Table of Contents

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

☑ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Quarterly Period Ended June 30, 2017

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Transition Period from to
Commission File No. 1-11778

CHUBB LIMITED

(Exact name of registrant as specified in its charter)

Switzerland	**98-0091805**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

Baerengasse 32
Zurich, Switzerland CH-8001
(Address of principal executive offices) (Zip Code)
+41 (0)43 456 76 00
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

YES ☑ NO ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

YES ☑ NO ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☑		Accelerated filer ☐
Non-accelerated filer ☐	(Do not check if a smaller reporting company)	Smaller reporting company ☐
		Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

YES ☐ NO ☑

The number of registrant's Common Shares (CHF 24.15 par value) outstanding as of July 21, 2017 was 465,416,079 .

CHUBB LIMITED
INDEX TO FORM 10-Q

		Page
Part I.	**FINANCIAL INFORMATION**	
Item 1.	Financial Statements:	
	Consolidated Balance Sheets (Unaudited) June 30, 2017 and December 31, 2016	3
	Consolidated Statements of Operations and Comprehensive Income (Unaudited) Three and Six Months Ended June 30, 2017 and 2016	4
	Consolidated Statements of Shareholders' Equity (Unaudited) Six Months Ended June 30, 2017 and 2016	5
	Consolidated Statements of Cash Flows (Unaudited) Six Months Ended June 30, 2017 and 2016	6
	Notes to Consolidated Financial Statements (Unaudited)	
	Note 1. General	7
	Note 2. Acquisition	8
	Note 3. Investments	9
	Note 4. Fair value measurements	14
	Note 5. Unpaid losses and loss expenses	22
	Note 6. Commitments, contingencies, and guarantees	26
	Note 7. Shareholders' equity	31
	Note 8. Share-based compensation	32
	Note 9. Postretirement benefits	32
	Note 10. Segment information	33
	Note 11. Earnings per share	36
	Note 12. Information provided in connection with outstanding debt of subsidiaries	37
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	43
Item 3.	Quantitative and Qualitative Disclosures About Market Risk	82
Item 4.	Controls and Procedures	85
Part II.	**OTHER INFORMATION**	
Item 1.	Legal Proceedings	85
Item 1A.	Risk Factors	85
Item 2.	Unregistered Sales of Equity Securities and Use of Proceeds and Issuer Repurchases of Equity Securities	85
Item 6.	Exhibits	85

PART I FINANCIAL INFORMATION

ITEM 1. Financial Statements

CONSOLIDATED BALANCE SHEETS (Unaudited)

Chubb Limited and Subsidiaries

(in millions of U.S. dollars, except share and per share data)	June 30 2017	December 31 2016
Assets		
Investments		
Fixed maturities available for sale, at fair value (amortized cost – $80,363 and $79,536)		
(includes hybrid financial instruments of $2 and $2)	$ 81,645	$ 80,115
Fixed maturities held to maturity, at amortized cost (fair value – $10,560 and $10,670)	10,371	10,644
Equity securities, at fair value (cost – $697 and $706)	856	814
Short-term investments, at fair value and amortized cost	2,651	3,002
Other investments (cost – $4,410 and $4,270)	4,685	4,519
Total investments	100,208	99,094
Cash	1,297	985
Securities lending collateral	1,545	1,092
Accrued investment income	901	918
Insurance and reinsurance balances receivable	9,662	8,970
Reinsurance recoverable on losses and loss expenses	13,358	13,577
Reinsurance recoverable on policy benefits	198	182
Deferred policy acquisition costs	4,546	4,314
Value of business acquired	337	355
Goodwill	15,434	15,332
Other intangible assets	6,579	6,763
Prepaid reinsurance premiums	2,592	2,448
Investments in partially-owned insurance companies	662	666
Other assets	5,669	5,090
Total assets	$ 162,988	$ 159,786
Liabilities		
Unpaid losses and loss expenses	$ 60,394	$ 60,540
Unearned premiums	15,289	14,779
Future policy benefits	5,190	5,036
Insurance and reinsurance balances payable	5,841	5,637
Securities lending payable	1,546	1,093
Accounts payable, accrued expenses, and other liabilities	8,952	8,617
Deferred tax liabilities	1,122	988
Repurchase agreements	1,408	1,403
Short-term debt	922	500
Long-term debt	11,667	12,610
Trust preferred securities	308	308
Total liabilities	112,639	111,511
Commitments and contingencies		
Shareholders' equity		
Common Shares (CHF 24.15 par value; 479,783,864 shares issued; 465,375,141 and 465,968,716 shares outstanding)	11,121	11,121
Common Shares in treasury (14,408,723 and 13,815,148 shares)	(1,675)	(1,480)
Additional paid-in capital	14,522	15,335
Retained earnings	26,011	23,613
Accumulated other comprehensive income (loss) (AOCI)	370	(314)
Total shareholders' equity	50,349	48,275
Total liabilities and shareholders' equity	$ 162,988	$ 159,786

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (Unaudited)
Chubb Limited and Subsidiaries

(in millions of U.S. dollars, except per share data)	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	**2017**	2016
Revenues				
Net premiums written	**$ 7,581**	$ 7,639	**$ 14,291**	$ 13,634
Decrease (increase) in unearned premiums	**(344)**	(234)	**(282)**	368
Net premiums earned	**7,237**	7,405	**14,009**	14,002
Net investment income	**770**	708	**1,515**	1,382
Net realized gains (losses):				
Other-than-temporary impairment (OTTI) losses gross	**(9)**	(16)	**(28)**	(87)
Portion of OTTI losses recognized in other comprehensive income (OCI)	**1**	—	**1**	8
Net OTTI losses recognized in income	**(8)**	(16)	**(27)**	(79)
Net realized gains (losses) excluding OTTI losses	**109**	(200)	**121**	(531)
Total net realized gains (losses) (includes $25, $2, $17, and $(150) reclassified from AOCI)	**101**	(216)	**94**	(610)
Total revenues	**8,108**	7,897	**15,618**	14,774
Expenses				
Losses and loss expenses	**4,146**	4,254	**7,935**	7,928
Policy benefits	**163**	146	**331**	272
Policy acquisition costs	**1,449**	1,560	**2,846**	2,973
Administrative expenses	**706**	829	**1,382**	1,601
Interest expense	**147**	153	**301**	299
Other (income) expense	**(145)**	(29)	**(215)**	(1)
Amortization of purchased intangibles	**65**	5	**129**	12
Chubb integration expenses	**72**	98	**183**	246
Total expenses	**6,603**	7,016	**12,892**	13,330
Income before income tax	**1,505**	881	**2,726**	1,444
Income tax expense (includes $9, $6, $3 and $5 on reclassified unrealized gains and losses)	**200**	155	**328**	279
Net income	**$ 1,305**	$ 726	**$ 2,398**	$ 1,165
Other comprehensive income				
Unrealized appreciation	**$ 459**	$ 947	**$ 766**	$ 1,852
Reclassification adjustment for net realized (gains) losses included in net income	**(25)**	(2)	**(17)**	150
	434	945	**749**	2,002
Change in:				
Cumulative foreign currency translation adjustment	**102**	81	**236**	393
Postretirement benefit liability adjustment	**(35)**	1	**(55)**	3
Other comprehensive income, before income tax	**501**	1,027	**930**	2,398
Income tax expense related to OCI items	**(131)**	(213)	**(246)**	(482)
Other comprehensive income	**370**	814	**684**	1,916
Comprehensive income	**$ 1,675**	$ 1,540	**$ 3,082**	$ 3,081
Earnings per share				
Basic earnings per share	**$ 2.79**	$ 1.55	**$ 5.12**	$ 2.55
Diluted earnings per share	**$ 2.77**	$ 1.54	**$ 5.08**	$ 2.53

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (Unaudited)
Chubb Limited and Subsidiaries

(in millions of U.S. dollars)	Six Months Ended June 30 2017	2016
Common Shares		
Balance – beginning of period	$ **11,121**	$ 7,833
Shares issued for Chubb Corp acquisition	**—**	3,288
Balance – end of period	**11,121**	11,121
Common Shares in treasury		
Balance – beginning of period	**(1,480)**	(1,922)
Common Shares repurchased	**(475)**	—
Net shares redeemed under employee share-based compensation plans	**280**	345
Balance – end of period	**(1,675)**	(1,577)
Additional paid-in capital		
Balance – beginning of period	**15,335**	4,481
Shares issued for Chubb Corp acquisition	**—**	11,916
Equity awards assumed in Chubb Corp acquisition	**—**	323
Net shares redeemed under employee share-based compensation plans	**(275)**	(358)
Exercise of stock options	**(38)**	(37)
Share-based compensation expense and other	**156**	170
Funding of dividends declared to Retained earnings	**(656)**	(637)
Balance – end of period	**14,522**	15,858
Retained earnings		
Balance – beginning of period	**23,613**	19,478
Net income	**2,398**	1,165
Funding of dividends declared from Additional paid-in capital	**656**	637
Dividends declared on Common Shares	**(656)**	(637)
Balance – end of period	**26,011**	20,643
Accumulated other comprehensive income (loss)		
Net unrealized appreciation on investments		
Balance – beginning of period	**1,058**	874
Change in period, before reclassification from AOCI, net of income tax expense of $(259) and $(477)	**507**	1,375
Amounts reclassified from AOCI, net of income tax benefit of $3 and $5	**(14)**	155
Change in period, net of income tax expense of $(256) and $(472)	**493**	1,530
Balance – end of period	**1,551**	2,404
Cumulative foreign currency translation adjustment		
Balance – beginning of period	**(1,663)**	(1,539)
Change in period, net of income tax expense of $(7) and $(11)	**229**	382
Balance – end of period	**(1,434)**	(1,157)
Postretirement benefit liability adjustment		
Balance – beginning of period	**291**	(70)
Change in period, net of income tax benefit of $17 and $1	**(38)**	4
Balance – end of period	**253**	(66)
Accumulated other comprehensive income	**370**	1,181
Total shareholders' equity	$ **50,349**	$ 47,226

See accompanying notes to the consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)
Chubb Limited and Subsidiaries

	Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016
Cash flows from operating activities		
Net income	**$ 2,398**	$ 1,165
Adjustments to reconcile net income to net cash flows from operating activities		
Net realized (gains) losses	**(94)**	610
Amortization of premiums/discounts on fixed maturities	**353**	376
Amortization of UPR related to the Chubb Corp acquisition	**—**	1,095
Deferred income taxes	**(112)**	48
Unpaid losses and loss expenses	**(411)**	330
Unearned premiums	**386**	(382)
Future policy benefits	**134**	106
Insurance and reinsurance balances payable	**278**	193
Accounts payable, accrued expenses, and other liabilities	**(603)**	18
Income taxes payable	**(103)**	67
Insurance and reinsurance balances receivable	**(575)**	(238)
Reinsurance recoverable on losses and loss expenses	**312**	(17)
Reinsurance recoverable on policy benefits	**(15)**	(11)
Deferred policy acquisition costs	**(179)**	(1,042)
Prepaid reinsurance premiums	**(139)**	12
Other	**10**	(177)
Net cash flows from operating activities	**1,640**	2,153
Cash flows from investing activities		
Purchases of fixed maturities available for sale	**(12,260)**	(17,077)
Purchases of fixed maturities held to maturity	**(212)**	(121)
Purchases of equity securities	**(82)**	(78)
Sales of fixed maturities available for sale	**6,873**	11,868
Sales of equity securities	**104**	932
Maturities and redemptions of fixed maturities available for sale	**5,169**	3,910
Maturities and redemptions of fixed maturities held to maturity	**408**	443
Net change in short-term investments	**354**	11,711
Net derivative instruments settlements	**(129)**	(93)
Acquisition of subsidiaries (net of cash acquired of nil and $71)	**—**	(14,248)
Other	**(121)**	81
Net cash flows from (used for) investing activities	**104**	(2,672)
Cash flows from financing activities		
Dividends paid on Common Shares	**(646)**	(530)
Common Shares repurchased	**(475)**	—
Repayment of long-term debt	**(500)**	—
Proceeds from issuance of repurchase agreements	**1,343**	904
Repayment of repurchase agreements	**(1,338)**	(902)
Proceeds from share-based compensation plans	**89**	92
Policyholder contract deposits	**209**	274
Policyholder contract withdrawals	**(125)**	(103)
Other	**—**	(4)
Net cash flows used for financing activities	**(1,443)**	(269)
Effect of foreign currency rate changes on cash and cash equivalents	**11**	24
Net increase (decrease) in cash	**312**	(764)
Cash – beginning of period	**985**	1,775

Cash – end of period	**$**	**1,297**	$	1,011
Supplemental cash flow information				
Taxes paid	**$**	**510**	$	259
Interest paid	**$**	**327**	$	319

See accompanying notes to the consolidated financial statements

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)
Chubb Limited and Subsidiaries

1 . General

a) Basis of presentation

Chubb Limited is a holding company incorporated in Zurich, Switzerland. Chubb Limited, through its subsidiaries, provides a broad range of insurance and reinsurance products to insureds worldwide. Chubb operates through the following business segments: North America Commercial P&C Insurance, North America Personal P&C Insurance, North America Agricultural Insurance, Overseas General Insurance, Global Reinsurance, and Life Insurance. Refer to Note 10 for additional information.

The interim unaudited consolidated financial statements, which include the accounts of Chubb Limited and its subsidiaries (collectively, Chubb, we, us, or our), 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 (consisting of normally recurring accruals) 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.

The results of operations and cash flows for any interim period are not necessarily indicative of the results for the full year. These consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes included in our 2016 Form 10-K.

b) Goodwill
During the six months ended June 30, 2017, Goodwill increased $ 102 million , reflecting the impact of foreign exchange.

c) Debt
In February 2017, Chubb INA Holdings Inc.'s $ 500 million of 5.7 percent senior notes matured and were fully paid. In 2017, we reclassified $300 million of the 5.8 percent senior notes (due to mature in March 2018), and $600 million of the 5.75 percent senior notes (due to mature in May 2018) from Long-term debt to Short-term debt in the Consolidated balance sheets.

Effective April 15, 2017, the interest rate on our $ 1.0 billion of unsecured junior subordinated capital securities converted to a floating rate, equal to the three-month LIBOR plus 2.25 percentage points. Previously, these capital securities carried interest at a rate of 6.375 percent. The current interest rate, at the time of this filing, on these securities is 3.55 percent. The scheduled maturity date for these securities is April 15, 2037.

d) Accounting guidance adopted in 2017

Stock Compensation
Effective January 2017, we prospectively adopted new guidance on stock compensation which requires recognition of the excess tax benefits or deficiencies of share-based compensation awards to employees through net income rather than through additional paid in capital. The calculation of the excess tax benefits or deficiencies is based on the difference between the market value of a stock award at the date of vesting, or at the time of exercise for a stock option, compared to the grant date fair value recognized as compensation expense in the Consolidated statements of operations. For the three and six months ended June 30, 2017, the excess tax benefit recorded to Income tax expense in the Consolidated statement of operations was $ 5 million and $30 million , respectively. Additionally, the guidance allowed for an election to account for forfeitures related to share-based payments either as they occur or through an estimation method. We elected to retain our current accounting for compensation expense using a forfeiture estimation process.

e) Accounting guidance not yet adopted

Goodwill Impairment
In January 2017, the FASB issued updated guidance on goodwill impairment testing that eliminates Step 2 of the goodwill impairment test requiring entities to calculate the implied fair value of goodwill through a hypothetical purchase price allocation. Under the updated guidance, impairment will now be recognized as the amount by which a reporting unit's carrying value exceeds its fair value. The standard will be effective for us in the first quarter of 2020 on a prospective basis with early adoption permitted. We do not expect the adoption of this guidance to have a material effect on our financial condition and results of operations.

Premium Amortization on Purchased Callable Debt Securities
In March 2017, the FASB issued guidance on the amortization period for purchased callable debt securities held at a premium. The guidance requires the premium to be amortized to the earliest call date. Under current guidance, premiums generally are amortized over the contracted life of the security. This guidance is effective for us in the first quarter of 2019 on a modified retrospective basis through a cumulative effect adjustment to beginning retained earnings. Early adoption is permitted. Securities held at a discount do not require an accounting change. We are in the process of evaluating the effect the updated guidance will have on our financial condition and results of operations.

Refer to the 2016 Form 10-K for information on other accounting guidance not yet adopted.

2 . Acquisition

The Chubb Corporation (Chubb Corp)
On January 14, 2016, we completed the acquisition of Chubb Corp, a leading provider of middle-market commercial, specialty, surety, and personal insurance for $29.5 billion , comprising $14.3 billion in cash and $15.2 billion in newly-issued stock. In addition, we assumed outstanding equity awards to employees and directors with an attributed value of $323 million . The total consideration, including the assumption of equity awards, was $29.8 billion . We recognized goodwill of $ 10.5 billion , attributable to expected growth and profitability, none of which is expected to be deductible for income tax purposes. Refer to the 2016 Form 10-K for additional information on this acquisition.

The consolidated financial statements include the results of Chubb Corp from the acquisition date.

The following table summarizes the results of the acquired Chubb Corp operations within our 2016 Consolidated statements of operations for the periods presented:

(in millions of U.S. dollars)	Three Months Ended June 30, 2016	January 14, 2016 to June 30, 2016
Total revenues	$ 2,745	$ 5,232
Net income	$ 326	$ 581

The following table provides supplemental unaudited pro forma consolidated information for the three and six months ended June 30, 2016 , as if Chubb Corp had been acquired as of January 1, 2015. The unaudited pro forma consolidated financial statements are presented solely for informational purposes and are not necessarily indicative of the consolidated results of operations that might have been achieved had the transaction been completed as of the date indicated, nor are they meant to be indicative of any anticipated consolidated future results of operations that the combined company will experience after the transaction.

(in millions of U.S. dollars, except per share data)	Three Months Ended June 30, 2016	Six Months Ended June 30, 2016
Total revenues	$ 7,915	$ 15,237
Net income	$ 712	$ 1,246
Earnings per share		
Basic earnings per share	$ 1.52	$ 2.67
Diluted earnings per share	$ 1.51	$ 2.65

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

3 . Investments

a) Fixed maturities

June 30, 2017 (in millions of U.S. dollars)	Amortized Cost	Gross Unrealized Appreciation	Gross Unrealized Depreciation	Fair Value	OTTI Recognized in AOCI
Available for sale					
U.S. Treasury and agency	$ 3,122	$ 40	$ (26)	$ 3,136	$ —
Foreign	21,139	653	(82)	21,710	(2)
Corporate securities	24,744	714	(94)	25,364	(7)
Mortgage-backed securities	14,469	148	(144)	14,473	(1)
States, municipalities, and political subdivisions	16,889	138	(65)	16,962	—
	$ 80,363	$ 1,693	$ (411)	$ 81,645	$ (10)
Held to maturity					
U.S. Treasury and agency	$ 602	$ 13	$ (2)	$ 613	$ —
Foreign	613	29	—	642	—
Corporate securities	2,645	62	(7)	2,700	—
Mortgage-backed securities	1,268	37	(1)	1,304	—
States, municipalities, and political subdivisions	5,243	66	(8)	5,301	—
	$ 10,371	$ 207	$ (18)	$ 10,560	$ —

December 31, 2016 (in millions of U.S. dollars)	Amortized Cost	Gross Unrealized Appreciation	Gross Unrealized Depreciation	Fair Value	OTTI Recognized in AOCI
Available for sale					
U.S. Treasury and agency	$ 2,883	$ 32	$ (45)	$ 2,870	$ —
Foreign	20,929	636	(125)	21,440	(5)
Corporate securities	23,736	580	(167)	24,149	(8)
Mortgage-backed securities	14,066	135	(194)	14,007	(1)
States, municipalities, and political subdivisions	17,922	72	(345)	17,649	—
	$ 79,536	$ 1,455	$ (876)	$ 80,115	$ (14)
Held to maturity					
U.S. Treasury and agency	$ 655	$ 9	$ (3)	$ 661	$ —
Foreign	640	28	(1)	667	—
Corporate securities	2,771	50	(26)	2,795	—
Mortgage-backed securities	1,393	35	—	1,428	—
States, municipalities, and political subdivisions	5,185	26	(92)	5,119	—
	$ 10,644	$ 148	$ (122)	$ 10,670	$ —

As discussed in Note 3 c), if a credit loss is incurred on an impaired fixed maturity, an OTTI is considered to have occurred and the portion of the impairment not related to credit losses (non-credit OTTI) is recognized in OCI. Included in the “OTTI Recognized in AOCI” columns above are the cumulative amounts of non-credit OTTI recognized in OCI adjusted for subsequent sales, maturities, and redemptions. OTTI recognized in AOCI does not include the impact of subsequent changes in fair value of the related securities. In periods subsequent to a recognition of OTTI in OCI, changes in the fair value of the related fixed maturities are reflected in Net unrealized appreciation on investments in the Consolidated statements of shareholders’ equity. For both the three and six months ended June 30, 2017 , $ 3 million of net unrealized depreciation related to such securities is included in OCI. For the three and six months ended June 30, 2016 , $21 million and $ 44 million , respectively, of net unrealized appreciation related to such securities is included in OCI. At June 30, 2017 and December 31, 2016 , AOCI included

cumulative net unrealized appreciation of $7 million and $10 million , respectively, related to securities remaining in the investment portfolio for which a non-credit OTTI was recognized.

Mortgage-backed securities (MBS) issued by U.S. government agencies are combined with all other to be announced mortgage-backed securities (TBAs) held (refer to Note 6 c) (iv)) and are included in the category, “Mortgage-backed securities”. Approximately 81 percent of the total mortgage-backed securities at both June 30, 2017 and December 31, 2016 , are represented by investments in U.S. government agency bonds. The remainder of the mortgage exposure consists of collateralized mortgage obligations and non-government mortgage-backed securities, the majority of which provide a planned structure for principal and interest payments and carry a rating of AAA by the major credit rating agencies.

The following table presents fixed maturities by contractual maturity:

	June 30 2017		December 31 2016	
(in millions of U.S. dollars)	**Amortized Cost**	**Fair Value**	Amortized Cost	Fair Value
Available for sale				
Due in 1 year or less	**$ 3,799**	**$ 3,823**	$ 3,892	$ 3,913
Due after 1 year through 5 years	**23,748**	**24,207**	24,027	24,429
Due after 5 years through 10 years	**28,040**	**28,498**	27,262	27,379
Due after 10 years	**10,307**	**10,644**	10,289	10,387
	65,894	**67,172**	65,470	66,108
Mortgage-backed securities	**14,469**	**14,473**	14,066	14,007
	$ 80,363	**$ 81,645**	$ 79,536	$ 80,115
Held to maturity				
Due in 1 year or less	**$ 807**	**$ 814**	$ 430	$ 435
Due after 1 year through 5 years	**2,353**	**2,396**	2,646	2,691
Due after 5 years through 10 years	**3,001**	**3,045**	2,969	2,944
Due after 10 years	**2,942**	**3,001**	3,206	3,172
	9,103	**9,256**	9,251	9,242
Mortgage-backed securities	**1,268**	**1,304**	1,393	1,428
	$ 10,371	**$ 10,560**	$ 10,644	$ 10,670

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) Equity securities

	June 30 2017	December 31 2016
(in millions of U.S. dollars)		
Cost	**$ 697**	$ 706
Gross unrealized appreciation	**164**	129
Gross unrealized depreciation	**(5)**	(21)
Fair value	**$ 856**	$ 814

c) Net realized gains (losses)
In accordance with guidance related to the recognition and presentation of OTTI, when an impairment related to a fixed maturity has occurred, OTTI is required to be recorded in Net income if management has the intent to sell the security or it is more likely than not that we will be required to sell the security before the recovery of its amortized cost. Further, in cases where we do not intend to sell the security and it is more likely than not that we will not be required to sell the security, we must evaluate the security to determine the portion of the impairment, if any, related to credit losses. If a credit loss is incurred, an OTTI is considered to have occurred and any portion of the OTTI related to credit losses must be reflected in Net income while the

portion of OTTI related to all other factors is recognized in OCI. For fixed maturities held to maturity, OTTI recognized in OCI is accreted from AOCI to the amortized cost of the fixed maturity prospectively over the remaining term of the securities.

Each quarter, securities in an unrealized loss position (impaired securities), including fixed maturities, securities lending collateral, equity securities, and other investments, are reviewed to identify impaired securities to be specifically evaluated for a potential OTTI.

For all non-fixed maturities, OTTI is evaluated based on the following:

- the amount of time a security has been in a loss position and the magnitude of the loss position;
- the period in which cost is expected to be recovered, if at all, based on various criteria including economic conditions and other issuer-specific developments; and
- our ability and intent to hold the security to the expected recovery period.

As a general rule, we also consider that equity securities in an unrealized loss position for twelve consecutive months are other than temporarily impaired. For mutual funds included in equity securities in our Consolidated balance sheets, we employ analysis similar to fixed maturities, when applicable.

Evaluation of potential credit losses related to fixed maturities
We review each fixed maturity in an unrealized loss position to assess whether the security is a candidate for credit loss. Specifically, we consider credit rating, market price, and issuer-specific financial information, among other factors, to assess the likelihood of collection of all principal and interest as contractually due. Securities for which we determine that credit loss is likely are subjected to further analysis to estimate the credit loss recognized in Net income, if any. In general, credit loss recognized in Net income equals the difference between the security's amortized cost and the net present value of its projected future cash flows discounted at the effective interest rate implicit in the debt security. All significant assumptions used in determining credit losses are subject to change as market conditions evolve.

Corporate securities
Projected cash flows for corporate securities (principally senior unsecured bonds) are driven primarily by assumptions regarding probability of default and also the timing and amount of recoveries associated with defaults. Chubb developed projected cash flows for corporate securities using market observable data, issuer-specific information, and credit ratings. We use historical default data by Moody's Investors Service (Moody's) rating category to calculate a 1-in-100 year probability of default, which results in a default assumption in excess of the historical mean default rate. Consistent with management's approach, Chubb assumed a 32 percent recovery rate (the par value of a defaulted security that will be recovered) across all rating categories rather than using Moody's historical mean recovery rate of 42 percent. We believe that use of a default assumption in excess of the historical mean is conservative in light of current market conditions.

For the three and six months ended June 30, 2017 , credit losses recognized in Net income for corporate securities were $1 million and $ 2 million , respectively. For the three and six months ended June 30, 2016 , credit losses recognized in Net income for corporate securities were $7 million and $ 24 million , respectively.

Mortgage-backed securities
For mortgage-backed securities, credit impairment is assessed using a cash flow model that estimates the cash flows on the underlying mortgages, using the security-specific collateral and transaction structure. The model estimates cash flows from the underlying mortgage loans and distributes those cash flows to various tranches of securities, considering the transaction structure and any subordination and credit enhancements that exist in that structure. The cash flow model incorporates actual cash flows on the mortgage-backed securities through the current period and then projects the remaining cash flows using a number of assumptions, including default rates, prepayment rates, and loss severity rates (the par value of a defaulted security that will not be recovered) on foreclosed properties.

For the three and six months ended June 30, 2017 and 2016, there were no credit losses recognized in Net income for mortgage-backed securities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

The following table presents the Net realized gains (losses) and the losses included in Net realized gains (losses) and OCI as a result of conditions which caused us to conclude the decline in fair value of certain investments was "other-than-temporary":

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016	**2017**	2016
Fixed maturities:				
OTTI on fixed maturities, gross	**$ (5)**	$ (11)	$ (11)	$ (78)
OTTI on fixed maturities recognized in OCI (pre-tax)	**1**	—	1	8
OTTI on fixed maturities, net	**(4)**	(11)	(10)	(70)
Gross realized gains excluding OTTI	**45**	37	79	102
Gross realized losses excluding OTTI	**(18)**	(19)	(58)	(215)
Total fixed maturities	**23**	7	11	(183)
Equity securities:				
OTTI on equity securities	**(3)**	(5)	(8)	(6)
Gross realized gains excluding OTTI	**6**	4	15	44
Gross realized losses excluding OTTI	**(1)**	(4)	(1)	(5)
Total equity securities	**2**	(5)	6	33
OTTI on other investments	**(1)**	—	(9)	(3)
Foreign exchange gains (losses)	**14**	(22)	(5)	17
Investment and embedded derivative instruments	**(16)**	(47)	(10)	(86)
Fair value adjustments on insurance derivative	**118**	(131)	211	(359)
S&P put options and futures	**(38)**	(28)	(112)	(43)
Other derivative instruments	**(1)**	—	1	(2)
Other	**—**	10	1	16
Net realized gains (losses)	**$ 101**	$ (216)	$ 94	$ (610)

The following table presents a roll-forward of pre-tax credit losses related to fixed maturities for which a portion of OTTI was recognized in OCI:

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016	2017	2016
Balance of credit losses related to securities still held – beginning of period	**$ 32**	$ 57	$ 35	$ 53
Additions where no OTTI was previously recorded	**1**	1	1	12
Additions where an OTTI was previously recorded	**—**	6	1	12
Reductions for securities sold during the period	**(4)**	(13)	(8)	(26)
Balance of credit losses related to securities still held – end of period	**$ 29**	$ 51	$ 29	$ 51

d) Gross unrealized loss
At June 30, 2017 , there were 7,924 fixed maturities out of a total of 30,953 fixed maturities in an unrealized loss position. The largest single unrealized loss in the fixed maturities was $5 million . There were 67 equity securities out of a total of 320 equity securities in an unrealized loss position. The largest single unrealized loss in the equity securities was $1 million . Fixed maturities in an unrealized loss position at June 30, 2017 , 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

The following tables present, 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:

June 30, 2017 (in millions of U.S. dollars)	0 – 12 Months Fair Value	0 – 12 Months Gross Unrealized Loss	Over 12 Months Fair Value	Over 12 Months Gross Unrealized Loss	Total Fair Value	Total Gross Unrealized Loss
U.S. Treasury and agency	$ 2,021	$ (28)	$ —	$ —	$ 2,021	$ (28)
Foreign	4,381	(57)	599	(25)	4,980	(82)
Corporate securities	4,410	(72)	372	(29)	4,782	(101)
Mortgage-backed securities	7,657	(141)	118	(4)	7,775	(145)
States, municipalities, and political subdivisions	9,049	(68)	182	(5)	9,231	(73)
Total fixed maturities	27,518	(366)	1,271	(63)	28,789	(429)
Equity securities	104	(5)	—	—	104	(5)
Other investments	70	(4)	—	—	70	(4)
Total	$ 27,692	$ (375)	$ 1,271	$ (63)	$ 28,963	$ (438)

December 31, 2016 (in millions of U.S. dollars)	0 – 12 Months Fair Value	0 – 12 Months Gross Unrealized Loss	Over 12 Months Fair Value	Over 12 Months Gross Unrealized Loss	Total Fair Value	Total Gross Unrealized Loss
U.S. Treasury and agency	$ 2,216	$ (48)	$ —	$ —	$ 2,216	$ (48)
Foreign	5,918	(99)	386	(27)	6,304	(126)
Corporate securities	7,021	(149)	641	(44)	7,662	(193)
Mortgage-backed securities	8,638	(189)	234	(5)	8,872	(194)
States, municipalities, and political subdivisions	19,448	(435)	49	(2)	19,497	(437)
Total fixed maturities	43,241	(920)	1,310	(78)	44,551	(998)
Equity securities	199	(21)	—	—	199	(21)
Other investments	201	(18)	—	—	201	(18)
Total	$ 43,641	$ (959)	$ 1,310	$ (78)	$ 44,951	$ (1,037)

e) Restricted assets
Chubb is required to maintain assets on deposit with various regulatory authorities to support its insurance and reinsurance operations. These requirements are generally promulgated in the statutory regulations of the individual jurisdictions. The assets on deposit are available to settle insurance and reinsurance liabilities. Chubb is also required to restrict assets pledged under repurchase agreements, which represent Chubb's agreement to sell securities and repurchase them at a future date for a predetermined price. We also use trust funds in certain large reinsurance 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. We also have investments in segregated portfolios primarily to provide collateral or guarantees for LOC and derivative transactions. Included in restricted assets at June 30, 2017 and December 31, 2016 are investments, primarily fixed maturities, totaling $21.2 billion and $20.1 billion, respectively, and cash of $122 million and $103 million, respectively.

The following table presents the components of restricted assets:

(in millions of U.S. dollars)	June 30 2017	December 31 2016
Trust funds	$ 14,938	$ 13,880
Deposits with U.S. regulatory authorities	2,325	2,203
Deposits with non-U.S. regulatory authorities	2,170	2,191
Assets pledged under repurchase agreements	1,472	1,461
Other pledged assets	371	435
	$ 21,276	$ 20,170

4 . 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.

We categorize 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. Accordingly, transfers between levels within the valuation hierarchy occur when there are significant changes to the inputs, such as increases or decreases in market activity, changes to the availability of current prices, changes to the transparency to underlying inputs, and whether there are significant variances in quoted prices. Transfers in and/or out of any level are assumed to occur at the end of the period.

We use pricing services to obtain fair value measurements for the majority of our 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 our understanding of the market inputs used by the pricing services, all applicable investments have been valued in accordance with GAAP. We do 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.

Fixed maturities

We use pricing services to estimate fair value measurements for the majority of our 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, 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), which 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, we obtain a single broker quote (typically from a market maker). Due to the disclaimers on the quotes that indicate that the price is indicative only, we include these fair value estimates in Level 3.

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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

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.

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. Certain of our long-duration contracts are supported by assets that do not qualify for separate account reporting under GAAP. These assets comprise mutual funds classified within Level 1 in the valuation hierarchy on the same basis as other equity securities traded in active markets. Other investments also include equity securities classified within Level 1, and fixed maturities, classified within Level 2, held in rabbi trusts maintained by Chubb for deferred compensation plans and are classified within the valuation hierarchy on the same basis as other equity securities and fixed maturities. Other investments for which pricing is unobservable are classified within Level 3.

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 Chubb's obligation to return the collateral plus interest as it is reported at contract value and not fair value in the Consolidated balance sheets.

Investment derivative instruments
Actively traded investment derivative instruments, including futures, options, and forward contracts are classified within Level 1 as fair values are based on quoted market prices. The fair value of cross-currency swaps is based on market valuations and is classified within Level 2. Investment derivative instruments are recorded in either Other assets or Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets.

Other derivative instruments
We generally maintain positions in other derivative instruments including exchange-traded equity futures contracts designed to limit exposure to a severe equity market decline, which would cause an increase in expected claims and, therefore, an increase in reserves for our guaranteed minimum death benefits (GMDB) and guaranteed living benefits (GLB) reinsurance business. Our position in exchange-traded equity futures contracts is classified within Level 1. The fair value of the majority of the remaining positions in other derivative instruments is based on significant observable inputs including equity security and interest rate indices. Accordingly, these are classified within Level 2. Other derivative instruments based on unobservable inputs are classified within Level 3. Other derivative instruments are recorded in either Other assets or Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets.

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 Chubb. Separate account assets comprise mutual funds classified within Level 1 in the valuation hierarchy on the same basis as other equity securities traded in active markets. 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.

Guaranteed living benefits
The GLB arises from life reinsurance programs covering living benefit guarantees whereby we assume the risk of guaranteed minimum income benefits (GMIB) and guaranteed minimum accumulation benefits (GMAB) associated with variable annuity contracts. GLB's are recorded in Accounts payable, accrued expenses, and other liabilities and Future policy benefits in the Consolidated balance sheets. For GLB reinsurance, Chubb 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

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.

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.

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. Because of the significant use of unobservable inputs including policyholder behavior, GLB reinsurance is classified within Level 3. During the three months ended June 30, 2017, we updated aspects of our valuation model relating to interest rates. This resulted in a decrease to the fair value of GLB liabilities generating a realized gain of approximately $ 94 million . During the six months ended June 30, 2017, there were no other material changes to actuarial or behavioral assumptions. For detailed information on our lapse and annuitization rate assumptions, refer to Note 4 to the Consolidated Financial Statements of our 2016 Form 10-K.

Financial instruments measured at fair value on a recurring basis, by valuation hierarchy

June 30, 2017

(in millions of U.S. dollars)	Level 1	Level 2	Level 3	Total
Assets:				
Fixed maturities available for sale				
U.S. Treasury and agency	$ 2,486	$ 650	$ —	$ 3,136
Foreign	—	21,625	85	21,710
Corporate securities	—	24,617	747	25,364
Mortgage-backed securities	—	14,428	45	14,473
States, municipalities, and political subdivisions	—	16,962	—	16,962
	2,486	78,282	877	81,645
Equity securities	817	—	39	856
Short-term investments	1,421	1,223	7	2,651
Other investments [1]	430	282	243	955
Securities lending collateral	—	1,545	—	1,545
Investment derivative instruments	12	—	—	12
Other derivative instruments	9	—	—	9
Separate account assets	2,147	101	—	2,248
Total assets measured at fair value [1]	$ 7,322	$ 81,433	$ 1,166	$ 89,921
Liabilities:				
Investment derivative instruments	$ 35	$ —	$ —	$ 35
Other derivative instruments	—	—	2	2
GLB [2]	—	—	357	357
Total liabilities measured at fair value	$ 35	$ —	$ 359	$ 394

(1) Excluded from the table above are partially-owned investments, investment funds, and limited partnerships of $ 3,711 million and other investments of $ 19 million at June 30, 2017 measured using NAV as a practical expedient.

(2) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value. Excluded from the table above is the portion of the GLB derivative liability classified as Future policy benefits in the Consolidated balance sheets.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

December 31, 2016 (in millions of U.S. dollars)	Level 1	Level 2	Level 3	Total
Assets:				
Fixed maturities available for sale				
U.S. Treasury and agency	$ 2,175	$ 695	$ —	$ 2,870
Foreign	—	21,366	74	21,440
Corporate securities	—	23,468	681	24,149
Mortgage-backed securities	—	13,962	45	14,007
States, municipalities, and political subdivisions	—	17,649	—	17,649
	2,175	77,140	800	80,115
Equity securities	773	—	41	814
Short-term investments	1,757	1,220	25	3,002
Other investments [1]	384	259	225	868
Securities lending collateral	—	1,092	—	1,092
Investment derivative instruments	31	—	—	31
Other derivative instruments	3	—	—	3
Separate account assets	1,784	95	—	1,879
Total assets measured at fair value [1]	$ 6,907	$ 79,806	$ 1,091	$ 87,804
Liabilities:				
Investment derivative instruments	$ 54	$ —	$ —	$ 54
Other derivative instruments	—	—	13	13
GLB [2]	—	—	559	559
Total liabilities measured at fair value	$ 54	$ —	$ 572	$ 626

(1) Excluded from the table above are partially-owned investments, investment funds, and limited partnerships of $3,626 million and other investments of $25 million at December 31, 2016 measured using NAV as a practical expedient.

(2) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value. Excluded from the table above is the portion of the GLB derivative liability classified as Future policy benefits in the Consolidated balance sheets.

There were no transfers of financial instruments between Level 1 and Level 2 for the three and six months ended June 30, 2017 and 2016.

Fair value of alternative investments
Alternative investments include investment funds, limited partnerships, and partially-owned investment companies measured at fair value using NAV as a practical expedient. The following table presents, by investment category, the expected liquidation period, fair value, and maximum future funding commitments of alternative investments:

		June 30 2017		December 31 2016	
(in millions of U.S. dollars)	**Expected Liquidation Period of Underlying Assets**	**Fair Value**	**Maximum Future Funding Commitments**	Fair Value	Maximum Future Funding Commitments
Financial	**5 to 9 Years**	**$ 576**	**$ 354**	$ 548	$ 428
Real Assets	**3 to 7 Years**	**622**	**181**	536	230
Distressed	**5 to 9 Years**	**350**	**175**	485	179
Private Credit	**3 to 7 Years**	**238**	**337**	236	259
Traditional	**3 to 9 Years**	**1,646**	**805**	1,550	930
Vintage	**1 to 2 Years**	**19**	**—**	21	14
Investment funds	**Not Applicable**	**260**	**—**	251	—
		$ 3,711	**$ 1,852**	$ 3,627	$ 2,040

Included in all categories in the above table, except for Investment funds, are investments for which Chubb 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, Chubb 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 corporate debt/credit and equity opportunities in the U.S.
Private Credit	targeting privately originated corporate debt investments including senior secured loans and subordinated bonds
Traditional	employing traditional private equity investment strategies such as buyout and growth equity globally
Vintage	made before 2002 and where the funds' commitment periods had already expired

Investment funds
Chubb's investment funds employ various investment strategies such as long/short equity and arbitrage/distressed. Included in this category are investments for which Chubb 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 Chubb 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 Chubb 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, Chubb 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 Chubb's investment within several months of the notification. Notice periods for redemption of the investment funds range between 5 and 120 days. Chubb can redeem its investment funds without consent from the investment fund managers.

Level 3 financial instruments
The fair values of assets and liabilities measured at fair value using significant unobservable inputs (Level 3) consist of various inputs and assumptions that management makes when determining fair value. Management analyzes changes in fair value measurements classified within Level 3 by comparing pricing and returns of our investments to benchmarks, including month-over-month movements, investment credit spreads, interest rate movements, and credit quality of securities.

The following table presents the significant unobservable inputs used in the Level 3 liability valuations. Excluded from the table below are inputs used to determine the fair value of Level 3 assets which are based on single broker quotes and contain no quantitative unobservable inputs developed by management.

(in millions of U.S. dollars, except for percentages)	Fair Value		Valuation Technique	Significant Unobservable Inputs	Ranges
	June 30, 2017	December 31, 2016			
GLB [(1)]	**$ 357**	**$ 559**	**Actuarial model**	**Lapse rate**	**3% – 34%**
				Annuitization rate	**0% – 78%**

(1) Discussion of the most significant inputs used in the fair value measurement of GLB and the sensitivity of those assumptions is included within Note 4 a) Guaranteed living benefits.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

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):

	Assets						Liabilities	
Three Months Ended	Available-for-Sale Debt Securities							
June 30, 2017 (in millions of U.S. dollars)	Foreign	Corporate securities	MBS	Equity securities	Short-term investments	Other investments	Other derivative instruments	GLB [1]
Balance – beginning of period	$ 80	$ 737	$ 45	$ 41	$ 21	$ 233	$ 11	$ 466
Transfers into Level 3	—	28	—	—	—	—	—	9
Transfers out of Level 3	—	(13)	—	—	—	—	(9)	—
Change in Net Unrealized Gains (Losses) included in OCI	3	—	—	1	—	(1)	—	—
Net Realized Gains/Losses	2	—	—	—	—	—	—	(118)
Purchases	19	65	—	6	7	16	—	—
Sales	(19)	(28)	—	(9)	—	—	—	—
Settlements	—	(42)	—	—	(21)	(5)	—	—
Balance – end of period	$ 85	$ 747	$ 45	$ 39	$ 7	$ 243	$ 2	$ 357
Net Realized Gains/Losses Attributable to Changes in Fair Value at the Balance Sheet Date	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ (118)

(1) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value. Excluded from the table above is the portion of the GLB derivative liability classified as Future policy benefits in the Consolidated balance sheets. The liability for GLB reinsurance was $684 million at June 30, 2017, and $774 million at March 31, 2017, which includes a fair value derivative adjustment of $357 million and $466 million , respectively.

							Liabilities	
Three Months Ended	Available-for-Sale Debt Securities							
June 30, 2016 (in millions of U.S. dollars)	Foreign	Corporate securities	MBS	Equity securities	Short-term investments	Other investments	Other derivative instruments	GLB [1]
Balance – beginning of period	$ 62	$ 261	$ 48	$ 29	$ —	$ 211	$ 10	$ 839
Transfers into Level 3	3	2	—	—	—	—	—	—
Change in Net Unrealized Gains (Losses) included in OCI	3	9	—	(1)	—	—	—	—
Net Realized Gains/Losses	(1)	(2)	—	1	—	—	—	132
Purchases	27	31	1	10	50	8	—	—
Sales	(7)	(16)	—	(2)	—	—	—	—
Settlements	—	(4)	—	—	—	(3)	—	—
Balance – end of period	$ 87	$ 281	$ 49	$ 37	$ 50	$ 216	$ 10	$ 971
Net Realized Gains/Losses Attributable to Changes in Fair Value at the Balance Sheet Date	$ (1)	$ —	$ —	$ —	$ —	$ —	$ —	$ 132

(1) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value. Excluded from the table above is the portion of the GLB derivative liability classified as Future policy benefits in the Consolidated balance sheets. The liability for GLB reinsurance was $1.3 billion at June 30, 2016 , and $1.1 billion at March 31, 2016, which includes a fair value derivative adjustment of $971 million and $839 million, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

Six Months Ended June 30, 2017 (in millions of U.S. dollars)	Assets: Available-for-Sale Debt Securities: Foreign	Assets: Available-for-Sale Debt Securities: Corporate securities	Assets: Available-for-Sale Debt Securities: MBS	Assets: Equity securities	Assets: Short-term investments	Assets: Other investments	Liabilities: Other derivative instruments	Liabilities: GLB [1]
Balance – beginning of period	$ 74	$ 681	$ 45	$ 41	$ 25	$ 225	$ 13	$ 559
Transfers into Level 3	—	57	—	—	—	—	—	9
Transfers out of Level 3	—	(67)	—	—	—	—	(9)	—
Change in Net Unrealized Gains (Losses) included in OCI	2	(8)	—	1	—	3	—	—
Net Realized Gains/Losses	1	(1)	—	—	—	—	(2)	(211)
Purchases	33	221	1	6	14	24	—	—
Sales	(22)	(55)	(1)	(9)	—	—	—	—
Settlements	(3)	(81)	—	—	(32)	(9)	—	—
Balance – end of period	$ 85	$ 747	$ 45	$ 39	$ 7	$ 243	$ 2	$ 357
Net Realized Gains/Losses Attributable to Changes in Fair Value at the Balance Sheet Date	$ —	$ —	$ —	$ —	$ —	$ —	$ (2)	$ (211)

(1) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value. Excluded from the table above is the portion of the GLB derivative liability classified as Future policy benefits in the Consolidated balance sheets. The liability for GLB reinsurance was $684 million at June 30, 2017, and $853 million at December 31, 2016, which includes a fair value derivative adjustment of $357 million and $559 million , respectively.

Six Months Ended June 30, 2016 (in millions of U.S. dollars)	Assets: Available-for-Sale Debt Securities: Foreign	Assets: Available-for-Sale Debt Securities: Corporate securities	Assets: Available-for-Sale Debt Securities: MBS	Assets: Equity securities	Assets: Short-term investments	Assets: Other investments	Liabilities: Other derivative instruments	Liabilities: GLB [1]
Balance – beginning of period	$ 57	$ 174	$ 53	$ 16	$ —	$ 212	$ 6	$ 609
Transfers into Level 3	9	18	—	—	—	—	—	—
Transfers out of Level 3	(2)	—	—	—	—	—	—	—
Change in Net Unrealized Gains (Losses) included in OCI	9	11	—	(1)	—	—	—	—
Net Realized Gains/Losses	(6)	(8)	—	1	—	—	2	362
Purchases [2]	32	124	1	23	50	14	2	—
Sales	(8)	(30)	(5)	(2)	—	—	—	—
Settlements	(4)	(8)	—	—	—	(10)	—	—
Balance – end of period	$ 87	$ 281	$ 49	$ 37	$ 50	$ 216	$ 10	$ 971
Net Realized Gains/Losses Attributable to Changes in Fair Value at the Balance Sheet Date	$ (5)	$ (7)	$ —	$ —	$ —	$ —	$ 2	$ 362

(1) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value. Excluded from the table above is the portion of the GLB derivative liability classified as Future policy benefits in the Consolidated balance sheets. The liability for GLB reinsurance was $1.3 billion at June 30, 2016 , and $888 million at December 31, 2015, which includes a fair value derivative adjustment of $971 million and $609 million , respectively.

(2) Includes acquired invested assets as a result of the Chubb Corp acquisition.

b) Financial instruments disclosed, but not measured, at fair value
Chubb uses various financial instruments in the normal course of its business. Our insurance contracts are excluded from fair value of financial instruments accounting guidance, and therefore, are not included in the amounts discussed below.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

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

Short- and long-term debt, repurchase agreements, and trust preferred securities
Where practical, fair values for short-term debt, long-term debt, repurchase agreements, and trust preferred securities are estimated using discounted cash flow calculations based principally on observable inputs including incremental borrowing rates, which reflect Chubb'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:

June 30, 2017				Fair Value	
(in millions of U.S. dollars)	Level 1	Level 2	Level 3	Total	Carrying Value
Assets:					
Fixed maturities held to maturity					
U.S. Treasury and agency	$ 528	$ 85	$ —	$ 613	$ 602
Foreign	—	642	—	642	613
Corporate securities	—	2,688	12	2,700	2,645
Mortgage-backed securities	—	1,304	—	1,304	1,268
States, municipalities, and political subdivisions	—	5,301	—	5,301	5,243
Total assets	$ 528	$ 10,020	$ 12	$ 10,560	$ 10,371
Liabilities:					
Repurchase agreements	$ —	$ 1,408	$ —	$ 1,408	$ 1,408
Short-term debt	—	931	—	931	922
Long-term debt	—	12,366	—	12,366	11,667
Trust preferred securities	—	462	—	462	308
Total liabilities	$ —	$ 15,167	$ —	$ 15,167	$ 14,305

December 31, 2016				Fair Value	
(in millions of U.S. dollars)	Level 1	Level 2	Level 3	Total	Carrying Value
Assets:					
Fixed maturities held to maturity					
U.S. Treasury and agency	$ 555	$ 106	$ —	$ 661	$ 655
Foreign	—	667	—	667	640
Corporate securities	—	2,782	13	2,795	2,771
Mortgage-backed securities	—	1,428	—	1,428	1,393
States, municipalities, and political subdivisions	—	5,119	—	5,119	5,185
Total assets	$ 555	$ 10,102	$ 13	$ 10,670	$ 10,644
Liabilities:					
Repurchase agreements	$ —	$ 1,403	$ —	$ 1,403	$ 1,403
Short-term debt	—	503	—	503	500
Long-term debt	—	12,998	—	12,998	12,610
Trust preferred securities	—	456	—	456	308
Total liabilities	$ —	$ 15,360	$ —	$ 15,360	$ 14,821

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

5. Unpaid losses and loss expenses

The following table presents a reconciliation of beginning and ending Unpaid losses and loss expenses:

	Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016
Gross unpaid losses and loss expenses – beginning of period	**$ 60,540**	$ 37,303
Reinsurance recoverable on unpaid losses [1]	**(12,708)**	(10,741)
Net unpaid losses and loss expenses – beginning of period	**47,832**	26,562
Acquisition of subsidiaries	**—**	21,398
Total	**47,832**	47,960
Net losses and loss expenses incurred in respect of losses occurring in:		
Current year	**8,396**	8,529
Prior years [2]	**(461)**	(601)
Total	**7,935**	7,928
Net losses and loss expenses paid in respect of losses occurring in:		
Current year	**2,271**	1,964
Prior years	**5,758**	5,541
Total	**8,029**	7,505
Foreign currency revaluation and other	**171**	40
Net unpaid losses and loss expenses – end of period	**47,909**	48,423
Reinsurance recoverable on unpaid losses [1]	**12,485**	12,396
Gross unpaid losses and loss expenses – end of period	**$ 60,394**	$ 60,819

(1) Net of provision for uncollectible reinsurance.

(2) Relates to prior period loss reserve development only and excludes prior period development related to reinstatement premiums, expense adjustments, and earned premiums of $60 million and $53 million for the six months ended June 30, 2017 and 2016, respectively.

Prior Period Development
Long-tail lines include lines such as workers' compensation, general liability, and professional liability; while short-tail lines include lines such as most property lines, energy, personal accident, aviation, marine (including associated liability-related exposures) and agriculture. Significant prior period movements by segment, principally driven by reserve reviews completed during each respective period, are discussed in more detail below. The remaining net development for long-tail lines and short-tail business for each segment and Corporate comprises numerous favorable and adverse movements across a number of lines and accident years, none of which is significant individually or in the aggregate.

North America Commercial P&C Insurance

2017
For the three months ended June 30, 2017 , net favorable PPD was $131 million , which was the net result of several underlying favorable and adverse movements, driven by the following principal changes:

- Net favorable development of $101 million in long-tail business, primarily from:
  - Net favorable development of $83 million in our workers' compensation lines with favorable development of $57 million in the 2016 accident year related to our annual assessment of multi-claimant events including industrial accidents. Consistent with prior years, we reviewed these potential exposures after the close of the accident year to allow for late reporting or identification of significant losses. Favorable development of $40 million in accident years 2015 and prior was principally due to lower than expected loss experience and revision to development patterns used in our loss projection methods for select portfolios; and

- Net favorable development of $37 million in our commercial-multi peril (CMP) and monoline general liability lines, driven by favorable paid and reported loss activity relative to prior expectations, principally in accident years 2008 through 2013.

- Net favorable development of $30 million in short-tail business, primarily from favorable development of $29 million in our commercial property portfolios, driven by lower than expected loss emergence in the 2014 and 2016 accident years.

For the six months ended June 30, 2017 , net favorable PPD was $310 million , which was the net result of several underlying favorable and adverse movements, driven by the following principal changes:

- Net favorable development of $200 million in long-tail business, primarily from:

  - Net favorable development of $84 million in our workers' compensation lines due to the same factors experienced for the three months ended June 30, 2017, as described above;

  - Net favorable development of $74 million in our commercial excess and umbrella portfolios, primarily in accident years 2010 and prior, driven by lower than expected reported loss activity, and an increase in weighting towards experience-based methods;

  - Net favorable development of $37 million in our commercial-multi peril (CMP) and monoline general liability lines, due to the same factors experienced for the three months ended June 30, 2017, as described above; and

  - Net favorable development of $25 million in our professional Errors and Omissions (E&O) portfolios, primarily in the 2012 and 2013 accident years, arising from lower than expected reported loss activity, partially offset by claim-specific adverse development.

- Net favorable development of $110 million in short-tail business, primarily from:

  - Net favorable development of $45 million in our credit-related business, primarily due to lower than expected claims severity in the 2015 accident year;

  - Favorable development of $33 million in our property lines, primarily in our commercial property portfolios, due to the same factors experienced for the three months ended June 30, 2017 as described above; and

  - Net favorable development of $24 million in our accident & health (A&H) business, primarily due to lower than expected loss emergence in the 2015 and 2016 accident years.

2016
For the three months ended June 30, 2016, net favorable PPD was $168 million , which was the net result of several underlying favorable and adverse movements, driven by the following principal changes:

- Net favorable development of $167 million in long-tail business, primarily from:

  - Net favorable development of $114 million in our workers' compensation lines with favorable development of $40 million in the 2015 accident year related to our annual assessment of multi-claimant events including industrial accidents. Consistent with prior years, we reviewed these potential exposures after the close of the accident year to allow for late reporting or identification of significant losses. Favorable development of $59 million driven by accident years 2011 and prior was principally due to lower than expected loss experience and revision to the basis for selecting development patterns used in our loss projection methods. Adverse development in accident years 2012 through 2015 was due to a small number of large claims in our excess business;

  - Net favorable development of $50 million in our commercial-multi peril (CMP) and monoline general liability lines, driven by favorable paid and reported loss activity relative to prior expectations, principally in accident years 2007 through 2014; and

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

- Net favorable development of $20 million in our professional E&O portfolios, in the 2003 accident year due to a favorable development on a specific claim.

For the six months ended June 30, 2016, net favorable PPD was $346 million , which was the net result of several underlying favorable and adverse movements, driven by the following principal changes:

- Net favorable development of $309 million in long-tail business, primarily from:
  - Favorable development of $145 million in our commercial excess and umbrella portfolios, driven by continued lower than expected reported loss activity in accident years 2010 and prior; in general, the severity of claims has been less than previously expected;
  - Net favorable development of $114 million on our workers' compensation lines due to the same factors experienced for the three months ended June 30, 2016, as described above;
  - Favorable development of $63 million in our professional E&O portfolios, primarily impacting the 2012 and prior accident years and arising from both lower than expected reported loss activity and re-assessments of remaining claim-specific liabilities for the older accident years; and
  - Net favorable development of $24 million in our primary casualty and general liability portfolios was driven by $50 million favorable development in our CMP and monoline general liability lines as described above, and $26 million adverse development due to higher than expected reported loss activity, mainly associated with construction defect coverages.
- Net favorable development of $37 million in short-tail business, primarily from favorable development of $24 million in our surety business, due to favorable claim emergence in the 2013 accident year.

North America Personal P&C Insurance

2017
For the three and six months ended June 30, 2017 , net adverse PPD was $37 million and $34 million , respectively, driven primarily by higher than expected case incurred development in our automobile, recreational marine and homeowners lines, mainly in accident years 2012 through 2016.

2016
For the three and six months ended June 30, 2016, net favorable PPD was $15 million and $18 million , respectively, which were the net result of several underlying favorable and adverse movements, none of which were significant individually or in the aggregate.

North America Agricultural Insurance

There was no PPD in both the three months ended June 30, 2017 and 2016.

For the six months ended June 30, 2017 and 2016, net favorable PPD was $79 million and $41 million , respectively. Actual claim development relates to our Multiple Peril Crop Insurance (MPCI) business and is favorable due to better than expected crop yield results in certain states at the prior year-end period (i.e., 2017 results based on crop yield results at year-end 2016).

Overseas General Insurance

2017
For the three months ended June 30, 2017 , net favorable PPD was $88 million , which was the net result of several underlying favorable and adverse movements, driven by the following principal changes:

- Net favorable development of $88 million in short-tail business, primarily from:
  - Favorable development of $37 million in property and marine (excluding technical lines), primarily in accident years 2013 through 2015,driven mainly by favorable U.K. and Continental Europe loss emergence, including favorable claim-specific loss settlements;
  - Favorable development of $26 million in technical and energy lines, primarily from favorable loss emergence in accident years 2014 through 2016 primarily in offshore where experience has been better than expected; and
  - Favorable development of $19 million in A&H lines, primarily from favorable loss emergence in Asia Pacific and Continental Europe in accident years 2014 through 2016.

For the six months ended June 30, 2017 , net favorable PPD was $76 million , which was the net result of several underlying favorable and adverse movements, driven by the following principal changes:

- Net favorable development of $108 million in short-tail business, due primarily to the same factors experienced for the three months ended June 30, 2017 as described above; and
- Net adverse development of $32 million in long-tail business, primarily in our casualty lines, driven by a change in the discount rate in the U.K. (Ogden rate) impacting the 2016 and prior accident years.

2016
For the three months ended June 30, 2016, net favorable PPD was $85 million , which was the net result of several underlying favorable and adverse movements, driven by the following principal changes:

- Net favorable development of $84 million in short-tail business, primarily from:
  - Favorable development of $38 million in property (excluding technical lines), primarily from favorable Continental Europe loss emergence in accident years 2013 through 2015; and
  - Favorable development of $32 million in energy lines, primarily from a claims review of catastrophe impacts on underwriting years 2004 through 2008, as well as favorable loss emergence in accident years 2010 through 2013, primarily in offshore where experience has been better than expected.

For the six months ended June 30, 2016, net favorable PPD was $115 million , due primarily to the same factors experienced for the three months ended June 30, 2016 as described above.

Global Reinsurance

2017
For the three months ended June 30, 2017 , net favorable PPD was $31 million , which was the net result of several underlying favorable and adverse movements, driven by the following principal change:

- Net favorable development of $36 million in our casualty and professional liability lines, primarily impacting treaty years 2011 and prior, principally resulting from lower than expected loss emergence.

For the six months ended June 30, 2017 , net favorable PPD was $23 million , which was the net result of several underlying favorable and adverse movements driven by the following principal change:

- Net favorable development of $27 million , comprising $36 million in our casualty and professional liability lines as described above, as well as adverse development of $9 million in our motor and excess liability lines, driven by a change in the discount rate in the U.K. (Ogden rate) primarily impacting the 2015 and prior treaty years.

2016
For the three and six months ended June 30, 2016, net favorable PPD was $47 million and $50 million , respectively, which were the net result of several underlying favorable and adverse movements, driven by the following principal change:

- Favorable development of $41 million in casualty lines primarily impacting treaty years 2011 and prior, principally resulting from lower than expected loss emergence.

Corporate

2017
For the three and six months ended June 30, 2017 , adverse development was $43 million and $53 million , respectively, due principally to development of $35 million on run-off non A&E casualty exposures due to higher than expected loss activity, and unallocated loss adjustment expenses due to run-off operating expenses paid and incurred in the respective periods of $8 million and $18 million , respectively.

2016
For the three and six months ended June 30, 2016, net adverse development was $14 million and $22 million , respectively, due principally to unallocated loss adjustment expenses due to run-off operating expenses paid and incurred in the respective periods.

6 . Commitments, contingencies, and guarantees

a) Derivative instruments
Foreign currency management
As a global company, Chubb entities transact business in multiple currencies. Our policy is to generally match assets, liabilities, and required capital for each individual jurisdiction in local currency, which would include the use of derivatives discussed below. We do not hedge our net asset non-U.S. dollar capital positions; however, we do consider hedging for planned cross border transactions.

Derivative instruments employed
Chubb maintains positions in derivative instruments such as futures, options, 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. Chubb also maintains positions in convertible securities that contain embedded derivatives. Investment derivative instruments are recorded in either Other assets (OA) or Accounts payable, accrued expenses, and other liabilities (AP), convertible bonds are recorded in Fixed maturities available for sale (FM AFS), and convertible equity securities are recorded in Equity securities (ES) in the Consolidated balance sheets. These are the most numerous and frequent derivative transactions.

In addition, Chubb from time to time purchases to be announced mortgage-backed securities (TBAs) as part of its investing activities.

Under reinsurance programs covering GLBs, Chubb assumes the risk of GLBs, including GMIB and GMAB, 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 GMAB risk is triggered if, at contract maturity, the contract holder’s account value is less than a guaranteed minimum value. The GLB reinsurance product meets the definition of a derivative instrument. Benefit reserves in respect of GLBs are classified as Future policy benefits (FPB) while the fair value derivative adjustment is classified within AP. Chubb also generally maintains positions in exchange-traded equity futures contracts on equity market indices to limit equity exposure in the GMDB and GLB blocks of business.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

All derivative instruments are carried at fair value with changes in fair value recorded in Net realized gains (losses) in the Consolidated statements of operations. None of the derivative instruments are designated as hedges for accounting purposes.

The following table presents the balance sheet locations, fair values of derivative instruments in an asset or (liability) position, and notional values/payment provisions of our derivative instruments:

		June 30, 2017			December 31, 2016		
		Fair Value			Fair Value		
(in millions of U.S. dollars)	Consolidated Balance Sheet Location	Derivative Asset	Derivative (Liability)	Notional Value/ Payment Provision	Derivative Asset	Derivative (Liability)	Notional Value/ Payment Provision
Investment and embedded derivative instruments							
Foreign currency forward contracts	OA / (AP)	$ 8	$ (30)	$ 2,201	$ 25	$ (50)	$ 2,220
Cross-currency swaps	OA / (AP)	—	—	45	—	—	95
Options/Futures contracts on notes and bonds	OA / (AP)	4	(5)	1,376	6	(4)	2,344
Convertible securities [1]	FM AFS / ES	2	—	7	2	—	7
		$ 14	$ (35)	$ 3,629	$ 33	$ (54)	$ 4,666
Other derivative instruments							
Futures contracts on equities [2]	OA / (AP)	$ 5	$ —	$ 1,428	$ 1	$ —	$ 1,316
Other	OA / (AP)	4	(2)	249	2	(13)	214
		$ 9	$ (2)	$ 1,677	$ 3	$ (13)	$ 1,530
GLB [3]	(AP) / (FPB)	$ —	$ (684)	$ 1,180	$ —	$ (853)	$ 1,264

(1) Includes fair value of embedded derivatives.
(2) Related to GMDB and GLB blocks of business.
(3) Includes both future policy benefits reserves and fair value derivative adjustment. 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 June 30, 2017 and December 31, 2016, derivative liabilities of $8 million and $10 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) Secured borrowings
Chubb participates in a securities lending program operated by a third-party banking institution whereby certain assets are loaned to qualified borrowers and from which we earn an incremental return. The securities lending collateral can only be drawn down by Chubb in the event that the institution borrowing the securities is in default under the lending agreement. An indemnification agreement with the lending agent protects us 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.

Potential risks exist in our secured borrowing transactions due to market conditions and counterparty exposure. With collateral that we pledge, 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, Chubb will have free use of the borrowed funds until our collateral is returned. In addition, we may encounter the risk that Chubb 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, Chubb may seek alternative borrowing sources or reduce borrowings. Additionally, increased margins and collateral requirements due to market conditions would increase our restricted assets as we are required to provide additional collateral to support the transaction.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

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

	Remaining contractual maturity	
	June 30	December 31
	2017	2016
(in millions of U.S. dollars)	Overnight and Continuous	
Collateral held under securities lending agreements:		
Cash	**$ 1,062**	$ 423
U.S. Treasury and agency	**82**	54
Foreign	**263**	578
Corporate securities	**1**	37
Mortgage-backed securities	**60**	—
Equity securities	**77**	—
	$ 1,545	$ 1,092
Gross amount of recognized liability for securities lending payable	**$ 1,546**	$ 1,093
Difference [1]	**$ (1)**	$ (1)

(1) The carrying value of the securities lending collateral held is $ 1 million lower than the securities lending payable at both June 30, 2017 and December 31, 2016, due to accrued interest recorded in the securities lending payable.

At June 30, 2017 and December 31, 2016, our repurchase agreement obligations of $1,408 million and $1,403 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 Equity securities and the repurchase agreement obligation is recorded in Repurchase agreements in the Consolidated balance sheets.

The following table presents the carrying value of collateral pledged under repurchase agreements by investment category and remaining contractual maturity of the underlying agreements:

	Remaining contractual maturity					
	June 30, 2017			December 31, 2016		
(in millions of U.S. dollars)	**30-90 Days**	**Greater than 90 Days**	**Total**	Up to 30 Days	Greater than 90 Days	Total
Collateral pledged under repurchase agreements:						
Cash	**$ —**	**$ —**	**$ —**	$ —	$ 1	$ 1
U.S. Treasury and agency	**6**	**240**	**246**	230	10	240
Mortgage-backed securities	**495**	**731**	**1,226**	339	881	1,220
	$ 501	**$ 971**	**$ 1,472**	$ 569	$ 892	$ 1,461
Gross amount of recognized liabilities for repurchase agreements			**$ 1,408**			$ 1,403
Difference [1]			**$ 64**			$ 58

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

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

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016	**2017**	2016
Investment and embedded derivative instruments				
Foreign currency forward contracts	**$ (7)**	$ (10)	**$ 7**	$ (20)
All other futures contracts and options	**(9)**	(37)	**(17)**	(71)
Convertible securities [1]	**—**	—	**—**	5
Total investment and embedded derivative instruments	**$ (16)**	$ (47)	**$ (10)**	$ (86)
GLB and other derivative instruments				
GLB [2]	**$ 118**	$ (131)	**$ 211**	$ (359)
Futures contracts on equities [3]	**(38)**	(28)	**(112)**	(43)
Other	**(1)**	—	**1**	(2)
Total GLB and other derivative instruments	**$ 79**	$ (159)	**$ 100**	$ (404)
	$ 63	$ (206)	**$ 90**	$ (490)

(1) Includes embedded derivatives.
(2) Excludes foreign exchange gains (losses) related to GLB.
(3) Related to GMDB and GLB blocks of business.

c) 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. Chubb uses forwards to minimize the effect of fluctuating foreign currencies as discussed above.

(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. Exchange-traded futures contracts on money market instruments, notes, and bonds are used in fixed maturity portfolios to more efficiently manage duration, as substitutes for ownership of the money market instruments, bonds, and notes without significantly increasing the risk in the portfolio. 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 in reserves for GMDB and GLB reinsurance business.

Options
An option contract conveys to the holder the right, but not the obligation, to purchase or sell a specified amount or value of an underlying security at a fixed price. Option contracts are used in the investment portfolio as protection against unexpected shifts in interest rates, which would affect the duration of the fixed maturity portfolio. By using options in the portfolio, the overall interest rate sensitivity of the portfolio can be reduced. Option contracts may also be used as an alternative to futures contracts in the synthetic strategy as described above.

The price of an option is influenced by the underlying security, expected volatility, time to expiration, and supply and demand.

The credit risk associated with the above derivative financial instruments relates to the potential for non-performance by counterparties. Although non-performance is not anticipated, in order to minimize the risk of loss, management monitors the creditworthiness of its counterparties and obtains collateral. The performance of exchange-traded instruments is guaranteed by the exchange on which they trade. For non-exchange-traded instruments, the counterparties are principally banks which must meet certain criteria according to our investment guidelines.

Cross-currency swaps
Cross-currency swaps are agreements under which two counterparties exchange interest payments and principal denominated in different currencies at a future date. We use cross-currency swaps to reduce the foreign currency and interest rate risk by converting cash flows back into local currency. We invest in foreign currency denominated investments to improve credit diversification and also to obtain better duration matching to our liabilities that is limited in the local currency market.

Other
Included within Other are derivatives intended to reduce potential losses which may arise from certain exposures in our insurance business. The economic benefit provided by these derivatives is similar to purchased reinsurance. For example, Chubb may enter into crop derivative contracts to protect underwriting results in the event of a significant decline in commodity prices.

(iii) Convertible security investments
A convertible security is a debt instrument or preferred stock that can be converted into a predetermined amount of the issuer's equity. The convertible option is an embedded derivative within the host instruments which are classified in the investment portfolio as either available for sale or as an equity security. Chubb purchases convertible securities for their total return and not specifically for the conversion feature.

(iv) TBA
By acquiring TBAs, we make a commitment to purchase a future issuance of mortgage-backed securities. For the period between purchase of the TBAs and issuance of the underlying security, we account for our position as a derivative in the consolidated financial statements. Chubb purchases TBAs both for their total return and for the flexibility they provide related to our mortgage-backed security strategy.

(v) GLB
Under the GLB program, as the assuming entity, Chubb is obligated to provide coverage until the expiration or maturity of the underlying deferred annuity contracts or the expiry of the reinsurance treaty. Premiums received under the reinsurance treaties are classified as premium. Expected losses allocated to premiums received are classified as Future policy benefits and valued similar to GMDB reinsurance. Other changes in fair value, principally arising from changes in expected losses allocated to expected future premiums, are classified as Net realized gains (losses). 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 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. We believe this presentation provides the most meaningful disclosure of changes in the underlying risk within the GLB reinsurance programs for a given reporting period.

d) Fixed maturities
At June 30, 2017 , we have commitments to purchase fixed income securities of $675 million over the next several years.

e) Other investments
At June 30, 2017 , included in Other investments in the Consolidated balance sheets are investments in limited partnerships and partially-owned investment companies with a carrying value of $3.5 billion. In connection with these investments, we have commitments that may require funding of up to $1.9 billion over the next several years.

f) Taxation
At June 30, 2017 , $15 million of unrecognized tax benefits remain outstanding. It is reasonably possible that over the next twelve months, the amount of unrecognized tax benefits may change resulting from the re-evaluation of unrecognized tax benefits arising from examinations of taxing authorities and the closing of tax statute limitations. With few exceptions, Chubb is no longer subject to state and local or non-U.S. income tax examinations for years before 2009.

g) Legal proceedings
Our insurance subsidiaries are subject to claims litigation involving disputed interpretations of policy coverages and, in some jurisdictions, direct actions by allegedly-injured persons seeking damages from policyholders. These lawsuits, involving claims on policies issued by our subsidiaries which are typical to the insurance industry in general and in the normal course of business, are considered in our loss and loss expense reserves. In addition to claims litigation, we are subject to lawsuits and regulatory actions in the normal course of business that do not arise from or directly relate to claims on insurance policies. This category of business litigation typically involves, among other things, allegations of underwriting errors or misconduct,

employment claims, regulatory activity, or disputes arising from our business ventures. In the opinion of management, our ultimate liability for these matters could be, but we believe is not likely to be, material to our consolidated financial condition and results of operations.

7. Shareholders' equity

All of Chubb's Common Shares are authorized under Swiss corporate law. Though the par value of Common Shares is stated in Swiss francs, Chubb continues to use U.S. dollars as its reporting currency for preparing consolidated financial statements. Under Swiss corporate law, dividends, including distributions through a reduction in par value (par value reduction) or from legal reserves, must be stated in Swiss francs though dividend payments are made by Chubb in U.S. dollars. At June 30, 2017, our Common Shares had a par value of CHF 24.15 per share.

At our May 2016 and 2015 annual general meetings, our shareholders approved an annual dividend for the following year of up to $ 2.76 per share and $ 2.68 per share, respectively, which were paid in four quarterly installments of $ 0.69 per share and $ 0.67 per share, respectively, at dates determined by the Board of Directors (Board) after the annual general meetings by way of a distribution from capital contribution reserves, transferred to free reserves for payment.

At our May 2017 annual general meeting, our shareholders approved an annual dividend for the following year of up to $2.84 per share, expected to be paid in four quarterly installments of $0.71 per share after the annual general meeting by way of distribution from capital contribution reserves, transferred to free reserves for payment. The Board will determine the record and payment dates at which the annual dividend may be paid until the date of the 2018 annual general meeting, and is authorized to abstain from distributing a dividend at its discretion.

The following table presents dividend distributions per Common Share in Swiss francs (CHF) and U.S. dollars (USD):

	Three Months Ended June 30				Six Months Ended June 30			
	2017		2016		**2017**		2016	
	CHF	USD	CHF	USD	CHF	USD	CHF	USD
Total dividend distributions per common share	**0.69**	**$ 0.71**	0.68	$ 0.69	**1.38**	**$ 1.40**	1.34	$ 1.36

Common Shares in treasury are used principally for issuance upon the exercise of employee stock options, grants of restricted stock, and purchases under the Employee Stock Purchase Plan (ESPP). At June 30, 2017 , 14,408,723 Common Shares remain in treasury after net shares redeemed under employee share-based compensation plans.

Chubb Limited securities repurchase authorization
There was no share repurchase program from January 2016 through October 2016. In November 2016, the Board authorized a share repurchase program of $1.0 billion of Chubb's Common Shares through December 31, 2017.

Repurchases of Chubb's Common Shares conducted in a series of open market transactions from January 1, 2017 through August 2, 2017 under the Board authorization are as follows:

(in millions of U.S. dollars, except share data)	Three Months Ended June 30, 2017	Six Months Ended June 30, 2017	July 1, 2017 through August 2, 2017
Number of shares repurchased	**2,381,566**	**3,417,630**	**501,872**
Cost of shares repurchased	**$ 335**	**$ 475**	**$ 72**
Repurchase authorization remaining at end of period	**$ 525**	**$ 525**	**$ 453**

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

8 . Share-based compensation

The Chubb Limited 2016 Long-Term Incentive Plan (the 2016 LTIP) permits grants of incentive and non-qualified stock options; restricted stock and restricted stock units; and performance-based restricted stock awards. The incentive and non-qualified stock options are granted principally at an option price per share equal to the grant date fair value of Chubb's Common Shares. Stock options are generally granted with a 3-year vesting period and a 10-year term and typically vest in equal annual installments over the vesting period, which is also the requisite service period. On February 23, 2017 , Chubb granted 2,065,620 stock options with a weighted-average grant date fair value of $22.97 each estimated using the Black-Scholes option pricing model. The service-based restricted stock and restricted stock units are generally granted with a 4-year vesting period, based on a graded vesting schedule.

Performance-based restricted stock awards granted prior to January 2017 comprised target awards which have four installments that vest annually based on tangible book value (shareholders' equity less goodwill and intangible assets, net of tax) per share growth compared to a defined group of peer companies, and premium awards, which are earned only if tangible book value per share growth over the cumulative 4-year period after the grant of the associated target awards exceeds a higher threshold compared to our peer group. The terms of performance-based restricted stock awards granted beginning in January 2017 were updated to now include a 3-year cliff vesting provision in place of the 4-year graded vesting period. In addition, these awards now include an additional vesting criteria based on the P&C combined ratio compared to a defined group of peer companies as well as an additional vesting provision for premium awards based on total shareholder return (TSR) compared to a defined group of peer companies.

Chubb's restricted stock is granted at market close price on the grant date. On February 23, 2017 , Chubb granted 1,105,118 service-based restricted stock awards, 326,272 service-based restricted stock units, and 202,251 performance-based stock awards to employees and officers with a grant date fair value of $139.01 each. Each restricted stock unit represents our obligation to deliver to the holder one Common Share upon vesting.

9 . Postretirement benefits

The components of net pension and other postretirement benefit costs (benefits) reflected in Net income in the Consolidated statements of operations were as follows:

	Three Months Ended June 30					
	Pension Benefits			Other Postretirement Benefits		
(in millions of U.S. dollars)	U.S. Plans	Non-U.S. Plans	Total	U.S. Plans	Non-U.S. Plans	Total
2017						
Service cost	**$ 16**	**$ 4**	**$ 20**	**$ 1**	**$ 1**	**$ 2**
Interest cost	**26**	**7**	**33**	**—**	**—**	**—**
Expected return on plan assets	**(48)**	**(10)**	**(58)**	**(1)**	**—**	**(1)**
Amortization of net actuarial loss	**—**	**1**	**1**	**—**	**—**	**—**
Amortization of prior service cost	**—**	**—**	**—**	**(23)**	**—**	**(23)**
Curtailments	**—**	**(8)**	**(8)**	**—**	**—**	**—**
Net periodic (benefit) cost	**$ (6)**	**$ (6)**	**$ (12)**	**$ (23)**	**$ 1**	**$ (22)**
2016						
Service cost	$ 20	$ 4	$ 24	$ 2	$ 1	$ 3
Interest cost	27	8	35	4	—	4
Expected return on plan assets	(42)	(10)	(52)	(2)	—	(2)
Amortization of net actuarial loss	—	1	1	—	—	—
Net periodic cost	$ 5	$ 3	$ 8	$ 4	$ 1	$ 5

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

	Six Months Ended June 30					
	Pension Benefits			Other Postretirement Benefits		
(in millions of U.S. dollars)	U.S. Plans	Non-U.S. Plans	Total	U.S. Plans	Non-U.S. Plans	Total
2017						
Service cost	**$ 32**	**$ 8**	**$ 40**	**$ 1**	**$ 1**	**$ 2**
Interest cost	**52**	**14**	**66**	**1**	**—**	**1**
Expected return on plan assets	**(95)**	**(20)**	**(115)**	**(2)**	**—**	**(2)**
Amortization of net actuarial loss	**—**	**1**	**1**	**—**	**—**	**—**
Amortization of prior service cost	**—**	**—**	**—**	**(46)**	**—**	**(46)**
Curtailments	**—**	**(8)**	**(8)**	**—**	**—**	**—**
Net periodic (benefit) cost	**$ (11)**	**$ (5)**	**$ (16)**	**$ (46)**	**$ 1**	**$ (45)**
2016						
Service cost	$ 37	$ 9	$ 46	$ 4	$ 1	$ 5
Interest cost	54	16	70	9	—	9
Expected return on plan assets	(79)	(20)	(99)	(4)	—	(4)
Amortization of net actuarial loss	—	2	2	—	—	—
Net periodic cost	$ 12	$ 7	$ 19	$ 9	$ 1	$ 10

10 . Segment information

Chubb operates through six business segments: North America Commercial P&C Insurance, North America Personal P&C Insurance, North America Agricultural Insurance, Overseas General Insurance, Global Reinsurance, and Life Insurance.

Corporate primarily includes loss and loss expenses of asbestos and environmental (A&E) run-off liabilities, and the results of our non-insurance companies including Chubb Limited, Chubb Group Management and Holdings Ltd, and Chubb INA Holdings Inc. Our exposure to A&E claims principally arises out of liabilities acquired when we purchased Westchester Specialty in 1998, CIGNA's P&C business in 1999, and legacy Chubb Corp run-off business in 2016.

For segment reporting purposes, certain items are presented in a different manner below than in the consolidated financial statements. Management uses underwriting income as the main measures of segment performance. Chubb calculates underwriting income by subtracting Losses and loss expenses, Policy benefits, Policy acquisition costs, and Administrative expenses from Net premiums earned. To calculate segment income, include net investment income, other (income) expense, and amortization of purchased intangibles. For the North America Agricultural Insurance segment, management includes gains and losses on crop derivatives as a component of underwriting income. For example, for the three months ended June 30, 2017, underwriting income in our North America Agricultural Insurance segment was $23 million . This amount includes $2 million of realized losses related to crop derivatives which are reported in Net realized gains (losses) in the Corporate column below.

For the Life Insurance segment, management includes Net investment income and (Gains) losses from fair value changes in separate account assets that do not qualify for separate account reporting under GAAP as components of Life Insurance underwriting income. For example, for the three months ended June 30, 2017, Life Insurance underwriting income of $56 million includes Net investment income of $77 million and gains from fair value changes in separate account assets of $16 million . The gains from fair value changes in separate account assets are reported in Other (income) expense in the table below.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

The following tables present the Statement of Operations by segment:

For the Three Months Ended June 30, 2017 (in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Life Insurance	Corporate	Chubb Consolidated
Net premiums written	$ 3,204	$ 1,255	$ 403	$ 2,006	$ 190	$ 523	$ —	$ 7,581
Net premiums earned	3,099	1,093	344	2,018	168	515	—	7,237
Losses and loss expenses	1,936	683	290	964	46	182	45	4,146
Policy benefits	—	—	—	—	—	163	—	163
Policy acquisition costs	464	230	27	555	43	130	—	1,449
Administrative expenses	241	66	2	243	12	77	65	706
Underwriting income (loss)	458	114	25	256	67	(37)	(110)	773
Net investment income (loss)	490	56	6	148	65	77	(72)	770
Other (income) expense	(4)	1	1	(3)	1	(12)	(129)	(145)
Amortization expense of purchased intangibles	—	5	7	11	—	—	42	65
Segment income (loss)	$ 952	$ 164	$ 23	$ 396	$ 131	$ 52	$ (95)	$ 1,623
Net realized gains (losses) including OTTI							101	101
Interest expense							147	147
Chubb integration expenses							72	72
Income tax expense							200	200
Net income (loss)							$ (413)	$ 1,305

For the Three Months Ended June 30, 2016 (in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Life Insurance	Corporate	Chubb Consolidated
Net premiums written	$ 3,245	$ 1,231	$ 375	$ 2,031	$ 230	$ 527	$ —	$ 7,639
Net premiums earned	3,148	1,140	327	2,093	185	512	—	7,405
Losses and loss expenses	1,971	661	284	1,089	87	147	15	4,254
Policy benefits	—	—	—	—	—	146	—	146
Policy acquisition costs	545	269	25	537	47	137	—	1,560
Administrative expenses	299	98	2	277	14	77	62	829
Underwriting income (loss)	333	112	16	190	37	5	(77)	616
Net investment income (loss)	468	55	5	147	65	69	(101)	708
Other (income) expense	(9)	3	—	(5)	(2)	—	(16)	(29)
Amortization expense (benefit) of purchased intangibles	—	4	8	13	—	—	(20)	5
Segment income (loss)	$ 810	$ 160	$ 13	$ 329	$ 104	$ 74	$ (142)	$ 1,348
Net realized gains (losses) including OTTI							(216)	(216)
Interest expense							153	153
Chubb integration expenses							98	98
Income tax expense							155	155
Net income (loss)							$ (764)	$ 726

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

For the Six Months Ended June 30, 2017 (in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Life Insurance	Corporate	Chubb Consolidated
Net premiums written	$ 5,946	$ 2,239	$ 464	$ 4,206	$ 389	$ 1,047	$ —	$ 14,291
Net premiums earned	6,140	2,179	358	3,954	357	1,021	—	14,009
Losses and loss expenses	3,796	1,316	217	2,035	140	375	56	7,935
Policy benefits	—	—	—	—	—	331	—	331
Policy acquisition costs	951	447	26	1,084	94	244	—	2,846
Administrative expenses	472	131	(3)	488	22	149	123	1,382
Underwriting income (loss)	921	285	118	347	101	(78)	(179)	1,515
Net investment income (loss)	968	111	12	296	127	152	(151)	1,515
Other (income) expense	—	2	1	(4)	1	(41)	(174)	(215)
Amortization expense of purchased intangibles	—	8	14	22	—	1	84	129
Segment income (loss)	$ 1,889	$ 386	$ 115	$ 625	$ 227	$ 114	$ (240)	$ 3,116
Net realized gains (losses) including OTTI							94	94
Interest expense							301	301
Chubb integration expenses							183	183
Income tax expense							328	328
Net income (loss)							$ (958)	$ 2,398

For the Six Months Ended June 30, 2016 (in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Life Insurance	Corporate	Chubb Consolidated
Net premiums written	$ 5,547	$ 2,102	$ 439	$ 4,072	$ 431	$ 1,043	$ —	$ 13,634
Net premiums earned	6,044	2,164	350	4,048	387	1,009	—	14,002
Losses and loss expenses	3,718	1,322	254	2,110	176	324	24	7,928
Policy benefits	—	—	—	—	—	272	—	272
Policy acquisition costs	1,027	518	29	1,040	100	259	—	2,973
Administrative expenses	565	186	(2)	540	28	149	135	1,601
Underwriting income (loss)	734	138	69	358	83	5	(159)	1,228
Net investment income (loss)	894	102	10	293	132	136	(185)	1,382
Other (income) expense	(9)	4	—	(10)	(3)	6	11	(1)
Amortization expense (benefit) of purchased intangibles	—	12	15	24	—	1	(40)	12
Segment income (loss)	$ 1,637	$ 224	$ 64	$ 637	$ 218	$ 134	$ (315)	$ 2,599
Net realized gains (losses) including OTTI							(610)	(610)
Interest expense							299	299
Chubb integration expenses							246	246
Income tax expense							279	279
Net income (loss)							$ (1,749)	$ 1,165

Underwriting assets are reviewed in total by management for purposes of decision-making. Other than Unpaid losses and loss expenses, Reinsurance recoverables, Goodwill and Other intangible assets, Chubb does not allocate assets to its segments.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

11 . Earnings per share

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S. dollars, except share and per share data)	**2017**	2016	**2017**	2016
Numerator:				
Net income	**$ 1,305**	$ 726	**$ 2,398**	$ 1,165
Denominator:				
Denominator for basic earnings per share:				
Weighted-average shares outstanding	**467,981,077**	467,701,328	**468,244,458**	457,102,802
Denominator for diluted earnings per share:				
Share-based compensation plans	**3,872,860**	3,455,969	**3,900,678**	3,379,559
Weighted-average shares outstanding and assumed conversions	**471,853,937**	471,157,297	**472,145,136**	460,482,361
Basic earnings per share	**$ 2.79**	$ 1.55	**$ 5.12**	$ 2.55
Diluted earnings per share	**$ 2.77**	$ 1.54	**$ 5.08**	$ 2.53
Potential anti-dilutive share conversions	**2,066,578**	2,103,281	**1,467,556**	2,056,018

Excluded from weighted-average shares outstanding and assumed conversions is the impact of securities that would have been anti-dilutive during the respective periods.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

12 . Information provided in connection with outstanding debt of subsidiaries

The following tables present condensed consolidating financial information at June 30, 2017 and December 31, 2016 , and for the three and six months ended June 30, 2017 and 2016 for Chubb Limited (Parent Guarantor) and Chubb INA Holdings Inc. (Subsidiary Issuer). The Subsidiary Issuer is an indirect 100 percent-owned subsidiary of the Parent Guarantor. The Parent Guarantor fully and unconditionally guarantees certain of the debt of the Subsidiary Issuer. Condensed consolidating financial information of the Parent Guarantor and Subsidiary Issuer are presented on the equity method of accounting. The revenues and expenses and cash flows of the subsidiaries of the Subsidiary Issuer are presented in the Other Chubb Limited Subsidiaries column on a combined basis.

Condensed Consolidating Balance Sheet at June 30, 2017

(in millions of U.S. dollars)	Chubb Limited (Parent Guarantor)	Chubb INA Holdings Inc. (Subsidiary Issuer)	Other Chubb Limited Subsidiaries	Consolidating Adjustments and Eliminations	Chubb Limited Consolidated
Assets					
Investments	$ 23	$ 305	$ 99,880	$ —	$ 100,208
Cash [1]	—	167	1,323	(193)	1,297
Insurance and reinsurance balances receivable	—	—	11,699	(2,037)	9,662
Reinsurance recoverable on losses and loss expenses	—	—	24,118	(10,760)	13,358
Reinsurance recoverable on policy benefits	—	—	1,205	(1,007)	198
Value of business acquired	—	—	337	—	337
Goodwill and other intangible assets	—	—	22,013	—	22,013
Investments in subsidiaries	40,553	49,982	—	(90,535)	—
Due from subsidiaries and affiliates, net	10,251	—	—	(10,251)	—
Other assets	141	289	19,527	(4,042)	15,915
Total assets	$ 50,968	$ 50,743	$ 180,102	$ (118,825)	$ 162,988
Liabilities					
Unpaid losses and loss expenses	$ —	$ —	$ 70,460	$ (10,066)	$ 60,394
Unearned premiums	—	—	18,876	(3,587)	15,289
Future policy benefits	—	—	6,197	(1,007)	5,190
Due to subsidiaries and affiliates, net	—	9,939	312	(10,251)	—
Affiliated notional cash pooling programs [1]	193	—	—	(193)	—
Repurchase agreements	—	—	1,408	—	1,408
Short-term debt	—	922	—	—	922
Long-term debt	—	11,656	11	—	11,667
Trust preferred securities	—	308	—	—	308
Other liabilities	426	1,582	18,639	(3,186)	17,461
Total liabilities	619	24,407	115,903	(28,290)	112,639
Total shareholders' equity	50,349	26,336	64,199	(90,535)	50,349
Total liabilities and shareholders' equity	$ 50,968	$ 50,743	$ 180,102	$ (118,825)	$ 162,988

(1) Chubb maintains two notional multicurrency cash pools (Pools) with a third-party bank. Various Chubb entities participate in one or the other of the Pools, pursuant to which credit and debit balances in individual Chubb accounts are translated daily into a single currency and pooled on a notional basis. Individual Chubb entities are permitted to overdraw on their individual accounts provided the overall Pool balances do not fall below zero. At June 30, 2017 , the cash balance of one or more entities was negative; however, the overall Pool balances were positive.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

Condensed Consolidating Balance Sheet at December 31, 2016

(in millions of U.S. dollars)	Chubb Limited (Parent Guarantor)	Chubb INA Holdings Inc. (Subsidiary Issuer)	Other Chubb Limited Subsidiaries	Consolidating Adjustments and Eliminations	Chubb Limited Consolidated
Assets					
Investments	$ 27	$ 485	$ 98,582	$ —	$ 99,094
Cash [1]	1	1	1,965	(982)	985
Insurance and reinsurance balances receivable	—	—	10,498	(1,528)	8,970
Reinsurance recoverable on losses and loss expenses	—	—	24,496	(10,919)	13,577
Reinsurance recoverable on policy benefits	—	—	1,153	(971)	182
Value of business acquired	—	—	355	—	355
Goodwill and other intangible assets	—	—	22,095	—	22,095
Investments in subsidiaries	38,408	49,509	—	(87,917)	—
Due from subsidiaries and affiliates, net	10,482	—	—	(10,482)	—
Other assets	3	436	18,442	(4,353)	14,528
Total assets	$ 48,921	$ 50,431	$ 177,586	$ (117,152)	$ 159,786
Liabilities					
Unpaid losses and loss expenses	$ —	$ —	$ 70,683	$ (10,143)	$ 60,540
Unearned premiums	—	—	18,538	(3,759)	14,779
Future policy benefits	—	—	6,007	(971)	5,036
Due to subsidiaries and affiliates, net	—	10,209	273	(10,482)	—
Affiliated notional cash pooling programs [1]	363	619	—	(982)	—
Repurchase agreements	—	—	1,403	—	1,403
Short-term debt	—	500	—	—	500
Long-term debt	—	12,599	11	—	12,610
Trust preferred securities	—	308	—	—	308
Other liabilities	283	1,582	17,368	(2,898)	16,335
Total liabilities	646	25,817	114,283	(29,235)	111,511
Total shareholders' equity	48,275	24,614	63,303	(87,917)	48,275
Total liabilities and shareholders' equity	$ 48,921	$ 50,431	$ 177,586	$ (117,152)	$ 159,786

(1) Chubb maintains two notional multicurrency cash pools (Pools) with a third-party bank. Various Chubb entities participate in one or the other of the Pools, pursuant to which credit and debit balances in individual Chubb accounts are translated daily into a single currency and pooled on a notional basis. Individual Chubb entities are permitted to overdraw on their individual accounts provided the overall Pool balances do not fall below zero. At December 31, 2016 , the cash balance of one or more entities was negative; however, the overall Pool balances were positive.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

Condensed Consolidating Statements of Operations and Comprehensive Income

For the Three Months Ended June 30, 2017 (in millions of U.S. dollars)	Chubb Limited (Parent Guarantor)	Chubb INA Holdings Inc. (Subsidiary Issuer)	Other Chubb Limited Subsidiaries	Consolidating Adjustments and Eliminations	Chubb Limited Consolidated
Net premiums written	$ —	$ —	$ 7,581	$ —	$ 7,581
Net premiums earned	—	—	7,237	—	7,237
Net investment income	2	4	764	—	770
Equity in earnings of subsidiaries	1,253	665	—	(1,918)	—
Net realized gains (losses) including OTTI	(2)	(1)	104	—	101
Losses and loss expenses	—	—	4,146	—	4,146
Policy benefits	—	—	163	—	163
Policy acquisition costs and administrative expenses	18	(2)	2,139	—	2,155
Interest (income) expense	(84)	212	19	—	147
Other (income) expense	4	10	(159)	—	(145)
Amortization of purchased intangibles	—	—	65	—	65
Chubb integration expenses	6	4	62	—	72
Income tax expense (benefit)	4	(87)	283	—	200
Net income	$ 1,305	$ 531	$ 1,387	$ (1,918)	$ 1,305
Comprehensive income	$ 1,675	$ 920	$ 1,756	$ (2,676)	$ 1,675

Condensed Consolidating Statements of Operations and Comprehensive Income

For the Three Months Ended June 30, 2016 (in millions of U.S. dollars)	Chubb Limited (Parent Guarantor)	Chubb INA Holdings Inc. (Subsidiary Issuer)	Other Chubb Limited Subsidiaries	Consolidating Adjustments and Eliminations	Chubb Limited Consolidated
Net premiums written	$ —	$ —	$ 7,639	$ —	$ 7,639
Net premiums earned	—	—	7,405	—	7,405
Net investment income	1	3	704	—	708
Equity in earnings of subsidiaries	664	549	—	(1,213)	—
Net realized gains (losses) including OTTI	(1)	(1)	(214)	—	(216)
Losses and loss expenses	—	—	4,254	—	4,254
Policy benefits	—	—	146	—	146
Policy acquisition costs and administrative expenses	16	96	2,277	—	2,389
Interest (income) expense	(93)	233	13	—	153
Other (income) expense	(4)	10	(35)	—	(29)
Amortization of purchased intangibles	—	—	5	—	5
Chubb integration expenses	14	(97)	181	—	98
Income tax expense (benefit)	5	(37)	187	—	155
Net income	$ 726	$ 346	$ 867	$ (1,213)	$ 726
Comprehensive income	$ 1,540	$ 1,004	$ 1,681	$ (2,685)	$ 1,540

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

Condensed Consolidating Statements of Operations and Comprehensive Income

For the Six Months Ended June 30, 2017 (in millions of U.S. dollars)	Chubb Limited (Parent Guarantor)	Chubb INA Holdings Inc. (Subsidiary Issuer)	Other Chubb Limited Subsidiaries	Consolidating Adjustments and Eliminations	Chubb Limited Consolidated
Net premiums written	$ —	$ —	$ 14,291	$ —	$ 14,291
Net premiums earned	—	—	14,009	—	14,009
Net investment income	2	7	1,506	—	1,515
Equity in earnings of subsidiaries	2,280	1,366	—	(3,646)	—
Net realized gains (losses) including OTTI	(2)	(14)	110	—	94
Losses and loss expenses	—	—	7,935	—	7,935
Policy benefits	—	—	331	—	331
Policy acquisition costs and administrative expenses	36	12	4,180	—	4,228
Interest (income) expense	(168)	433	36	—	301
Other (income) expense	(2)	25	(238)	—	(215)
Amortization of purchased intangibles	—	—	129	—	129
Chubb integration expenses	6	53	124	—	183
Income tax expense (benefit)	10	(199)	517	—	328
Net income	$ 2,398	$ 1,035	$ 2,611	$ (3,646)	$ 2,398
Comprehensive income	$ 3,082	$ 1,711	$ 3,294	$ (5,005)	$ 3,082

Condensed Consolidating Statements of Operations and Comprehensive Income

For the Six Months Ended June 30, 2016 (in millions of U.S. dollars)	Chubb Limited (Parent Guarantor)	Chubb INA Holdings Inc. (Subsidiary Issuer)	Other Chubb Limited Subsidiaries	Consolidating Adjustments and Eliminations	Chubb Limited Consolidated
Net premiums written	$ —	$ —	$ 13,634	$ —	$ 13,634
Net premiums earned	—	—	14,002	—	14,002
Net investment income	2	7	1,373	—	1,382
Equity in earnings of subsidiaries	1,039	1,055	—	(2,094)	—
Net realized gains (losses) including OTTI	(1)	(1)	(608)	—	(610)
Losses and loss expenses	—	—	7,928	—	7,928
Policy benefits	—	—	272	—	272
Policy acquisition costs and administrative expenses	33	132	4,409	—	4,574
Interest (income) expense	(173)	448	24	—	299
Other (income) expense	(13)	20	(8)	—	(1)
Amortization of purchased intangibles	—	—	12	—	12
Chubb integration expenses	17	40	189	—	246
Income tax expense (benefit)	11	(187)	455	—	279
Net income	$ 1,165	$ 608	$ 1,486	$ (2,094)	$ 1,165
Comprehensive income	$ 3,081	$ 2,060	$ 3,402	$ (5,462)	$ 3,081

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

Condensed Consolidating Statement of Cash Flows

Six Months Ended June 30, 2017 (in millions of U.S. dollars)	Chubb Limited (Parent Guarantor)	Chubb INA Holdings Inc. (Subsidiary Issuer)	Other Chubb Limited Subsidiaries	Consolidating Adjustments and Eliminations	Chubb Limited Consolidated
Net cash flows from operating activities	**$ 551**	**$ 1,444**	**$ 1,686**	**$ (2,041)**	**$ 1,640**
Cash flows from investing activities					
Purchases of fixed maturities available for sale	**—**	**(5)**	**(12,255)**	**—**	**(12,260)**
Purchases of fixed maturities held to maturity	**—**	**—**	**(212)**	**—**	**(212)**
Purchases of equity securities	**—**	**—**	**(82)**	**—**	**(82)**
Sales of fixed maturities available for sale	**—**	**—**	**6,873**	**—**	**6,873**
Sales of equity securities	**—**	**—**	**104**	**—**	**104**
Maturities and redemptions of fixed maturities available for sale	**—**	**13**	**5,156**	**—**	**5,169**
Maturities and redemptions of fixed maturities held to maturity	**—**	**—**	**408**	**—**	**408**
Net change in short-term investments	**—**	**166**	**188**	**—**	**354**
Net derivative instruments settlements	**—**	**(7)**	**(122)**	**—**	**(129)**
Other	**—**	**2**	**(123)**	**—**	**(121)**
Net cash flows from (used for) investing activities	**—**	**169**	**(65)**	**—**	**104**
Cash flows from financing activities					
Dividends paid on Common Shares	**(646)**	**—**	**—**	**—**	**(646)**
Common Shares repurchased	**—**	**—**	**(475)**	**—**	**(475)**
Repayment of long-term debt	**—**	**(500)**	**—**	**—**	**(500)**
Proceeds from issuance of repurchase agreements	**—**	**—**	**1,343**	**—**	**1,343**
Repayment of repurchase agreements	**—**	**—**	**(1,338)**	**—**	**(1,338)**
Proceeds from share-based compensation plans	**—**	**—**	**89**	**—**	**89**
Dividend to parent company	**—**	**—**	**(2,041)**	**2,041**	**—**
Advances (to) from affiliates	**264**	**(328)**	**64**	**—**	**—**
Net payments to affiliated notional cash pooling programs (1)	**(170)**	**(619)**	**—**	**789**	**—**
Policyholder contract deposits	**—**	**—**	**209**	**—**	**209**
Policyholder contract withdrawals	**—**	**—**	**(125)**	**—**	**(125)**
Net cash flows used for financing activities	**(552)**	**(1,447)**	**(2,274)**	**2,830**	**(1,443)**
Effect of foreign currency rate changes on cash and cash equivalents	**—**	**—**	**11**	**—**	**11**
Net increase (decrease) in cash	**(1)**	**166**	**(642)**	**789**	**312**
Cash – beginning of period (1)	**1**	**1**	**1,965**	**(982)**	**985**
Cash – end of period (1)	**$ —**	**$ 167**	**$ 1,323**	**$ (193)**	**$ 1,297**

(1) Chubb maintains two notional multicurrency cash pools (Pools) with a third-party bank. Various Chubb entities participate in one or the other of the Pools, pursuant to which credit and debit balances in individual Chubb accounts are translated daily into a single currency and pooled on a notional basis. Individual Chubb entities are permitted to overdraw on their individual accounts provided the overall Pool balances do not fall below zero. At June 30, 2017 and December 31, 2016, the cash balance of one or more entities was negative; however, the overall Pool balances were positive.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – continued (Unaudited)
Chubb Limited and Subsidiaries

Condensed Consolidating Statement of Cash Flows

Six Months Ended June 30, 2016 (in millions of U.S. dollars)	Chubb Limited (Parent Guarantor)	Chubb INA Holdings Inc. (Subsidiary Issuer)	Other Chubb Limited Subsidiaries	Consolidating Adjustments and Eliminations	Chubb Limited Consolidated
Net cash flows from operating activities	$ 3,213	$ 4,050	$ 2,262	$ (7,372)	$ 2,153
Cash flows from investing activities					
Purchases of fixed maturities available for sale	—	(83)	(16,994)	—	(17,077)
Purchases of fixed maturities held to maturity	—	—	(121)	—	(121)
Purchases of equity securities	—	—	(78)	—	(78)
Sales of fixed maturities available for sale	—	—	11,868	—	11,868
Sales of equity securities	—	—	932	—	932
Maturities and redemptions of fixed maturities available for sale	—	—	3,910	—	3,910
Maturities and redemptions of fixed maturities held to maturity	—	—	443	—	443
Net change in short-term investments	—	7,829	3,882	—	11,711
Net derivative instruments settlements	—	(10)	(83)	—	(93)
Acquisition of subsidiaries (net of cash acquired of $71)	—	(14,282)	34	—	(14,248)
Capital contribution	(2,330)	—	(2,330)	4,660	—
Other	—	(3)	84	—	81
Net cash flows from (used for) investing activities	(2,330)	(6,549)	1,547	4,660	(2,672)
Cash flows from financing activities					
Dividends paid on Common Shares	(530)	—	—	—	(530)
Proceeds from issuance of repurchase agreements	—	—	904	—	904
Repayment of repurchase agreements	—	—	(902)	—	(902)
Proceeds from share-based compensation plans, including windfall tax benefits	—	—	92	—	92
Dividend to parent company	—	—	(7,372)	7,372	—
Advances (to) from affiliates	(247)	221	26	—	—
Capital contribution	—	2,330	2,330	(4,660)	—
Net proceeds from (payments to) affiliated notional cash pooling programs (1)	(106)	157	—	(51)	—
Policyholder contract deposits	—	—	274	—	274
Policyholder contract withdrawals	—	—	(103)	—	(103)
Other	—	(4)	—	—	(4)
Net cash flows from (used for) financing activities	(883)	2,704	(4,751)	2,661	(269)
Effect of foreign currency rate changes on cash and cash equivalents	—	—	24	—	24
Net increase (decrease) in cash	—	205	(918)	(51)	(764)
Cash – beginning of period (1)	1	2	2,743	(971)	1,775
Cash – end of period (1)	$ 1	$ 207	$ 1,825	$ (1,022)	$ 1,011

(1) Chubb maintains two notional multicurrency cash pools (Pools) with a third-party bank. Various Chubb entities participate in one or the other of the Pools, pursuant to which credit and debit balances in individual Chubb accounts are translated daily into a single currency and pooled on a notional basis. Individual Chubb entities are permitted to overdraw on their individual accounts provided the overall Pool balances do not fall below zero. At June 30, 2016 and December 31, 2015, the cash balance of one or more entities was negative; however, the overall Pool balances were positive.

ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following is a discussion of our results of operations, financial condition, and liquidity and capital resources as of and for the three and six months ended June 30, 2017 .

All comparisons in this discussion are to the corresponding prior year period unless otherwise indicated.

Our results of operations and cash flows for any interim period are not necessarily indicative of our results for the full year. This discussion should be read in conjunction with our consolidated financial statements and related notes and our Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report on Form 10-K for the year ended December 31, 2016 (2016 Form 10-K).

Other Information
We routinely post important information for investors on our website (investors.chubb.com). We use this website as a means of disclosing material, non-public information and for complying with our disclosure obligations under Securities and Exchange Commission (SEC) Regulation FD (Fair Disclosure). Accordingly, investors should monitor the Investor Information portion of our website, in addition to following our press releases, SEC filings, public conference calls, and webcasts. The information contained on, or that may be accessed through, our website is not incorporated by reference into, and is not a part of, this report.

MD&A Index	Page
Forward-Looking Statements	44
Overview	46
Financial Highlights	46
Consolidated Operating Results	48
Integration-Related Savings	54
Prior Period Development	55
Segment Operating Results	56
Other Income and Expense Items	70
Amortization of Purchased Intangibles	70
Net Investment Income	71
Net Realized and Unrealized Gains (Losses)	72
Investments	73
Critical Accounting Estimates	76
Reinsurance Recoverable on Ceded Reinsurance	76
Unpaid Losses and Loss Expenses	77
Asbestos and Environmental (A&E)	77
Fair Value Measurements	77
Catastrophe Management	78
Natural Catastrophe Property Reinsurance Program	78
Crop Insurance	79
Liquidity	80
Capital Resources	81

Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 provides a “safe harbor” for forward-looking statements. Any written or oral statements made by us or on our behalf may include forward-looking statements that reflect our current views with respect to future events and financial performance. These forward-looking statements are subject to certain risks, uncertainties, and other factors that could, should potential events occur, cause actual results to differ materially from such statements. These risks, uncertainties, and other factors, which are described in more detail elsewhere herein and in other documents we file with the U.S. Securities and Exchange Commission (SEC), include but are not limited to:

- losses arising out of natural or man-made catastrophes such as hurricanes, typhoons, earthquakes, floods, climate change (including effects on weather patterns; greenhouse gases; sea; land and air temperatures; sea levels; and rain and snow), nuclear accidents, or terrorism which could be affected by:
  - the number of insureds and ceding companies affected;
  - the amount and timing of losses actually incurred and reported by insureds;
  - the impact of these losses on our reinsurers and the amount and timing of reinsurance recoverable actually received;
  - the cost of building materials and labor to reconstruct properties or to perform environmental remediation following a catastrophic event; and
  - complex coverage and regulatory issues such as whether losses occurred from storm surge or flooding and related lawsuits;
- actions that rating agencies may take from time to time, such as financial strength or credit ratings downgrades or placing these ratings on credit watch negative or the equivalent;
- the ability to collect reinsurance recoverable, credit developments of reinsurers, and any delays with respect thereto and changes in the cost, quality, or availability of reinsurance;
- actual loss experience from insured or reinsured events and the timing of claim payments;
- the uncertainties of the loss-reserving and claims-settlement processes, including the difficulties associated with assessing environmental damage and asbestos-related latent injuries, the impact of aggregate-policy-coverage limits, the impact of bankruptcy protection sought by various asbestos producers and other related businesses, and the timing of loss payments;
- changes to our assessment as to whether it is more likely than not that we will be required to sell, or have the intent to sell, available for sale fixed maturity investments before their anticipated recovery;
- infection rates and severity of pandemics and their effects on our business operations and claims activity;
- developments in global financial markets, including changes in interest rates, stock markets, and other financial markets, increased government involvement or intervention in the financial services industry, the cost and availability of financing, and foreign currency exchange rate fluctuations (which we refer to in this report as foreign exchange and foreign currency exchange), which could affect our statement of operations, investment portfolio, financial condition, and financing plans;
- general economic and business conditions resulting from volatility in the stock and credit markets and the depth and duration of potential recession;
- global political conditions, the occurrence of any terrorist attacks, including any nuclear, radiological, biological, or chemical events, or the outbreak and effects of war, and possible business disruption or economic contraction that may result from such events;
- the potential impact of the United Kingdom’s vote to withdraw from the European Union, including political, regulatory, social, and economic uncertainty and market and exchange rate volatility;
- judicial decisions and rulings, new theories of liability, legal tactics, and settlement terms;
- the effects of public company bankruptcies and/or accounting restatements, as well as disclosures by and investigations of public companies relating to possible accounting irregularities, and other corporate governance issues, including the effects of such events on:
  - the capital markets;
  - the markets for directors and officers (D&O) and errors and omissions (E&O) insurance; and
  - claims and litigation arising out of such disclosures or practices by other companies;

- uncertainties relating to governmental, legislative and regulatory policies, developments, actions, investigations, and treaties, which, among other things, could subject us to insurance regulation or taxation in additional jurisdictions or affect our current operations;
- the actual amount of new and renewal business, market acceptance of our products, and risks associated with the introduction of new products and services and entering new markets, including regulatory constraints on exit strategies;
- the competitive environment in which we operate, including trends in pricing or in policy terms and conditions, which may differ from our projections and changes in market conditions that could render our business strategies ineffective or obsolete;
- acquisitions made by us performing differently than expected, our failure to realize anticipated expense-related efficiencies or growth from acquisitions, the impact of acquisitions on our pre-existing organization, or announced acquisitions not closing;
- risks and uncertainties relating to our acquisition of The Chubb Corporation (Chubb Corp acquisition) including our ability to successfully integrate the acquired company;
- risks associated with being a Swiss corporation, including reduced flexibility with respect to certain aspects of capital management and the potential for additional regulatory burdens;
- the potential impact from government-mandated insurance coverage for acts of terrorism;
- the availability of borrowings and letters of credit under our credit facilities;
- the adequacy of collateral supporting funded high deductible programs;
- changes in the distribution or placement of risks due to increased consolidation of insurance and reinsurance brokers;
- material differences between actual and expected assessments for guaranty funds and mandatory pooling arrangements;
- the effects of investigations into market practices in the property and casualty (P&C) industry;
- changing rates of inflation and other economic conditions, for example, recession;
- the amount of dividends received from subsidiaries;
- loss of the services of any of our executive officers without suitable replacements being recruited in a reasonable time frame;
- the ability of our technology resources, including information systems and security, to perform as anticipated such as with respect to preventing material information technology failures or third-party infiltrations or hacking resulting in consequences adverse to Chubb or its customers or partners; and
- management's response to these factors and actual events (including, but not limited to, those described above).

The words "believe," "anticipate," "estimate," "project," "should," "plan," "expect," "intend," "hope," "feel," "foresee," "will likely result," or "will continue," and variations thereof and similar expressions, identify forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates. We undertake no obligation to publicly update or review any forward-looking statements, whether as a result of new information, future events, or otherwise.

Overview

Chubb Limited is the Swiss-incorporated holding company of the Chubb Group of Companies. Chubb Limited, which is headquartered in Zurich, Switzerland, and its direct and indirect subsidiaries (collectively, the Chubb Group of Companies, Chubb, we, us, or our) are a global insurance and reinsurance organization, serving the needs of a diverse group of clients worldwide. At June 30, 2017 , we had total assets of $163 billion and shareholders' equity of $50 billion . Chubb was incorporated in 1985 at which time it opened its first business office in Bermuda and continues to maintain operations in Bermuda.

We operate through six business segments: North America Commercial P&C Insurance, North America Personal P&C Insurance, North America Agricultural Insurance, Overseas General Insurance, Global Reinsurance, and Life Insurance. For more information on our segments refer to "Segment Information" under Item 1 in our 2016 Form 10-K.

Financial Highlights for the Three Months Ended June 30, 2017

- Net income was $1,305 million compared with $726 million in the prior year period.
- Total company and P&C net premiums written were $7.6 billion and $7.1 billion, respectively, both down 0.8 percent.
- Since the acquisition of Chubb Corp, we have entered into new reinsurance agreements with third-party reinsurers for certain legacy Chubb Corp business, and have taken other merger-related underwriting actions, including exiting certain types of business that do not meet our underwriting standards or adhere to our risk diversification strategy. Together, these items adversely impacted P&C net premiums written growth by $198 million in the quarter. Excluding these items, P&C net premiums written were up 2.6 percent in constant dollars.
- P&C combined ratio was 88.0 percent compared with 91.2 percent in the prior year period which included 1.0 percentage point from the unfavorable impact of initial year purchase accounting adjustments related to the Chubb Corp acquisition. The P&C combined ratio in the current year reflects favorable impacts from integration-related savings, post-retirement benefit savings, a favorable release of unallocated claims handling expense reserves and merger-related underwriting actions. These benefits reduced the expense ratio by 1.7 percentage points and the loss and loss expense ratio by 1.0 percentage point. Partially offsetting this decline is an increase in the underlying loss and loss expense ratio.
- Total incremental integration-related savings recognized in the quarter were $105 million pre-tax. Refer to the Integration-Related Savings section below for additional information on the impact of these savings by income statement line item and segment.
- Total pre-tax and after-tax catastrophe losses were $200 million (3.0 percentage points of the combined ratio) and $152 million, respectively, compared with $390 million (5.7 percentage points of the combined ratio) and $311 million, respectively, last year.
- Total pre-tax and after-tax favorable prior period development was $170 million (2.5 percentage points of the combined ratio) and $144 million, respectively, compared with $301 million (4.4 percentage points of the combined ratio) and $241 million, respectively, last year.
- Net investment income was $770 million compared with $708 million in the prior year period. Excluding the amortization of the fair value adjustment on acquired invested assets of Chubb Corp, net investment income was $855 million, compared with $816 million, up 4.8 percent.
- Share repurchases totaled $335 million, or approximately 2.4 million shares, during the quarter.

Operationally and financially, we believe all areas of integration are on track or ahead of schedule. As indicated in the table below, we have now increased the total annualized run-rate savings we expect to achieve by the end of 2018 to $875 million, up from our prior estimate of $800 million. Integration and merger-related expenses are now estimated to be $903 million, up from $809 million and have increased primarily related to the realization of increases in our savings projections.

	Actual			Expected		
(in millions of U.S. dollars)	2015	2016	YTD 2017	2017	2018	Total
Cumulative Chubb integration-related savings [1]						
Annualized savings		$ 578	$ 775	$ 825	$ 875	$ 875
Realized savings		$ 325	$ 554	$ 710	$ 845	$ 875
Chubb integration and merger-related expenses [2]						
One-time integration expenses related to savings	$ 22	$ 299	$ 144	$ 233	$ 18	$ 572
Other one-time merger-related expenses	11	193	39	116	12	331
Total expected integration and merger-related expenses	$ 33	$ 492	$ 183	$ 349	$ 30	$ 903
Cumulative annualized post-retirement benefit savings		$ 15	$ 95	$ 115	$ 115	$ 115

(1) Realized savings are the portion that is recorded in the financial statements in the current period. Annualized savings are the run rate of savings for the full year. The difference between annualized savings and realized savings reflects the additional amount that will be realized in future periods. The timing of realized savings is dependent upon the period in which the action is executed.

(2) Integration expenses related to savings are one-time costs that are directly attributable to the achievement of the annualized savings, including employee severance, third-party consulting fees, and systems integration expenses. Other merger-related expenses are one-time costs directly attributable to the merger, including rebranding, employee retention costs and other professional and legal fees related to the acquisition.

The anticipated integration-related savings and integration and merger-related expenses may not be realized fully, or may take longer to realize than expected or could have other adverse effects that we do not currently foresee. Some of the assumptions that we have made, such as the achievement of operating synergies, may not be realized. Refer to the Risk Factors under Part II, Item 1A on page 85 for additional information.

Consolidated Operating Results – Three and Six Months Ended June 30, 2017 and 2016

(in millions of U.S. dollars, except for percentages)	Three Months Ended June 30		% Change	Six Months Ended June 30		% Change
	2017	2016	Q-17 vs. Q-16	**2017**	2016	YTD-17 vs. YTD-16
Net premiums written [1]	**$ 7,581**	$ 7,639	(0.8)%	**$ 14,291**	$ 13,634	4.8 %
Net premiums earned [1]	**7,237**	7,405	(2.3)%	**14,009**	14,002	0.1 %
Net investment income	**770**	708	8.8 %	**1,515**	1,382	9.6 %
Net realized gains (losses)	**101**	(216)	NM	**94**	(610)	NM
Total revenues	**8,108**	7,897	2.7 %	**15,618**	14,774	5.7 %
Losses and loss expenses	**4,146**	4,254	(2.5)%	**7,935**	7,928	0.1 %
Policy benefits	**163**	146	11.6 %	**331**	272	21.7 %
Policy acquisition costs	**1,449**	1,560	(7.1)%	**2,846**	2,973	(4.3)%
Administrative expenses	**706**	829	(14.8)%	**1,382**	1,601	(13.7)%
Interest expense	**147**	153	(3.9)%	**301**	299	0.7 %
Other (income) expense	**(145)**	(29)	NM	**(215)**	(1)	NM
Amortization of purchased intangibles	**65**	5	NM	**129**	12	NM
Chubb integration expenses	**72**	98	(26.5)%	**183**	246	(25.6)%
Total expenses	**6,603**	7,016	(5.9)%	**12,892**	13,330	(3.3)%
Income before income tax	**1,505**	881	70.9 %	**2,726**	1,444	88.8 %
Income tax expense	**200**	155	29.0 %	**328**	279	17.6 %
Net income	**$ 1,305**	$ 726	79.6 %	**$ 2,398**	$ 1,165	105.8 %

NM – not meaningful

(1) On a constant-dollar basis for the three and six months ended June 30, 2017 , net premiums written decreased $17 million , or 0.2 percent, and increased $721 million , or 5.3 percent, respectively, and net premiums earned decreased $131 million and increased $45 million , respectively. Amounts are calculated by translating prior period results using the same local currency exchange rates as the comparable current period.

Net Premiums Written

Net premiums written reflect the premiums we retain after purchasing reinsurance protection. Consolidated net premiums written decreased $58 million for the three months ended June 30, 2017 , as growth in the quarter was more than offset by merger-related underwriting actions ($206 million). For the six months ended June 30, 2017 , net premiums written increased $657 million due to the timing of the Chubb Corp acquisition in the prior year, which excluded approximately $855 million of production generated prior to the Chubb Corp acquisition close on January 14, 2016 (14-day stub period). On a comparative basis, which includes the 14-day stub period, net premiums written decreased $198 million as growth was more than offset by merger-related underwriting actions ($409 million). Merger-related underwriting actions include the cancellation of certain portfolios or lines of business that do not meet our underwriting standards and the purchase of additional reinsurance. Excluding these items, net premiums written increased $189 million, or 2.5 percent, and $275 million, or 1.9 percent, on a constant-dollar basis, for the three and six months ended June 30, 2017 , respectively.

- Net premiums written in our North America Commercial P&C Insurance segment decreased $41 million for the three months ended June 30, 2017 primarily due to merger-related underwriting actions ($84 million). Excluding these actions, net premiums written increased $43 million as growth in our Major Accounts Risk Management and Wholesale businesses was offset by declines in our property, casualty and select components of our financial lines businesses due to competitive market conditions. Net premiums written increased $399 million for the six months ended June 30, 2017 primarily reflecting the 14-day stub period ($519 million). On a comparative basis, which includes the 14-day stub period, net premiums written declined $120 million driven by merger-related underwriting actions ($168 million). Excluding these items, net premiums written increased $48 million, or 0.8 percent, due to the same factors driving the increase in the quarter as described above.

- Net premiums written in our North America Personal P&C Insurance segment increased $24 million and $137 million for the three and six months ended June 30, 2017, respectively, reflecting growth across most lines. In addition, the increase in net premiums written for the six months ended June 30, 2017 reflected the favorable impact of the 14-day stub period ($100 million). Offsetting this growth were merger-related underwriting actions of $75 million and $126 million for the three and six months ended June 30, 2017, respectively. Excluding these items, net premiums written increased $99 million and $163 million for the three and six months ended June 30, 2017 , respectively, reflecting growth across most lines, primarily in homeowners and complementary products such as automobiles and valuables. Additionally, the non-renewal of a quota share treaty ($46 million) and a one-time favorable impact from the change in timing of premium registration favorably impacted growth in the quarter and year-to-date periods.

- Net premiums written in our North America Agricultural Insurance segment increased $28 million and $25 million for the three and six months ended June 30, 2017 , respectively, primarily due to higher commodity base prices in our 2017 policy pricing and growth in our Chubb Agribusiness unit driven by new business written and strong retention.

- Net premiums written in our Overseas General Insurance segment decreased $25 million or increased $7 million on a constant-dollar basis, for the three months ended June 30, 2017 , as growth in personal lines business and property and casualty (P&C) lines were offset by merger-related underwriting actions ($39 million). Net premiums written increased $134 million , or $196 million on a constant-dollar basis, for the six months ended June 30, 2017 , primarily reflecting the 14-day stub period ($215 million). On a comparative constant-dollar basis, which includes the 14-day stub period, net premiums written declined $19 million for the six months ended June 30, 2017 reflecting merger-related underwriting actions ($81 million) and the impact of a merger-related accounting policy adjustment in the fourth quarter of 2016 to align the timing of premium recognition ($73 million). Excluding these items, net premiums written increased $135 million on a constant-dollar basis, due to growth in personal lines and P&C lines.

- Net premiums written in our Global Reinsurance segment decreased $ 40 million and $42 million for the three and six months ended June 30, 2017 , respectively, as we maintained underwriting discipline in an environment of declining rates and increasing competition.

- Net premiums written in our Life Insurance segment decreased $ 4 million and increased $4 million for the three and six months ended June 30, 2017 , respectively. For the quarter, growth in our Combined Insurance supplemental A&H program business and our Asian international life operations was more than offset by merger-related underwriting actions ($8 million). For the six months ended June 30, 2017 , growth in these businesses more than offset the declines related to merger-related underwriting actions ($24 million). Both periods were adversely impacted by our life reinsurance business, which continues to decline as no new business is currently being written.

Line of Business

The following tables present a breakdown of consolidated net premiums written by line of business for the periods indicated:

	Three Months Ended June 30					
(in millions of U.S. dollars, except for percentages)	2017	2016	% Change Q-17 vs. Q-16	C$ [1] 2016	C$ [1] % Change Q-17 vs. Q-16	Impact of Merger Actions [2]
Commercial multiple peril [3]	**$ 227**	$ 236	(3.8)%	$ 236	(3.8)%	(1.3) pts
Commercial casualty	**961**	893	7.6 %	892	7.7 %	(3.7) pts
Workers' compensation	**478**	548	(12.8)%	547	(12.6)%	(5.1) pts
Professional liability	**913**	927	(1.5)%	912	0.1 %	(0.7) pts
Surety	**153**	149	2.7 %	148	3.4 %	— pts
Property and other short-tail lines	**1,054**	1,097	(3.9)%	1,093	(3.6)%	(1.4) pts
International other casualty	**248**	247	0.4 %	241	2.9 %	(0.8) pts
Total Commercial P&C	**4,034**	4,097	(1.5)%	4,069	(0.9)%	(2.2) pts
Agriculture	**403**	375	7.7 %	375	7.7 %	— pts
Personal automobile - North America	**209**	190	10.0 %	190	10.0 %	— pts
Personal automobile - International	**188**	165	13.9 %	162	16.0 %	— pts
Personal homeowners	**925**	929	(0.4)%	928	(0.3)%	(8.1) pts
Personal other	**363**	363	—	360	0.8 %	(6.1) pts
Total Personal lines	**1,685**	1,647	2.3 %	1,640	2.7 %	(6.0) pts
Total Property and Casualty lines	**6,122**	6,119	—	6,084	0.6 %	(3.0) pts
Global A&H lines [4]	**1,025**	1,029	(0.4)%	1,022	0.3 %	(1.4) pts
Reinsurance lines	**190**	230	(17.7)%	227	(16.5)%	— pts
Life	**244**	261	(6.5)%	265	(7.9)%	(3.0) pts
Total consolidated	**$ 7,581**	$ 7,639	(0.8)%	$ 7,598	(0.2)%	(2.7) pts

(1) On a constant-dollar basis. Amounts are calculated by translating prior period results using the same local currency exchange rates as the comparable current period.

(2) Reflects the impact to growth of merger-related underwriting actions.

(3) Commercial multiple peril represents retail package business (property and general liability)

(4) For purposes of this schedule only, A&H results from our Combined North America and International businesses, normally included in the Life Insurance and Overseas General Insurance segments, respectively, as well as the A&H results of our North America Commercial P&C segment, are included in Global A&H lines above.

(in millions of U.S. dollars, except for percentages)	Six Months Ended June 30 2017	2016	% Change YTD-17 vs. YTD-16	C$ [1] 2016 including stub period	C$ [1] % Change YTD-17 vs. YTD-16 including stub period	Impact of Merger Actions and accounting policy alignment [2]
Commercial multiple peril [3]	**$ 428**	$ 368	16.3 %	$ 448	(4.5)%	(1.2) pts
Commercial casualty	**1,688**	1,536	9.9 %	1,653	2.1 %	(3.4) pts
Workers' compensation	**1,066**	996	7.0 %	1,134	(6.0)%	(3.6) pts
Professional liability	**1,694**	1,605	5.5 %	1,730	(2.1)%	(2.2) pts
Surety	**303**	283	7.1 %	291	4.1 %	(1.1) pts
Property and other short-tail lines	**2,086**	2,030	2.8 %	2,157	(3.3)%	(4.0) pts
International other casualty	**564**	532	6.0 %	564	—	(3.5) pts
Total Commercial P&C	**7,829**	7,350	6.5 %	7,977	(1.9)%	(3.2) pts
Agriculture	**464**	439	5.9 %	439	5.9 %	— pts
Personal automobile - North America	**374**	332	12.7 %	346	8.1 %	— pts
Personal automobile - International	**374**	345	8.4 %	337	11.0 %	— pts
Personal homeowners	**1,622**	1,569	3.4 %	1,636	(0.9)%	(7.7) pts
Personal other	**725**	681	6.5 %	712	1.8 %	(7.8) pts
Total Personal lines	**3,095**	2,927	5.7 %	3,031	2.1 %	(6.0) pts
Total Property and Casualty lines	**11,388**	10,716	6.3 %	11,447	(0.5)%	(3.7) pts
Global A&H lines [4]	**2,019**	1,965	2.7 %	2,005	0.7 %	(1.0) pts
Reinsurance lines	**389**	431	(9.9)%	445	(12.7)%	(2.2) pts
Life	**495**	522	(5.2)%	528	(6.3)%	(4.6) pts
Total consolidated	**$ 14,291**	$ 13,634	4.8 %	$ 14,425	(0.9)%	(3.3) pts

(1) On a constant-dollar basis. Amounts are calculated by translating prior period results using the same local currency exchange rates as the comparable current period.

(2) Reflects the impact to growth of merger-related underwriting actions and accounting policy alignment, including the 14-day stub period.

(3) Commercial multiple peril represents retail package business (property and general liability)

(4) For purposes of this schedule only, A&H results from our Combined North America and International businesses, normally included in the Life Insurance and Overseas General Insurance segments, respectively, as well as the A&H results of our North America Commercial P&C segment, are included in Global A&H lines above.

Net Premiums Earned

Net premiums earned for short-duration contracts, typically P&C contracts, generally reflect the portion of net premiums written that were recorded as revenues for the period as the exposure periods expire. Net premiums earned for long-duration contracts, typically traditional life contracts, generally are recognized as earned when due from policyholders. Net premiums earned decreased $168 million , or $131 million on a constant-dollar basis, for the three months ended June 30, 2017 due to the same factors driving the decline in net premiums written as described above.

Net premiums earned increased $7 million , or $45 million on a constant-dollar basis, for the six months ended June 30, 2017 . The prior year excluded approximately $391 million of premiums earned in the 14-day stub period. On a comparative constant-dollar basis, which includes the 14-day stub period, net premiums earned decreased $346 million for the six months ended June 30, 2017 due to the same factors driving the decline in net premiums written, as described above.

Combined Ratio

In evaluating our segments excluding Life Insurance, we use the P&C combined ratio, the loss and loss expense ratio, the policy acquisition cost ratio, and the administrative expense ratio. We calculate these ratios by dividing the respective expense amounts by net premiums earned. We do not calculate these ratios for the Life Insurance segment as we do not use these measures to monitor or manage that segment. The P&C combined ratio is determined by adding the loss and loss expense ratio, the policy acquisition cost ratio, and the administrative expense ratio. A P&C combined ratio under 100 percent indicates underwriting income, and a combined ratio exceeding 100 percent indicates underwriting loss.

The following table presents the components of the combined ratio:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	**2017**	2016
Loss and loss expense ratio	**59.0%**	59.6%	**58.2%**	58.5%
Policy acquisition cost ratio	**19.6%**	20.6%	**20.0%**	20.9%
Administrative expense ratio	**9.4%**	11.0%	**9.6%**	11.2%
Combined Ratio	**88.0%**	91.2%	**87.8%**	90.6%

The following table presents pre-tax catastrophe losses and pre-tax favorable prior period development net of related reinstatement premiums:

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S dollars)	**2017**	2016	**2017**	2016
Catastrophe losses, pre-tax	**$ 200**	$ 396	**$ 406**	$ 654
Favorable prior period development net of related reinstatement premiums, pre-tax	**$ 170**	$ 301	**$ 401**	$ 548

Catastrophe losses through June 30, 2017 and 2016 were primarily from the following events:

- 2017 : severe weather-related events in the U.S., Cyclone Debbie in Australia and flooding in Latin America
- 2016 : severe weather-related events in the U.S. and Europe, a wildfire in Canada, and an earthquake in Ecuador

Prior period development arises from changes to loss estimates recognized in the current year that relate to loss events that occurred in previous calendar years and excludes the effect of losses from the development of earned premium from previous accident years. Favorable prior period development included a charge of $41 million in the first quarter of 2017, reflecting the change in the discount rate in the U.K. (Ogden rate). Refer to Note 5 to the Consolidated Financial Statements for additional information.

The following table presents the impact of catastrophe losses and prior period reserve development net of related reinstatement premiums on our consolidated loss and loss expense ratio. The loss ratio numerator includes losses and loss expenses adjusted to exclude catastrophe losses and PPD. The loss ratio denominator includes net premiums earned adjusted to exclude the amount of reinstatement premiums (expensed) collected. In periods where there are adjustments on loss sensitive policies, these adjustments are excluded from PPD and net premiums earned when calculating this ratio. We believe that excluding the impact of catastrophe losses and PPD provides a better evaluation of our underwriting performance and enhances the understanding of the trends in our property & casualty business that may be obscured by these items.

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	**2017**	2016
Loss and loss expense ratio	**59.0 %**	59.6 %	**58.2 %**	58.5 %
Catastrophe losses	**(3.0)%**	(5.7)%	**(3.1)%**	(5.0)%
Prior period development net of related reinstatement premiums	**2.6 %**	4.5 %	**3.3 %**	4.4 %
Loss and loss expense ratio, adjusted	**58.6 %**	58.4 %	**58.4 %**	57.9 %

The adjusted loss and loss expense ratio increased 0.2 percentage points and 0.5 percentage points for the three and six months ended June 30, 2017 , respectively, primarily due to mix of business in our Major Accounts book, driven by growth in casualty lines which have a higher loss ratio and declines in property lines which have a lower loss ratio, in our North America Commercial P&C Insurance segment (0.5 percentage points for both periods) and an updated allocation that more appropriately classified certain claims-related expenses as loss adjustment expenses (previously reported as administrative expenses). This updated allocation increased loss adjustment expenses (0.4 percentage points for both periods), with an offsetting decrease to administrative expenses. The increase for the six months ended June 30, 2017 was also due to higher non-catastrophe large losses in our North America Personal P&C Insurance segment (0.3 percentage points). These increases were partially offset by favorable claims handling expense adjustments in our North America Commercial P&C Insurance segment (0.4 percentage points and 0.2 percentage points, respectively), and integration-related claims handling expense savings realized of $26 million (0.4 percentage points) and $54 million (0.4 percentage points) for the three and six months ended June 30, 2017 , respectively.

Policy acquisition costs consist of commissions, premium taxes, and certain underwriting costs directly related to the successful acquisition of a new or renewal insurance contract. Our policy acquisition cost ratio decreased 1.0 percentage point and 0.9 percentage points, respectively, for the three and six months ended June 30, 2017 , compared to the prior year periods, which included a net unfavorable impact of purchase accounting adjustments related to the Chubb Corp acquisition (0.9 percentage points for both periods). The decrease for the three and six months ended June 30, 2017 was also due to integration-related expense savings realized (0.2 percentage points for both periods). This decrease was partially offset by a change in the mix of business in our Overseas General Insurance segment towards more A&H and personal lines products and regions which have higher acquisition cost ratios and a lower loss ratios (0.1 percentage point and 0.2 percentage points, respectively).

Our administrative expense ratio decreased 1.6 percentage points for both the three and six months ended June 30, 2017 , primarily due to integration-related expense savings realized as a result of the Chubb Corp acquisition of $68 million (1.0 percentage point) and $150 million (1.2 percentage points), respectively, lower employee benefit-related expenses (0.6 percentage points and 0.7 percentage points, respectively), and the updated loss expenses and administrative expenses allocation as noted above (0.4 percentage points for both periods), partially offset by the impact of merit-based salary increases, inflation, and increased spending to support growth.

Policy benefits

Policy benefits represent losses on contracts classified as long-duration and generally include accident and supplemental health products, term and whole life products, endowment products, and annuities. Policy benefits also include gains and losses from changes in liabilities associated with our separate account assets that do not qualify for separate account reporting under GAAP. Certain of our long duration contracts are supported by assets that do not qualify for separate account reporting under GAAP. These assets are classified as trading securities and reported in Other investments and the offsetting liabilities are reported in Future policy benefits in the Consolidated balance sheet. Fair value changes in separate account assets that do not qualify for separate account reporting under GAAP are reported in Other (income) expense and the offsetting movements in the liabilities are included in Policy benefits in the Consolidated statements of operations.

For the three months ended June 30, 2017 , Policy benefits were $163 million, which included $16 million of separate account liabilities losses, compared to $146 million in the prior year, which included losses of $3 million related to separate account liabilities.

For the six months ended June 30, 2017 , Policy benefits were $331 million, which included $46 million of separate account liabilities losses, compared to $272 million in the prior year, which included no gains or losses related to separate account liabilities.

Refer to the Corporate results section below for information on Net investment income, Interest expense, and Income tax expense.

Integration-Related Savings

The following tables present consolidated integration-related savings realized by segment and income statement line item:

	Three Months Ended June 30							
2017 (in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	Overseas General Insurance	Global Reinsurance	Corporate	Total P&C	Life Insurance	Consolidated
Losses and loss expenses	**$ 21**	**$ 10**	**$ 13**	**$ —**	**$ —**	**$ 44**	**$ —**	**$ 44**
Policy acquisition costs	**9**	**2**	**6**	**—**	**—**	**17**	**—**	**17**
Administrative expenses	**36**	**17**	**42**	**—**	**18**	**113**	**1**	**114**
Net investment income	**1**	**1**	**—**	**—**	**—**	**2**	**—**	**2**
Total	**$ 67**	**$ 30**	**$ 61**	**$ —**	**$ 18**	**$ 176**	**$ 1**	**$ 177**
2016								
Losses and loss expenses	$ 9	$ 6	$ 3	$ —	$ —	$ 18	$ —	$ 18
Policy acquisition costs	4	—	2	—	—	6	—	6
Administrative expenses	18	10	11	—	7	46	—	46
Net investment income	1	1	—	—	—	2	—	2
Total	$ 32	$ 17	$ 16	$ —	$ 7	$ 72	$ —	$ 72
Incremental Change								
Losses and loss expenses	$ 12	$ 4	$ 10	$ —	$ —	$ 26	$ —	$ 26
Policy acquisition costs	5	2	4	—	—	11	—	11
Administrative expenses	18	7	31	—	11	67	1	68
Net investment income	—	—	—	—	—	—	—	—
Total	$ 35	$ 13	$ 45	$ —	$ 11	$ 104	$ 1	$ 105

	Six Months Ended June 30							
2017 (in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	Overseas General Insurance	Global Reinsurance	Corporate	Total P&C	Life Insurance	Consolidated
Losses and loss expenses	**$ 37**	**$ 15**	**$ 20**	**$ —**	**$ —**	**$ 72**	**$ —**	**$ 72**
Policy acquisition costs	**17**	**4**	**10**	**—**	**—**	**31**	**—**	**31**
Administrative expenses	**78**	**32**	**80**	**1**	**32**	**223**	**1**	**224**
Net investment income	**1**	**1**	**—**	**—**	**—**	**2**	**—**	**2**
Total	**$ 133**	**$ 52**	**$ 110**	**$ 1**	**$ 32**	**$ 328**	**$ 1**	**$ 329**
2016								
Losses and loss expenses	$ 9	$ 6	$ 3	$ —	$ —	$ 18	$ —	$ 18
Policy acquisition costs	4	—	2	—	—	6	—	6
Administrative expenses	32	15	17	—	10	74	—	74
Net investment income	1	1	—	—	—	2	—	2
Total	$ 46	$ 22	$ 22	$ —	$ 10	$ 100	$ —	$ 100
Incremental Change								
Losses and loss expenses	$ 28	$ 9	$ 17	$ —	$ —	$ 54	$ —	$ 54
Policy acquisition costs	13	4	8	—	—	25	—	25
Administrative expenses	46	17	63	1	22	149	1	150
Net investment income	—	—	—	—	—	—	—	—
Total	$ 87	$ 30	$ 88	$ 1	$ 22	$ 228	$ 1	$ 229

Annualized and realized integration-related savings are expected to be $875 million and $845 million, respectively, by the end of 2018. The difference between annualized savings and realized savings reflects the additional amount that will be realized in future periods. The timing of realizing savings is dependent on the period in which the action is executed.

Prior Period Development

The following table summarizes (favorable) and adverse prior period development (PPD) by segment. Long-tail lines include lines such as workers' compensation, general liability, and professional liability; while short-tail lines include lines such as most property lines, energy, personal accident, aviation, marine (including associated liability-related exposures) and agriculture.

	Three Months Ended June 30			Six Months Ended June 30		
(in millions of U.S. dollars)	**Long-tail**	**Short-tail**	**Total**	**Long-tail**	**Short-tail**	**Total**
2017						
North America Commercial P&C Insurance	**$ (101)**	**$ (30)**	**$ (131)**	**$ (200)**	**$ (110)**	**$ (310)**
North America Personal P&C Insurance	**20**	**17**	**37**	**20**	**14**	**34**
North America Agricultural Insurance	**—**	**—**	**—**	**—**	**(79)**	**(79)**
Overseas General Insurance	**—**	**(88)**	**(88)**	**32**	**(108)**	**(76)**
Global Reinsurance	**(36)**	**5**	**(31)**	**(28)**	**5**	**(23)**
Corporate	**43**	**—**	**43**	**53**	**—**	**53**
Total	**$ (74)**	**$ (96)**	**$ (170)**	**$ (123)**	**$ (278)**	**$ (401)**
2016						
North America Commercial P&C Insurance	$ (167)	$ (1)	$ (168)	$ (309)	$ (37)	$ (346)
North America Personal P&C Insurance	(4)	(11)	(15)	(4)	(14)	(18)
North America Agricultural Insurance	—	—	—	—	(41)	(41)
Overseas General Insurance	(1)	(84)	(85)	(1)	(114)	(115)
Global Reinsurance	(47)	—	(47)	(49)	(1)	(50)
Corporate	14	—	14	22	—	22
Total	$ (205)	$ (96)	$ (301)	$ (341)	$ (207)	$ (548)

For a discussion of significant prior period movements by segment, refer to Note 5 to the Consolidated Financial Statements.

Segment Operating Results – Three and Six Months Ended June 30, 2017 and 2016

We operate through six business segments: North America Commercial P&C Insurance, North America Personal P&C Insurance, North America Agricultural Insurance, Overseas General Insurance, Global Reinsurance, and Life Insurance. For more information on our segments refer to "Segment Information" under Item 1 in our 2016 Form 10-K.

Corporate results primarily include the results of our non-insurance companies, income and expenses not attributable to reportable segments and loss and loss expenses of asbestos and environmental (A&E) liabilities and certain other run-off exposures.

North America Commercial P&C Insurance

The North America Commercial P&C Insurance segment comprises operations that provide property and casualty (P&C) insurance and services to large, middle market, and small commercial businesses in the U.S., Canada, and Bermuda. This segment includes our North America Major Accounts and Specialty Insurance division (principally large corporate accounts and wholesale accounts), and the North America Commercial Insurance division (principally middle market and small commercial accounts).

	Three Months Ended			Six Months Ended		
		June 30	% Change		June 30	% Change
(in millions of U.S. dollars, except for percentages)	**2017**	2016	Q-17 vs. Q-16	**2017**	2016	YTD-17 vs. YTD-16
Net premiums written	**$ 3,204**	$ 3,245	(1.3)%	**$ 5,946**	$ 5,547	7.2%
Net premiums earned	**3,099**	3,148	(1.6)%	**6,140**	6,044	1.6%
Losses and loss expenses	**1,936**	1,971	(1.8)%	**3,796**	3,718	2.1%
Policy acquisition costs	**464**	545	(14.9)%	**951**	1,027	(7.4)%
Administrative expenses	**241**	299	(19.4)%	**472**	565	(16.5)%
Underwriting income	**458**	333	37.5%	**921**	734	25.5%
Net investment income	**490**	468	4.7%	**968**	894	8.3%
Other (income) expense	**(4)**	(9)	(55.6)%	**—**	(9)	NM
Segment income	**$ 952**	$ 810	17.5%	**$ 1,889**	$ 1,637	15.4%
Loss and loss expense ratio	**62.5%**	62.6%	(0.1) pts	**61.8%**	61.5%	0.3 pts
Policy acquisition cost ratio	**15.0%**	17.3%	(2.3) pts	**15.5%**	17.0%	(1.5) pts
Administrative expense ratio	**7.7%**	9.6%	(1.9) pts	**7.7%**	9.4%	(1.7) pts
Combined ratio	**85.2%**	89.5%	(4.3) pts	**85.0%**	87.9%	(2.9) pts

NM – not meaningful

Premiums

Net premiums written decreased $41 million for the three months ended June 30, 2017 primarily due to merger-related underwriting actions ($84 million). Excluding these actions, net premiums written increased $43 million, as growth in our Major Accounts Risk Management and Wholesale businesses was partially offset by declines in our property, casualty and select components of our financial lines businesses due to competitive market conditions. In addition, net premiums written included a one-time favorable impact of a change in the timing of premium registrations during the quarter ($30 million).

Net premiums written increased $399 million for the six months ended June 30, 2017 due to the timing of the Chubb Corp acquisition in the prior year which excluded approximately $519 million of production generated prior to the acquisition close on January 14, 2016 (14-day stub period). On a comparative basis, which includes the 14-day stub period, net premiums written declined $120 million driven by merger-related underwriting actions ($168 million). Excluding these items, net premiums written increased $48 million, or 0.8 percent, due to the same factors driving the increase in the quarter as described above.

Net premiums earned decreased $49 million and increased $96 million for the three and six months ended June 30, 2017 , respectively, due to the factors described above. For the six months ended June 30, 2017, the unfavorable impact from merger-

related underwriting actions was more than offset by growth as well as the favorable impact of the 14-day stub period as described above.

Combined Ratio
The following table presents pre-tax catastrophe losses and pre-tax favorable prior period development net of related reinstatement premiums:

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016	**2017**	2016
Catastrophe losses, pre-tax	**$ 102**	$ 160	**$ 185**	$ 241
Favorable prior period development net of related reinstatement premiums, pre-tax	**$ 131**	$ 168	**$ 310**	$ 346

Catastrophe losses through June 30, 2017 and 2016 were primarily from the following events:
- 2017: Severe weather-related events in the U.S.
- 2016: Severe weather-related events in the U.S. and a wildfire in Canada.

The following table presents the impact of catastrophe losses and prior period reserve development net of related reinstatement premiums on our loss and loss expense ratio:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	**2017**	2016
Loss and loss expense ratio	**62.5 %**	62.6 %	**61.8 %**	61.5 %
Catastrophe losses	**(3.3)%**	(5.1)%	**(3.0)%**	(4.0)%
Prior period development net of related reinstatement premiums	**4.2 %**	5.4 %	**5.1 %**	5.8 %
Loss and loss expense ratio, adjusted	**63.4 %**	62.9 %	**63.9 %**	63.3 %

The adjusted loss and loss expense ratio increased 0.5 percentage points and 0.6 percentage points for the three and six months ended June 30, 2017 , respectively, primarily due to mix of business in our Major Accounts book, driven by growth in casualty lines which have a higher loss ratio and declines in property lines which have a lower loss ratio, as well as an updated allocation that more appropriately classified certain claims-related expenses as loss adjustment expenses (previously reported as administrative expenses). This updated allocation increased loss adjustment expenses (0.6 percentage points and 0.7 percentage points for the three and six months ended June 30, 2017 , respectively) with an offsetting decrease to administrative expenses. This increase was partially offset by favorable claims handling expense adjustments of $30 million for both the three and six months ended June 30, 2017 (0.9 percentage points and 0.5 percentage points, respectively) and integration-related expense savings realized of $12 million (0.4 percentage points) and $28 million (0.4 percentage points), respectively.

The policy acquisition cost ratio decreased 2.3 percentage points and 1.5 percentage points for the three and six months ended June 30, 2017 , respectively, compared to prior year periods which included the net unfavorable impact of initial year purchase accounting adjustments related to the Chubb Corp acquisition (1.4 percentage points and 1.5 percentage points, respectively). Excluding this item, the policy acquisition cost ratio decreased 0.9 percentage points for the three months ended June 30, 2017 primarily due to the change in the mix of business and integration-related expense savings realized of $5 million (0.2 percentage points). For the six months ended June 30, 2017, the policy acquisition cost ratio remained flat reflecting an increase in supplemental commissions offset by integration-related expense savings realized of $13 million (0.2 percentage points).

The administrative expense ratio decreased 1.9 percentage points and 1.7 percentage points for the three and six months ended June 30, 2017 , respectively. The decline reflects integration-related expense savings realized of $18 million (0.6 percentage points) and $46 million (0.8 percentage points) for the three and six months ended June 30, 2017 , respectively, lower employee benefit-related expenses of $21 million (0.7 percentage points) and $55 million (0.9 percentage points), respectively, and the updated loss expenses and administrative expenses allocation as noted above (0.6 percentage points and 0.7 percentage points), partially offset by the impact of merit-based salary increases, inflation, and increased spending to support growth.

North America Personal P&C Insurance

The North America Personal P&C Insurance segment comprises operations that provide high net worth personal lines business, including homeowners and complementary products such as valuable articles, excess liability, automobile, and recreational marine insurance and services in the U.S. and Canada.

	Three Months Ended June 30		% Change	Six Months Ended June 30		% Change
(in millions of U.S. dollars, except for percentages)	**2017**	2016	Q-17 vs. Q-16	**2017**	2016	YTD-17 vs. YTD-16
Net premiums written	**$ 1,255**	$ 1,231	2.0%	**$ 2,239**	$ 2,102	6.5%
Net premiums earned	**1,093**	1,140	(4.0)%	**2,179**	2,164	0.7%
Losses and loss expenses	**683**	661	3.3%	**1,316**	1,322	(0.5)%
Policy acquisition costs	**230**	269	(14.5)%	**447**	518	(13.7)%
Administrative expenses	**66**	98	(32.7)%	**131**	186	(29.6)%
Underwriting income	**114**	112	1.8%	**285**	138	106.5%
Net investment income	**56**	55	1.8%	**111**	102	8.8%
Other (income) expense	**1**	3	(66.7)%	**2**	4	(50.0)%
Amortization of purchased intangibles	**5**	4	25.0%	**8**	12	(33.3)%
Segment income	**$ 164**	$ 160	2.5%	**$ 386**	$ 224	72.3%
Loss and loss expense ratio	**62.4%**	58.0%	4.4 pts	**60.4%**	61.1%	(0.7) pts
Policy acquisition cost ratio	**21.1%**	23.6%	(2.5) pts	**20.5%**	23.9%	(3.4) pts
Administrative expense ratio	**6.1%**	8.5%	(2.4) pts	**6.0%**	8.6%	(2.6) pts
Combined ratio	**89.6%**	90.1%	(0.5) pts	**86.9%**	93.6%	(6.7) pts

Premiums

Net premiums written increased $24 million for the three months ended June 30, 2017 reflecting growth primarily in homeowners and complementary products such as automobile and valuables. In addition, the non-renewal of a quota share treaty covering the acquired Fireman's Fund homeowners and automobile businesses ($46 million) and a one-time change in the timing of premium registrations during the quarter ($22 million), added to the growth. This increase was partially offset by the purchase of additional reinsurance ($75 million) primarily for our homeowners and large limit valuable articles business written in the northeast United States.

Net premiums written increased $137 million for the six months ended June 30, 2017 due to the timing of the Chubb Corp acquisition. The prior year period excluded approximately $100 million of production generated prior to the Chubb Corp acquisition close on January 14, 2016 (14-day stub period). On a comparative basis, which includes the 14-day stub period, net premiums written increased $37 million reflecting growth across most lines, partially offset by the purchase of additional reinsurance ($126 million) described above.

Net premiums earned decreased $47 million for the three months ended June 30, 2017 primarily due to the purchase of additional reinsurance described above. Net premiums earned increased $15 million for the six months ended June 30, 2017 due to the factors described above.

Combined Ratio

The following table presents pre-tax catastrophe losses and pre-tax favorable prior period development:

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016	**2017**	2016
Catastrophe losses, pre-tax	**$ 77**	$ 97	**$ 145**	$ 253
Favorable (unfavorable) prior period development, pre-tax	**$ (37)**	$ 15	**$ (34)**	$ 18

Catastrophe losses through June 30, 2017 and 2016 were primarily from severe weather-related events in the U.S.

The following table presents the impact of catastrophe losses and prior period reserve development on our loss and loss expense ratio:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	**2017**	2016
Loss and loss expense ratio	**62.4 %**	58.0 %	**60.4 %**	61.1 %
Catastrophe losses	**(7.0)%**	(8.5)%	**(6.7)%**	(11.7)%
Prior period development	**(3.3)%**	1.4 %	**(1.5)%**	0.9 %
Loss and loss expense ratio, adjusted	**52.1 %**	50.9 %	**52.2 %**	50.3 %

The adjusted loss and loss expense ratio increased 1.2 percentage points and 1.9 percentage points for the three and six months ended June 30, 2017 , respectively, primarily due to higher non-catastrophe large losses (0.7 percentage points and 1.7 percentage points, respectively), as well as an updated allocation that more appropriately classified certain claims-related expenses as loss adjustment expenses (previously reported as administrative expenses). This updated allocation increased loss adjustment expenses (0.5 percentage points for both the three and six months ended June 30, 2017), with an offsetting decrease to administrative expenses. This increase was partially offset by integration-related claims handling expense savings realized of $4 million (0.3 percentage points) and $9 million (0.4 percentage points) for the three and six months ended June 30, 2017, respectively.

The policy acquisition cost ratio decreased 2.5 percentage points and 3.4 percentage points for the three and six months ended June 30, 2017 , respectively, compared to the prior year periods which included the net unfavorable impact from purchase accounting adjustments (2.5 percentage points and 2.8 percentage points, respectively) related to the Chubb Corp acquisition. The decreases in the ratios also reflected the favorable impact from the ceded commission benefits related to additional reinsurance purchased (1.1 percentage points for both the three and six months ended June 30, 2017) and integration-related expense savings realized of $2 million (0.2 percentage points) and $4 million (0.2 percentage points) for the three and six months ended June 30, 2017, respectively. The decrease was partially offset by the non-renewal of the Fireman's Fund quota share treaty, as noted above, which had a higher acquisition cost ratio.

The administrative expense ratio decreased 2.4 percentage points and 2.6 percentage points for the three and six months ended June 30, 2017 , respectively, due to integration-related expense savings realized of $7 million (0.6 percentage points) and $17 million (0.8 percentage points), respectively, lower employee benefit-related expenses of $8 million (0.7 percentage points) and $22 million (1.0 percentage point), respectively, and the updated loss expenses and administrative expenses allocation as noted above (0.5 percentage points for both periods).

North America Agricultural Insurance

The North America Agricultural Insurance segment comprises our North American based businesses that provide a variety of coverages in the U.S. and Canada including crop insurance, primarily Multiple Peril Crop Insurance (MPCI) and crop-hail through Rain and Hail Insurance Service, Inc. (Rain and Hail) as well as farm and ranch and specialty P&C commercial insurance products and services through our Chubb Agribusiness unit.

	Three Months Ended June 30		% Change	Six Months Ended June 30		% Change
(in millions of U.S. dollars, except for percentages)	**2017**	2016	Q-17 vs. Q-16	**2017**	2016	YTD-17 vs. YTD-16
Net premiums written	**$ 403**	$ 375	7.7%	**$ 464**	$ 439	5.9%
Net premiums earned	**344**	327	5.4%	**358**	350	2.3%
Losses and loss expenses	**292**	286	2.1%	**219**	256	(14.5)%
Policy acquisition costs	**27**	25	8.0%	**26**	29	(10.3)%
Administrative expenses	**2**	2	—	**(3)**	(2)	50.0%
Underwriting income	**23**	14	64.3%	**116**	67	73.1%
Net investment income	**6**	5	20.0%	**12**	10	20.0%
Other (income) expense	**1**	—	NM	**1**	—	NM
Amortization of purchased intangibles	**7**	8	(12.5)%	**14**	15	(6.7)%
Segment income	**$ 21**	$ 11	90.9%	**$ 113**	$ 62	82.3%
Loss and loss expense ratio	**85.2%**	87.5%	(2.3) pts	**61.3 %**	73.3 %	(12.0) pts
Policy acquisition cost ratio	**7.7%**	7.7%	—	**7.2 %**	8.2 %	(1.0) pts
Administrative expense ratio	**0.4%**	0.7%	(0.3) pts	**(0.8)%**	(0.5)%	(0.3) pts
Combined ratio	**93.3%**	95.9%	(2.6) pts	**67.7 %**	81.0 %	(13.3) pts

NM – not meaningful

Premiums

Net premiums written increased $28 million and $25 million for the three and six months ended June 30, 2017 , respectively, primarily due to higher commodity base prices in our 2017 policy pricing and growth in our Chubb Agribusiness unit driven by new business written and strong retention. For the six months ended June 30, 2017 , the increase was partially offset by a decline in the first quarter due to the premium-sharing formulas under the U.S. government's MPCI program. Under the MPCI profit and loss calculation, we retained less premiums on the 2016 crop year due to lower than expected losses for that year. In the first quarter of 2017, we recognized these adjustments as prior period development.

Net premiums earned increased $17 million and $8 million for the three and six months ended June 30, 2017 , respectively, due to the factors described above.

Combined Ratio

The following table presents pre-tax catastrophe losses and pre-tax favorable prior period development:

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016	**2017**	2016
Catastrophe losses, pre-tax	**$ 8**	$ 14	**$ 13**	$ 16
Favorable prior period development, pre-tax	**$ —**	$ —	**$ 79**	$ 41

Catastrophe losses through June 30, 2017 and 2016 were primarily from our farm, ranch, and specialty P&C businesses.

There was no prior period development for the three months ended June 30, 2017 and 2016. For the six months ended June 30, 2017, net favorable prior period development was $79 million , which included $135 million of favorable incurred losses and $5 million of lower acquisition costs due to lower than expected MPCI losses for the 2016 crop year, partially offset by a $61 million decrease in net premiums earned related to the MPCI profit and loss calculation formula. For the six months ended

June 30, 2016, net favorable PPD was $41 million, which included $85 million of favorable incurred losses due to lower than expected MPCI losses for the 2015 crop year, partially offset by a $48 million decrease in net premiums earned related to the MPCI profit and loss calculation formula.

The following table presents the impact of catastrophe losses and prior period reserve development on our loss and loss expense ratio:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	**2017**	2016
Loss and loss expense ratio	**85.2 %**	87.5 %	**61.3 %**	73.3 %
Catastrophe losses	**(2.2)%**	(4.2)%	**(3.5)%**	(4.5)%
Prior period development	**—**	—	**23.9 %**	13.0 %
Loss and loss expense ratio, adjusted	**83.0 %**	83.3 %	**81.7 %**	81.8 %

The adjusted loss and loss expense ratio decreased 0.3 percentage points and 0.1 percentage point for the three and six months ended June 30, 2017 , respectively.

The policy acquisition cost ratio remained flat for the three months ended June 30, 2017 . For the six months ended June 30, 2017 , the policy acquisition ratio decreased 1.0 percentage point primarily due to lower direct commissions in the current year. The administrative expense ratio decreased 0.3 percentage points for both the three and six months ended June 30, 2017 primarily due to higher Administrative and Operating (A&O) reimbursements.

Overseas General Insurance

Overseas General Insurance segment comprises Chubb International and Chubb Global Markets (CGM). Chubb International comprises our commercial P&C traditional and specialty lines serving large corporations, middle market and small customers, A&H and traditional and specialty personal lines business serving local territories outside the U.S., Bermuda, and Canada. CGM, our London-based international commercial P&C excess and surplus lines business, includes Lloyd's of London (Lloyd's) Syndicate 2488. Chubb provides funds at Lloyd's to support underwriting by Syndicate 2488 which is managed by ACE Underwriting Agencies Limited. The reinsurance operations of CGM are included in the Global Reinsurance segment.

	Three Months Ended June 30			Six Months Ended June 30		
(in millions of U.S. dollars, except for percentages)	**2017**	2016	% Change Q-17 vs. Q-16	**2017**	2016	% Change YTD-17 vs. YTD-16
Net premiums written [1]	**$ 2,006**	$ 2,031	(1.2)%	**$ 4,206**	$ 4,072	3.3%
Net premiums earned	**2,018**	2,093	(3.6)%	**3,954**	4,048	(2.3)%
Losses and loss expenses	**964**	1,089	(11.5)%	**2,035**	2,110	(3.6)%
Policy acquisition costs	**555**	537	3.4%	**1,084**	1,040	4.2%
Administrative expenses	**243**	277	(12.3)%	**488**	540	(9.6)%
Underwriting income [2]	**256**	190	34.7%	**347**	358	(3.1)%
Net investment income	**148**	147	0.7%	**296**	293	1.0%
Other (income) expense	**(3)**	(5)	(40.0)%	**(4)**	(10)	(60.0)%
Amortization of purchased intangibles	**11**	13	(15.4)%	**22**	24	(8.3)%
Segment income	**$ 396**	$ 329	20.4%	**$ 625**	$ 637	(1.9)%
Loss and loss expense ratio	**47.8%**	52.1%	(4.3) pts	**51.5%**	52.1%	(0.6) pts
Policy acquisition cost ratio	**27.5%**	25.6%	1.9 pts	**27.4%**	25.7%	1.7 pts
Administrative expense ratio	**12.0%**	13.2%	(1.2) pts	**12.3%**	13.3%	(1.0) pts
Combined ratio	**87.3%**	90.9%	(3.6) pts	**91.2%**	91.1%	0.1 pts

(1) For the three and six months ended June 30, 2017 , net premiums written increased $7 million and $196 million , or 0.3 percent and 4.9 percent, respectively, on a constant-dollar basis. Amounts are calculated by translating prior period results using the same local currency exchange rates as the comparable current period.

(2) For the three and six months ended June 30, 2017 , underwriting income increased $64 million and decreased $11 million , or 33.9 percent and 2.9 percent, respectively, on a constant-dollar basis. Amounts are calculated by translating prior period results using the same local currency exchange rates as the comparable current period.

Premiums
Net premiums written decreased $25 million , or increased $7 million on a constant-dollar basis, for the three months ended June 30, 2017 , as growth in personal lines business, in Latin America and Europe, and property and casualty (P&C) lines, primarily in Asia and Latin America, was mostly offset by merger-related underwriting actions ($39 million).

Net premiums written increased $134 million , or $196 million on a constant-dollar basis, for the six months ended June 30, 2017 , due to the timing of the Chubb Corp acquisition which excluded approximately $215 million of production in the prior year generated prior to the acquisition close on January 14, 2016 (14-day stub period). This increase was partially offset by merger-related underwriting actions ($81 million) and the impact of a merger-related accounting policy adjustment in the fourth quarter of 2016 to align the timing of premium recognition ($73 million). Excluding these items, net premiums written increased $135 million on a constant-dollar basis, due to growth in personal lines and P&C lines, as described above.

Net premiums earned decreased $75 million and $94 million for the three and six months ended June 30, 2017 , respectively. On a constant-dollar basis net premiums earned decreased $47 million and $53 million , respectively, primarily due to a higher mix of multi-year policies written in the current year in comparison to the growth in net premiums written, as well as the same factors described above. The decrease for the six months ended was partially offset by the favorable impact of the 14-day stub period, as noted above.

Overseas General Insurance conducts business internationally and in most major foreign currencies. The following tables present a regional breakdown of Overseas General Insurance net premiums written:

	Three Months Ended June 30					% Change	
(in millions of U.S. dollars, except for percentages)	**2017**	**2017 % of Total**	2016	2016 % of Total	C$ [1] 2016	Q-17 vs. Q-16	C$ [1] Q-17 vs. Q-16
Region							
Europe	**$ 726**	**36%**	$ 807	40%	$ 763	(10.0)%	(4.8)%
Latin America	**508**	**25%**	483	24%	502	5.2 %	1.2 %
Asia	**673**	**34%**	641	31%	639	5.0 %	5.3 %
Other [2]	**99**	**5%**	100	5%	95	(1.0)%	4.2 %
Net premiums written	**$ 2,006**	**100%**	$ 2,031	100%	$ 1,999	(1.2)%	0.3 %

(1) On a constant-dollar basis. Amounts are calculated by translating prior period results using the same local currency exchange rates as the comparable current period.
(2) Combined International, Eurasia and Africa region, and other international.

	Six Months Ended June 30					% Change	
(in millions of U.S. dollars, except for percentages)	**2017**	**2017 % of Total**	2016	2016 % of Total	C$ [1] 2016	YTD-17 vs. YTD-16	C$ [1] YTD-17 vs. YTD-16
Region							
Europe	**$ 1,756**	**42%**	$ 1,706	42%	$ 1,611	2.9%	9.0%
Latin America	**1,005**	**24%**	965	24%	992	4.1%	1.3%
Asia	**1,250**	**30%**	1,211	30%	1,223	3.2%	2.2%
Other [2]	**195**	**4%**	190	4%	184	2.6%	6.0%
Net premiums written	**$ 4,206**	**100%**	$ 4,072	100%	$ 4,010	3.3%	4.9%

(1) On a constant-dollar basis. Amounts are calculated by translating prior period results using the same local currency exchange rates as the comparable current period.
(2) Combined International, Eurasia and Africa region, and other international.

Combined Ratio

The following table presents pre-tax catastrophe losses and pre-tax favorable prior period development:

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016	**2017**	2016
Catastrophe losses, pre-tax	**$ 10**	$ 73	**$ 60**	$ 91
Favorable prior period development, pre-tax	**$ 88**	$ 85	**$ 76**	$ 115

Catastrophe losses through June 30, 2017 and 2016 were primarily from the following events:

- 2017 : Cyclone Debbie in Australia and flooding in Latin America
- 2016 : Severe weather related events in Europe and an earthquake in Ecuador

Favorable prior period development included a charge of $32 million in the first quarter of 2017, reflecting the change in the discount rate in the U.K. (Ogden rate) which impacted our casualty lines. Refer to Note 5 to the Consolidated Financial Statements for additional information.

The following table presents the impact of catastrophe losses and prior period reserve development on our loss and loss expense ratio:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	**2017**	2016
Loss and loss expense ratio	**47.8 %**	52.1 %	**51.5 %**	52.1 %
Catastrophe losses	**(0.5)%**	(3.5)%	**(1.6)%**	(2.2)%
Prior period development	**4.3 %**	4.1 %	**2.0 %**	2.9 %
Loss and loss expense ratio, adjusted	**51.6 %**	52.7 %	**51.9 %**	52.8 %

The adjusted loss and loss expense ratio decreased 1.1 percentage points and 0.9 percentage points for the three and six months ended June 30, 2017 , respectively, primarily due to a change in the mix of business towards products and regions that have a lower loss ratio and a higher acquisition cost ratio (0.6 percentage points for both periods) and integration-related claims handling expense savings realized of $10 million (0.5 percentage points) and $17 million (0.4 percentage points), respectively.

The policy acquisition cost ratio increased 1.9 percentage points and 1.7 percentage points for the three and six months ended June 30, 2017 , respectively, compared to the prior year periods, which included the net favorable impact of initial year purchase accounting adjustments related to the Chubb Corp acquisition (0.4 percentage points and 0.6 percentage points, respectively). Excluding this item, the policy acquisition cost ratio increased 1.5 percentage points and 1.1 percentage points for the three and six months ended June 30, 2017 , respectively, primarily due to a change in the mix of business towards more A&H products and towards regions within personal lines which have a higher acquisition cost ratio and a lower loss ratio (0.4 percentage point and 0.5 percentage points), higher relative solicitation costs, as a percentage of net premiums earned, to support growth initiatives (0.2 percentage points and 0.1 percentage point, respectively), and lower cede commission benefits in the current year (0.1 percentage point for both periods). In addition, the adverse impact of aligning accounting policy after the Chubb Corp acquisition in the prior year increased the policy acquisition ratio by 0.4 percentage points and 0.2 percentage points for the three and six months ended June 30, 2017, respectively. These increases were partially offset by integration-related expense savings realized of $4 million (0.3 percentage points) and $8 million (0.2 percentage points) for the three and six months ended June 30, 2017 , respectively.

The administrative expense ratio decreased 1.2 percentage points and 1.0 percentage point for the three and six months ended June 30, 2017 , respectively, primarily due to integration-related expense savings realized of $31 million (1.5 percentage points) and $63 million (1.6 percentage points), respectively, and lower employee benefit-related expenses of $7 million in the quarter (0.3 percentage points and 0.2 percentage points, respectively). This decrease was partially offset by the impact of merit-based salary increases, inflation, and increased spending to support growth initiatives.

Global Reinsurance

The Global Reinsurance segment represents our reinsurance operations comprising Chubb Tempest Re Bermuda, Chubb Tempest Re USA, Chubb Tempest Re International, and Chubb Tempest Re Canada. Global Reinsurance markets its reinsurance products worldwide under the Chubb Tempest Re brand name and provides a broad range of traditional reinsurance coverage to a diverse array of primary P&C companies.

	Three Months Ended June 30		% Change	Six Months Ended June 30		% Change
(in millions of U.S. dollars, except for percentages)	**2017**	2016	Q-17 vs. Q-16	**2017**	2016	YTD-17 vs. YTD-16
Net premiums written	**$ 190**	$ 230	(17.7)%	**$ 389**	$ 431	(9.9)%
Net premiums earned	**168**	185	(9.6)%	**357**	387	(7.9)%
Losses and loss expenses	**46**	87	(47.1)%	**140**	176	(20.5)%
Policy acquisition costs	**43**	47	(8.5)%	**94**	100	(6.0)%
Administrative expenses	**12**	14	(14.3)%	**22**	28	(21.4)%
Underwriting income	**67**	37	81.1%	**101**	83	21.7%
Net investment income	**65**	65	—	**127**	132	(3.8)%
Other (income) expense	**1**	(2)	NM	**1**	(3)	NM
Segment income	**$ 131**	$ 104	26.0%	**$ 227**	$ 218	4.1%
Loss and loss expense ratio	**27.8%**	46.9%	(19.1) pts	**39.3%**	45.5%	(6.2) pts
Policy acquisition cost ratio	**25.7%**	25.5%	0.2 pts	**26.3%**	25.9%	0.4 pts
Administrative expense ratio	**6.7%**	7.4%	(0.7) pts	**6.2%**	7.1%	(0.9) pts
Combined ratio	**60.2%**	79.8%	(19.6) pts	**71.8%**	78.5%	(6.7) pts

NM - not meaningful

Premiums
Net premiums written decreased $ 40 million and $42 million for the three and six months ended June 30, 2017 , respectively, as we maintained underwriting discipline in an environment of declining rates and increasing competition. In addition, the decrease in net premiums written for the six months ended June 30, 2017, which included an unfavorable impact from merger-related underwriting actions of $10 million , was partially offset by the timing of the Chubb Corp acquisition. The first quarter of 2016 excluded approximately $20 million of production generated prior to the Chubb Corp acquisition close on January 14, 2016 (14-day stub period).

Net premiums earned decreased $ 17 million and $30 million for the three and six months ended June 30, 2017 , respectively, primarily due to the factors described above.

Combined Ratio
The following table presents pre-tax catastrophe losses and pre-tax favorable prior period development net of related reinstatement premiums:

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S dollars)	**2017**	2016	**2017**	2016
Catastrophe losses, pre-tax	**$ 3**	$ 52	**$ 3**	$ 53
Favorable prior period development net of related reinstatement premiums, pre-tax	**$ 31**	$ 47	**$ 23**	$ 50

Catastrophe losses through June 30, 2017 were primarily from severe weather related events in the U.S. Catastrophe losses through June 30, 2016 were primarily related to the Fort McMurray wildfire.

Favorable prior period development included a charge of $9 million in the first quarter of 2017, reflecting the change in the discount rate in the U.K. (Ogden rate) which impacted our motor and excess liability lines. Refer to Note 5 to the Consolidated Financial Statements for additional information.

The following table presents the impact of catastrophe losses and prior period reserve development net of related reinstatement premiums on our loss and loss expense ratio:

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	**2017**	2016
Loss and loss expense ratio	**27.8 %**	46.9 %	**39.3 %**	45.5 %
Catastrophe losses and related reinstatement premiums	**(1.9)%**	(27.8)%	**(0.8)%**	(13.3)%
Prior period development net of related reinstatement premiums [1]	**18.5 %**	26.9 %	**5.3 %**	13.6 %
Loss and loss expense ratio, adjusted	**44.4 %**	46.0 %	**43.8 %**	45.8 %
(1) Reinstatement premiums expensed (collected) on prior period development - pre-tax	**$ —**	$ —	**$ (7)**	$ —

The adjusted loss and loss expense ratio decreased 1.6 percentage points and 2.0 percentage points for the three and six months ended June 30, 2017 , respectively, primarily due to a change in the mix of business towards products that have a lower loss ratio.

The policy acquisition cost ratio increased 0.2 percentage points and 0.4 percentage points for the three and six months ended June 30, 2017 , respectively, primarily due to a change in the mix of business towards products that have higher acquisition cost ratios.

The administrative expense ratio decreased 0.7 percentage points and 0.9 percentage points for the three and six months ended June 30, 2017 , respectively, primarily reflecting expense reductions implemented to align our cost structure with our premium base and integration-related expense savings realized.

Life Insurance

The Life Insurance segment comprises Chubb's international life operations (Chubb Life), Chubb Tempest Life Re (Chubb Life Re), and the North American supplemental A&H and life business of Combined Insurance. We assess the performance of our life business based on Life Insurance underwriting income, which includes Net investment income and (Gains) losses from fair value changes in separate account assets that do not qualify for separate account reporting under GAAP.

	Three Months Ended June 30			Six Months Ended June 30		
(in millions of U.S. dollars, except for percentages)	**2017**	2016	% Change Q-17 vs. Q-16	**2017**	2016	% Change YTD-17 vs. YTD-16
Net premiums written	**$ 523**	$ 527	(0.7)%	**$ 1,047**	$ 1,043	0.4 %
Net premiums earned	**515**	512	0.8 %	**1,021**	1,009	1.2 %
Losses and loss expenses	**182**	147	23.8 %	**375**	324	15.7 %
Policy benefits [1]	**163**	146	11.6 %	**331**	272	21.7 %
(Gains) losses from fair value changes in separate account assets [1]	**(16)**	(3)	NM	**(46)**	—	NM
Policy acquisition costs	**130**	137	(5.1)%	**244**	259	(5.8)%
Administrative expenses	**77**	77	—	**149**	149	—
Net investment income	**77**	69	11.6 %	**152**	136	11.8 %
Life Insurance underwriting income	**56**	77	(27.3)%	**120**	141	(14.9)%
Other (income) expense [1]	**4**	3	33.3 %	**5**	6	(16.7)%
Amortization of purchased intangibles	**—**	—	NM	**1**	1	—
Segment income	**$ 52**	$ 74	(29.7)%	**$ 114**	$ 134	(14.9)%

NM - not meaningful

(1) (Gains) losses from fair value changes in separate account assets that do not qualify for separate account reporting under GAAP have been reclassified from Other income (expense) for purposes of presenting Life Insurance underwriting income. The offsetting movement in the separate account liabilities is included in Policy benefits.

Premiums

Net premiums written decreased slightly for the three months ended June 30, 2017 and increased slightly for the six months ended June 30, 2017. For the quarter, growth in our Combined Insurance supplemental A&H program business and our Asian international life operations was more than offset by planned declines in our Latin American operations, reflecting merger-related underwriting actions of $8 million. For the six months ended June 30, 2017, the growth in the A&H program business and in our Asian international life operations more than offset the declines related to merger-related underwriting actions of $24 million. In addition, growth in both periods was adversely impacted by our life reinsurance business, which continues to decline as no new business is currently being written.

Deposits

The following table presents deposits collected on universal life and investment contracts:

	Three Months Ended June 30			% Change		Six Months Ended June 30			% Change	
(in millions of U.S. dollars, except for percentages)	**2017**	2016	C$ [1] 2016	Q-17 vs. Q-16	C$ [1] Q-17 vs. Q-16	**2017**	2016	C$ [1] 2016	Y-17 vs. Y-16	C$ [1] Y-17 vs. Y-16
Deposits collected on Universal life and investment contracts	**$ 316**	$ 262	$ 270	20.5%	16.8%	**$ 626**	$ 475	$ 488	31.8%	28.3%

(1) On a constant-dollar basis. Amounts are calculated by translating prior period results using the same local currency exchange rates as the comparable current period.

Deposits collected on universal life and investment contracts (life deposits) are not reflected as revenues in our Consolidated statements of operations in accordance with GAAP. New life deposits are an important component of production, and although they do not significantly affect current period income from operations, they are key to our efforts to grow our business. Life

deposits collected increased for the three and six months ended June 30, 2017 , due to growth in Taiwan, partially offset by a decline in Korea.

Life Insurance underwriting income

Life Insurance underwriting income decreased $21 million for both the three and six months ended June 30, 2017 , due to the adverse impact of updating our long-term benefit ratio in our variable annuity business in the fourth quarter of 2016 ($16 million and $33 million for the three and six months ended June 30, 2017, respectively). For the six months ended June 30, 2017 this decrease was offset by an increase in underwriting income in our international life operations, reflecting improved margins and higher net investment income.

Corporate

Corporate results primarily include the results of our non-insurance companies, income and expenses not attributable to reportable segments and loss and loss expenses of asbestos and environmental (A&E) liabilities and certain other run-off exposures.

Our exposure to A&E claims principally arises out of liabilities acquired when we purchased Westchester Specialty in 1998, CIGNA's P&C business in 1999, and legacy Chubb Corp A&E claims in 2016. Corporate staff expenses and net investment income of Chubb Limited, including the amortization of the fair value adjustment on acquired invested assets and debt, interest expense, amortization of purchased intangibles related to the Chubb Corp acquisition, Chubb integration expenses and other merger-related expenses and the results of Chubb Group Management and Holdings Ltd, and Chubb INA Holdings Inc. are reported within Corporate.

	Three Months Ended			Six Months Ended		
		June 30	% Change		June 30	% Change
(in millions of U.S. dollars, except for percentages)	**2017**	2016	Q-17 vs. Q-16	**2017**	2016	YTD-16 vs. YTD-15
Losses and loss expenses	**$ 45**	$ 15	200.0 %	**$ 56**	$ 24	133.3 %
Administrative expenses	**65**	62	4.8 %	**123**	135	(8.9)%
Underwriting loss	**110**	77	42.9 %	**179**	159	12.6 %
Net investment income (loss)	**(72)**	(101)	(28.7)%	**(151)**	(185)	(18.4)%
Interest expense	**147**	153	(3.9)%	**301**	299	0.7 %
Net realized gains (losses)	**101**	(216)	NM	**94**	(610)	NM
Other (income) expense	**(129)**	(16)	NM	**(174)**	11	NM
Amortization expense (benefit) of purchased intangibles	**42**	(20)	NM	**84**	(40)	NM
Chubb integration expenses	**72**	98	(26.5)%	**183**	246	(25.6)%
Income tax expense	**200**	155	29.0 %	**328**	279	17.6 %
Net loss	**$ (413)**	$ (764)	(45.9)%	**$ (958)**	$ (1,749)	(45.2)%

NM - not meaningful

Losses and loss expenses for the three and six months ended June 30, 2017 were primarily from unfavorable prior period development related to non-A&E run-off casualty exposures as well as unallocated loss adjustment expenses of the A&E claim operations. The 2016 losses and loss expenses related primarily to unallocated loss adjustment expenses of the A&E claim operations.

Administrative expenses increased $ 3 million for the three months ended June 30, 2017. For the six months ended June 30, 2017, administrative expenses decreased $12 million reflecting integration-related expense savings and lower post-retirement benefit expenses.

Net investment income for the three and six months ended June 30, 2017 included amortization of $85 million and $108 million, respectively, related to the fair value adjustment on invested assets related to the Chubb Corp acquisition. Net investment income for the three and six months ended June 30, 2016 included amortization of $108 million and $201

million, respectively, related to the fair value adjustment on invested assets related to the Chubb Corp acquisition. Excluding the fair value adjustment amortization, net investment income increased by $4 million and $10 million for the three and six months ended June 30, 2016, respectively. Refer to the Net Investment Income section for a discussion on consolidated Net investment income.

Interest expense decreased $6 million for the three months ended June 30, 2017 due to the conversion during the quarter of the interest rate on our $1.0 billion of unsecured junior subordinated capital securities to a floating rate, equal to the three-month LIBOR plus 2.25 percentage points. This conversion is expected to reduce future quarterly pre-tax interest expense by approximately $7 million for the remainder of 2017. For the six months ended June 30, 2017, interest expense increased $2 million as the decrease noted above was more than offset by the timing of the Chubb Corp acquisition in the prior year which excluded approximately $8 million of interest expense prior to the Chubb Corp acquisition close on January 14, 2016.

For the three and six months ended June 30, 2017, net realized gains of $101 million and $94 million, respectively, were primarily from realized gains associated with a net decrease in the fair value of GLB liabilities, partially offset by realized losses on our investment portfolios. The decrease in the fair value of GLB liabilities was primarily due to the impact of updating aspects of our valuation model relating to interest rates and higher global equity market levels, partially offset by declining interest rates. In addition, we maintain positions in derivative instruments that decrease in fair value when the S&P 500 index increases. During the three and six months ended June 30, 2017, we experienced realized losses of $38 million and $112 million, respectively, related to these derivative instruments.

Net realized losses for the three and six months ended June 30, 2016 were primarily associated with a net increase in the fair value of GLB liabilities. These increases were primarily due to lower interest rates and the unfavorable impact of discounting future claims for one and two less quarters, respectively. Falling international equity market levels also contributed to the increase in the fair value of the GLB liabilities for the six months ended June 30, 2016. In addition, we maintain positions in derivative instruments that decrease in fair value when the S&P 500 index increases. During the three and six months ended June 30, 2016, we experienced realized losses of $28 million and $43 million, respectively, related to these derivative instruments. Additionally, there were realized losses on our investment portfolios during the three and six months ended June 30, 2016 of $32 million and $220 million, respectively. For further discussion of the remaining Net realized gains and (losses), refer to "Net realized and unrealized gains and (losses)".

For the three and six months ended June 30, 2017 , Other (income) expense recognized in Corporate was $ (129) million and $(174) million, respectively, compared to $ (16) million and $11 million, respectively, comprised of:

- Other income in 2017 of $143 million and $204 million, respectively, from our share of net realized gains and losses from partially-owned investment companies, compared to realized gains (losses) in 2016 of $18 million and $(7) million, respectively, primarily reflecting the change in market value of these investments.

- Other expense in 2017 of $(14) million and $(21) million, respectively, compared to other expense in 2016 of $(2) million and $(4) million, respectively. The higher expense in 2017 was primarily due to an increase in capital taxes resulting from a higher equity base after the Chubb Corp acquisition.

Refer to the Other Income and Expense Items section for further information.

Amortization expense of purchased intangibles increased $ 62 million and $124 million for the three and six months ended June 30, 2017 , respectively, primarily reflecting the increase in intangible amortization expense related to agency distribution relationships and renewal rights and lower amortization benefit from the fair value adjustment of Unpaid losses and loss expenses acquired as part of the Chubb Corp acquisition. Refer to the Amortization of purchased intangibles and Other amortization section for further information.

Chubb integration expenses
The following table presents the components of Chubb integration expenses:

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S dollars)	**2017**	2016	**2017**	2016
Personnel-related expenses	**$ 34**	$ 41	**$ 115**	$ 116
Leases and real estate termination costs	**12**	6	**22**	13
Consulting fees	**7**	15	**14**	24
Rebranding	**6**	18	**6**	21
Advisor fees	**—**	—	**—**	38
Other	**13**	18	**26**	34
Totals	**$ 72**	$ 98	**$ 183**	$ 246

Chubb integration expenses are one-time in nature and are not related to the on-going business activities of the segments. The Chief Executive Officer does not manage segment results or allocate resources to segments when considering these costs and they are therefore excluded from our definition of segment income.

Effective income tax rate
Our effective income tax rate, which we calculate as income tax expense divided by income before income tax, is dependent upon the mix of earnings from different jurisdictions with various tax rates. A change in the geographic mix of earnings would change the effective income tax rate.

For the three and six months ended June 30, 2017, our effective income tax rate was 13.3 percent and 12.0 percent, respectively, compared to 17.6 percent and 19.3 percent, respectively, in the prior year periods. The effective income tax rate was lower in 2017 primarily due to realized gains being generated in lower taxing jurisdictions in the current year compared to realized losses generated in lower taxing jurisdictions in the prior year. The decrease was also driven by a reduction of income tax expense due to the adoption of the new stock compensation guidance in January 2017 ($5 million and $30 million for the three and six months ended June 30, 2017, respectively). Additionally, the decrease for the six months ended June 30, 2017 was also driven by a reduction to income tax expense of approximately $25 million in the current year primarily related to an accounting election we made relating to the treatment of certain, discrete investments that resulted in the release of the associated deferred tax liability. Refer to Note 1 to the Consolidated Financial Statements for additional information on the adoption of this guidance.

The lower tax rates attributed to our foreign operations primarily reflect the lower corporate tax rates that prevail outside of the U.S. During the three and six months ended June 30, 2017, approximately 60 percent and 59 percent, respectively, of our total pre-tax income was tax effected based on these lower rates compared with 51 percent and 46 percent for the three and six months ended June 30, 2016, respectively. The significant lower taxing jurisdictions outside of the U.S. include the U.K., Switzerland, and Bermuda with effective federal income tax rates in those countries of 19.25 percent, 7.83 percent, and 0.0 percent, respectively.

Other Income and Expense Items

(in millions of U.S. dollars)	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	**2017**	2016
Equity in net (income) loss of partially-owned entities	**$ (146)**	$ (31)	**$ (199)**	$ (16)
(Gains) losses from fair value changes in separate account assets [1]	**(16)**	(3)	**(46)**	—
Federal excise and capital taxes	**15**	5	**18**	6
Other	**2**	—	**12**	9
Other (income) expense	**$ (145)**	$ (29)	**$ (215)**	$ (1)

(1) Related to (gains) losses from fair value changes in separate account assets that do not qualify for separate account reporting under GAAP.

Other (income) expense includes equity in net (income) loss of partially-owned entities, which includes our share of net (income) loss related to partially-owned investment companies (private equity) and partially-owned insurance companies. Also included in Other (income) expense are (Gains) losses from fair value changes in separate account assets that do not qualify for separate account reporting under GAAP. The offsetting movement in the separate account liabilities is included in Policy benefits in the Consolidated statements of operations. Certain federal excise and capital taxes incurred as a result of capital management initiatives are included in Other (income) expense as these are considered capital transactions and are excluded from underwriting results.

Amortization of purchased intangibles and Other amortization

Amortization expense related to purchased intangibles was $ 65 million and $129 million for the three and six months ended June 30, 2017 , respectively, compared with $ 5 million and $12 million , respectively, in the prior year periods. The increase in amortization expense of purchased intangibles primarily reflects higher intangible amortization expense related to agency distribution relationships and renewal rights and lower amortization benefit from the fair value adjustment on Unpaid losses and loss expenses.

The following table presents, as of June 30, 2017 , the estimated pre-tax amortization expense (benefit) of purchased intangibles, at current foreign currency exchange rates, for the third and fourth quarters of 2017 and the next five years:

	Associated with the Chubb Corp Acquisition					
For the Years Ending December 31 (in millions of U.S. dollars)	Agency distribution relationships and renewal rights	Internally developed technology	Fair value adjustment on Unpaid losses and loss expenses	Total [1]	Other intangible assets [2]	Total Amortization of purchased intangibles
Third quarter of 2017	$ 74	$ 8	$ (40)	$ 42	$ 21	$ 63
Fourth quarter of 2017	74	8	(40)	42	21	63
2018	323	32	(101)	254	78	332
2019	281	—	(62)	219	68	287
2020	239	—	(35)	204	62	266
2021	217	—	(20)	197	53	250
2022	197	—	(15)	182	49	231
Total	$ 1,405	$ 48	$ (313)	$ 1,140	$ 352	$ 1,492

(1) Recorded in Corporate.
(2) Recorded in applicable segment(s) that acquired the intangible assets.

Reduction of deferred tax liability associated with intangible assets related to the Chubb Corp acquisition

The following table presents, as of June 30, 2017 , the expected reduction of the deferred tax liability associated with intangible assets related to the Chubb Corp acquisition (which reduces as agency distribution relationships and renewal rights and internally developed technology amortize), at current foreign currency exchange rates, for the third and fourth quarters of 2017 and the next five years. For example, for the third quarter of 2017, the expected reduction to deferred tax liability of $29 million associated with intangible assets in the table below is calculated by applying the 35 percent expected tax rate against the sum of the estimated amortization of $82 million, comprising agency distribution relationships and renewal rights of $74 million ,

and internally developed technology of $8 million . At June 30, 2017 , the remaining deferred tax liability associated with these intangibles was $2,019 million.

For the Years Ending December 31 (in millions of U.S. dollars)	Reduction of deferred tax liability associated with intangible assets related to the Chubb Corp acquisition
Third quarter of 2017	$ 29
Fourth quarter of 2017	29
2018	124
2019	98
2020	84
2021	76
2022	69
Total	$ 509

Amortization of the fair value adjustment on acquired invested assets and assumed long-term debt

The following table presents at June 30, 2017 , the expected amortization expense of the fair value adjustment on acquired invested assets, at current foreign currency exchange rates, and the expected amortization benefit from the amortization of the fair value adjustment on assumed long-term debt for the third and fourth quarters of 2017 and the next five years as follows:

	Amortization (expense) benefit of the fair value adjustment on	
For the Years Ending December 31 (in millions of U.S. dollars)	Acquired invested assets [1]	Assumed long-term debt [2]
Third quarter of 2017	$ (85)	$ 12
Fourth quarter of 2017	(85)	12
2018	(320)	31
2019	(320)	19
2020	(238)	19
2021	—	19
2022	—	19
Total	$ (1,048)	$ 131

(1) Recorded as a reduction to Net investment income in the Consolidated statements of operations.
(2) Recorded as a reduction to Interest expense in the Consolidated statements of operations.

The estimate of amortization expense of the fair value adjustment on acquired invested assets could vary materially based on current market conditions, bond calls, overall duration of the acquired investment portfolio, and foreign exchange.

Net Investment Income

	Three Months Ended June 30		Six Months Ended June 30	
(in millions of U.S. dollars)	**2017**	2016	**2017**	2016
Fixed maturities	**$ 741**	$ 686	**$ 1,471**	$ 1,329
Short-term investments	**31**	22	**57**	45
Equity securities	**13**	9	**22**	21
Other investments	**24**	26	**43**	53
Gross investment income [1]	**809**	743	**1,593**	1,448
Investment expenses	**(39)**	(35)	**(78)**	(66)
Net investment income [1]	**$ 770**	$ 708	**$ 1,515**	$ 1,382
[1] Includes amortization expense related to fair value adjustment of acquired invested assets related to the Chubb Corp acquisition	**$ (85)**	$ (108)	**$ (176)**	$ (201)

Net investment income is influenced by a number of factors including the amounts and timing of inward and outward cash flows, the level of interest rates, and changes in overall asset allocation. Net investment income increased 8.8 percent and 9.6 percent for the three and six months ended June 30, 2017 , respectively, compared with the prior year periods. The increase for the three and six months ended June 30, 2017 was primarily due to a higher overall invested asset base, higher call activity in our corporate bond portfolio and higher dividends. Additionally, the prior year period excluded $45 million of Net investment income generated prior to the Chubb Corp acquisition close on January 14, 2016.

Our average yield on invested assets was 3.4 percent for all periods presented, which is primarily driven by the yield on our fixed maturities. This compares to the average market yield, which represents the weighted average yield to maturity of our fixed income portfolio based on market prices of the holdings throughout the period, of 2.7 percent and 2.3 percent at June 30, 2017 and 2016, respectively.

Net Realized and Unrealized Gains (Losses)

We take a long-term view with our investment strategy, and our investment managers manage our investment portfolio to maximize total return within certain specific guidelines designed to minimize risk. The majority of our investment portfolio is available for sale and reported at fair value. Our held to maturity investment portfolio is reported at amortized cost.

The effect of market movements on our available for sale investment portfolio impacts Net income (through Net realized gains (losses)) when securities are sold or when we record an Other-than-temporary impairment (OTTI) charge in Net income. For a discussion related to how we assess OTTI for all of our investments, including credit-related OTTI, and the related impact on Net income, refer to Note 3 c) to the Consolidated Financial Statements. Additionally, Net income is impacted through the reporting of changes in the fair value of derivatives, including financial futures, options, swaps, and GLB reinsurance. Changes in unrealized appreciation and depreciation on available for sale securities resulting from the revaluation of securities held, changes in cumulative foreign currency translation adjustment, and unrealized postretirement benefit liability adjustment, are reported as separate components of Accumulated other comprehensive income in Shareholders' equity in the Consolidated balance sheets.

The following table presents our net realized and unrealized gains (losses):

	Three Months Ended June 30, 2017			Three Months Ended June 30, 2016		
(in millions of U.S. dollars)	**Net Realized Gains (Losses)**	**Net Unrealized Gains (Losses)**	**Net Impact**	Net Realized Gains (Losses)	Net Unrealized Gains (Losses)	Net Impact
Fixed maturities	**$ 23**	**$ 423**	**$ 446**	$ 7	$ 954	$ 961
Fixed income derivatives	**(16)**	**—**	**(16)**	(47)	—	(47)
Public equity	**2**	**15**	**17**	(5)	33	28
Private equity	**(1)**	**(4)**	**(5)**	13	(42)	(29)
Total investment portfolio [1]	**8**	**434**	**442**	(32)	945	913
Variable annuity reinsurance derivative transactions, net of applicable hedges	**80**	**—**	**80**	(159)	—	(159)
Other derivatives	**(1)**	**—**	**(1)**	—	—	—
Foreign exchange	**14**	**102**	**116**	(22)	81	59
Other	**—**	**(35)**	**(35)**	(3)	1	(2)
Net gains (losses) before tax	**$ 101**	**$ 501**	**$ 602**	$ (216)	$ 1,027	$ 811

(1) For the three months ended June 30, 2017 , other-than-temporary impairments in Net realized gains (losses) included $4 million for fixed maturities, $3 million for public equity, and $1 million for private equity. For the three months ended June 30, 2016 , other-than-temporary impairments in Net realized gains (losses) included $11 million for fixed maturities and $5 million for public equity.

(in millions of U.S. dollars)	Six Months Ended June 30, 2017 Net Realized Gains (Losses)	Net Unrealized Gains (Losses)	Net Impact	Six Months Ended June 30, 2016 Net Realized Gains (Losses)	Net Unrealized Gains (Losses)	Net Impact
Fixed maturities	$ 11	$ 679	$ 690	$ (183)	$ 2,042	$ 1,859
Fixed income derivatives	(10)	—	(10)	(86)	—	(86)
Public equity	6	43	49	33	29	62
Private equity	(8)	27	19	16	(69)	(53)
Total investment portfolio [1]	(1)	749	748	(220)	2,002	1,782
Variable annuity reinsurance derivative transactions, net of applicable hedges	99	—	99	(402)	—	(402)
Other derivatives	1	—	1	(2)	—	(2)
Foreign exchange	(5)	236	231	17	393	410
Other	—	(55)	(55)	(3)	3	—
Net gains (losses) before tax	$ 94	$ 930	$ 1,024	$ (610)	$ 2,398	$ 1,788

(1) For the six months ended June 30, 2017 , other-than-temporary impairments in Net realized gains (losses) included $10 million for fixed maturities, $8 million for public equity, and $9 million for private equity. For the six months ended June 30, 2016 , other-than-temporary impairments in Net realized gains (losses) included $70 million for fixed maturities, $6 million for public equity, and $3 million for private equity.

Investments

Our investment portfolio is invested primarily in publicly traded, investment grade, fixed income securities with an average credit quality of A/Aa as rated by the independent investment rating services Standard and Poor's (S&P)/ Moody's Investors Service (Moody's). The portfolio is externally managed by independent, professional investment managers and is broadly diversified across geographies, sectors, and issuers. Other investments principally comprise direct investments, investment funds, and limited partnerships. We hold no collateralized debt obligations in our investment portfolio, and we provide no credit default protection. We have long-standing global credit limits for our entire portfolio across the organization. Exposures are aggregated, monitored, and actively managed by our Global Credit Committee, comprising senior executives, including our Chief Financial Officer, our Chief Risk Officer, our Chief Investment Officer, and our Treasurer. We also have well-established, strict contractual investment rules requiring managers to maintain highly diversified exposures to individual issuers and closely monitor investment manager compliance with portfolio guidelines.

The average duration of our fixed income securities, including the effect of options and swaps, was 4.2 years at both June 30, 2017 and December 31, 2016 . We estimate that a 100 basis point (bps) increase in interest rates would reduce the valuation of our fixed income portfolio by approximately $4.0 billion at June 30, 2017 .

The following table shows the fair value and cost/amortized cost of our invested assets:

(in millions of U.S. dollars)	June 30, 2017 Fair Value	Cost/ Amortized Cost	December 31, 2016 Fair Value	Cost/ Amortized Cost
Fixed maturities available for sale	$ 81,645	$ 80,363	$ 80,115	$ 79,536
Fixed maturities held to maturity	10,560	10,371	10,670	10,644
Short-term investments	2,651	2,651	3,002	3,002
	94,856	93,385	93,787	93,182
Equity securities	856	697	814	706
Other investments	4,685	4,410	4,519	4,270
Total investments	$ 100,397	$ 98,492	$ 99,120	$ 98,158

The fair value of our total investments increased $1.3 billion during the six months ended June 30, 2017 , primarily due to the investing of operating cash flows and unrealized appreciation, partially offset by the repayment of our $500 million senior notes that matured in February 2017, repurchases of our Common Shares, and the payment of dividends on our Common Shares.

The following tables present the market value of our fixed maturities and short-term investments at June 30, 2017 and December 31, 2016 . The first table lists investments according to type and second according to S&P credit rating:

	June 30, 2017		December 31, 2016	
(in millions of U.S. dollars, except for percentages)	**Market Value**	**% of Total**	Market Value	% of Total
Treasury	**$ 3,117**	**3%**	$ 2,832	3%
Agency	**632**	**1%**	699	1%
Corporate and asset-backed securities	**28,064**	**30%**	26,944	29%
Mortgage-backed securities	**15,777**	**17%**	15,435	16%
Municipal	**22,263**	**23%**	22,768	24%
Non-U.S.	**22,352**	**23%**	22,107	24%
Short-term investments	**2,651**	**3%**	3,002	3%
Total	**$ 94,856**	**100%**	$ 93,787	100%
AAA	**$ 15,411**	**16%**	$ 15,746	17%
AA	**36,107**	**38%**	36,235	39%
A	**18,011**	**19%**	17,519	19%
BBB	**12,513**	**13%**	12,237	13%
BB	**7,151**	**8%**	6,993	7%
B	**5,390**	**6%**	4,814	5%
Other	**273**	**—%**	243	—%
Total	**$ 94,856**	**100%**	$ 93,787	100%

Corporate and asset-backed securities
The following table presents our 10 largest global exposures to corporate bonds by market value at June 30, 2017 :

(in millions of U.S. dollars)	**Market Value**
Wells Fargo & Co	**$ 588**
JP Morgan Chase & Co	**533**
Goldman Sachs Group Inc	**464**
Anheuser-Busch InBev NV	**433**
General Electric Co	**394**
Morgan Stanley	**363**
Verizon Communications Inc	**356**
Bank of America Corp	**349**
AT&T Inc	**345**
HSBC Holdings Plc	**318**

Mortgage-backed securities

	S&P Credit Rating					Market Value	Amortized Cost
June 30, 2017 (in millions of U.S. dollars)	AAA	AA	A	BBB	BB and below	Total	Total
Agency residential mortgage-backed (RMBS)	$ —	$ 12,765	$ —	$ —	$ —	$ 12,765	$ 12,749
Non-agency RMBS	1	5	60	3	28	97	105
Commercial mortgage-backed	2,902	13	—	—	—	2,915	2,883
Total mortgage-backed securities	$ 2,903	$ 12,783	$ 60	$ 3	$ 28	$ 15,777	$ 15,737

Municipal

As part of our overall investment strategy, we may invest in states, municipalities, and other political subdivisions fixed maturity securities (Municipal). We apply the same investment selection process described previously to our Municipal investments. The portfolio is highly diversified primarily in state general obligation bonds and essential service revenue bonds including education and utilities (water, power, and sewers).

Non-U.S.

Our exposure to the Euro results primarily from ACE European Group which is headquartered in London and offers a broad range of coverages throughout the European Union, Central, and Eastern Europe. Chubb primarily invests in Euro denominated investments to support its local currency insurance obligations and required capital levels. Chubb's local currency investment portfolios have strict contractual investment guidelines requiring managers to maintain a high quality and diversified portfolio to both sector and individual issuers. Investment portfolios are monitored daily to ensure investment manager compliance with portfolio guidelines.

Our non-U.S. investment grade fixed income portfolios are currency-matched with the insurance liabilities of our non-U.S. operations. The average credit quality of our non-U.S. fixed income securities is A and 55 percent of our holdings are rated AAA or guaranteed by governments or quasi-government agencies. Within the context of these investment portfolios, our government and corporate bond holdings are highly diversified across industries and geographies. Issuer limits are based on credit rating (AA— two percent, A— one percent, BBB— 0.5 percent of the total portfolio) and are monitored daily via an internal compliance system. Because of this investment approach, we do not have a direct exposure to troubled sovereign borrowers in Europe. We manage our indirect exposure using the same credit rating based investment approach. Accordingly, we do not believe our indirect exposure is material.

The following table summarizes the market value and amortized cost of our non-U.S. fixed income portfolio by country/sovereign for non-U.S. government securities at June 30, 2017 :

(in millions of U.S. dollars)	Market Value	Amortized Cost
United Kingdom	$ 1,406	$ 1,367
Republic of Korea	1,058	962
Canada	869	872
Federative Republic of Brazil	798	790
Province of Ontario	629	623
United Mexican States	506	506
Province of Quebec	499	494
Kingdom of Thailand	482	459
Germany	389	381
Australia	351	341
Other Non-U.S. Government Securities [1]	4,229	4,126
Total	$ 11,216	$ 10,921

(1) There are no investments in Portugal, Ireland, Italy, Greece or Spain.

The following table summarizes the market value and amortized cost of our non-U.S. fixed income portfolio by country/sovereign for non-U.S. corporate securities at June 30, 2017 :

(in millions of U.S. dollars)	Market Value	Amortized Cost
United Kingdom	$ 2,070	$ 1,985
Canada	1,373	1,350
United States [1]	906	882
France	837	810
Netherlands	714	692
Australia	713	700
Germany	621	606
Japan	348	347
Switzerland	335	325
China	285	280
Other Non-U.S. Corporate Securities	2,934	2,853
Total	$ 11,136	$ 10,830

(1) The countries that are listed in the non-U.S. corporate fixed income portfolio above represent the ultimate parent company's country of risk. Non-U.S. corporate securities could be issued by foreign subsidiaries of U.S. corporations.

Below-investment grade corporate fixed income portfolio

Below-investment grade securities have different characteristics than investment grade corporate debt securities. Risk of loss from default by the borrower is greater with below-investment grade securities. Below-investment grade securities are generally unsecured and are often subordinated to other creditors of the issuer. Also, issuers of below-investment grade securities usually have higher levels of debt and are more sensitive to adverse economic conditions, such as recession or increasing interest rates, than investment grade issuers. At June 30, 2017 , our corporate fixed income investment portfolio included below-investment grade and non-rated securities which, in total, comprised approximately 12 percent of our fixed income portfolio. Our below-investment grade and non-rated portfolio includes over 1,100 issuers, with the greatest single exposure being $157 million .

We manage high-yield bonds as a distinct and separate asset class from investment grade bonds. The allocation to high-yield bonds is explicitly set by internal management and is targeted to securities in the upper tier of credit quality (BB/B). Our minimum rating for initial purchase is BB/B. Eight external investment managers are responsible for high-yield security selection and portfolio construction. Our high-yield managers have a conservative approach to credit selection and very low historical default experience. Holdings are highly diversified across industries and generally subject to a 1.5 percent issuer limit as a percentage of high-yield allocation. We monitor position limits daily through an internal compliance system. Derivative and structured securities (e.g., credit default swaps and collateralized loan obligations) are not permitted in the high-yield portfolio.

Critical Accounting Estimates

As of June 30, 2017 , there were no material changes to our critical accounting estimates. For a full discussion of our critical accounting estimates, refer to Item 7 in our 2016 Form 10-K.

Reinsurance recoverable on ceded reinsurance

(in millions of U.S. dollars)	June 30 2017	December 31 2016
Reinsurance recoverable on unpaid losses and loss expenses [1]	$ 12,485	$ 12,708
Reinsurance recoverable on paid losses and loss expenses [1]	873	869
Reinsurance recoverable on losses and loss expenses [1]	$ 13,358	$ 13,577
Reinsurance recoverable on policy benefits [1]	$ 198	$ 182

(1) Net of provision for uncollectible reinsurance

We evaluate the financial condition of our reinsurers and potential reinsurers on a regular basis and also monitor concentrations of credit risk with reinsurers. The provision for uncollectible reinsurance is required principally due to the potential failure of reinsurers to indemnify us, primarily because of disputes under reinsurance contracts and insolvencies. The provision for

uncollectible reinsurance is based on a default analysis applied to gross reinsurance recoverables, net of approximately $3.4 billion and $ 3.3 billion of collateral at June 30, 2017 and December 31, 2016 , respectively. The decrease in reinsurance recoverable on losses and loss expenses was primarily due to collections relating to large losses, partially offset by crop activity.

Unpaid losses and loss expenses

As an insurance and reinsurance company, we are required by applicable laws and regulations and GAAP to establish loss and loss expense reserves for the estimated unpaid portion of the ultimate liability for losses and loss expenses under the terms of our policies and agreements with our insured and reinsured customers. With the exception of certain structured settlements, for which the timing and amount of future claim payments are reliably determinable, and certain reserves for unsettled claims that are discounted in statutory filings, our loss reserves are not discounted for the time value of money.

The following table presents a roll-forward of our unpaid losses and loss expenses:

(in millions of U.S. dollars)	Gross Losses	Reinsurance Recoverable [1]	Net Losses
Balance at December 31, 2016	$ 60,540	$ 12,708	$ 47,832
Losses and loss expenses incurred	9,768	1,833	7,935
Losses and loss expenses paid	(10,186)	(2,157)	(8,029)
Foreign currency revaluation and other	272	101	171
Balance at June 30, 2017	**$ 60,394**	**$ 12,485**	**$ 47,909**

(1) Net of provision for uncollectible reinsurance

The estimate of the liabilities includes provisions for claims that have been reported but are unpaid at the balance sheet date (case reserves) and for obligations on claims that have been incurred but not reported (IBNR) at the balance sheet date. IBNR may also include provisions to account for the possibility that reported claims may settle for amounts that differ from the established case reserves. Loss reserves also include an estimate of expenses associated with processing and settling unpaid claims (loss expenses).

Asbestos and Environmental (A&E)

There was no significant A&E reserve activity during the three and six months ended June 30, 2017 . A&E reserves are included in Corporate. Refer to our 2016 Form 10-K for further information on our A&E exposures.

Fair value measurements

Accounting 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 (Level 1 inputs) and the lowest priority to unobservable data (Level 3 inputs). Level 2 includes inputs, other than quoted prices within Level 1, that are observable for assets or liabilities either directly or indirectly. Refer to Note 4 to the Consolidated Financial Statements for information on our fair value measurements.

Catastrophe management

We actively monitor our catastrophe risk accumulation around the world. The table below presents our modeled annual aggregate pre-tax probable maximum loss (PML), net of reinsurance, for 100-year and 250-year return periods for U.S. hurricane and California earthquake at June 30, 2017 and 2016 . The table also presents Chubb's corresponding share of pre-tax industry PMLs for each of the return periods for U.S. hurricane and California earthquake. For example, according to the model, for the 1-in-100 return period scenario, there is a one percent chance that our losses incurred in any year from U.S. hurricane events could be in excess of $2,919 million (or 5.8 percent of our total shareholders' equity at June 30, 2017). We estimate that at such hypothetical loss levels, Chubb's share of the aggregate industry PML would be approximately 2.0 percent.

	Modeled Annual Aggregate Net PML							
	U.S. Hurricane				California Earthquake			
			June 30 2017	June 30 2016			**June 30 2017**	June 30 2016
(in millions of U.S. dollars, except for percentages)	**Chubb**	**% of Total Shareholders' Equity**	**% of Industry**	Chubb	**Chubb**	**% of Total Shareholders' Equity**	**% of Industry**	Chubb
1-in-100	**$ 2,919**	**5.8%**	**2.0%**	$ 3,310	**$ 1,436**	**2.9%**	**3.7%**	$ 1,504
1-in-250	**$ 5,033**	**10.0%**	**2.5%**	$ 5,717	**$ 1,891**	**3.8%**	**3.1%**	$ 2,114

The above modeled loss information at June 30, 2017 reflects our in-force portfolio at April 1, 2017. The June 30, 2017 modeled loss information reflects the April 1, 2017 reinsurance program (see Natural Catastrophe Property Reinsurance Program section below) as well as inuring reinsurance protection coverages.

The modeling estimates of both Chubb and industry loss levels are inherently uncertain owing to key assumptions. First, while the use of third-party catastrophe modeling packages to simulate potential hurricane and earthquake losses is prevalent within the insurance industry, the models are reliant upon significant meteorology, seismology, and engineering assumptions to estimate hurricane and earthquake losses. In particular, modeled hurricane and earthquake events are not always a representation of actual events and ensuing additional loss potential. Second, there is no universal standard in the preparation of insured data for use in the models and the running of the modeling software. Third, we are reliant upon third-party estimates of industry insured exposures and there is significant variation possible around the relationship between our loss and that of the industry following an event. Fourth, we assume that our reinsurance recoveries following an event are fully collectible. These loss estimates do not represent our potential maximum exposures and it is highly likely that our actual incurred losses would vary materially from the modeled estimates.

Natural Catastrophe Property Reinsurance Program

Chubb's core property catastrophe reinsurance program provides protection against natural catastrophes impacting its primary property operations (i.e., excluding our Global Reinsurance and Life Insurance segments).

We regularly review our reinsurance protection and corresponding property catastrophe exposures. This may or may not lead to the purchase of additional reinsurance prior to a program's renewal date. In addition, prior to each renewal date, we consider how much, if any, coverage we intend to buy and we may make material changes to the current structure in light of various factors, including modeled PML assessment at various return periods, reinsurance pricing, our risk tolerance and exposures, and various other structuring considerations.

Chubb renewed its Global Property Catastrophe Reinsurance Program for our North American and International operations effective April 1, 2017 through March 31, 2018, with no significant change in coverage from the expiring program. The program consists of three layers in excess of losses retained by Chubb. In addition, Chubb also renewed its terrorism coverage (excluding nuclear, biological, chemical and radiation coverage, with an inclusion of coverage for biological and chemical coverage for personal lines) for the United States from April 1, 2017 through March 31, 2018 with the same limits and retention and percentage placed except that the majority of terrorism coverage is on an aggregate basis above our retentions without a reinstatement.

Loss Location	Layer of Loss	Comments	Notes
United States (excluding Alaska and Hawaii)	$0 million – $1.0 billion	Losses retained by Chubb	(a)
United States (excluding Alaska and Hawaii)	$1.0 billion – $1.25 billion	All natural perils and terrorism	(b)
United States (excluding Alaska and Hawaii)	$1.25 billion – $2.0 billion	All natural perils and terrorism	(c)
United States (excluding Alaska and Hawaii)	$2.0 billion – $3.5 billion	All natural perils and terrorism	(d)
International (including Alaska and Hawaii)	$0 million – $175 million	Losses retained by Chubb	(a)
International (including Alaska and Hawaii)	$175 million – $925 million	All natural perils and terrorism	(c)
Alaska, Hawaii, and Canada	$925 million – $2.425 billion	All natural perils and terrorism	(d)

(a) Ultimate retention will depend upon the nature of the loss and the interplay between the underlying per risk programs and certain other catastrophe programs purchased by individual business units. These other catastrophe programs have the potential to reduce our effective retention below the stated levels.

(b) These coverages are 20 percent placed with Reinsurers.

(c) These coverages are both part of the same Second layer within the Global Catastrophe Program and are 100 percent placed with Reinsurers. As such, it may be exhausted in one region and not available in the other.

(d) These coverages are both part of the same Third layer within the Global Catastrophe Program and are 100 percent placed with Reinsurers. As such, it may be exhausted in one region and not available in the other.

Chubb also has two series of property catastrophe bonds in place (assumed as part of the Chubb Corp acquisition) that offer additional natural catastrophe protection for certain parts of the portfolio. The geographic scope of this coverage is from Virginia through Maine. The East Lane VI 2014 series currently provides $270 million of coverage as part of a $300 million layer in excess of $2,660 million retention through March 14, 2018. The East Lane VI 2015 series currently provides $250 million of coverage as part of a $408 million layer in excess of $2,014 million retention through March 13, 2020.

Crop Insurance

We are, and have been since the 1980s, one of the leading writers of crop insurance in the U.S. and have conducted that business through a managing general agent subsidiary of Rain and Hail. We provide protection throughout the U.S. on a variety of crops and are therefore geographically diversified, which reduces the risk of exposure to a single event or a heavy accumulation of losses in any one region. Our crop insurance business comprises two components – Multiple Peril Crop Insurance (MPCI) and crop-hail insurance.

The MPCI program is offered in conjunction with the U.S. Department of Agriculture (USDA). The policies cover revenue shortfalls or production losses due to natural causes such as drought, excessive moisture, hail, wind, frost, insects, and disease. Generally, policies have deductibles ranging from 10 percent to 50 percent of the insured's risk. The USDA's Risk Management Agency (RMA) sets the policy terms and conditions, rates and forms, and is also responsible for setting compliance standards. As a participating company, we report all details of policies underwritten to the RMA and are party to a Standard Reinsurance Agreement (SRA). The SRA sets out the relationship between private insurance companies and the Federal Crop Insurance Corporation (FCIC) concerning the terms and conditions regarding the risks each will bear including the pro-rata and state stop-loss provisions which allows companies to limit the exposure of any one state or group of states on their underwriting results. In addition to the pro-rata and excess of loss reinsurance protections inherent in the SRA, we also purchase third-party proportional and stop-loss reinsurance for our MPCI business to reduce our exposure. We may also enter into crop derivative contracts to further manage our risk exposure.

Each year the RMA issues a final SRA for the subsequent reinsurance year. In June 2017, the RMA released the 2018 SRA which establishes the terms and conditions for the 2018 reinsurance year (i.e., July 1, 2017 through June 30, 2018) that replaced the 2017 SRA. There were no significant changes in the terms and conditions, and therefore the new SRA does not impact Chubb's outlook on the crop program relative to 2018.

On the MPCI business, we recognize net premiums written as soon as estimable, which is generally when we receive acreage reports from the policyholders on the various crops throughout the U.S. This allows us to best determine the premium

associated with the liability that is being planted. The MPCI program has specific timeframes as to when producers must report acreage to us and in certain cases, the reporting occurs after the close of the respective reinsurance year. Once the net premium written has been recorded, the premium is then earned over the growing season for the crops. A majority of the crops that are covered in the program are typically subject to the SRA in effect at the beginning of the year. Given the major crops covered in the program, we typically see a substantial written and earned premium impact in the second and third quarters.

The pricing of MPCI premium is determined using a number of factors including commodity prices and related volatility. For instance, in most states the pricing for the MPCI Revenue Product for corn includes a factor that is based on the average price in February of the Chicago Board of Trade December corn futures. To the extent that the corn commodity prices are higher in February than they were in the previous February, and all other factors are the same, the increase in corn prices will increase the corn premium year over year.

Our crop-hail program is a private offering. Premium is earned on the crop-hail program over the coverage period of the policy. Given the very short nature of the growing season, most crop-hail business is typically written in the second and third quarters with the earned premium also more heavily occurring during this time frame. We use industry data to develop our own rates and forms for the coverage offered. The policy primarily protects farmers against yield reduction caused by hail and/or fire, and related costs such as transit to storage. We offer various deductibles to allow the grower to partially self-insure for a reduced premium cost. We limit our crop-hail exposures through the use of township liability limits and third-party proportional and stop-loss reinsurance on our net retained hail business.

Liquidity

We anticipate that positive cash flows from operations (underwriting activities and investment income) should be sufficient to cover cash outflows under most loss scenarios for the near term. In addition to cash from operations, routine sales of investments, and financing arrangements, we have agreements with a third-party bank provider which implemented two international multi-currency notional cash pooling programs to enhance cash management efficiency during periods of short-term timing mismatches between expected inflows and outflows of cash by currency. The programs allow us to optimize investment income by avoiding portfolio disruption. Should the need arise, we generally have access to capital markets and an available $1.5 billion letter of credit/revolver facility. At June 30, 2017 , our usage of this letter of credit was $376 million . Our access to funds under an existing credit facility is dependent on the ability of the bank that is a party to the facility to meet its funding commitments. Our existing credit facility has a remaining term expiring in November 2017 and requires that we maintain certain financial covenants, all of which we met at June 30, 2017 . Should our existing credit provider experience financial difficulty, we may be required to replace credit sources, possibly in a difficult market. If we cannot obtain adequate capital or sources of credit on favorable terms, on a timely basis, or at all, our business, operating results, and financial condition could be adversely affected. To date, we have not experienced difficulty accessing our credit facility . Refer to “Credit Facilities” in our 2016 Form 10-K for additional information.

The payment of dividends or other statutorily permissible distributions from our operating companies are subject to the laws and regulations applicable to each jurisdiction, as well as the need to maintain capital levels adequate to support the insurance and reinsurance operations, including financial strength ratings issued by independent rating agencies. During the six months ended June 30, 2017 , we were able to meet all of our obligations, including the payments of dividends on our Common Shares, with our net cash flows.

We assess which subsidiaries to draw dividends from based on a number of factors. Considerations such as regulatory and legal restrictions as well as the subsidiary’s financial condition are paramount to the dividend decision. Chubb Limited received dividends of $450 million and $875 million from its Bermuda subsidiaries during the six months ended June 30, 2017 and 2016, respectively. Chubb Limited received dividends of $5.0 billion from its Bermuda subsidiaries in 2015, of which $2.7 billion were paid in 2015, while the remaining $2.3 billion were paid during the first quarter of 2016. These dividends were used to finance a portion of the Chubb Corp acquisition by making capital contributions to Chubb INA and Chubb Group Holdings, both subsidiaries of Chubb Limited.

The payment of any dividends from CGM or its subsidiaries is subject to applicable U.K. insurance laws and regulations. In addition, the release of funds by Syndicate 2488 to subsidiaries of CGM is subject to regulations promulgated by the Society of Lloyd’s. The U.S. insurance subsidiaries of Chubb INA Holdings Inc. (Chubb INA) may pay dividends, without prior regulatory approval, subject to restrictions set out in state law of the subsidiary’s domicile (or, if applicable, commercial domicile). Chubb INA’s international subsidiaries are also subject to insurance laws and regulations particular to the countries in which the subsidiaries operate. These laws and regulations sometimes include restrictions that limit the amount of dividends payable without prior approval of regulatory insurance authorities. Chubb Limited received no dividends from CGM or Chubb INA during

the six months ended June 30, 2017 and 2016 . Debt issued by Chubb INA is serviced by statutorily permissible distributions by Chubb INA's insurance subsidiaries to Chubb INA as well as other group resources. Chubb INA received dividends of $1.6 billion and $1.2 billion from its subsidiaries during the six months ended June 30, 2017 and 2016, respectively.

Chubb INA received $1.0 billion in capital contributions from Chubb Limited and $4.2 billion from Chubb Group Holdings during the six months ended June 30, 2016. Chubb INA also received $5.1 billion in capital contributions in 2015, of which $2.8 billion were paid in 2015, while the remaining $2.3 billion were paid in 2016. $5.0 billion of these capital contributions were sourced from the dividends from the Bermuda subsidiaries to fund the Chubb Corp acquisition as noted above.

Cash Flows

Our sources of liquidity include cash from operations, routine sales of investments, and financing arrangements. The following is a discussion of our cash flows for the six months ended June 30, 2017 and 2016 .

Operating cash flows were $1.6 billion in the six months ended June 30, 2017 , compared to $2.2 billion in the prior year period. The decrease in operating cash flow is due to higher taxes paid of $251 million in 2017, reflecting the timing of required estimated tax payments and balances due on prior years. Additionally, the 2016 tax payments were lower, reflecting the benefit from overpayments of taxes in 2015. Higher claims paid in 2017 compared to the prior year also reduced operating cash flow.

Cash from investing was $104 million in the six months ended June 30, 2017 , compared to cash used for investing of $2.7 billion in the prior year period. The prior year included $14.3 billion for the purchase of Chubb Corp, which was largely funded by sales in our investment portfolio, including net proceeds in short-term investments. Cash used for financing was $1,443 million in the six months ended June 30, 2017 , compared to $269 million in the prior year period. The current year included $500 million of repayments of long-term debt and $475 million of share repurchases. In addition, dividends paid in the current year were $646 million compared to $530 million in the prior year reflecting our higher outstanding share count following the Chubb Corp acquisition. The dividends paid in January 2016 were based on shareholders of record at December 31, 2015, which was prior to the issuance of 137 million shares in connection with the closing of the Chubb Corp acquisition on January 14, 2016.

Both internal and external forces influence our financial condition, results of operations, and cash flows. Claim settlements, premium levels, and investment returns may be impacted by changing rates of inflation and other economic conditions. In many cases, significant periods of time, ranging up to several years or more, may lapse between the occurrence of an insured loss, the reporting of the loss to us, and the settlement of the liability for that loss.

In the current low interest rate environment, we use repurchase agreements as a low-cost alternative for short-term funding needs and to address short-term cash timing differences without disrupting our investment portfolio holdings. At June 30, 2017 , there were $ 1.4 billion in repurchase agreements outstanding with various maturities over the next 7 months.

Capital Resources

Capital resources consist of funds deployed or available to be deployed to support our business operations.

(in millions of U.S. dollars, except for ratios)		**June 30 2017**		December 31 2016
Short-term debt	**$**	**922**	$	500
Long-term debt		**11,667**		12,610
Total financial debt		**12,589**		13,110
Trust preferred securities		**308**		308
Total shareholders' equity		**50,349**		48,275
Total capitalization	**$**	**63,246**	$	61,693
Ratio of financial debt to total capitalization		**19.9%**		21.3%
Ratio of financial debt plus trust preferred securities to total capitalization		**20.4%**		21.8%

Repurchase agreements are excluded from the table above and are disclosed separately from short-term debt in the Consolidated balance sheets. The repurchase agreements are collateralized borrowings where we maintain the right and ability

to redeem the collateral on short notice, unlike short-term debt which comprises the current maturities of our long-term debt instruments.

As part of the Chubb Corp acquisition on January 14, 2016, we assumed Chubb Corp's senior and subordinated debt obligations, totaling $3.3 billion par value (fair valued at $3.8 billion at the acquisition date), which is guaranteed by Chubb Limited. Included in the debt obligations are junior subordinated capital securities of $1.0 billion. Prior to April 15, 2017, these securities carried a fixed interest rate of 6.375 percent. Effective April 15, 2017, these securities bear interest at a rate equal to the three-month LIBOR plus 2.25 percentage points. The current interest rate, at the time of this filing, on these securities is 3.55 percent. The scheduled maturity date for these securities is April 15, 2037.

In February 2017, Chubb INA Holdings Inc.'s $ 500 million of 5.7 percent senior notes matured and were fully paid. In 2017, we reclassified $300 million of the 5.8 percent senior notes (due to mature in March 2018), and $600 million of the 5.75 percent senior notes (due to mature in May 2018) from Long-term debt to Short-term debt in the Consolidated balance sheets.

For the six months ended June 30, 2017, we repurchased $475 million of Common Shares in a series of open market transactions under the Board of Directors (Board) share repurchase authorization. At June 30, 2017 , there were 14,408,723 Common Shares in treasury with a weighted average cost of $116.25 per share. For the period July 1, 2017 through August 2, 2017, we repurchased 501,872 Common Shares for a total of $72 million in a series of open market transactions. At August 2, 2017, $453 million in share repurchase authorization remained through December 31, 2017.

We generally maintain the ability to issue certain classes of debt and equity securities via an unlimited Securities and Exchange Commission (SEC) shelf registration which is renewed every three years. This allows us capital market access for refinancing as well as for unforeseen or opportunistic capital needs. Our current shelf registration on file with the SEC expires in October 2018.

Dividends

We have paid dividends each quarter since we became a public company in 1993. Under Swiss law, dividends must be stated in Swiss francs though dividend payments are made by Chubb in U.S. dollars. Refer to Note 7 to the Consolidated Financial Statements for a discussion of our dividend methodology.

At our May 2017 annual general meeting, our shareholders approved an annual dividend for the following year of up to $2.84 per share, or CHF 2.78 per share, calculated using the USD/CHF exchange rate as published in the Wall Street Journal on May 18, 2017, expected to be paid in four quarterly installments of $0.71 per share after the general meeting by way of a distribution from capital contribution reserves, transferred to free reserves for payment. The Board will determine the record and payment dates at which the annual dividend may be paid until the date of the 2018 annual general meeting, and is authorized to abstain from distributing a dividend at their discretion. The annual dividend approved in May 2017 represented an $0.08 per share increase ($0.02 per quarter) over the prior year dividend.

The following table represents dividends paid per Common Share to shareholders of record on each of the following dates:

Shareholders of record as of:	Dividends paid as of:	
December 30, 2016	January 20, 2017	$0.69 (CHF 0.69)
March 31, 2017	April 21, 2017	$0.69 (CHF 0.69)
June 30, 2017	July 21, 2017	$0.71 (CHF 0.69)

ITEM 3. Quantitative and Qualitative Disclosures about Market Risk

Refer to Item 7A included in our 2016 Form 10-K.

Foreign currency management

As a global company, Chubb entities transact business in multiple currencies. Our policy is to generally match assets, liabilities and required capital for each individual jurisdiction in local currency, which would include the use of derivatives. We do not hedge our net asset non-U.S. dollar capital positions; however, we do consider hedging for planned cross border transactions. For an estimated impact of foreign currency movement on our net assets denominated in non-U.S. currencies, refer to Item 7A in our 2016 Form 10-K. This information will be updated and disclosed in interim filings if our net assets in non-U.S. currencies change materially from the December 31, 2016 balances disclosed in the 2016 Form 10-K.

Reinsurance of GMDB and GLB guarantees

Chubb views its variable annuity reinsurance business as having a similar risk profile to that of catastrophe reinsurance with the probability of long-term economic loss relatively small, at the time of pricing. Adverse changes in market factors and policyholder behavior will have an impact on both life underwriting income and net income. When evaluating these risks, we expect to be compensated for taking both the risk of a cumulative long-term economic net loss, as well as the short-term accounting variations caused by these market movements. Therefore, we evaluate this business in terms of its long-term economic risk and reward.

Net income is directly impacted by changes in benefit reserves calculated in connection with reinsurance of variable annuity guarantees, primarily GMDB and GLB. In addition, net income is directly impacted by changes in the fair value of the GLB liability (FVL), which is classified as a derivative for accounting purposes. The FVL established for a GLB reinsurance contract represents the difference between the fair value of the contract and the benefit reserves. Benefit reserves and FVL calculations are directly affected by market factors, including equity levels, interest rate levels, credit risk, and implied volatilities, as well as policyholder behaviors, such as annuitization and lapse rates.

The tables below are estimates of the sensitivities to instantaneous changes in economic inputs (e.g., equity shock, interest rate shock etc.) or actuarial assumptions at June 30, 2017 of the FVL and of the fair value of specific derivative instruments held (hedge value) to partially offset the risk in the variable annuity guarantee reinsurance portfolio. The following assumptions should be considered when using the below tables:

- No changes to the benefit ratio used to establish benefit reserves at June 30, 2017
- Equity shocks impact all global equity markets equally
  - Our liabilities are sensitive to global equity markets in the following proportions: 75 percent— 85 percent U.S. equity, 10 percent— 20 percent international equity ex-Japan, up to 10 percent Japan equity.
  - Our current hedge portfolio is sensitive to global equity markets in the following proportions: 100 percent U.S. equity.
  - We would suggest using the S&P 500 index as a proxy for U.S. equity, the MSCI EAFE index as a proxy for international equity, and the TOPIX as a proxy for Japan equity.
- Interest rate shocks assume a parallel shift in the U.S. yield curve
  - Our liabilities are also sensitive to global interest rates at various points on the yield curve, mainly the U.S. Treasury curve in the following proportions: up to 10 percent short-term rates (maturing in less than 5 years), 15 percent— 25 percent medium-term rates (maturing between 5 years and 10 years, inclusive), and 70 percent— 80 percent long-term rates (maturing beyond 10 years).
  - A change in AA-rated credit spreads (AA-rated credit spreads are a proxy for both our own credit spreads and the credit spreads of the ceding insurers) impacts the rate used to discount cash flows in the fair value model.
- The hedge sensitivity is from June 30, 2017 market levels.
- The sensitivities are not directly additive because changes in one factor will affect the sensitivity to changes in other factors. The sensitivities do not scale linearly and may be proportionally greater for larger movements in the market factors. The sensitivities may also vary due to foreign exchange rate fluctuations. The calculation of the FVL is based on internal models that include assumptions regarding future policyholder behavior, including lapse, annuitization, and asset allocation. These assumptions impact both the absolute level of the FVL as well as the sensitivities to changes in market factors shown below. Actual sensitivity of our net income may differ from those disclosed in the tables below due to differences between short-term market movements and management judgment regarding the long-term assumptions implicit in our benefit ratios. Furthermore, the sensitivities below could vary by multiples of the sensitivities in the tables below.
- In addition, the tables below do not reflect the expected quarterly run rate of net income generated by the variable annuity guarantee reinsurance portfolio if markets remain unchanged during the period. All else equal, if markets remain unchanged during the period, the Gross FVL will increase, resulting in a realized loss. The realized loss occurs primarily because, during the period, we will collect premium on the full population while only 69 percent of that population has become eligible to annuitize and generate a claim (since approximately 31 percent of policies are not eligible to annuitize until after June 30, 2017). This increases the Gross FVL because future premiums are lower by the amount collected in the quarter, and also because future claims are discounted for a shorter period. We refer to this increase in Gross FVL as “timing

effect". The unfavorable impact of timing effect on our Gross FVL in a quarter is not reflected in the sensitivity tables below. For this reason, when using the tables below to estimate the sensitivity of Gross FVL in the third quarter to various changes, it is necessary to assume an additional $5 million to $45 million increase in Gross FVL and realized losses. However, the impact to Net income is substantially mitigated because the majority of this realized loss is offset by the positive quarterly run rate of Life underwriting income generated by the variable annuity guarantee reinsurance portfolio if markets remain unchanged during the period. Note that both the timing effect and the quarterly run rate of Life underwriting income change over time as the book ages.

Interest Rate Shock		Worldwide Equity Shock					
(in millions of U.S. dollars)		+10%	Flat	-10%	-20%	-30%	-40%
+100 bps	(Increase)/decrease in Gross FVL	$ 330	$ 228	$ 38	$ (221)	$ (538)	$ (909)
	Increase/(decrease) in hedge value	(142)	—	142	285	427	570
	Increase/(decrease) in net income	$ 188	$ 228	$ 180	$ 64	$ (111)	$ (339)
Flat	(Increase)/decrease in Gross FVL	$ 190	$ —	$ (242)	$ (546)	$ (906)	$ (1,315)
	Increase/(decrease) in hedge value	(142)	—	142	285	427	570
	Increase/(decrease) in net income	$ 48	$ —	$ (100)	$ (261)	$ (479)	$ (745)
-100 bps	(Increase)/decrease in Gross FVL	$ (88)	$ (319)	$ (604)	$ (947)	$ (1,341)	$ (1,770)
	Increase/(decrease) in hedge value	(142)	—	142	285	427	570
	Increase/(decrease) in net income	$ (230)	$ (319)	$ (462)	$ (662)	$ (914)	$ (1,200)

Sensitivities to Other Economic Variables	AA-rated Credit Spreads		Interest Rate Volatility		Equity Volatility	
(in millions of U.S. dollars)	+100 bps	-100 bps	+2%	-2%	+2%	-2%
(Increase)/decrease in Gross FVL	$ 73	$ (83)	$ —	$ —	$ (10)	$ 9
Increase/(decrease) in hedge value	—	—	—	—	—	—
Increase/(decrease) in net income	$ 73	$ (83)	$ —	$ —	$ (10)	$ 9

Sensitivities to Actuarial Assumptions	Mortality			
(in millions of U.S. dollars)	+20%	+10%	-10%	-20%
(Increase)/decrease in Gross FVL	$ 29	$ 14	$ (15)	$ (30)
Increase/(decrease) in hedge value	—	—	—	—
Increase/(decrease) in net income	$ 29	$ 14	$ (15)	$ (30)

	Lapses			
(in millions of U.S. dollars)	+50%	+25%	-25%	-50%
(Increase)/decrease in Gross FVL	$ 110	$ 58	$ (64)	$ (136)
Increase/(decrease) in hedge value	—	—	—	—
Increase/(decrease) in net income	$ 110	$ 58	$ (64)	$ (136)

	Annuitization			
(in millions of U.S. dollars)	+50%	+25%	-25%	-50%
(Increase)/decrease in Gross FVL	$ (413)	$ (223)	$ 227	$ 415
Increase/(decrease) in hedge value	—	—	—	—
Increase/(decrease) in net income	$ (413)	$ (223)	$ 227	$ 415

ITEM 4. Controls and Procedures

Chubb's management, with the participation of Chubb's Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of Chubb's disclosure controls and procedures as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934 as of June 30, 2017. Based upon that evaluation, Chubb's Chief Executive Officer and Chief Financial Officer concluded that Chubb's disclosure controls and procedures are effective in allowing information required to be disclosed in reports filed under the Securities and Exchange Act of 1934 to be recorded, processed, summarized, and reported within time periods specified in the rules and forms of the SEC, and that such information is accumulated and communicated to Chubb's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

In 2016, Chubb completed the acquisition of The Chubb Corporation. During the three months ended June 30, 2017, we continued to integrate the information technology environments of the two companies. There were no other changes to Chubb's internal controls over financial reporting during the three months ended June 30, 2017 that have materially affected, or are reasonably likely to materially affect, Chubb's internal controls over financial reporting.

PART II OTHER INFORMATION

ITEM 1. Legal Proceedings

The information required with respect to this item is included in Note 6 g) to the Consolidated Financial Statements which is hereby incorporated by reference.

ITEM 1A. Risk Factors

Refer to "Risk Factors" under Item 1A of Part I of our 2016 Form 10-K. There have been no material changes to the risk factors disclosed in Item 1A of Part I of our 2016 Form 10-K.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds and Issuer Repurchases of Equity Securities

Issuer's Repurchases of Equity Securities

The following table provides information with respect to purchases by Chubb of its Common Shares during the three months ended June 30, 2017 :

Period	Total Number of Shares Purchased [1]	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan [2]	Approximate Dollar Value of Shares that May Yet be Purchased Under the Plan [3]
April 1 through April 30	586,714	$ 137.41	544,301	$ 786 million
May 1 through May 31	1,174,101	$ 138.96	1,056,924	$ 639 million
June 1 through June 30	787,154	$ 145.22	780,341	$ 525 million
Total	2,547,969	$ 140.54	2,381,566	

(1) This column represents open market share repurchases and the surrender to Chubb of Common Shares to satisfy tax withholding obligations in connection with the vesting of restricted stock issued to employees and the exercising of options by employees.

(2) The aggregate value of shares repurchased in the three months ended June 30, 2017 as part of the publicly announced plan was $ 335 million .

(3) Refer to Note 7 to the Consolidated Financial Statements for more information on the Chubb Limited securities repurchase authorization. For the period July 1, 2017 through August 2, 2017, we repurchased 501,872 Common Shares for a total of $72 million in a series of open market transactions. At August 2, 2017, $453 million in share repurchase authorization remained through December 31, 2017.

ITEM 6. Exhibits

Refer to the Exhibit Index.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CHUBB LIMITED
(Registrant)

August 3, 2017

/s/ Evan G. Greenberg

Evan G. Greenberg
Chairman, President and Chief Executive Officer

August 3, 2017

/s/ Philip V. Bancroft

Philip V. Bancroft
Executive Vice President and Chief Financial Officer

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Original Number	Date Filed	
3.1	Articles of Association of the Company, as amended	8-K	3.1	May 20, 2016	
3.2	Organizational Regulations of the Company, as amended	8-K	3.1	November 21, 2016	
4.1	Articles of Association of the Company, as amended	8-K	4.1	May 20, 2016	
4.2	Organizational Regulations of the Company, as amended	8-K	3.1	November 21, 2016	
10.1*	Director Restricted Stock Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan				X
31.1	Certification Pursuant to Section 302 of The Sarbanes-Oxley Act of 2002				X
31.2	Certification Pursuant to Section 302 of The Sarbanes-Oxley Act of 2002				X
32.1	Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of The Sarbanes-Oxley Act of 2002				X
32.2	Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of The Sarbanes-Oxley Act of 2002				X
101.1	The following financial information from Chubb Limited's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017 formatted in XBRL: (i) Consolidated Balance Sheets at June 30, 2017, and December 31, 2016; (ii) Consolidated Statements of Operations and Comprehensive Income for the three and six months ended June 30, 2017 and 2016; (iii) Consolidated Statements of Shareholders' Equity for the six months ended June 30, 2017 and 2016; (iv) Consolidated Statements of Cash Flows for the six months ended June 30, 2017 and 2016; and (v) Notes to Consolidated Financial Statements				X

* Management Contract or Compensation Plan

Exhibit 10.1

Chubb Limited
Director Restricted Stock Award Terms
under the
Chubb Limited 2016 Long-Term Incentive Plan

The Participant has been granted a Restricted Stock Award by Chubb Limited (the "Company") under the Chubb Limited 2016 Long-Term Incentive Plan (the "Plan"). The Restricted Stock Award shall be subject to the following Restricted Stock Award Terms:

1. Terms of Award . The following words and phrases used in these Restricted Stock Award Terms shall have the meanings set forth in this paragraph 1:

(a) The "Participant" is **[Insert Name]** .
(b) The "Grant Date" is **[Insert Date]** .
(c) The number of "Covered Shares" is **[Insert Number]** .

Other words and phrases used in these Restricted Stock Award Terms are defined in paragraph 9 or elsewhere in these Restricted Stock Award Terms.

2. Restricted Period . Subject to the limitations of these Restricted Stock Award Terms, the "Restricted Period" for the Covered Shares shall begin on the day of the annual shareholders' meeting held in **201X** and end on the day before the annual shareholders' meeting held in the immediately following year. Notwithstanding the foregoing, the Restricted Period shall end earlier to the extent set forth below:

(a) The Restricted Period shall end upon the Date of Termination, if the Date of Termination occurs by reason of the Participant's death.
(b) The Restricted Period shall end upon the Date of Termination, if the Date of Termination occurs by reason of the Participant's Long-Term Disability.
(c) The Restricted Period shall end upon a Change in Control, provided that such Change in Control occurs on or before the Date of Termination.

3. Transfer and Forfeiture of Shares . Except as otherwise determined by the Committee in its sole discretion, the Participant shall forfeit the Covered Shares as of the Participant's Date of Termination, if such Date of Termination occurs prior to the end of the Restricted Period. If the Participant's Date of Termination has not occurred prior to the last day of the Restricted Period, then, at the end of such Restricted Period, the Covered Shares shall be transferred to the Participant free of all restrictions. For the avoidance of doubt, if the Date of Termination is the last day of the Restricted Period, the Covered Shares shall be transferred free of restrictions in accordance with the immediately preceding sentence.

4. Withholding. All deliveries and distributions under these Restricted Stock Award Terms are subject to withholding of all applicable taxes to the extent, if any, that such withholding is required. At the election of the Participant, and subject to such rules and limitations as may be established by the Committee from time to time, such withholding obligations may be satisfied through the surrender of shares of Stock which the Participant already owns, or to which the Participant is otherwise entitled under the Plan; provided, however, that such shares may be used to satisfy not more than the Company's minimum statutory withholding obligation (based on minimum statutory withholding rates for Federal and state tax purposes, including payroll taxes, that are applicable to such supplemental taxable income).

5. Transferability . Except as otherwise provided by the Committee, the Covered Shares may not be sold, assigned, transferred, pledge or otherwise encumbered during the Restricted Period.

6. Dividends . The Participant shall be entitled to receive any dividends and distributions paid with respect to the Covered Shares that become payable or distributable during the Restricted Period (other than extraordinary dividends or distributions, as determined by the Committee); provided, however, that no dividends or distributions shall be payable or distributable to or for the benefit of the Participant for Covered Shares with respect to record dates occurring prior to the Grant Date, or with respect to record dates occurring on or after the date, if any, on which the Participant has forfeited those Covered Shares. Extraordinary dividends or distributions shall be vested in accordance with the same schedule as the shares to which such extraordinary dividends or distributions are attributable.

7. Voting . The Participant shall be entitled to vote the Covered Shares during the Restricted Period to the same extent as would have been applicable to the Participant if the Participant was then vested in the shares; provided, however, that the Participant shall not be entitled to vote the shares with respect to record dates for such voting rights arising prior to the Grant Date, or with respect to record dates occurring on or after the date, if any, on which the Participant has forfeited those Covered Shares.

8. Deposit of Covered Shares . Each certificate issued in respect of the Covered Shares granted under these Restricted Stock Award Terms shall be registered in the name of the Participant and, in the discretion of the Committee, may be held by the Company or a Related Company or deposited in a bank designated by the Committee. During the Restricted Period, certificates evidencing the Restricted Stock may be imprinted with the following legend: "The securities

evidenced by this certificate are subject to the transfer restrictions, forfeiture restrictions and other provisions of the Restricted Stock Award Terms dated **[Insert Date]** between the Company and the Participant.

9. Definitions. For purposes of these Restricted Stock Award Terms, words and phrases shall be defined as follows:

(a) Change in Control. The term "Change in Control" shall be defined as set forth in the Plan.

(b) Date of Termination. The "Date of Termination" means the date the Director resigns or otherwise ceases to perform services as a Director for the Company or a Related Company for any reason.

(c) Director. The term "Director" means a member of the Board who is not an employee of the Company or a Related Company.

(d) Long-Term Disability. A Participant shall be considered to have a "Long-Term Disability" if the Committee determines, using standards comparable to those used in any long-term disability plan of the Company, that the Participant would be eligible for long-term disability benefits if he or she participated in such plan.

(e) Plan Definitions. Except where the context clearly implies or indicates the contrary, a word, term, or phrase used in the Plan is similarly used in these Restricted Stock Award Terms.

10. Heirs and Successors. These Restricted Stock Award Terms shall be binding upon, and inure to the benefit of, the Company and its successors and assigns, and upon any person acquiring, whether by merger, consolidation, purchase of assets or otherwise, all or substantially all of the Company's assets and business. If any benefits deliverable to the Participant under these Restricted Stock Award Terms have not been delivered at the time of the Participant's death, such benefits shall be delivered to the Designated Beneficiary, in accordance with the provisions of these Restricted Stock Award Terms and the Plan. The "Designated Beneficiary" shall be the beneficiary or beneficiaries designated by the Participant in a writing filed with the Committee in such form and at such time as the Committee shall require. If a deceased Participant fails to designate a beneficiary, or if the Designated Beneficiary does not survive the Participant, any rights that would have been exercisable by the Participant and any benefits distributable to the Participant shall be distributed to the legal representative of the estate of the Participant. If a deceased Participant designates a beneficiary and the Designated Beneficiary survives the Participant but dies before the complete distribution of benefits to the Designated Beneficiary under these Restricted Stock Award Terms, then any benefits distributable to the Designated Beneficiary shall be distributed to the legal representative of the estate of the Designated Beneficiary.

11. Administration. The authority to manage and control the operation and administration of these Restricted Stock Award Terms shall be vested in the Committee, and the Committee shall have all powers with respect to these Restricted Stock Award Terms as it has with respect to the Plan. Any interpretation of these Restricted Stock Award Terms by the Committee and any decision made by it with respect to these Restricted Stock Award Terms are final and binding on all persons.

12. Plan Governs. Notwithstanding anything in these Restricted Stock Award Terms to the contrary, these Restricted Stock Award Terms shall be subject to the terms of the Plan, a copy of which may be obtained by the Participant from the office of the Secretary of the Company; and these Restricted Stock Award Terms are subject to all interpretations, amendments, rules and regulations promulgated by the Committee from time to time pursuant to the Plan.

13. Not An Employment Contract. The Restricted Stock Award will not confer on the Participant any right with respect to continuance of employment or other service with the Company or any Related Company, nor will it interfere in any way with any right the Company or any Related Company would otherwise have to terminate or modify the terms of such Participant's employment or other service at any time.

14. Notices. Any written notices provided for in these Restricted Stock Award Terms or the Plan shall be in writing and shall be deemed sufficiently given if either hand delivered or if sent by fax or overnight courier, or by postage paid first class mail. Notices sent by mail shall be deemed received three business days after mailing but in no event later than the date of actual receipt. Notices shall be directed, if to the Participant, at the Participant's address indicated by the Company's records, or if to the Company, at the Company's principal executive office.

15. Fractional Shares. In lieu of issuing a fraction of a share, resulting from an adjustment of the Restricted Stock Award pursuant to paragraph 5.2(f) of the Plan or otherwise, the Company will be entitled to pay to the Participant an amount equal to the fair market value of such fractional share.

16. Amendment. The Restricted Stock Award Terms may be amended in accordance with the provisions of the Plan, and may otherwise be amended by written agreement of the Participant and the Company without the consent of any other person.

IN WITNESS WHEREOF, the Company has caused these presents to be executed in its name and on its behalf, all as of the Grant Date.

CHUBB LIMITED

By:
Its:

I hereby agree to all the terms, restrictions and conditions set forth in the Agreement:

Participant

Exhibit 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Evan G. Greenberg, certify that:

1) I have reviewed this quarterly report on Form 10-Q of Chubb Limited;

2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 3, 2017

/s/ Evan G. Greenberg

Evan G. Greenberg

Chairman, President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION PURSUANT TO
SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Philip V. Bancroft, certify that:

1) I have reviewed this quarterly report on Form 10-Q of Chubb Limited;

2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 3, 2017

/s/ Philip V. Bancroft

Philip V. Bancroft

Executive Vice President and Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The undersigned officer of Chubb Limited (the Corporation) hereby certifies that the Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, fully complies with the applicable reporting requirements of Section 13(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a)) and that the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

Dated: August 3, 2017

/s/ Evan G. Greenberg

Evan G. Greenberg

Chairman, President and Chief Executive Officer

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The undersigned officer of Chubb Limited (the Corporation) hereby certifies that the Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, fully complies with the applicable reporting requirements of Section 13(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a)) and that the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

Dated: August 3, 2017

/s/ Philip V. Bancroft

Philip V. Bancroft

Executive Vice President and Chief Financial Officer