve the existing recognition, measurement, presentation, and disclosure requirements for long-duration contracts issued by an insurance entity. The amendments in this update require more frequent updating of assumptions and a standardized discount rate for the future policy benefit liability, a requirement to use the fair value measurement model for policies with market risk benefits, simplified amortization of deferred acquisition costs, and enhanced disclosures. This standard will be effective for the Company in the first quarter of 2023 with early adoption permitted. The Company is currently assessing the effect of adopting this guidance on the financial condition and results of operations. The Company will be better able to quantify the effect of adopting this standard as progress is made on the implementation process and the Company draws nearer to the date of adoption.

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4. Investments

(a) Fixed maturities

Effective January 1, 2020, the Company adopted new accounting guidance that requires a valuation allowance for credit losses to be established for fixed maturity securities classified as held to maturity (HTM) or available for sale (AFS).

		2020				
		(in thousands of U.S. dollars)				
		Amortized Cost	Valuation Allowance	Gross Unrealized Appreciation	Gross Unrealized Depreciation	Fair Value
<u>Available for sale</u>						
U.S. Treasury /Agency	\$	381,915	-	28,995	(135)	\$ 410,775
Non-U.S.		3,424,813	(2,956)	262,153	(3,976)	3,680,034
Corporate and asset- backed securities		5,979,107	(1,669)	371,020	(9,126)	6,339,332
Mortgage-backed securities		3,393,438	(30)	148,188	(2,103)	3,539,493
Municipal		243,309	-	21,572	(2)	264,879
	\$	<u>13,422,582</u>	<u>(4,655)</u>	<u>831,928</u>	<u>(15,342)</u>	<u>\$ 14,234,513</u>
<u>Held to maturity</u>						
Corporate and asset- backed securities	\$	1,308	(68)	100	-	\$ 1,340
Mortgage-backed securities		3,193	-	364	-	3,557
	\$	<u>4,501</u>	<u>(68)</u>	<u>464</u>	<u>-</u>	<u>\$ 4,897</u>
		2019				
		(in thousands of U.S. dollars)				
		Amortized Cost	Gross Unrealized Appreciation	Gross Unrealized Depreciation	Fair Value	OTTI Recognized in AOCI
<u>Available for sale</u>						
U.S. Treasury /Agency	\$	446,410	13,884	(92)	\$ 460,202	\$ -
Non-U.S.		3,063,054	147,851	(9,162)	3,201,743	(2,719)
Corporate and asset- backed securities		5,436,386	203,402	(17,009)	5,622,779	(183)
Mortgage-backed securities		3,183,403	82,625	(3,020)	3,263,008	(74)
Municipal		218,062	9,971	(3,285)	224,748	-
	\$	<u>12,347,315</u>	<u>457,733</u>	<u>(32,568)</u>	<u>\$ 12,772,480</u>	<u>\$ (2,976)</u>
<u>Held to maturity</u>						
Corporate and asset- backed securities	\$	1,461	58	-	\$ 1,519	\$ 1,461
Mortgage-backed securities		4,058	277	-	4,335	4,058
	\$	<u>5,519</u>	<u>335</u>	<u>-</u>	<u>\$ 5,854</u>	<u>\$ 5,519</u>

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The following table presents the amortized cost of the Company HTM securities according to S&P rating at December 31, 2020.

(in thousands of U.S. dollars)	Amortized cost	% of Total
AAA	\$ 125	3%
AA	4,215	94%
A	-	-
BBB	-	-
BB	-	-
B	-	-
Other	161	3%
	<u>\$ 4,501</u>	<u>100%</u>

The following table presents fixed maturities by contractual maturity at December 31, 2020 and 2019.

(in thousands of U.S. dollars)	2020		2019	
	Fair Value	Net Carrying Value	Fair Value	Amortized Cost
<u>Available for sale; maturity period</u>				
Due in 1 year or less	\$ 560,205	\$ 560,205	\$ 600,917	\$ 596,627
Due after 1 year through 5 years	3,939,722	3,939,722	3,482,601	3,396,346
Due after 5 years through 10 years	4,488,135	4,488,135	4,090,675	3,929,803
Due after 10 years	1,706,958	1,706,958	1,335,279	1,241,136
	<u>10,695,020</u>	<u>10,695,020</u>	<u>9,509,472</u>	<u>9,163,912</u>
Mortgage-backed securities	3,539,493	3,539,493	3,263,008	3,183,403
	<u>\$ 14,234,513</u>	<u>\$ 14,234,513</u>	<u>\$ 12,772,480</u>	<u>\$ 12,347,315</u>
<u>Held to maturity; maturity period</u>				
Due in 1 year or less	\$ 1,051	\$ 1,022	\$ -	\$ -
Due after 1 year through 5 years	-	-	1,107	1,055
Due after 10 years	289	218	412	406
	<u>1,340</u>	<u>1,240</u>	<u>1,519</u>	<u>1,461</u>
Mortgage-backed securities	3,557	3,193	4,335	4,058
	<u>\$ 4,897</u>	<u>\$ 4,433</u>	<u>\$ 5,854</u>	<u>\$ 5,519</u>

Expected maturities could differ from contractual maturities because borrowers may have the right to call or prepay obligations, with or without call or prepayment penalties.

(b) Gross unrealized loss

Fixed maturities in an unrealized loss position at December 31, 2020 comprised both investment grade and below investment grade securities for which fair value declined primarily due to widening credit spreads since the date of purchase.

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The following table present, for AFS fixed maturities in an unrealized loss position at December 31, 2020 and 2019 (including securities on loan) that are not deemed to have credit losses, the aggregate fair value and gross unrealized loss by length of time the security has continuously been in an unrealized loss position:

(in thousands of U.S. dollars)

	2020					
	0 - 12 Months		Over 12 Months		Total	
	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss
U.S. Treasury /Agency	\$ 38,992	\$ (135)	\$ -	\$ -	\$ 38,992	\$ (135)
Non-U.S.	217,491	(2,735)	17,032	(912)	234,523	(3,647)
Corporate and asset-backed securities	412,480	(5,535)	97,739	(2,097)	510,219	(7,632)
Mortgage-backed securities	143,335	(1,411)	11,313	(648)	154,648	(2,059)
Municipal	673	(2)	-	-	673	(2)
Total AFS fixed maturities	<u>\$ 812,971</u>	<u>\$ (9,818)</u>	<u>\$ 126,084</u>	<u>\$ (3,657)</u>	<u>\$ 939,055</u>	<u>\$ (13,475)</u>

The following table presents, for all securities in an unrealized loss position (including securities on loan), the aggregate fair value and gross unrealized loss by length of time the security has continuously been in an unrealized loss position:

(in thousands of U.S. dollars)

	2019					
	0 - 12 Months		Over 12 Months		Total	
	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss
U.S. Treasury /Agency	\$ 31,017	\$ (89)	\$ 7,572	\$ (3)	\$ 38,589	\$ (92)
Non-U.S.	286,827	(3,468)	163,224	(5,694)	450,051	(9,162)
Corporate and asset-backed securities	401,527	(7,518)	216,148	(9,491)	617,675	(17,009)
Mortgage-backed securities	240,049	(1,810)	183,408	(1,210)	423,457	(3,020)
Municipal	6,684	(41)	22,262	(3,244)	28,946	(3,285)
Total AFS fixed maturities	<u>\$ 966,104</u>	<u>\$ (12,926)</u>	<u>\$ 592,614</u>	<u>\$ (19,642)</u>	<u>\$ 1,558,718</u>	<u>\$ (32,568)</u>

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(c) Net realized gains (losses)

The following table presents, for the years ended December 31, 2020 and 2019, a roll-forward of pre-tax credit losses related to fixed maturities for which a portion of OTTI was recognized in OCI.

(in thousands of U.S. dollars)	2019
Balance of credit losses related to securities still held-beginning of year	\$ 7,357
Additions where no OTTI was previously recorded	1,743
Additions where an OTTI was previously recorded	1,126
Reductions for securities sold during the period	(7,206)
Balance of credit losses related to securities still held - end of year	\$ 3,020

The following table presents, for the years ended December 31, 2020 and 2019, the components of Net realized gains (losses) and the change in net unrealized appreciation (depreciation) of investments.

(in thousands of U.S. dollars)	2020	2019
Fixed maturities:		
OTTI on fixed maturities, gross	\$ -	\$ (10,050)
OTTI on fixed maturities recognized in OCI, pre-tax	-	2,722
OTTI on fixed maturities, net	-	(7,328)
Gross realized gains excluding OTTI	22,184	37,492
Gross realized losses excluding OTTI	(57,711)	(37,786)
Recovery of expected credit losses	3,282	
Impairment ⁽¹⁾	(30,097)	
Total fixed maturities	(62,342)	(7,622)
Equity securities	68,418	(130)
Other investments	(24,339)	(9,580)
Foreign exchange losses	(36,860)	2,314
Derivative instruments	(67,061)	(28,026)
Fair value adjustments on insurance derivative	(202,007)	(3,830)
S&P futures	(108,288)	(137,619)
Other	2,534	24
Net realized gains (losses)	\$ (429,945)	\$ (184,469)

(in thousands of U.S. dollars)	2020	2019
Change in net unrealized appreciation (depreciation) on investments:		
Fixed maturities available for sale	\$ 378,700	\$ 566,129
Fixed maturities held to maturity	(327)	(423)
Other	(3,297)	(3,472)
Change in net unrealized appreciation (depreciation) on investments	\$ 375,076	\$ 562,234
Total net realized gains (losses) and change in net unrealized appreciation (depreciation) on investments	\$ (54,869)	\$ 377,765

⁽¹⁾ Relates to certain securities the company intended to sell and securities written to market entering default.

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Realized gains and losses from equity securities and other investments include both sales of securities and unrealized gains and losses as follows:

(in thousands of U.S. dollars)	Year Ended December 31, 2020			Year Ended December 31, 2019		
	Equity securities	Other investments	Total	Equity securities	Other investments	Total
Net gains (losses) recognized during the period	\$ 68,418	\$ (24,339)	\$ 44,079	\$ (130)	\$ (9,580)	\$ (9,710)
Less: Net gains (losses) recognized from sales of securities	274	(865)	(591)	26	(1,449)	(1,423)
Unrealized gains (losses) recognized for securities still held at reporting date	\$ 68,144	\$ (23,474)	\$ 44,670	\$ (156)	\$ (8,131)	\$ (8,287)

The following table presents a roll-forward of valuation allowance for expected credit losses on fixed maturities for the year ended December 31, 2020

(in thousands of U.S. dollars)	2020
<i>Available for sale</i>	
Valuation allowance for expected credit losses - beginning of period	\$ -
Impact of adoption of new accounting guidance	6,703
Provision for expected credit loss	37,788
Initial allowance for purchased securities with credit deterioration	1,185
Foreign currency revaluation	(47)
Write-offs charged against the expected credit loss	80
Recovery of expected credit loss	(41,054)
Valuation allowance for expected credit losses - end of period	\$ 4,655
<i>Held to maturity</i>	
Valuation allowance for expected credit losses - beginning of period	\$ -
Impact of adoption of new accounting guidance	63
Provision for expected credit loss	53
Recovery of expected credit loss	(48)
Valuation allowance for expected credit losses - end of period	\$ 68

Purchased Credit Deterioration (PCD) Securities

During the year ended December 31, 2020, the Company purchased \$42.7 million of securities with credit deterioration, categorized as available for sale, and assessed an allowance for credit losses of \$1.2 million at acquisition. These PCD securities had a par value at acquisition of \$55.4 million.

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(d) Other investments

The following table presents Other Investments at December 31, 2020 and 2019.

(in thousands of U.S. dollars)	2020		2019	
	Fair Value/Cost		Fair Value/Cost	
Alternative Investments:				
Partially-owned investment companies	\$	4,760,986	\$	3,093,157
Limited partnerships		429,310		377,313
Investment funds		254,260		271,441
		<u>5,444,556</u>		<u>3,741,911</u>
Policy loans and other		70,693		90,970
Total	\$	<u>5,515,249</u>	\$	<u>3,832,881</u>

Alternative investments

Alternative investments include partially-owned investment companies, investment funds and limited partnerships measured at fair value using net asset value (NAV) as a practical expedient.

The following table presents, by investment category, the expected liquidation period, fair value of and maximum future funding commitments of alternative investments.

	December 31, 2020			December 31, 2019		
	Expected Liquidation Period	Fair Value	Maximum Future Funding Commitments	Fair Value	Maximum Future Funding Commitments	
(in thousands of U.S. dollars)						
Financial	2 to 10 Years	\$ 471,184	193,921	\$ 392,951	272,504	
Real Assets	2 to 11 Years	122,434	60,983	139,323	76,667	
Distressed	2 to 8 Years	338,960	286,569	231,880	74,526	
Private Credit	3 to 8 Years	61,792	240,116	167,050	266,927	
Traditional	2 to 14 Years	4,183,146	1,001,951	2,521,664	2,078,124	
Vintage	1 to 2 Years	12,780	-	17,602	-	
Investment funds	Not Applicable	254,260	-	271,441	-	
		<u>\$ 5,444,556</u>	<u>1,783,540</u>	<u>\$ 3,741,911</u>	<u>2,768,748</u>	

Included in all categories in the above table except for investment funds are investments for which the Company will never have the contractual option to redeem but receives distributions based on the liquidation of the underlying assets. Further, for all categories except for Investment funds, the Company does not have the ability to sell or transfer the investments without the consent from the general partner of individual funds.

Investment Category

Consists of investments in private equity funds

Financial

targeting financial services companies such as financial institutions and insurance services worldwide.

Real Assets

targeting investments related to hard physical assets such as real estate, infrastructure and natural resources.

Distressed

targeting distressed debt/credit and equity opportunities in the U.S.

Private Credit

targeting privately originated corporate debt investments including senior secured loans and subordinated bonds.

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<i>Traditional</i>	employing traditional private equity investment strategies such as buyout growth equity globally.
<i>Vintage</i>	funds where the initial fund term has expired

Included in limited partnerships and partially-owned investment company are 60 individual limited partnerships covering a broad range of investment strategies including large cap buyouts, specialist buyouts, growth capital, distressed, mezzanine, real estate, and co-investments. The underlying portfolio consists of various public and private debt and equity securities of publicly traded and privately held companies and real estate assets. The underlying investments across various partnerships, geographies, industries, asset types, and investment strategies provide risk diversification within the limited partnership portfolio and the overall investment portfolio.

Investment funds employ various investment strategies such as long/short equity and arbitrage/distressed. Included in this category are investments for which the Company has the option to redeem at agreed upon value as described in each investment fund's subscription agreement. Depending on the terms of the various subscription agreements, investment fund investments may be redeemed monthly, quarterly, semi-annually, or annually. If the Company wishes to redeem an investment fund investment, it must first determine if the investment fund is still in a lock-up period (a time when the Company cannot redeem its investment so that the investment fund manager has time to build the portfolio). If the investment fund is no longer in its lock-up period, the Company must then notify the investment fund manager of its intention to redeem by the notification date prescribed by the subscription agreement. Subsequent to notification, the investment fund can redeem the company's investment within several months of the notification. Notice periods for redemption of the investment funds range up to 270 days. The Company can redeem its investment funds without consent from the investment fund managers.

(e) Investments in partially-owned insurance companies

The following table presents Investments in partially-owned insurance companies

(in thousands of U.S. dollars)

	2020			2019			Domicile
	Carrying value	Goodwill	Ownership Percentage	Carrying value	Goodwill	Ownership Percentage	
Huatai Life Insurance Company	\$ 1,506,047	\$ 889,573	26.0%	\$ 230,505	\$ 42,725	9.9%	China
ABR reinsurance LTD	113,498	-	15.6%	100,311	-	12.2%	Bermuda
Total	\$ 1,619,545	\$ 889,573		\$ 330,816	\$ 42,725		

The Company maintains a direct investment in Huatai Insurance Group Co., Ltd. (Huatai Group). Huatai Group is the parent company of, and owns 100 percent of, Huatai Property & Casualty Insurance Co., Ltd. (Huatai P&C), approximately 80 percent of Huatai Life Insurance Co., Ltd. (Huatai Life), and approximately 82 percent of Huatai Asset Management Co., Ltd. (collectively, Huatai). Huatai Group's insurance operations have more than 600 branches and 17 million customers in China.

In 2019, the Company entered into agreements to acquire an additional 22.4 percent ownership in Huatai Group through two separate purchases, a 15.3 percent ownership interest for approximately \$1.1 billion and a 7.1 percent ownership interest for approximately \$493 million. On July 13, 2020, the Company completed the 15.3 percent purchase. The purchase of the additional 7.1 percent ownership interest is contingent upon important conditions and has been excluded from the table above.

In connection with these purchase agreements, the Company paid \$1.6 billion, including a collateralized deposit for the 7.1 percent tranche, in 2020. These transactions are recorded within investing activities on the Consolidated statement of cash flows.

Separately, in November 2020, the Company completed the purchase of an incremental 0.9 percent ownership interest in Huatai Group for approximately \$65 million.

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As of December 31, 2020, the Company's aggregate ownership interest in Huatai Group was approximately 26.0 percent. The Company applies the equity method of accounting to its investment in Huatai Group by recording its share of net income or loss in Other (income) expense in the Consolidated statements of operations. The Consolidated statements of operations include the equity income from the additional ownership interests as of each respective closing date.

The Company owns 15.6 percent of the common equity of ABR Reinsurance Capital Holdings Ltd. and warrants to acquire 0.5 percent of additional equity. ABR Reinsurance Capital Holdings Ltd., is the parent company of ABR Reinsurance Ltd. (ABR Re), an independent reinsurance company. Through long-term arrangements, Chubb will be the sole source of reinsurance risks ceded to ABR Re, and BlackRock, Inc. will be ABR Re's exclusive investment management service provider. As an investor, the Company is expected to benefit from underwriting profit generated by ABR Re's reinsuring a wide range of Chubb's primary insurance business and the income and capital appreciation BlackRock, Inc. seeks to deliver through its investment management services.

ABR Re is a variable interest entity; however, the Company is not the primary beneficiary and does not consolidate ABR Re because the Company does not have the power to control and direct ABR Re's most significant activities, including investing and underwriting. The Company's minority ownership interest is accounted for under the equity method of accounting. The Company cedes premiums to ABR Re and recognizes the associated commissions.

(f) Net investment income

The following table presents the source of net investment income for the years ended December 31, 2020 and 2019.

(in thousands of U.S. dollars)	2020	2019
Fixed maturities	\$ 466,739	\$ 494,151
Short-term investments	16,136	20,059
Other investments	43,291	34,543
Investment income from affiliates	2,352	4,073
Gross investment income	528,518	552,826
Investment expenses	(27,568)	(28,714)
Net investment income	\$ 500,950	\$ 524,112

(g) Restricted Assets

The Company is required to maintain assets on deposit with various regulatory authorities to support its reinsurance operations. These requirements are generally promulgated in the statutory regulations of the individual jurisdictions. The assets on deposit are available to settle reinsurance liabilities. The Company is also required to restrict assets pledged under repurchase agreements which represent the Company's agreement to sell securities and repurchase them at a future date for a predetermined price. The Company also utilizes trust funds in certain transactions where the trust funds are set up for the benefit of the ceding companies and generally take the place of Letter of Credit (LOC) requirements. The Company has investments in segregated portfolios primarily to provide collateral or guarantees for LOCs and derivative transactions. Included in restricted assets at December 31, 2020 and 2019, are investments, primarily fixed maturities and short term investments totaling \$5.5 billion and \$6.4 billion, respectively, and cash of \$12 million and \$28 million, respectively.

The following table presents the components of the restricted assets at December 31, 2020 and 2019.

(in thousands of U.S. dollars)	2020	2019
Deposits with non-U.S. regulatory authorities	\$ 27,164	\$ 20,927
Trust funds	5,332,358	6,274,489
Assets pledged under repurchase agreements	102,394	103,038
	\$ 5,461,916	\$ 6,398,454

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5. Unpaid losses and loss expenses

The Company establishes reserves for the estimated unpaid ultimate liability for losses and loss expenses under the terms of its treaties and agreements. Reserves include estimates for both claims that have been reported and for IBNR claims, and include estimates of expenses associated with processing and settling these claims. Reserves are recorded in Unpaid losses and loss expenses in the consolidated balance sheets. While the Company believes that its reserves for unpaid losses and loss expenses at December 31, 2020 are adequate, new information or trends may lead to future developments in incurred losses and loss expenses significantly greater or less than the reserves provided. Any such revisions could result in future changes in estimates of losses or reinsurance recoverable and would be reflected in the Company's results of operations in the period in which the estimates are changed.

The following table presents a reconciliation of unpaid losses and loss expenses for the years ended December 31, 2020 and 2019.

(in thousands of U.S. dollars)	<u>2020</u>	<u>2019</u>
Gross unpaid losses and loss expenses at beginning of year	\$ 6,510,589	\$ 6,530,063
Reinsurance recoverable ⁽¹⁾	<u>(1,013,191)</u>	<u>(926,753)</u>
Net unpaid losses and loss expenses at beginning of year	<u>5,497,398</u>	<u>5,603,310</u>
Net losses and loss expenses incurred in respect of losses occurring in:		
Current year	1,993,927	1,646,174
Prior years ⁽²⁾	<u>(66,133)</u>	<u>90,311</u>
Total	<u>1,927,794</u>	<u>1,736,485</u>
Net losses and loss expenses paid in respect of losses occurring in:		
Current year	(461,399)	(421,452)
Prior years	<u>(1,160,269)</u>	<u>(1,436,711)</u>
Total	<u>(1,621,668)</u>	<u>(1,858,163)</u>
Foreign currency revaluation and other	<u>145,280</u>	<u>15,766</u>
Net unpaid losses and loss expenses at end of year	5,948,804	5,497,398
Reinsurance recoverable ⁽¹⁾	<u>1,257,521</u>	<u>1,013,191</u>
Gross unpaid losses and loss expenses at end of year	<u>\$ 7,206,325</u>	<u>\$ 6,510,589</u>

⁽¹⁾ Net of valuation allowance

⁽²⁾ Relates to prior period loss reserve development only and excludes prior period development related to reinstatement premiums, expense adjustments, and earned premium.

The increase in gross and net unpaid losses and loss expense in 2020 was driven by catastrophe losses incurred, including the COVID-19 pandemic.

In 2020, \$42.2 million of net favorable prior period development (\$70.1 million of net unfavorable prior period development in 2019) was attributable to long-tailed business. In addition, there was favorable development of \$23.9 million (\$20.2 million of net unfavorable prior period development in 2019) in short-tailed lines. These developments were from a number of lines and accident years due to lower than expected claims emergence and favorable claim settlements.

Business written or assumed by the Company that is long-tailed in nature (e.g., Workers' Compensation and Professional Lines) can exhibit a high degree of variability. Commencing in accident year 2019, the Company assumed North America business through a stop loss treaty. The nature of the business written coupled with the relative immaturity of the business can expose the reserves to a higher-than-normal degree of uncertainty and the ultimate losses may be materially different.

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The following table presents a reconciliation of the loss development tables to the liability for unpaid losses and loss expenses in the consolidated balance sheet as at December 31, 2020:

(in thousands of U.S. dollars)	2020
<i>Net unpaid loss and allocated loss adjustment expense:</i>	
North America P&C – Casualty	\$ 2,099,024
North America P&C – Non-Casualty	164,110
Overseas General P&C – Casualty	1,748,615
Overseas General P&C – Non-Casualty	1,102,283
Global Reinsurance – Casualty	482,937
Global Reinsurance – Non-Casualty	166,742
<i>Excluded from the loss development tables</i>	
Other ⁽¹⁾	35,552
Net unpaid loss and allocated loss adjustment expense	\$ <u>5,799,263</u>
<i>Ceded unpaid loss and allocated loss adjustment expense:</i>	
North America P&C – Casualty	\$ -
North America P&C – Non-Casualty	-
Overseas General P&C – Casualty	311,444
Overseas General P&C – Non-Casualty	866,746
Global Reinsurance – Casualty	-
Global Reinsurance – Non-Casualty	79,579
Other ⁽¹⁾	(248)
Ceded unpaid loss and allocated loss adjustment expense	\$ 1,257,521
Unpaid loss and loss expense on other than short-duration contracts ⁽²⁾	\$ <u>149,541</u>
Unpaid losses and loss expenses	\$ <u>7,206,325</u>

⁽¹⁾ This is comprised of businesses not included in the loss development tables from various lines of businesses none of which are significant, such as long duration.

⁽²⁾ Primarily includes the claims reserve of the international A&H business.

(a) Description of Reserving Methodologies

The Company's recorded reserves represent management's best estimate of the provision for unpaid claims as of the balance sheet date. The process of establishing loss and loss expense reserve can be complex and is subject to considerable uncertainty as it requires the use of estimates and judgments based on circumstances underlying the insured loss at the date of accrual. The reserves for the Company's various product lines each require different qualitative and quantitative assumptions and judgments to be made. Management's best estimate is developed after collaboration with actuarial, underwriting, legal, and finance departments and culminates with the input of reserve committees. Reserves are further reviewed by Chubb's Chief Actuary and senior management. The objective of such a process is to determine a single estimate that the Company believes represents a better estimate than any other and which is viewed by management to be the best estimate of ultimate loss settlements.

This estimate is based on a combination of exposure and experience-based actuarial methods (described below) and other considerations such as claims reviews, reinsurance recovery assumptions and/or input from other knowledgeable parties such as underwriting. Exposure-based methods are most commonly used on relatively immature origin years (i.e., the year in which the losses were incurred — “accident year” or “report year”), while experience-based methods provide a view based on the projection of loss experience that has emerged as of the valuation date. Greater reliance is placed upon experience-based methods as the pool of emerging loss experience grows and where it is deemed sufficiently credible and reliable as the basis for the estimate. In comparing the held reserve for any given origin year to the actuarial projections, judgment is

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required as to the credibility, uncertainty and inherent limitations of applying actuarial techniques to historical data to project future loss experience. Examples of factors that impact such judgments include, but are not limited to, the following:

- nature and complexity of underlying coverage provided and net limits of exposure provided;
- segmentation of data to provide sufficient homogeneity and credibility for loss projection methods;
- extent of credible internal historical loss data and reliance upon industry information as required;
- historical variability of actual loss emergence compared with expected loss emergence;
- reported and projected loss trends;
- extent of emerged loss experience relative to the remaining expected period of loss emergence;
- rate monitor information for new and renewal business;
- changes in claims handling practice;
- inflation;
- the legal environment
- facts and circumstances of large claims;
- terms and conditions of the contracts sold to the Company's insured parties;
- impact of applicable reinsurance recoveries; and
- nature and extent of underlying assumptions.

The Company has actuarial staff who analyzes loss reserves (including loss expenses) and regularly project estimates of ultimate losses and the corresponding indications of the required IBNR reserve. The data presented in this disclosure was prepared on an aggregated basis and with a focus on changes in incurred loss estimates over time as well as associated cash flows. The Company notes that data prepared on this basis may not demonstrate the full spectrum of characteristics that are evident in the more detailed level studied internally.

For most product lines, one or more standard actuarial reserving methods may be used to determine estimates of ultimate losses and loss expenses, and from these estimates, a single actuarial central estimate is selected. The actuarial central estimate is an input to the reserve committee process described above. For the few product lines that do not lend themselves to standard actuarial reserving methods, appropriate techniques are applied to produce the actuarial central estimates.

(b) Standard actuarial reserving methods

The judgments involved in projecting the ultimate losses include the use and interpretation of various standard actuarial reserving methods that place reliance on the extrapolation of actual historical data, loss development patterns, industry data, and other benchmarks as appropriate.

Standard actuarial reserving methods include, but are not limited to, expected loss ratio, paid and reported loss development, and Bornhuetter-Ferguson methods. A general description of these methods is provided below. In addition to these standard methods, depending upon the product line characteristics and available data, the Company may use other recognized actuarial methods and approaches. Implicit in the standard actuarial methods that the Company generally utilizes is the need for two fundamental assumptions: first, the pattern by which losses are expected to emerge over time for each origin year, and second the expected loss ratio for each origin year.

The expected loss ratio for any particular origin year is selected after consideration of a number of factors, including historical loss ratios adjusted for rate changes, premium and loss trends, industry benchmarks, the results of policy level loss modeling at the time of underwriting, and/or other more subjective considerations for the product line (e.g., terms and conditions) and external environment as noted above. The expected loss ratio for a given origin year is initially established at the start of the origin year as part of the planning process. This analysis is performed in conjunction with underwriters and management. The expected loss ratio method arrives at an ultimate loss estimate by multiplying the expected ultimate loss ratio by the corresponding premium base. This method is most commonly used as the basis for the actuarial central estimate for immature

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origin periods on product lines where the actual paid or reported loss experience is not yet deemed sufficiently credible to serve as the principal basis for the selection of ultimate losses. The expected loss ratio for a given origin year may be modified over time if the underlying assumptions differ from the original assumptions (e.g., the assessment of prior year loss ratios, loss trend, rate changes, actual claims, or other information).

The Company's selected paid and reported development patterns provide a benchmark against which the actual emerging loss experience can be monitored. Where possible, development patterns are selected based on historical loss emergence by origin year. For product lines where the historical data is viewed to have low statistical credibility, the selected development patterns also reflect relevant industry benchmarks and/or experience from similar product lines written elsewhere within Chubb. This most commonly occurs for relatively new product lines that have limited historical data or for high severity/low frequency portfolios where the Company's historical experience exhibits considerable volatility and/or lacks credibility. The paid and reported loss development methods convert the selected loss emergence pattern to a set of multiplicative factors which are then applied to actual paid or reported losses to arrive at an estimate of ultimate losses for each period. Due to their multiplicative nature, the paid and reported loss development methods will leverage differences between actual and expected loss emergence. These methods tend to be utilized for more mature origin periods and for those portfolios where the loss emergence has been relatively consistent over time.

The Bornhuetter-Ferguson method is a combination of the expected loss ratio method and the loss development method, where the loss development method is given more weight as the origin year matures. This approach allows a logical transition between the expected loss ratio method which is generally utilized at earlier maturities and the loss development methods which are typically utilized at later maturities. The Company usually applies this method using reported loss data although paid data may also be used.

Short-tail business

Short-tail business generally describes product lines for which losses are typically known and paid shortly after the loss occurs. This would include, for example, most property, personal accident, and automobile physical damage policies that the Company writes. Due to the short reporting and development pattern for these product lines, the uncertainty associated with the Company's estimate of ultimate losses for any particular accident period diminishes relatively quickly as actual loss experience emerges. The Company typically assigns credibility to methods that incorporate actual loss emergence, such as the paid and reported loss development and Bornhuetter-Ferguson methods, sooner than would be the case for long-tail lines at a similar stage of development for a given origin year. The reserving process for short-tail losses arising from catastrophic events typically involves an assessment by the underwriting and actuarial departments, of the Company's exposure and estimated losses immediately following an event and then subsequent revisions of the estimated losses as insureds provide updated actual loss information.

Long-tail business

Long-tail business describes lines of business for which specific losses may not be known/reported for some period and for which claims can take significant time to settle/close. This includes most casualty lines such as general liability, D&O, and workers' compensation. There are various factors contributing to the uncertainty and volatility of long-tail business. Among these are:

- The nature and complexity of underlying coverage provided and net limits of exposure provided;
- The Company's historical loss data and experience is sometimes too immature and lacking in credibility to rely upon for reserving purposes. Where this is the case, in the reserve analysis the Company may utilize industry loss ratios or industry benchmark development patterns that are believed to reflect the nature and coverage of the underwritten business and its future development, where available. For such product lines, actual loss experience may differ from industry loss statistics as well as loss experience for previous underwriting years;
- The difficulty in estimating loss trends, claims inflation (e.g., medical and judicial) and underlying economic conditions;
- The need for professional judgment to estimate loss development patterns beyond that represented by historical data using supplemental internal or industry data, extrapolation, or a blend of both;
- The need to address shifts in business mix or volume over time when applying historical paid and reported loss development patterns from older origin years to more recent origin years. For example, changes over time in the

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processes and procedures for establishing case reserves can distort reported loss development patterns or changes in ceded reinsurance structures by origin year can alter the development of paid and reported losses;

- Loss reserve analyses typically require loss or other data be grouped by common characteristics in some manner. If data from two combined lines of business exhibit different characteristics, such as loss payment patterns, the credibility of the reserve estimate could be affected. Additionally, since casualty lines of business can have significant intricacies in the terms and conditions afforded to the insured, there is an inherent risk as to the homogeneity of the underlying data used in performing reserve analyses; and
- The applicability of the price change data used to estimate ultimate loss ratios for most recent origin years.

As described above, various factors are considered when determining appropriate data, assumptions, and methods used to establish the loss reserve estimates for long-tail product lines. These factors may also vary by origin year for given product lines. The derivation of loss development patterns from data and the selection of a tail factor to project ultimate losses from actual loss emergence require considerable judgment, particularly with respect to the extent to which historical loss experience is relied upon to support changes in key reserving assumptions.

The Company's portfolio comprises a mix of proportional and non-proportional treaties. The proportional treaties are reported on a bulk basis and do not lend themselves to meaningful claim count data. As such, we do not provide claim count information.

(c) Loss Development Tables

The tables were designed to present business with similar risk characteristics which exhibit like development patterns and generally similar trends, in order to provide insight into the nature, amount, timing and uncertainty of cash flows related to the Company's claims liabilities.

Each table follows a similar format and reflects the following:

- The incurred loss triangle includes both reported case reserves and IBNR liabilities.
- Both the incurred and paid loss triangles include allocated loss adjustment expense (i.e., defense and investigative costs particular to individual claims) but exclude unallocated loss adjustment expense (i.e., the costs associated with internal claims staff and third party administrators).
- The amounts in both triangles for the years ended December 31, 2011, to December 31, 2019 and average historical claim duration as of December 31, 2020, are presented as supplementary information.
- All data presented in the triangles is net of reinsurance recoverables.
- The IBNR reserves shown to the right of each incurred loss development exhibit reflect the net IBNR recorded as of December 31, 2020.

Historical dollar amounts are presented in this footnote on a constant-dollar basis, which is achieved by assuming constant foreign exchange rates for all periods in the loss triangles, translating prior period amounts using the same local currency exchange rates as the current year end. The impact of this conversion is to show the change between periods exclusive of the effect of fluctuations in exchange rates, which would otherwise distort the change in incurred loss and cash flow patterns shown. The change in incurred loss shown will differ from other GAAP disclosures of incurred prior period reserve development amounts, which include the effect of fluctuations in exchanges rates.

The Company provided guidance above on key assumptions that should be considered when reviewing this disclosure and information relating to how loss reserve estimates are developed. The Company believes the information provided in the "Loss Development Tables" section of the disclosure is of limited use for independent analysis or application of standard actuarial estimations.

North America

Prior to 2018, the Company mainly provided reinsurance to Chubb's North America business through quota-share arrangements. Since 2019, the Company has been providing reinsurance through Stop Loss arrangements.

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North America P&C - Casualty - Long-tail

This product line is comprised of various long tail lines of business including Workers Compensation, Liability such as medical liability, professional liability, fidelity bonds and fiduciary liability as well as other Casualty coverages.

Net Incurred Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)

Years ended December 31

Accident Year	Unaudited										Net IBNR reserves
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
2011	\$441,159	\$429,342	\$433,957	\$437,513	\$435,996	\$427,547	\$429,682	\$421,304	\$419,444	\$412,585	\$54,828
2012		\$444,771	\$451,816	\$465,840	\$469,755	\$465,435	\$456,817	\$464,490	\$463,583	\$467,570	\$67,006
2013			\$531,093	\$530,583	\$542,087	\$541,139	\$519,063	\$509,480	\$501,697	\$498,003	\$87,589
2014				\$444,333	\$450,615	\$465,252	\$472,817	\$459,086	\$439,091	\$424,459	\$81,590
2015					\$494,461	\$502,613	\$520,859	\$557,346	\$562,486	\$547,807	\$124,672
2016						\$545,150	\$552,426	\$574,528	\$581,594	\$574,791	\$173,609
2017							\$586,274	\$605,909	\$614,057	\$614,701	\$260,340
2018								\$84,066	\$91,943	\$93,953	\$50,070
2019									\$214,181	\$144,715	\$107,145
2020										\$183,947	\$173,246
Total										\$3,962,531	

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)

Years ended December 31

Accident Year	Unaudited									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011	\$58,232	\$112,562	\$158,056	\$208,255	\$251,061	\$284,092	\$300,077	\$318,082	\$333,438	\$338,420
2012		\$52,650	\$126,055	\$181,824	\$241,492	\$298,534	\$332,377	\$355,803	\$359,241	\$368,232
2013			\$49,289	\$123,897	\$202,551	\$260,424	\$314,892	\$347,137	\$364,122	\$381,068
2014				\$49,977	\$116,672	\$184,046	\$240,937	\$275,650	\$297,215	\$314,826
2015					\$59,854	\$143,640	\$219,879	\$294,886	\$350,403	\$378,028
2016						\$63,788	\$155,471	\$233,400	\$303,029	\$348,488
2017							\$77,086	\$168,778	\$246,604	\$299,677
2018								\$7,260	\$20,456	\$29,535
2019									\$6,116	\$19,895
2020										\$4,451
Total										\$2,482,620

Net Liabilities for Loss and Allocated Loss Adjustment Expenses as at December 31, 2020

(in thousands of U.S. dollars)

Accident years prior to 2011	2020
	\$619,113
Accident years 2011 – 2020 from tables above	1,479,911
All Accident years	\$2,099,024

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Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as at December 31, 2020 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	11%	15%	13%	12%	10%	6%	4%	3%	3%	1%

North America P&C – Non-Casualty – Short-tail

This product line represents first party personal and commercial product lines that are short-tailed in nature. The Company provides personal lines coverage for high-net-worth individuals and families in North America including homeowners, automobile, valuable articles (including fine art), umbrella liability, and recreational marine insurance. Some years may be impacted by natural catastrophe losses.

Net Incurred Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)

Years ended December 31

Accident Year	Unaudited										Net IBNR reserves
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
2011	\$480,655	\$480,365	\$475,021	\$472,563	\$471,676	\$470,027	\$469,082	\$469,038	\$468,812	\$467,868	\$155
2012		\$552,681	\$533,904	\$524,728	\$522,661	\$523,839	\$522,199	\$520,282	\$520,167	\$520,053	\$113
2013			\$508,810	\$523,649	\$512,091	\$510,789	\$508,477	\$507,698	\$507,392	\$507,492	\$426
2014				\$344,984	\$338,615	\$330,649	\$329,321	\$329,598	\$328,721	\$329,061	\$327
2015					\$344,504	\$326,282	\$314,328	\$313,658	\$310,933	\$308,515	\$1,554
2016						\$275,754	\$270,767	\$263,558	\$256,052	\$257,355	\$3,015
2017							\$384,513	\$380,824	\$373,195	\$375,521	\$5,791
2018								\$128,366	\$128,463	\$125,170	\$2,647
2019									\$136,211	\$122,753	\$11,872
2020										\$187,450	\$67,290
Total										\$3,201,238	

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)

Years ended December 31

Accident Year	Unaudited									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011	\$330,346	\$440,676	\$457,836	\$464,848	\$465,675	\$467,166	\$467,704	\$467,542	\$467,652	\$467,752
2012		\$391,840	\$491,673	\$504,867	\$511,778	\$517,293	\$517,609	\$518,880	\$519,247	\$519,306
2013			\$329,925	\$481,813	\$495,604	\$502,111	\$504,320	\$504,449	\$505,655	\$506,128
2014				\$189,217	\$302,568	\$316,795	\$321,462	\$325,461	\$326,839	\$328,314
2015					\$187,210	\$279,348	\$296,011	\$303,598	\$304,871	\$305,935
2016						\$131,298	\$216,564	\$232,673	\$243,434	\$249,274
2017							\$168,768	\$307,688	\$345,473	\$357,058
2018								\$63,478	\$108,518	\$116,455
2019									\$62,363	\$98,662
2020										\$89,855
Total										\$3,038,739

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Net Liabilities for Loss and Allocated Loss Adjustment Expenses as at December 31, 2020

(in thousands of U.S. dollars)	2020
Accident years prior to 2011	\$1,611
Accident years 2011 – 2020 from tables above	162,499
All Accident years	<u>\$164,110</u>

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as at December 31, 2020 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	61%	29%	5%	2%	2%	1%	0%	0%	0%	0%

Overseas General – Casualty - Long-tail

This product line is comprised of D&O liability, E&O liability, financial institutions (including crime/fidelity coverages), and non-U.S. general liability as well as aviation and political risk. Exposures are located around the world, including Europe, Latin America, and Asia. There is some U.S. exposure in Casualty from multinational accounts.

Net Incurred Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)	Years ended December 31										Net IBNR reserves
	Unaudited										
Accident Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
2011	\$153,635	\$159,696	\$156,822	\$167,164	\$158,788	\$149,420	\$156,486	\$142,665	\$143,828	\$152,022	\$944
2012		\$163,232	\$181,224	\$204,753	\$217,695	\$227,039	\$241,823	\$257,689	\$231,836	\$229,227	\$5,410
2013			\$153,565	\$174,785	\$182,301	\$161,322	\$146,862	\$148,506	\$150,836	\$153,105	\$8,924
2014				\$165,098	\$165,555	\$185,506	\$188,614	\$175,684	\$176,657	\$185,902	\$14,974
2015					\$174,989	\$156,099	\$160,415	\$170,120	\$222,981	\$196,135	\$22,790
2016						\$180,139	\$166,665	\$207,910	\$271,942	\$330,092	\$56,278
2017							\$318,789	\$322,018	\$337,661	\$440,782	\$114,147
2018								\$334,038	\$314,359	\$301,457	\$99,474
2019									\$388,737	\$347,775	\$210,446
2020										\$524,625	\$472,170
Total										<u>\$2,861,122</u>	

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Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses as at

Accident Year	(in thousands of U.S. dollars)									
	Years ended December 31 Unaudited									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011	\$9,666	\$20,363	\$23,992	\$43,911	\$48,286	\$59,439	\$81,919	\$86,264	\$109,008	\$119,543
2012		\$11,799	\$37,089	\$54,664	\$84,479	\$94,098	\$149,739	\$167,571	\$163,046	\$175,334
2013			\$12,047	\$32,857	\$57,786	\$69,887	\$83,951	\$100,825	\$111,674	\$118,276
2014				\$12,145	\$30,296	\$51,287	\$70,620	\$91,443	\$114,528	\$134,804
2015					\$7,365	\$23,443	\$55,394	\$82,800	\$103,625	\$125,133
2016						\$19,087	\$42,365	\$101,573	\$123,603	\$173,802
2017							\$15,224	\$69,479	\$135,582	\$197,819
2018								\$12,730	\$68,570	\$100,779
2019									\$9,717	\$60,426
2020										\$18,758
Total										\$1,224,674

Net Liabilities for Loss and Allocated Loss Adjustment Expenses as at December 31, 2020

(in thousands of U.S. dollars)	2020
Accident years prior to 2011	\$ 112,167
Accident years 2011 – 2020 from tables above	1,636,448
All Accident years	\$ 1,748,615

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as at December 31, 2020 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	4%	12%	13%	11%	12%	11%	10%	4%	5%	7%

Overseas General – Non-Casualty - Short-tail

This product line is comprised of commercial fire, marine (predominantly cargo), surety, personal automobile, personal cell phones, personal residential (including high net worth), energy and construction. In general, these lines have relatively stable payment and reporting patterns although some years may be impacted by natural catastrophes.

Net Incurred Loss and Allocated Loss Adjustment Expenses as at

Accident Year	(in thousands of U.S. dollars)										Net IBNR reserves
	Years ended December 31 Unaudited										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
2011	\$409,274	\$429,598	\$396,592	\$394,223	\$402,410	\$402,248	\$405,634	\$399,705	\$396,536	\$394,167	\$900
2012		\$273,875	\$267,020	\$263,369	\$254,609	\$249,016	\$242,994	\$243,927	\$242,269	\$239,642	\$657
2013			\$311,662	\$303,114	\$280,883	\$274,256	\$260,581	\$260,996	\$262,806	\$259,442	\$890
2014				\$333,530	\$357,865	\$325,485	\$310,130	\$313,201	\$317,390	\$315,243	\$1,370
2015					\$396,467	\$386,208	\$369,364	\$372,629	\$378,338	\$377,521	\$2,158
2016						\$535,695	\$573,507	\$560,972	\$559,679	\$555,501	\$3,939
2017							\$761,895	\$708,303	\$703,095	\$695,088	\$6,397
2018								\$605,517	\$696,751	\$701,901	\$6,836
2019									\$692,500	\$686,934	\$18,747
2020										\$902,833	\$402,394

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Total

\$5,128,272

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)	Years ended December 31									
	Unaudited									
Accident Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011	\$143,088	\$311,027	\$346,149	\$356,767	\$367,875	\$365,315	\$368,040	\$371,317	\$368,639	\$371,089
2012		\$85,172	\$188,578	\$224,648	\$235,814	\$238,107	\$238,419	\$239,066	\$238,520	\$238,217
2013			\$77,718	\$184,888	\$239,380	\$238,227	\$244,438	\$253,489	\$256,469	\$256,713
2014				\$84,721	\$231,000	\$289,811	\$297,817	\$299,711	\$301,358	\$303,234
2015					\$109,149	\$246,226	\$320,597	\$347,866	\$353,392	\$360,579
2016						\$216,771	\$420,747	\$503,159	\$527,149	\$532,997
2017							\$257,801	\$520,191	\$623,658	\$646,255
2018								\$247,044	\$493,306	\$582,595
2019									\$267,569	\$490,603
2020										\$273,145
Total										\$4,055,427

Net Liabilities for Loss and Allocated Loss Adjustment Expenses as at December 31, 2020

(in thousands of U.S. dollars)	2020
Accident years prior to 2011	\$ 29,438
Accident years 2011 – 2020 from tables above	1,072,845
All Accident years	\$ 1,102,283

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as at December 31, 2020 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	34%	38%	16%	4%	2%	2%	1%	1%	1%	0%

Global Reinsurance

Global reinsurance analyzes its business on a treaty year basis rather than on an accident year basis. Treaty year data was converted to an accident year basis for the purposes of this disclosure. Mix shifts are an important consideration in these product line groupings. As proportional business and excess of loss business have different earning and loss reporting and payment patterns, this change in mix will affect the cash flow patterns across the accident years. In addition, the shift from excess to proportional business over time will make the cash flow patterns of older and more recent years difficult to compare. In general, the proportional business will pay out more quickly than the excess of loss business, as such, using older years development patterns may overstate the ultimate loss estimates in more recent years.

Global Reinsurance –Casualty - Long-tail

This product line includes proportional and excess coverages in general, automobile liability, professional liability, medical malpractice and workers' compensation, with exposures located around the world. In general, reinsurance exhibits less stable development patterns than primary business. In particular, general casualty reinsurance and excess coverages are long-tailed and can be very volatile.

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Net Incurred Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)	Years ended December 31										Net IBNR reserves
	Unaudited										
Accident Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
2011	\$94,927	\$93,518	\$92,125	\$90,411	\$86,273	\$78,399	\$78,021	\$76,590	\$73,585	\$69,526	\$1,831
2012		\$79,643	\$73,424	\$73,704	\$73,942	\$69,131	\$58,096	\$57,091	\$62,037	\$61,311	\$617
2013			\$63,320	\$62,065	\$61,905	\$60,269	\$61,750	\$59,572	\$55,380	\$54,234	\$3,438
2014				\$67,868	\$62,616	\$62,401	\$65,101	\$62,949	\$60,058	\$57,223	\$4,326
2015					\$70,629	\$69,039	\$70,769	\$72,885	\$76,569	\$76,201	\$11,558
2016						\$82,805	\$86,123	\$87,714	\$89,664	\$88,156	\$15,116
2017							\$93,017	\$89,570	\$94,789	\$91,032	\$16,060
2018								\$73,937	\$74,622	\$76,370	\$9,155
2019									\$41,632	\$43,909	\$10,673
2020										\$23,780	\$12,153
Total										\$641,742	

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)	Years ended December 31									
	Unaudited									
Accident Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011	\$8,099	\$11,849	\$15,979	\$22,087	\$28,228	\$33,298	\$40,464	\$44,892	\$46,732	\$48,472
2012		\$9,591	\$16,636	\$21,681	\$27,021	\$34,222	\$35,241	\$40,949	\$47,429	\$49,110
2013			\$8,626	\$14,104	\$18,368	\$23,947	\$29,271	\$34,861	\$37,849	\$39,381
2014				\$9,896	\$18,813	\$24,831	\$30,391	\$35,048	\$38,731	\$42,352
2015					\$12,809	\$20,606	\$28,848	\$33,339	\$39,029	\$44,743
2016						\$14,395	\$29,235	\$37,505	\$42,535	\$48,872
2017							\$16,139	\$32,581	\$39,643	\$46,587
2018								\$12,301	\$17,904	\$22,869
2019									\$283	\$983
2020										\$333
Total										\$343,702

Net Liabilities for Loss and Allocated Loss Adjustment Expenses as at December 31, 2020

(in thousands of U.S. dollars)	2020
Accident years prior to 2011	\$184,897
Accident years 2011 – 2020 from tables above	298,040
All Accident years	\$482,937

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as at December 31, 2020 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	14%	11%	8%	8%	9%	7%	8%	7%	3%	3%

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Global Reinsurance – Non-Casualty - Short-tail

This product line includes property, property catastrophe, marine, credit/surety, A&H and energy and some years may be impacted by natural catastrophes.

Net Incurred Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)	Years ended December 31										Net IBNR reserves
	Unaudited										
Accident Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020
2011	\$180,169	\$187,276	\$184,338	\$179,389	\$179,391	\$179,536	\$178,887	\$180,050	\$179,805	\$179,549	\$48
2012		\$102,348	\$97,933	\$92,260	\$86,312	\$83,766	\$82,560	\$80,601	\$80,698	\$80,737	\$1,200
2013			\$67,751	\$60,970	\$58,284	\$56,462	\$54,799	\$53,107	\$52,536	\$52,493	\$206
2014				\$65,602	\$66,792	\$69,632	\$71,796	\$71,744	\$70,292	\$70,145	\$1,709
2015					\$45,601	\$44,625	\$47,630	\$49,899	\$46,782	\$46,836	\$1,285
2016						\$108,796	\$106,050	\$108,443	\$106,243	\$103,844	\$2,147
2017							\$303,826	\$330,479	\$366,646	\$362,765	\$7,001
2018								\$206,440	\$212,591	\$215,287	(\$11,205)
2019									\$48,712	\$50,448	\$17,965
2020										\$99,657	\$53,943
Total										\$1,261,761	

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses as at

(in thousands of U.S. dollars)	Years ended December 31									
	Unaudited									
Accident Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2011	\$56,235	\$114,154	\$134,828	\$155,604	\$170,390	\$172,981	\$175,183	\$176,221	\$176,550	\$176,715
2012		\$19,078	\$51,436	\$65,213	\$71,020	\$73,380	\$76,467	\$77,473	\$78,380	\$78,539
2013			\$12,563	\$35,172	\$44,645	\$49,437	\$50,312	\$51,521	\$51,627	\$52,310
2014				\$20,286	\$43,665	\$55,522	\$61,714	\$65,026	\$66,011	\$66,733
2015					\$12,628	\$27,698	\$36,903	\$41,119	\$42,303	\$43,474
2016						\$23,347	\$68,713	\$88,466	\$94,643	\$97,086
2017							\$159,410	\$257,080	\$326,661	\$332,890
2018								\$64,797	\$188,602	\$198,427
2019									\$4,585	\$21,977
2020										\$31,461
Total										\$1,099,612

Net Liabilities for Loss and Allocated Loss Adjustment Expenses as at December 31, 2020

(in thousands of U.S. dollars)	2020
Accident years prior to 2011	\$4,593
Accident years 2011 – 2020 from tables above	162,149
All Accident years	\$166,742

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Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as at December 31, 2020 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	32%	37%	15%	6%	5%	2%	1%	1%	0%	0%

6. Reinsurance

The Company purchases reinsurance to manage various exposures including catastrophic risks. Although reinsurance agreements contractually obligate the Company's reinsurers to reimburse it for the agreed upon portion of its gross paid losses, they do not discharge the primary liability of the Company. The amounts for net premiums written and net premiums earned in the Consolidated statements of operations are net of reinsurance.

The following table presents assumed and ceded premiums for the years ended December 31, 2020 and 2019.

(in thousands of U.S. dollars)	<u>2020</u>		<u>2019</u>	
Premiums written				
Assumed	\$	4,357,962	\$	4,512,264
Ceded		<u>(583,179)</u>		<u>(520,605)</u>
Net		<u>3,774,783</u>		<u>3,991,659</u>
Premiums earned				
Assumed		4,324,765		4,388,094
Ceded		<u>(550,873)</u>		<u>(500,376)</u>
Net	\$	<u>3,773,892</u>	\$	<u>3,887,718</u>

The following table presents the composition of the Company's reinsurance recoverable at December 31, 2020 and 2019.

(in thousands of U.S. dollars)	<u>2020</u>		<u>2019</u>	
Reinsurance recoverable on paid losses and loss expenses, net of valuation allowance for uncollectible reinsurance	\$	82,514	\$	87,295
Reinsurance recoverable on unpaid losses and loss expenses, net of valuation allowance for uncollectible reinsurance		1,257,521		1,013,191
Reinsurance recoverable on future policy benefits		<u>5,682</u>		<u>6,549</u>
Net reinsurance recoverable	\$	<u>1,345,717</u>	\$	<u>1,107,035</u>

The Company evaluates the financial condition of its reinsurers and potential reinsurers on a regular basis and also monitors concentrations of credit risk with reinsurers. The valuation allowance for uncollectible reinsurance is required principally due to the potential failure of reinsurers to indemnify the Company, primarily because of disputes under reinsurance contracts and insolvencies. Valuation allowance has been established for amounts estimated to be uncollectible on both unpaid and paid losses. Refer to Note 2 d) for a discussion of the valuation allowance methodology. At December 31, 2020 and 2019, the Company carried a valuation allowance for uncollectible reinsurance of \$19.5 million and \$18.0 million, respectively.

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Management evaluates the need for a valuation allowance for uncollectible reinsurance recoverable using current and historical factors and forecasts each quarter. These factors include a review of active and run-off lines of business, review of reinsurer financial strength ratings, and review of the Company's largest reinsurers. The evaluation of the valuation allowance includes several judgments including certain aspects of the allocation of reinsurance recoverable on incurred but not reported (IBNR) claims by reinsurer and a default analysis to estimate uncollectible reinsurance. The primary components of the default analysis are reinsurance recoverable balances by reinsurer, net of collateral, and default factors used to determine the portion of a reinsurer's balance deemed uncollectible. Default factors require considerable judgment and are determined using principally the current financial strength rating, or rating equivalent, of each reinsurer. Changes in the valuation allowance for uncollectible reinsurance recoverables are recorded in Losses and loss expenses in the Consolidated statements of operations.

The evaluation of the valuation allowance at December 31, 2019 was consistent with the new accounting guidance adopted January 1, 2020, therefore, there was no material change to the valuation allowance upon adoption.

The following tables present a listing, at December 31, 2020 and 2019, of the categories of the Company's reinsurers. The first category, largest reinsurers, represents all groups of reinsurers where the gross recoverable exceeds one percent of the Company's total shareholder's equity. All rated reinsurers are those that were not included in the largest reinsurer category. The provision for uncollectible reinsurance is principally based on an analysis of the credit quality of the reinsurer and collateral balances.

<i>(in thousands of U.S. dollars)</i>	<u>2020</u>	<u>2019</u>
Largest reinsurers	\$ 444,339	\$ 307,657
Other reinsurers balances rated A- or better	780,521	691,253
Other reinsurers with ratings lower than A-	120,857	108,125
Total	<u>\$ 1,345,717</u>	<u>\$ 1,107,035</u>

Largest Reinsurers

ABR Reinsurance Capital Holdings Ltd

HDI Group (Hannover Re)

7. Related party business

The Company reinsures a number of affiliates for property, casualty, marine and accident and health risks and, through a reinsurance contract with affiliate ACE Life Insurance Company, reinsures traditional life risks.

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The related statement of operations and balance sheet account balances for the years ended December 31, 2020 and 2019 have been affected by these intercompany reinsurance agreements as follows:

(in thousands of U.S. dollars)	2020	2019
Gross premiums written	\$ 3,817,583	\$ 4,020,646
Reinsurance premiums ceded	(49,254)	(44,845)
Net premiums earned	3,761,539	3,872,003
Losses and loss expenses	2,311,766	1,706,621
Future policy benefits	23,832	8,768
Policy acquisition costs	887,485	891,722
Reinsurance balances receivable	646,372	753,920
Prepaid reinsurance premiums	17,177	16,712
Reinsurance recoverables	13,717	10,666
Deferred policy acquisition costs	320,281	350,282
Value of reinsurance business assumed	115,174	137,501
Unpaid losses and loss expenses	7,038,972	6,389,110
Future policy benefits	89,540	87,627
Unearned premiums	1,132,468	1,153,395
Reinsurance balances payable	\$ 1,739,493	\$ 872,467

There are amounts due from related parties of \$35.1 million and \$14.9 million and due to related parties of \$32.4 million and \$8.7 million as at December 31, 2020 and 2019, respectively. The noncontrolling interest in Oasis Investments is held by a related party. Further, the Company has entered into an interest rate swap and a foreign currency forward contract with a related party. The aggregate balance of the (liability) asset related to these instruments at December 31, 2020 and 2019 was \$(53.9) million and \$5.6 million, respectively. Refer to Note 8.

Refer to Note 8 g) for a discussion on funds withheld security arrangement with a related party.

8. Commitments, contingencies and guarantees

(a) Derivative Instruments

The Company maintains positions in derivative instruments such as futures, swaps, and foreign currency forward contracts for which the primary purposes are to manage duration and foreign currency exposure, yield enhancement, or to obtain an exposure to a particular financial market. Investment derivative instruments are recorded in either Other assets (OA) or Accounts payable, accrued expenses, and other liabilities (AP) in the Consolidated balance sheets. These are the most numerous and frequent derivative transactions.

Under reinsurance programs covering GLBs, the Company assumes the risk of GLBs, (principally GMIB), associated with variable annuity contracts. The GMIB risk is triggered if, at the time the contract holder elects to convert the accumulated account value to a periodic payment stream (annuitize), the accumulated account value is not sufficient to provide a guaranteed minimum level of monthly income. The GLB reinsurance product meets the definition of a derivative instrument and is classified within AP. The Company also generally maintains positions in exchange-traded equity futures contracts on equity market indices to limit equity exposure in the GMDB and GLB book of business.

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The following table presents the balance sheet locations, fair values in an asset or (liability) position, and notional values/payment provisions of the Company's derivative instruments at December 31, 2020 and 2019.

(in thousands of U.S. dollars)	2020			2019				
	Consolidated Balance sheet Location ⁽¹⁾	Fair Value		Notional Value / Payment Provision	Consolidated Balance sheet Location ⁽¹⁾	Fair Value		Notional Value / Payment Provision
		Derivative Asset	Derivative (Liability)			Derivative Asset	Derivative (Liability)	
Investment and embedded derivative instruments								
Foreign currency forward contracts	OA/(AP)	\$ 3,392	\$ (2,976)	\$ 357,477	OA/(AP)	\$ 6,705	\$ (5,548)	\$ 632,601
Futures contracts on notes and bonds	OA/(AP)	2,653	(438)	294,780	OA/(AP)	2,394	(839)	124,300
		<u>\$ 6,045</u>	<u>\$ (3,414)</u>	<u>\$ 652,257</u>		<u>\$ 9,099</u>	<u>\$ (6,387)</u>	<u>\$ 756,901</u>
Other derivative instruments								
Future contracts on equities ⁽²⁾	AP	\$ -	\$ (16,681)	\$ 708,712	OA	\$ -	\$ (12,632)	\$ 612,586
Interest rate swap	AP	-	(53,908)	650,000	OA	5,612	-	650,000
GLB ⁽³⁾	AP	-	(1,089,483)	1,658,145	AP	-	(897,758)	1,510,000
		<u>\$ -</u>	<u>\$ (1,160,072)</u>	<u>\$ 3,016,857</u>		<u>\$ 5,612</u>	<u>\$ (910,390)</u>	<u>\$ 2,772,586</u>

⁽¹⁾ Other assets (OA) and Accounts payable (AP)

⁽²⁾ Related to GMDB and GLB book of business.

⁽³⁾ Note that the payment provision related to GLB is the net amount at risk. The concept of a notional value does not apply to the GLB reinsurance contracts.

At December 31, 2020 and 2019, net derivative liabilities of \$14.1 million and \$9.9 million, respectively, included in the table above were subject to a master netting agreement. The remaining derivatives included in the table above were not subject to a master netting agreement.

(b) Derivative instrument objectives

(i) Foreign currency exposure management

A foreign currency forward contract (forward) is an agreement between participants to exchange specific foreign currencies at a future date. The Company uses forwards to minimize the effect of fluctuating foreign currencies.

(ii) Duration management and market exposure

Futures

Futures contracts give the holder the right and obligation to participate in market movements, determined by the index or underlying security on which the futures contract is based. Settlement is made daily in cash by an amount equal to the change in value of the futures contract times a multiplier that scales the size of the contract. Investments in futures contracts may be made only to the extent that there are assets under management not otherwise committed.

Exchange-traded equity futures contracts are used to limit exposure to a severe equity market decline, which would cause an increase in expected claims and therefore, an increase future policy benefit reserves for GMDB and an increase in the fair value liability for GLB reinsurance business.

(iii) GLB

Under the GLB program, as the assuming entity, the Company is obligated to provide coverage until the expiration or maturity of the underlying deferred annuity contracts or the expiry of the reinsurance treaty. The GLB is accounted for as a derivative and is recorded at fair value. Fair value represents management's estimate of an exit price and thus, includes a risk margin. We may recognize a realized loss for other changes in fair value due to adverse changes in the

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capital markets (e.g., declining interest rates and/or declining equity markets) and changes in actual or estimated future policyholder behavior (e.g., increased annuitization or decreased lapse rates) although we expect the business to be profitable.

(iv) Interest rate swaps

The Company has entered into an interest rate swap for the purpose of minimizing the effect of fluctuation interest rates.

(c) Securities lending and secured borrowings

The Company participates in a securities lending program operated by a third-party banking institution whereby certain assets are loaned to qualified borrowers and from which the Company earns an incremental return. The securities lending collateral can only be drawn down by the Company in the event that the institution borrowing the securities is in default under the lending agreement. An indemnification agreement with the lending agent protects the Company in the event a borrower becomes insolvent or fails to return any of the securities on loan. The collateral is recorded in Securities lending collateral and the liability is recorded in Securities lending payable in the Consolidated balance sheets.

The following table presents the carrying value of collateral held under securities lending agreements by investment category and maturity date of the underlying agreements:

	Remaining contractual maturity	
	Overnight and Continuous	
	December 31 2020	December 31 2019
(in thousands of U.S. dollars)		
Collateral held under securities lending agreements:		
Cash	\$ 175,733	\$ 146,863
U.S. Treasury and agency	29	-
	<u>175,762</u>	<u>146,863</u>
Gross amount of recognized liabilities for securities lending payable	175,853	146,925
Difference ⁽¹⁾	<u>\$ (91)</u>	<u>\$ (62)</u>

(1) The carrying value of the securities lending collateral held is lower than the securities lending payable due to accrued interest recorded in the securities lending payable.

At December 31, 2020 and 2019, the Company's repurchase agreement obligations of \$100.1 million and \$102.0 million, respectively, were fully collateralized. In contrast to securities lending programs, the use of cash received is not restricted for the repurchase obligations. The fair value of the underlying securities sold remains in Fixed maturities available for sale and the repurchase agreement obligation is recorded in Repurchase agreements in the Consolidated balance sheets.

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The following table presents the carrying value of collateral pledged under repurchase agreements by investment category and maturity date of the underlying agreements as at December 31, 2020 and 2019:

(in thousands of U.S. dollars)	2020			
	Remaining contractual maturity			Total
	Up to 30 days	30 – 90 days	Greater than 90 days	
Collateral pledged under repurchase agreements				
U.S. Treasury and agency	\$ -	\$ -	\$ -	\$ -
Mortgage-backed securities	-	-	102,394	102,394
	\$ -	\$ -	\$ 102,394	\$ 102,394
Gross amount of recognized liabilities for repurchase agreements				100,073
Difference ⁽¹⁾				\$ 2,321

(1) Per the repurchase agreements, the amount of collateral posted is required to exceed the amount of gross liability.

(in thousands of U.S. dollars)	2019			
	Remaining contractual maturity			Total
	Up to 30 days	30 – 90 days	Greater than 90 days	
Collateral pledged under repurchase agreements				
U.S. Treasury and agency	\$ 103,038	\$ -	\$ -	\$ 103,038
Mortgage-backed securities	-	-	-	-
	\$ 103,038	\$ -	\$ -	103,038
Gross amount of recognized liabilities for repurchase agreements				101,994
Difference ⁽¹⁾				\$ 1,044

(1) Per the repurchase agreements, the amount of collateral posted is required to exceed the amount of gross liability.

Potential risks exist in the Company's secured borrowing transactions due to market conditions and counterparty exposure. With collateral that the Company pledges, there is a risk that the collateral may not be returned at the expiration of the agreement. If the counterparty fails to return the collateral, the Company will have free use of the borrowed funds until the collateral is returned. In addition, the Company may encounter the risk that it may not be able to renew outstanding borrowings with a new term or with an existing counterparty due to market conditions including a decrease in demand as well as more restrictive terms from banks due to increased regulatory and capital constraints. Should this condition occur, the Company may seek alternative borrowing sources or reduce borrowings. Additionally, increased margins and collateral requirements due to market conditions would increase restricted assets as the Company is required to provide additional collateral to support the transaction.

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The following table presents net realized gains (losses) related to derivative instrument activity in the Consolidated statements of operations:

(in thousands of U.S. dollars)	2020	2019
Investment and embedded derivative instruments		
Foreign currency forward contracts	\$ 3,711	\$ 47
Future contracts on notes and bonds	(11,252)	(10,247)
Total investment and embedded derivative instruments	(7,541)	(10,200)
GLB and other derivative instruments		
GLB	\$ (202,007)	\$ (3,829)
Futures contracts on equities ⁽¹⁾	(108,288)	(137,619)
Interest rate swaps	(59,520)	(17,826)
Total GLB and other derivative instruments	(369,815)	(159,274)
	\$ (377,356)	\$ (169,474)

(1) Related to GMDB and GLB blocks of business.

(d) Concentrations of credit risk

The Company's investment portfolio is managed following prudent standards of diversification. Specific provisions limit the allowable holdings of a single issue and issuer. The Company believes that there are no significant concentrations of credit risk associated with the investment portfolio. Our three largest exposures by issuer at December 31, 2020, were Wells Fargo & Co., JP Morgan Chase & Co. and Bank of America Corp. The Company's largest exposure by industry at December 31, 2020 was financial services.

As discussed in Note 3, the Company committed to purchase an additional 7.1 percent interest in Huatai Group. In connection with this purchase agreement, in January 2020, the Company paid collateralized deposits totaling \$493 million. There is credit exposure with the current selling shareholders until the obligations under the purchase agreements are satisfied.

(e) Other investments

At December 31, 2020, included in Other investments in the Consolidated balance sheet are investments in limited partnerships and partially-owned investment companies with a carrying value of \$5.2 billion. In connection with these investments, the Company has commitments that may require funding of up to \$1.8 billion over the next several years.

(f) Letters of Credit

Chubb and its participating subsidiaries (including the Company) have access to capital markets and to credit facilities with letter of credit capacity of \$4.0 billion with a sub-limit of \$1.9 billion for revolving credit. The existing credit facilities have remaining terms expiring through October 2022. At December 31, 2020, the LOC usage was \$1.7 billion.

(g) Guarantee

In 2011, the Company entered into a funds withheld security arrangement with Chubb Insurance Limited (Chubb Australia), under which the Company agreed to provide collateral to support reinsurance balances recoverable that Chubb Australia carries in connection with business reinsured from CTR and other Chubb affiliates. The agreement requires collateral to be provided in connection with reinsurance balances recoverable from events that occurred at least two years prior. At December 31, 2020 the funds withheld balance totaled AUD\$607.2 million (\$452.2 million) of which a maximum of AUD\$87.0 million (\$64.8 million) could be used to support affiliate balances. At December 31, 2019 the funds withheld balance totaled AUD\$546.5 million (\$375.8 million) of which a maximum of AUD\$65.0 million (\$44.7 million) could be used to support other Chubb affiliate balances.

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(h) Floating Charge

The Company utilizes a floating charge over certain assets for the benefit of a affiliated ceding company. Under the agreement, the Company would be required to secure assets in a trust for the benefit of the ceding company upon certain triggering events, including a rating downgrade below “A” by Standard and Poor’s. Although there had been no triggering events, in 2015 the Company elected to fund a trust for the benefit of the ceding company with a balance at December 31, 2020 and 2019 of \$890.0 million and \$823.4 million, respectively. There have been no triggering events in 2020 or 2019.

(i) Fixed maturities

At December 31, 2020, the Company had no commitments to purchase fixed income securities.

(j) Claims and Other Litigation

The Company may be subject to litigation involving disputed interpretations of treaty coverages. These lawsuits, involving claims on treaties issued by the Company’s subsidiaries which are typical to the reinsurance industry in general and in the normal course of business, are considered in the loss and loss expense reserves. In addition to claims litigation, the Company is subject to lawsuits and regulatory actions in the normal course of business that do not arise from or directly relate to claims on reinsurance treaties. This category of business litigation typically involves, among other things, regulatory activity or disputes arising from the Company’s business ventures. In the opinion of management, the ultimate liability for these matters could be, but the Company believes is not likely to be, material to the consolidated financial condition and results of operations.

9. Shareholder’s equity

The Company's authorized and issued share capital is \$370,000 consisting of 370,000 Common Shares of \$1 par value.

During the years ended December 31, 2020 and 2019 dividends amounting to \$300 million and \$150 million respectively, were declared and paid.

During the year ended December 31, 2020, our parent company contributed additional paid-in capital of \$1.2 billion.

10. Fair value measurements

(a) Fair value hierarchy

Fair value of financial assets and financial liabilities is estimated based on the framework established in the fair value accounting guidance. The guidance defines fair value as the price to sell an asset or transfer a liability (an exit price) in an orderly transaction between market participants and establishes a three-level valuation hierarchy based on the reliability of the inputs. The fair value hierarchy gives the highest priority to quoted prices in active markets and the lowest priority to unobservable data.

The three levels of the hierarchy are as follows:

Level 1 – Unadjusted quoted prices for identical assets or liabilities in active markets;

Level 2 – Includes, among other items, inputs other than quoted prices that are observable for the asset or liability such as interest rates and yield curves, quoted prices for similar assets and liabilities in active markets, and quoted prices for identical or similar assets and liabilities in markets that are not active; and

Level 3 – Inputs that are unobservable and reflect management’s judgments about assumptions that market participants would use in pricing an asset or liability.

The Company categorizes financial instruments within the valuation hierarchy at the balance sheet date based upon the lowest level of inputs that are significant to the fair value measurement.

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The Company uses pricing services to obtain fair value measurements for the majority of the Company's investment securities. Based on management's understanding of the methodologies used, these pricing services only produce an estimate of fair value if there is observable market information that would allow them to make a fair value estimate. Based on the Company's understanding of the market inputs used by the pricing services, all applicable investments have been valued in accordance with GAAP. The Company does not adjust prices obtained from pricing services. The following is a description of the valuation techniques and inputs used to determine fair values for financial instruments carried at fair value, as well as the general classification of such financial instruments pursuant to the valuation hierarchy.

(i) Fixed maturities

The Company uses pricing services to estimate fair value measurements for the majority of the Company's fixed maturities. The pricing services use market quotations for fixed maturities that have quoted prices in active markets; such securities are classified within Level 1. For fixed maturities other than U.S. Treasury securities that generally do not trade on a daily basis, the pricing services prepare estimates of fair value measurements using their pricing applications, or pricing models, which include available relevant market information, benchmark curves, benchmarking of like securities, sector groupings, and matrix pricing. Additional valuation factors that can be taken into account are nominal spreads, dollar basis, and liquidity adjustments. The pricing services evaluate each asset class based on relevant market and credit information, perceived market movements, and sector news. The market inputs used in the pricing evaluation, listed in the approximate order of priority include: benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, reference data, and industry and economic events. The extent of the use of each input is dependent on the asset class and the market conditions. Given the asset class, the priority of the use of inputs may change or some market inputs may not be relevant. Additionally, fixed maturities valuation is more subjective when markets are less liquid due to the lack of market based inputs (i.e., stale pricing), and may require the use of models to be priced. The lack of market based inputs may increase the potential that an investment's estimated fair value is not reflective of the price at which an actual transaction would occur. The overwhelming majority of fixed maturities are classified within Level 2 because the most significant inputs used in the pricing techniques are observable. For a small number of fixed maturities, the Company obtains a single broker quote (typically a market maker). Due to the disclaimers on the quotes that indicate that the price is indicative only, the Company include these fair value estimates in Level 3.

(ii) Equity securities

Equity securities with active markets are classified within Level 1 as fair values are based on quoted market prices. For equity securities in markets which are less active, fair values are based on market valuations and are classified within Level 2. Equity securities for which pricing is unobservable are classified within Level 3.

(iii) Short-term investments

Short-term investments, which comprise securities due to mature within one year of the date of purchase that are traded in active markets, are classified within Level 1 as fair values are based on quoted market prices. Securities such as commercial paper and discount notes are classified within Level 2 because these securities are typically not actively traded due to their approaching maturity and, as such, their cost approximates fair value. Short-term investments for which pricing is unobservable are classified within Level 3.

(iv) Other investments

Fair values for the majority of Other investments including investments in partially-owned investment companies, investment funds and limited partnerships are based on their respective net asset values or equivalent (NAV) and are excluded from the fair value hierarchy table below.

(v) Securities lending collateral

The underlying assets included in Securities lending collateral in the Consolidated balance sheets are fixed maturities which are classified in the valuation hierarchy on the same basis as other fixed maturities. Excluded from the valuation hierarchy is the corresponding liability related to the Company's obligation to return the collateral plus interest as it is reported at contract value and not fair value in the Consolidated balance sheets.

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(vi) Investment derivative instruments

Actively traded investment derivative instruments, including futures, and exchange-traded forward contracts, are classified within Level 1 as fair values are based on quoted market prices. Investment derivative instruments are recorded in either Other assets or Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets.

(vii) Other derivative instruments

The Company maintains positions in exchange-traded equity futures designed to limit exposure to a severe equity market decline, which would cause an increase in expected claims and, therefore, an increase in future policy benefit reserves for the Company's GMDB and an increase in the fair value liability for our guaranteed living benefits GLB reinsurance business. The Company's positions in exchange-traded equity futures contracts are classified within Level 1. Further, the Company's positions in the interest rate swap and foreign currency forward contract are valued based on significant observable inputs and are therefore classified within Level 2. Other derivative instruments are recorded in either Other assets or Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets.

(viii) Separate account assets

Separate account assets represent segregated funds where investment risks are borne by the customers, except to the extent of certain guarantees made by the Company. Separate account assets comprise mutual funds classified in the valuation hierarchy on the same basis as other equity securities traded in active markets and are classified within Level 1. Separate account assets also include fixed maturities classified within Level 2 because the most significant inputs used in the pricing techniques are observable. Excluded from the valuation hierarchy are the corresponding liabilities as they are reported at contract value and not fair value in the Consolidated balance sheets. Separate account assets are recorded in Other assets in the Consolidated balance sheets.

(ix) Guaranteed living benefits

The GLB arises from life reinsurance programs covering living benefit guarantees whereby the Company assumes the risk of guaranteed minimum income benefits (GMIB) associated with variable annuity contracts. GLB's are recorded in Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets. Prior to 2020, a portion of the GLB liability that represented expected losses allocated to premiums received was recorded as incurred losses within Future policy benefits, with changes in these estimates recorded in Future policy benefits. The Company reclassified \$441 million of GLB liability as of December 31, 2019 to Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets to conform with the new presentation. For GLB reinsurance, the Company estimates fair value using an internal valuation model which includes current market information and estimates of policyholder behavior. All of the treaties contain claim limits, which are factored into the valuation model. The fair value depends on a number of factors, including interest rates, equity markets, credit risk, current account value, market volatility, expected annuitization rates and other policyholder behavior, and changes in policyholder mortality. Because of the significant use of unobservable inputs including policyholder behavior, GLB reinsurance is classified within Level 3.

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The following tables present, by valuation hierarchy, the financial instruments measured at fair value on a recurring basis at December 31, 2020 and 2019.

(in thousands of U.S. dollars)

	2020			
	Level 1	Level 2	Level 3	Total
Assets:				
Fixed maturities available for sale				
U.S. Treasury / Agency	\$ 304,342	\$ 106,433	\$ -	\$ 410,775
Non-U.S.	-	3,680,034	-	3,680,034
Corporate and assets-backed securities	-	6,322,280	17,052	6,339,332
Mortgage-backed securities	-	3,489,193	50,300	3,539,493
Municipal	-	264,879	-	264,879
	<u>304,342</u>	<u>13,862,819</u>	<u>67,352</u>	<u>14,234,513</u>
Equity securities	99,175	-	191	99,366
Short-term investments	400,032	77,727	-	477,759
Investment derivative instruments	6,045	-	-	6,045
Other investments ⁽¹⁾	4,897	-	-	4,897
Securities lending collateral	-	175,762	-	175,762
Separate account assets	3,985,397	-	-	3,985,397
Total assets measured at fair value ⁽¹⁾	<u>\$ 4,799,888</u>	<u>\$ 14,116,308</u>	<u>\$ 67,543</u>	<u>\$ 18,983,739</u>
Liabilities:				
Investment derivative instruments	\$ 3,414	\$ -	\$ -	\$ 3,414
Other derivative instruments	16,681	53,908	-	70,589
GLB ⁽²⁾	-	-	1,089,483	1,089,483
Total liabilities measured at fair value	<u>\$ 20,095</u>	<u>\$ 53,908</u>	<u>\$ 1,089,483</u>	<u>\$ 1,163,486</u>

(1) Excluded from the table above are partially-owned investment companies, limited partnerships and investment funds of \$5.5 billion at December 31, 2020 measured using NAV as a practical expedient.

(2) The GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value.

(in thousands of U.S. dollars)

	2019			
	Level 1	Level 2	Level 3	Total
Assets:				
Fixed maturities available for sale				
U.S. Treasury and agency	\$ 347,487	\$ 112,715	\$ -	\$ 460,202
Foreign	-	3,192,643	9,100	3,201,743
Corporate securities	-	5,575,928	46,851	5,622,779
Mortgage-backed securities	-	3,212,345	50,663	3,263,008
States, municipalities, and political subdivisions	-	224,748	-	224,748
	<u>347,487</u>	<u>12,318,379</u>	<u>106,614</u>	<u>12,772,480</u>
Equity securities	545	-	206	751
Short-term investments	649,650	86,069	-	735,719
Investment derivative instruments	9,099	-	-	9,099
Other investments ⁽¹⁾	-	-	-	-
Other derivative instruments	-	5,612	-	5,612
Securities lending collateral	-	146,863	-	146,863
Separate account assets	3,191,030	-	-	3,191,030
Total assets measured at fair value ⁽¹⁾	<u>\$ 4,197,811</u>	<u>\$ 12,556,923</u>	<u>\$ 106,820</u>	<u>\$ 16,861,554</u>
Liabilities:				

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Investment derivative instruments	\$	6,387	\$	-	\$	-	\$	6,387
Other derivative instruments		12,632		-		-		12,632
GLB ⁽²⁾		-		-		897,758		897,758
Total liabilities measured at fair value	\$	<u>19,019</u>	\$	<u>-</u>	\$	<u>897,758</u>	\$	<u>916,777</u>

(1) Excluded from the table above are partially-owned investment companies and investment funds of \$3.8 billion at December 31, 2019 measured using NAV as a practical expedient.

(2) The GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value.

(b) Level 3 financial instruments

The following table presents the significant unobservable inputs used in the Level 3 liability valuations. Excluded from the table below are inputs used to fair value Level 3 assets which are based on single broker quotes or net asset value and contain no quantitative unobservable inputs developed by management. The majority of the Company's fixed maturities classified as Level 3 used external pricing when markets are less liquid due to the lack of market inputs (i.e., stale pricing, broker quotes).

(in thousands of U.S. dollars)	Fair Value at December 31, 2020	Valuation Technique	Significant Unobservable Inputs	Ranges	Weighted Average ⁽¹⁾
GLB ⁽¹⁾	\$ 1,089,483	Actuarial model	Lapse rate	3% - 34%	4.7%
			Annuitization rate	0% - 100%	3.6%

(1) The weighted average lapse and annuitization rates are determined by weighting each treaty's rates by the GLB contracts fair value.

The most significant policyholder behavior assumptions include lapse rates and the GMIB annuitization rates. Assumptions regarding lapse rates and GMIB annuitization rates differ by treaty, but the underlying methodologies to determine rates applied to each treaty are comparable.

A lapse rate is the percentage of in-force policies surrendered in a given calendar year. All else equal, as lapse rates increase, ultimate claim payments will decrease. In general, the base lapse function assumes low lapse rates during the surrender charge period of the GMIB contract, followed by a "spike" lapse rate in the year immediately following the surrender charge period, and then reverting to an ultimate lapse rate, typically over a 2-year period. This base rate is adjusted downward for policies with more valuable guarantees (policies with guaranteed values far in excess of their account values). Partial withdrawals and the impact of older policyholders with tax-qualified contracts (due to required minimum distributions) are also reflected in our modeling.

The GMIB annuitization rate is the percentage of policies for which the policyholder will elect to annuitize using the guaranteed benefit provided under the GMIB. All else equal, as GMIB annuitization rates increase, ultimate claim payments will increase, subject to treaty claim limits. All GMIB reinsurance treaties include claim limits to protect the Company in the event that actual annuitization behavior is significantly higher than expected. In general, the Company assumes that GMIB annuitization rates will be higher for policies with more valuable guarantees (policies with guaranteed values far in excess of their account values). The Company also assumes that GMIB annuitization rates increase as policyholders get older. In addition, we also assume that GMIB annuitization rates are higher in the first year immediately following the waiting period (the first year the policies are eligible to annuitize using the GMIB) in comparison to all subsequent years. We do not yet have fully credible annuitization experience for all clients.

The effect of changes in key market factors on assumed lapse and annuitization rates reflect emerging trends using data available from cedants. For treaties with limited experience, rates are established in line with data received from other ceding companies adjusted, as appropriate, with industry estimates. The model and related assumptions are regularly re-evaluated by management and enhanced, as appropriate, based upon additional experience obtained related to policyholder behavior and availability of updated information such as market conditions, market participant assumptions, and demographics of in-force annuities.

In the fourth quarter of 2020, the Company completed a review of policyholder behavior related to annuitizations, partial withdrawals, lapses, and mortality for its variable annuity reinsurance business. As a result, we refined our policyholder behavior assumptions (mainly those relating to annuitizations and partial withdrawals), which had an insignificant

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impact on net income. During the year ended December 31, 2020, we also made routine model refinements to the internal valuation model which had an insignificant impact on net income.

The following tables present a reconciliation of the beginning and ending balances of financial instruments measured at fair value using significant unobservable inputs (Level 3):

(in thousands of U.S. dollars)

	Year ended December 31, 2020				
	Assets				Liabilities
	Available-for-sale debt securities				
	Foreign	Corporate securities	MBS	Equity securities	GLB ⁽¹⁾
Balance - Beginning of year	\$ 9,100	\$ 46,851	\$ 50,663	\$ 206	\$ 897,758
Transfers into Level 3	1	6,476	-	-	-
Transfers out of Level 3	(8,965)	(17,629)	-	(352)	-
Change in Net Unrealized Gains (Losses) included in OCI	(1,828)	(1,177)	(2)	-	-
Net Realized Gains/Losses	72	(405)	-	337	202,007
Purchases	1,697	2,277	-	-	-
Sales	-	(3,414)	-	-	-
Settlements	(77)	(15,927)	(361)	-	-
Other	-	-	-	-	(10,282)
Balance-End of year	\$ -	\$ 17,052	\$ 50,300	\$ 191	\$ 1,089,483
Net Realized Gains/Losses Attributable to Changes in Fair Value at the Balance Sheet Date	\$ -	\$ -	\$ -	\$ 387	\$ 202,007
Change in Net Unrealized Gains/Losses included in OCI at the Balance Sheet Date	\$ -	\$ 101	\$ (1)	\$ -	\$ -

(1) The Company's GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value.

(in thousands of U.S. dollars)

	Year ended December 31, 2019				
	Assets				Liabilities
	Available-for-sale debt securities				
	Foreign	Corporate securities	MBS	Equity securities	GLB ⁽¹⁾
Balance - Beginning of year	\$ 17,428	\$ 51,463	\$ 51,245	\$ 146	\$ 861,743
Transfers into Level 3	9,814	-	-	-	-
Transfers out of Level 3	(17,921)	(175)	-	-	-
Change in Net Unrealized Gains (Losses) included in OCI	434	893	(8)	-	-
Net Realized Gains/Losses	(242)	(1,579)	-	(311)	3,931
Purchases	2,476	20,570	-	371	-
Sales	(2,775)	(2,259)	-	-	-
Settlements	(114)	(22,062)	(574)	-	-
	-	-	-	-	32,084
Balance-End of year	\$ 9,100	\$ 46,851	\$ 50,663	\$ 206	\$ 897,758
Net Realized Gains/Losses Attributable to Changes in Fair Value at the Balance Sheet Date	\$ -	\$ (719)	\$ -	\$ -	\$ 3,930
Change in Net Unrealized Gains/Losses included in OCI at the Balance Sheet Date	\$ 222	\$ 911	\$ 10	\$ -	\$ -

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(1) The Company's GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value.

(c) Financial instruments disclosed, but not carried, at fair value

The Company uses various financial instruments in the normal course of its business. The Company's reinsurance contracts are excluded from fair value of financial instruments accounting guidance and, therefore, are not included in the amounts discussed below.

The carrying values of cash, other assets, other liabilities, and other financial instruments not included below approximated their fair values.

Investments in partially-owned insurance companies

The fair values of the Company's investments in partially-owned insurance companies are based on the share of the net assets based on the financial statements provided by those companies and are excluded from the valuation hierarchy tables below.

Repurchase agreements

Where practical, fair values of repurchase agreements are estimated using discounted cash flow calculations based principally on observable inputs including incremental borrowing rates, which reflect the Company's credit rating, for similar types of borrowings with maturities consistent with those remaining for the debt being valued.

The following tables present fair value, by valuation hierarchy, and carrying value of the financial instruments not measured at fair value:

December 31, 2020 (in thousands of U.S. dollars)	Fair Value				Carrying Value
	Level 1	Level 2	Level 3	Total	
Assets:					
Fixed Maturities held to maturity:					
Corporate securities	\$ -	\$ 1,340	\$ -	\$ 1,340	\$ 1,240
Mortgage-backed securities	-	3,557	-	3,557	3,193
Total assets	\$ -	4,897	-	4,897	4,433
Liabilities:					
Repurchase agreements	\$ -	\$ 100,073	\$ -	\$ 100,073	\$ 100,073

December 31, 2019 (in thousands of U.S. dollars)	Fair Value				Carrying Value
	Level 1	Level 2	Level 3	Total	
Assets:					
Fixed Maturities held to maturity:					
Corporate securities	\$ -	\$ 1,519	\$ -	\$ 1,519	\$ 1,461
Mortgage-backed securities	-	4,335	-	4,335	4,058
Total assets	\$ -	5,854	-	5,854	5,519
Liabilities:					
Repurchase agreements	\$ -	\$ 101,994	\$ -	\$ 101,994	\$ 101,994

11. Taxation

Under current Bermuda law, the Company and its Bermuda subsidiaries are not required to pay any taxes on income or capital gains. If a Bermuda law were enacted that would impose taxes on income or capital gains, Chubb Limited and the

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Bermuda subsidiaries have received an undertaking from the Minister of Finance in Bermuda that would exempt such companies from Bermudian taxation until March 2035.

The Company does not consider itself to be engaged in trade or business in the United States and, accordingly, does not expect to be subject to United States taxation.

The Company does conduct business through non-US branches and subsidiaries domiciled in tax jurisdictions.

12. Statutory financial information

The Company is registered under The Insurance Act 1978 (Bermuda), amendments thereto and related regulations (the Act) as a Class E insurer. Effective January 1, 2016, Bermuda implemented a new solvency and risk management regime which has been deemed equivalent to the EU's Solvency II regime. Bermuda statutory reporting rules have been amended to introduce an economic balance sheet (EBS) framework. The Company calculates statutory capital using the Bermuda Statutory Capital Requirement (BSCR) model. The BSCR is a risk-based capital model that measures risk to determine an enhanced capital requirement and target capital level (defined as 120 percent of the enhanced capital requirement (ECR)) for Class E insurers. Effective for our statutory filing related to the year ended December 31, 2019, the statutorily prescribed Bermuda Solvency Capital Requirement model (BSCR) calculates the ECR under a revised methodology (the Revised Methodology) compared to previous years. The Revised Methodology prescribes certain differences in the calculation of risk charges prior to covariance (or diversification) adjustments. In addition, unlike the methodology prior to 2019, the Revised Methodology assumes a certain degree of correlation between risks when calculating the covariance adjustment to arrive at ECR. In spite of these revisions, the Bermuda Monetary Authority has allowed for a multi-year transition (between the revised and previous methodologies) period in determining the ECR disclosed below.

Statutory capital and surplus of the Company was \$12.7 billion and \$11 billion at December 31, 2020 and 2019, respectively. For the years ended December 31, 2020 and 2019, the ECR was \$3.8 billion and \$2.8 billion, respectively. The minimum solvency margin required at December 31, 2020 was met by the Company.

CTR, as a wholly-owned subsidiary of the Company, is registered under the Act as a Class 4 insurer. The Act requires CTR to meet a minimum solvency margin and a minimum liquidity ratio. CTR has satisfied these requirements for 2020 and 2019. For Class 4 insurers, the target capital level as calculated by the BSCR is defined as 120 percent of the ECR. For the year ended December 31, 2020 the Company had statutory capital and surplus of \$12.5 billion (2019: \$10.6 billion) which exceeded the ECR of \$3.7 billion (2019: \$2.6 billion).

A Class 4 insurer is prohibited from declaring or paying a dividend if in breach of its ECR, solvency margin or minimum liquidity ratio or if the declaration or payment of such dividend would cause such a breach. Where an insurer fails to meet its solvency margin or minimum liquidity ratio on the last day of any financial year, it is prohibited from declaring or paying any dividends during the next financial year without the approval of the Bermuda Monetary Authority (the Authority). Further, a Class 4 insurer is prohibited from declaring or paying in any financial year dividends of more than 25 percent of its total statutory capital and surplus (as shown on its previous financial year's statutory balance sheet) unless it files (at least seven days before payment of such dividends) with the Authority an affidavit signed by at least two directors and the insurer's principal representative stating that the declaration of such dividends has not caused the insurer to fail to meet its solvency margin or minimum liquidity ratio. Class 4 insurers must obtain the Authority's prior approval for a reduction by 15 percent or more of the total statutory capital as set forth in its previous year's statutory financial statements.

13. Subsequent events

The Company has performed an evaluation of subsequent events through April 30, 2021, which is the date that the financial statements were issued.

During March 2021, the Company declared and paid a dividend amounting to \$350 million.

No other significant subsequent events were identified.