ARCH CAPITAL GROUP LTD.
Form 10-Q
August 04, 2017

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

x 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

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

Commission file number: 001-16209

ARCH CAPITAL GROUP LTD.
(Exact name of registrant as specified in its charter)

Bermuda	Not applicable
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
Waterloo House, Ground Floor	
100 Pitts Bay Road, Pembroke HM 08, Bermuda	(441) 278-9250
(Address of principal executive offices)	(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 þ No o
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 þ No o
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting 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 þ Accelerated Filer o Non-accelerated Filer o Smaller reporting
company o Emerging growth company o
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. o
Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No þ

As of August 1, 2017, there were 130,740,860 common shares, $0.0033 par value per share, of the registrant outstanding.

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ARCH CAPITAL GROUP LTD.

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PART I. FINANCIAL INFORMATION

Cautionary Note Regarding Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 (“PSLRA”) provides a “safe harbor” for forward-looking statements. This release or any other written or oral statements made by or on behalf of us may include forward-looking statements, which reflect our current views with respect to future events and financial performance. All statements other than statements of historical fact included in or incorporated by reference in this release are forward-looking statements. Forward-looking statements, for purposes of the PSLRA or otherwise, can generally be identified by the use of forward-looking terminology such as “may,” “will,” “expect,” “intend,” “estimate,” “anticipate,” “believe” or “continue” or similar statements of a future or forward-looking nature or their negative or variations or similar terminology. Forward-looking statements involve our current assessment of risks and uncertainties. Actual events and results may differ materially from those expressed or implied in these statements. Important factors that could cause actual events or results to differ materially from those indicated in such statements are discussed below and elsewhere in this release and in our periodic reports filed with the Securities and Exchange Commission (the “SEC”), and include:

- our ability to successfully implement our business strategy during “soft” as well as “hard” markets;
- acceptance of our business strategy, security and financial condition by rating agencies and regulators, as well as by brokers and our insureds and reinsureds;
- the integration of United Guaranty and any other businesses we have acquired or may acquire into our existing operations;
- our ability to maintain or improve our ratings, which may be affected by our ability to raise additional equity or debt financings, by ratings agencies’ existing or new policies and practices, as well as other factors described herein;
- general economic and market conditions (including inflation, interest rates, foreign currency exchange rates, prevailing credit terms and the depth and duration of a recession) and conditions specific to the reinsurance and insurance markets (including the length and magnitude of the current “soft” market) in which we operate;
- competition, including increased competition, on the basis of pricing, capacity (including alternative forms of capital), coverage terms or other factors;
- developments in the world’s financial and capital markets and our access to such markets;
- our ability to successfully enhance, integrate and maintain operating procedures (including information technology) to effectively support our current and new business;
- the loss of key personnel;
- accuracy of those estimates and judgments utilized in the preparation of our financial statements, including those related to revenue recognition, insurance and other reserves, reinsurance recoverables, investment valuations, intangible assets, bad debts, income taxes, contingencies and litigation, and any determination to use the deposit method of accounting, which for a relatively new insurance and reinsurance company, like our company, are even more difficult to make than those made in a mature company since relatively limited historical information has been reported to us through June 30, 2017;
- greater than expected loss ratios on business written by us and adverse development on claim and/or claim expense liabilities related to business written by our insurance and reinsurance subsidiaries;
- severity and/or frequency of losses;
- claims for natural or man-made catastrophic events in our insurance or reinsurance business could cause large losses and substantial volatility in our results of operations;
- acts of terrorism, political unrest and other hostilities or other unforecasted and unpredictable events;
- availability to us of reinsurance to manage our gross and net exposures and the cost of such reinsurance;
- the failure of reinsurers, managing general agents, third party administrators or others to meet their obligations to us;
- the timing of loss payments being faster or the receipt of reinsurance recoverables being slower than anticipated by us;
- our investment performance, including legislative or regulatory developments that may adversely affect the fair value of our investments;

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- changes in general economic conditions, including new or continued sovereign debt concerns in Eurozone countries or downgrades of U.S. securities by credit rating agencies, which could affect our business, financial condition and results of operations;
- the volatility of our shareholders' equity from foreign currency fluctuations, which could increase due to us not matching portions of our projected liabilities in foreign currencies with investments in the same currencies;
- losses relating to aviation business and business produced by a certain managing underwriting agency for which we may be liable to the purchaser of our prior reinsurance business or to others in connection with the May 5, 2000 asset sale described in our periodic reports filed with the SEC;
- changes in accounting principles or policies or in our application of such accounting principles or policies;
- changes in the political environment of certain countries in which we operate or underwrite business;
- statutory or regulatory developments, including as to tax policy and matters and insurance and other regulatory matters such as the adoption of proposed legislation that would affect Bermuda-headquartered companies and/or Bermuda-based insurers or reinsurers and/or changes in regulations or tax laws applicable to us, our subsidiaries, brokers or customers; and
- the other matters set forth under Item 1A "Risk Factors", Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" and other sections of our Annual Report on Form 10-K for the year ended December 31, 2016, as well as the other factors set forth in our other documents on file with the SEC, and management's response to any of the aforementioned factors.

All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements. The foregoing review of important factors should not be construed as exhaustive and should be read in conjunction with other cautionary statements that are included herein or elsewhere. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

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ITEM 1. CONSOLIDATED FINANCIAL STATEMENTS

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Arch Capital Group Ltd.:

We have reviewed the accompanying consolidated balance sheet of Arch Capital Group Ltd. and its subsidiaries (the "Company") as of June 30, 2017, and the related consolidated statements of income and comprehensive income for the three-month and six-month periods ended June 30, 2017 and June 30, 2016, and the consolidated statements of changes in shareholders' equity and cash flows for the six-month periods ended June 30, 2017 and June 30, 2016. These interim financial statements are the responsibility of the Company's management.

We conducted our review in accordance with the standards of the Public Company Accounting Oversight Board (United States). A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States), the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our review, we are not aware of any material modifications that should be made to the accompanying consolidated interim financial statements for them to be in conformity with accounting principles generally accepted in the United States of America.

We previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet as of December 31, 2016, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity, and cash flows for the year then ended (not presented herein), and in our report dated March 1, 2017, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying consolidated balance sheet as of December 31, 2016, is fairly stated, in all material respects in relation to the consolidated balance sheet from which it has been derived.

/s/ PricewaterhouseCoopers LLP

August 4, 2017

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ARCH CAPITAL GROUP LTD. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(U.S. dollars in thousands, except share data)

	(Unaudited) June 30, 2017	December 31, 2016
Assets		
Investments:		
Fixed maturities available for sale, at fair value (amortized cost: $13,626,639 and $13,522,671)	$13,671,011	$13,426,577
Short-term investments available for sale, at fair value (amortized cost: $914,032 and $611,878)	914,356	612,005
Collateral received under securities lending, at fair value (amortized cost: $627,852 and $762,554)	627,843	762,565
Equity securities available for sale, at fair value (cost: $389,745 and $475,085)	461,017	518,041
Other investments available for sale, at fair value (cost: $208,941 and $149,077)	248,661	167,970
Investments accounted for using the fair value option	3,827,408	3,421,220
Investments accounted for using the equity method	948,856	811,273
Total investments	20,699,152	19,719,651
Cash	740,320	842,942
Accrued investment income	108,562	124,483
Securities pledged under securities lending, at fair value (amortized cost: $610,355 and $746,409)	610,121	744,980
Premiums receivable	1,314,564	1,072,435
Reinsurance recoverable on unpaid and paid losses and loss adjustment expenses	2,155,107	2,114,138
Contractholder receivables	1,826,966	1,717,436
Ceded unearned premiums	961,330	859,567
Deferred acquisition costs	506,748	447,560
Receivable for securities sold	212,512	58,284
Goodwill and intangible assets	712,975	781,553
Other assets	1,014,282	889,080
Total assets	$30,862,639	$29,372,109
Liabilities		
Reserve for losses and loss adjustment expenses	$10,520,511	$10,200,960
Unearned premiums	3,679,651	3,406,870
Reinsurance balances payable	361,000	300,407
Contractholder payables	1,826,966	1,717,436
Collateral held for insured obligations	338,737	301,406
Senior notes	1,732,570	1,732,258
Revolving credit agreement borrowings	686,452	756,650
Securities lending payable	627,852	762,554
Payable for securities purchased	458,722	76,183
Other liabilities	648,099	806,260
Total liabilities	20,880,560	20,060,984
Commitments and Contingencies		
Redeemable noncontrolling interests	205,736	205,553

Shareholders' Equity		
Non-cumulative preferred shares	772,555	772,555
Convertible non-voting common equivalent preferred shares	489,627	1,101,304
Common shares ($0.0033 par, shares issued: 182,714,362 and 174,644,101)	609	582
Additional paid-in capital	1,196,884	531,687
Retained earnings	8,412,114	7,996,701
Accumulated other comprehensive income (loss), net of deferred income tax	78,441	(114,541)
Common shares held in treasury, at cost (shares: 52,034,403 and 51,856,584)	(2,051,343)	(2,034,570)
Total shareholders' equity available to Arch	8,898,887	8,253,718
Non-redeemable noncontrolling interests	877,456	851,854
Total shareholders' equity	9,776,343	9,105,572
Total liabilities, noncontrolling interests and shareholders' equity	$30,862,639	$29,372,109

See Notes to Consolidated Financial Statements

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ARCH CAPITAL GROUP LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(U.S. dollars in thousands, except share data)

	(Unaudited) Three Months Ended June 30, 2017	2016	(Unaudited) Six Months Ended June 30, 2017	2016
Revenues				
Net premiums written	$1,248,695	$1,023,563	$2,524,955	$2,144,798
Change in unearned premiums	(7,821)	(17,578)	(167,064)	(187,234)
Net premiums earned	1,240,874	1,005,985	2,357,891	1,957,564
Net investment income	111,124	88,338	228,998	182,073
Net realized gains (losses)	21,735	68,218	55,888	105,542
Other-than-temporary impairment losses	(1,730)	(5,395)	(3,537)	(13,132)
Less investment impairments recognized in other comprehensive income, before taxes	—	52	—	150
Net impairment losses recognized in earnings	(1,730)	(5,343)	(3,537)	(12,982)
Other underwriting income	4,822	25,224	9,455	30,271
Equity in net income (loss) of investment funds accounted for using the equity method	32,706	8,737	80,794	15,392
Other income (loss)	(1,994)	(7)	(2,776)	(32)
Total revenues	1,407,537	1,191,152	2,726,713	2,277,828
Expenses				
Losses and loss adjustment expenses	689,860	584,592	1,242,430	1,107,541
Acquisition expenses	190,436	172,677	372,725	340,515
Other operating expenses	169,981	157,314	344,700	307,462
Corporate expenses	24,876	17,200	52,668	26,583
Amortization of intangible assets	30,824	4,880	62,118	9,628
Interest expense	28,749	15,663	57,425	31,770
Net foreign exchange losses (gains)	39,543	(24,662)	58,947	(1,096)
Total expenses	1,174,269	927,664	2,191,013	1,822,403
Income before income taxes	233,268	263,488	535,700	455,425
Income tax expense	(34,169)	(14,131)	(62,566)	(30,441)
Net income	$199,099	$249,357	$473,134	$424,984
Net (income) loss attributable to noncontrolling interests	(13,932)	(38,302)	(34,840)	(59,131)
Net income available to Arch	185,167	211,055	438,294	365,853
Preferred dividends	(11,349)	(5,485)	(22,567)	(10,969)
Net income available to Arch common shareholders	$173,818	$205,570	$415,727	$354,884
Net income per common share and common share equivalent				
Basic	$1.29	$1.70	$3.10	$2.94
Diluted	$1.25	$1.65	$2.99	$2.85
Weighted average common shares and common share equivalents outstanding				

Basic	134,486,664	120,599,060	134,262,043	120,513,620
Diluted	139,244,646	124,365,596	139,140,632	124,425,126

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ARCH CAPITAL GROUP LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(U.S. dollars in thousands)

	(Unaudited) Three Months Ended June 30,		(Unaudited) Six Months Ended June 30,	
	2017	2016	2017	2016
Comprehensive Income				
Net income	$199,099	$249,357	$473,134	$424,984
Other comprehensive income (loss), net of deferred income tax				
Unrealized appreciation (decline) in value of available-for-sale investments:				
Unrealized holding gains (losses) arising during period	92,969	102,460	193,761	235,441
Portion of other-than-temporary impairment losses recognized in other comprehensive income, net of deferred income tax	—	(52)	—	(150)
Reclassification of net realized (gains) losses, net of income taxes, included in net income	(17,224)	(22,094)	(22,268)	(54,317)
Foreign currency translation adjustments	18,297	(18,151)	21,421	(838)
Comprehensive income	293,141	311,520	666,048	605,120
Net (income) loss attributable to noncontrolling interests	(13,932)	(38,302)	(34,840)	(59,131)
Foreign currency translation adjustments attributable to noncontrolling interests	76	42	68	200
Comprehensive income available to Arch	$279,285	$273,260	$631,276	$546,189

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ARCH CAPITAL GROUP LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(U.S. dollars in thousands)

	(Unaudited) Six Months Ended June 30, 2017	2016
Non-cumulative preferred shares		
Balance at beginning and end of period	$772,555	$325,000
Convertible non-voting common equivalent preferred shares		
Balance at beginning of year	1,101,304	—
Series D preferred shares issued	—	—
Series D preferred shares converted to common shares	(611,677)	—
Balance at end of period	489,627	—
Common shares		
Balance at beginning of year	582	577
Common shares issued, net	27	4
Balance at end of period	609	581
Additional paid-in capital		
Balance at beginning of year	531,687	467,339
Common shares issued, net	9,027	8,265
Series D preferred shares converted to common shares	611,653	—
Exercise of stock options	2,125	5,143
Amortization of share-based compensation	42,739	35,769
Other	(347)	1,426
Balance at end of period	1,196,884	517,942
Retained earnings		
Balance at beginning of year	7,996,701	7,332,032
Cumulative effect of an accounting change	(314)	—
Balance at beginning of year, as adjusted	7,996,387	7,332,032
Net income	473,134	424,984
Net (income) loss attributable to noncontrolling interests	(34,840)	(59,131)
Preferred share dividends	(22,567)	(10,969)
Balance at end of period	8,412,114	7,686,916
Accumulated other comprehensive income (loss), net of deferred income tax		
Balance at beginning of year	(114,541)	(16,502)
Unrealized appreciation (decline) in value of available-for-sale investments, net of deferred income tax:		
Balance at beginning of year	(27,641)	50,085
Unrealized holding gains (losses) arising during period, net of reclassification adjustment	171,493	181,124
Portion of other-than-temporary impairment losses recognized in other comprehensive income, net of deferred income tax	—	(150)
Balance at end of period	143,852	231,059
Foreign currency translation adjustments:		

Balance at beginning of year	(86,900)	(66,587)
Foreign currency translation adjustments	21,421	(838)
Foreign currency translation adjustments attributable to noncontrolling interests	68	200
Balance at end of period	(65,411)	(67,225)
Balance at end of period	78,441	163,834
Common shares held in treasury, at cost		
Balance at beginning of year	(2,034,570)	(1,941,904)
Shares repurchased for treasury	(16,773)	(86,786)
Balance at end of period	(2,051,343)	(2,028,690)
Total shareholders’ equity available to Arch	8,898,887	6,665,583
Non-redeemable noncontrolling interests	877,456	788,589
Total shareholders’ equity	$9,776,343	$7,454,172

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ARCH CAPITAL GROUP LTD. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(U.S. dollars in thousands)

	(Unaudited) Six Months Ended June 30, 2017	2016
Operating Activities		
Net income	$473,134	$424,984
Adjustments to reconcile net income to net cash provided by operating activities:		
Net realized (gains) losses	(74,985)	(126,337)
Net impairment losses recognized in earnings	3,537	12,982
Equity in net income or loss of investment funds accounted for using the equity method and other income or loss	(47,529)	11,161
Amortization of intangible assets	62,118	9,628
Share-based compensation	42,739	35,769
Changes in:		
Reserve for losses and loss adjustment expenses, net of unpaid losses and loss adjustment expenses recoverable	180,342	186,199
Unearned premiums, net of ceded unearned premiums	167,064	187,234
Premiums receivable	(222,498)	(278,814)
Deferred acquisition costs	(53,553)	(33,450)
Reinsurance balances payable	50,112	73,712
Other items, net	(26,414)	38,156
Net Cash Provided By Operating Activities	554,067	541,224
Investing Activities		
Purchases of fixed maturity investments	(19,899,326)	(17,541,731)
Purchases of equity securities	(400,155)	(212,678)
Purchases of other investments	(883,704)	(650,613)
Proceeds from sales of fixed maturity investments	19,611,680	16,978,549
Proceeds from sales of equity securities	473,064	337,619
Proceeds from sales, redemptions and maturities of other investments	614,494	636,535
Proceeds from redemptions and maturities of fixed maturity investments	447,941	370,980
Net settlements of derivative instruments	(5,984)	45,174
Net (purchases) sales of short-term investments	(445,203)	(304,460)
Change in cash collateral related to securities lending	175,693	(18,715)
Acquisitions, net of cash	—	(1,460)
Purchases of fixed assets	(11,103)	(8,284)
Other	(13,792)	13,416
Net Cash Provided By (Used For) Investing Activities	(336,395)	(355,668)
Financing Activities		
Purchases of common shares under share repurchase program	—	(75,256)
Proceeds from common shares issued, net	(6,838)	(1,487)
Proceeds from borrowings	—	46,000
Repayments of borrowings	(72,000)	(179,171)
Change in cash collateral related to securities lending	(175,693)	18,715
Dividends paid to redeemable noncontrolling interests	(8,994)	(8,994)
Other	(41,698)	(2,223)
Preferred dividends paid	(22,567)	(10,969)

Net Cash Provided By (Used For) Financing Activities	(327,790)	(213,385)
Effects of exchange rate changes on foreign currency cash	7,496	(8,906)
Increase (decrease) in cash	(102,622)	(36,735)
Cash beginning of year	842,942	553,326
Cash end of period	$740,320	$516,591
Income taxes paid	$3,935	$26,619
Interest paid	$58,035	$31,524

See Notes to Consolidated Financial Statements

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ARCH CAPITAL GROUP LTD. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

1. General

Arch Capital Group Ltd. (“ACGL”) is a Bermuda public limited liability company which provides insurance and reinsurance on a worldwide basis through its wholly-owned subsidiaries. As used herein, the “Company” means ACGL and its subsidiaries. The Company’s consolidated financial statements include the results of Watford Holdings Ltd. and its wholly owned subsidiaries. See Note 3.
On December 31, 2016, the Company completed the acquisition of United Guaranty Corporation, a North Carolina corporation (“UGC”) pursuant to a stock purchase agreement with American International Group, Inc. (“AIG”). The acquisition of UGC (“UGC acquisition”) expanded the scale of Arch’s existing mortgage insurance businesses by combining UGC’s position as the market leader in the U.S. private mortgage insurance industry with Arch’s financial strength and history of innovation, further diversifying the Company’s business profile and customer base.
The interim consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (“GAAP”). All significant intercompany transactions and balances have been eliminated in consolidation. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates and assumptions. In the opinion of management, the accompanying unaudited interim consolidated financial statements reflect all adjustments (consisting of normally recurring accruals) necessary for a fair statement of results on an interim basis. The results of any interim period are not necessarily indicative of the results for a full year or any future periods.
Certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted; however, management believes that the disclosures are adequate to make the information presented not misleading. This report should be read in conjunction with the Company’s Annual Report on Form 10-K for the year ended December 31, 2016 (“2016 Form 10-K”), including the Company’s audited consolidated financial statements and related notes.
The Company has reclassified the presentation of certain prior year information to conform to the current presentation, including the presentation of ‘amortization of intangible assets’ on its consolidated statements of income to split out such item

(previously reflected in acquisition expenses and/or other operating expenses). Such reclassifications had no effect on the Company’s net income, comprehensive income, shareholders’ equity or cash flows. Tabular amounts are in U.S. Dollars in thousands, except share amounts, unless otherwise noted.

2. Recent Accounting Pronouncements

Recently Issued Accounting Standards Adopted
The Company adopted Financial Accounting Standards Board (“FASB”) Accounting Standard Update (“ASU”) 2016-09, “Compensation - Stock Compensation (Topic 718) - Improvements to Employee Share-Based Payment Accounting,” effective January 1, 2017. This ASU was issued in the 2016 first quarter to improve and simplify the accounting for employee share-based payment transactions. This ASU provides simplifications with respect to income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows for these types of transactions. With respect to the forfeiture accounting policy election, the Company has elected to account for forfeitures as they occur, which did not result in a material cumulative effect adjustment. With respect to the change in presentation in the statement of cash flows related to excess tax benefits, the Company has applied the guidance prospectively and prior periods have not been adjusted.
Recently Issued Accounting Standards Not Yet Adopted

ASU 2014-09, “Revenue from Contracts with Customers (Topic 606),” was issued in the 2014 second quarter and updated through various ASUs in 2016. This ASU (and as updated in 2016) creates a new comprehensive revenue recognition standard that will serve as a single source of revenue for all companies in all industries. The guidance applies to all companies that either enter into contracts with customers to transfer goods or services or enter into contracts for the transfer of non-financial assets, unless those contracts are within the scope of other standards, such as insurance contracts or financial instruments. The core principle of this ASU is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In doing so, companies will need to use more judgment and make more estimates than under the current guidance. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. The ASU also requires enhanced disclosures about revenue. The ASU is effective in the 2018 first quarter and may be applied on a full retrospective or modified retrospective approach. The Company is currently assessing the impact the implementation of this ASU will have on its consolidated financial statements. The adoption of this ASU will not impact the Company's insurance premium revenues or revenues from its investment portfolio, which represent a substantial portion of consolidated revenues, but may have an impact on the Company's other revenues.

ASU 2016-01, “Financial Instruments - Overall (Subtopic 825-10) - Recognition and Measurement of Financial Assets and Financial Liabilities,” was issued in the 2016 first quarter to enhance the reporting model for financial instruments and to provide improved financial information to readers of the financial statements. Among other provisions focused on improving the recognition and measurement of financial instruments, the ASU requires that equity investments be measured at fair value on the balance sheet with changes in fair value reported in the income statement and that an exit price notion be used when measuring the fair value of financial instruments for disclosure purposes. The ASU is effective in the 2018 first quarter and, aside from limited situations, cannot be early adopted. The Company is currently assessing the impact the implementation of this ASU will have on its consolidated financial statements. The adoption of this ASU is not expected to have a material impact on the Company's financial position, cash flows, or total comprehensive income, but will have a material impact on the Company's results of operations as changes in fair value of equity instruments will be presented in net income rather than other comprehensive income.

ASU 2016-18, "Statement of Cash Flows (Topic 230) - Restricted Cash " was issued in the 2016 fourth quarter. The ASU requires that restricted cash and restricted cash equivalents be included with cash and cash equivalents in the reconciliation of beginning and ending cash on the statements of cash flows. As a result, transfers between cash and cash equivalents and restricted cash and restricted cash equivalents will no longer be presented on the statement of cash flows. The ASU is effective, with retrospective adoption, for interim and annual periods beginning after December 15, 2017, with early adoption permitted. The Company is currently assessing the impact the implementation of this ASU will have on its consolidated financial statements. The adoption of this ASU is not expected to have a material effect on the Company’s results of operations, financial position, comprehensive income or net cash provided from operating activities.

ASU 2017-08, “Receivables - Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization on Purchased Callable Debt Securities,” was issued in the 2017 first quarter. The ASU amends the amortization period for certain purchased callable debt securities held at a premium by shortening the amortization period for the premium to the earliest call date. The ASU will be effective for the Company on January 1, 2019 and is required to be applied using a modified retrospective approach through a cumulative-effect adjustment to retained

earnings as of the beginning of the first reporting period in which the guidance is effective. The Company is currently assessing the impact the implementation of this ASU will have on its consolidated financial statements. The adoption of this ASU is not expected to have a material effect on the Company’s results of operations, financial position or cash flows.

ASU 2017-09, “Compensation - Stock Compensation (Topic 718) - Scope of Modification Accounting” was issued in the 2017 second quarter. The ASU provides updated guidance to clarify when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. The ASU is effective prospectively for all companies for annual periods beginning on or after December 15, 2017, with early adoption permitted. The adoption of this ASU is not expected to have a material effect on the Company’s results of operations, financial position or cash flows.

3. Variable Interest Entities and Noncontrolling Interests

A variable interest entity ("VIE") refers to an entity that has characteristics such as (i) insufficient equity at risk to allow the entity to finance its activities without additional financial support or (ii) instances where the equity investors, as a group, do not have characteristics of a controlling financial interest. The primary beneficiary of a VIE is defined as the variable interest holder that is determined to have the controlling financial interest as a result of having both (i) the power to direct the activities of a VIE that most significantly impact the economic performance of the VIE and (ii) the obligation to absorb losses or right to receive benefits from the VIE that could potentially be significant to the VIE. If a company is determined to be the primary beneficiary, it is required to consolidate the VIE in its financial statements.

Watford Holdings Ltd.

In March 2014, the Company invested $100.0 million and acquired approximately 11% of Watford Holdings Ltd.'s common equity and a warrant to purchase additional common equity. Watford Holdings Ltd. is the parent of Watford Re Ltd., a multi-line Bermuda reinsurance company (together with Watford Holdings Ltd., "Watford Re"). Watford Re is considered a VIE and the Company concluded that it is the primary beneficiary of Watford Re. As such, the results of Watford Re are included in the Company's consolidated financial statements.

The Company does not guarantee or provide credit support for Watford Re, and the Company's financial exposure to Watford

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Re is limited to its investment in Watford Re’s common and preferred shares and counterparty credit risk (mitigated by collateral) arising from reinsurance transactions.
The following table provides the carrying amount and balance sheet caption in which the assets and liabilities of Watford Re are reported:

	June 30, 2017	December 31, 2016
Assets		
Investments accounted for using the fair value option	$2,129,436	$1,857,623
Cash	63,929	74,893
Accrued investment income	13,229	17,017
Premiums receivable	193,769	189,911
Reinsurance recoverable on unpaid and paid losses and LAE	28,267	24,420
Ceded unearned premiums	20,455	12,145
Deferred acquisition costs	91,183	86,379
Receivable for securities sold	32,618	1,326
Goodwill and intangible assets	7,650	7,650
Other assets	132,068	111,386
Total assets of consolidated VIE	$2,712,604	$2,382,750
Liabilities		
Reserves for losses and loss adjustment expenses	$643,424	$510,809
Unearned premiums	314,446	293,480
Reinsurance balances payable	17,623	12,289
Revolving credit agreement borrowings	186,452	256,650
Payable for securities purchased	224,152	42,922
Other liabilities	119,928	88,976
Total liabilities of consolidated VIE	$1,506,025	$1,205,126
Redeemable noncontrolling interests	$220,436	$220,253

For the six months ended June 30, 2017, Watford Re generated $134.4 million of cash provided by operating activities, $70.1 million of cash used for investing activities and $76.4 million of cash used for financing activities, compared to $131.6 million of cash provided by operating activities, $13.8 million of cash used for investing activities and $148.2 million of cash used for financing activities for the six months ended June 30, 2016.
Non-redeemable noncontrolling interests
The Company accounts for the portion of Watford Re’s common equity attributable to third party investors in the shareholders’ equity section of its consolidated balance sheets. The noncontrolling ownership in Watford Re’s common shares was approximately 89% at June 30, 2017. The portion of Watford Re’s income or loss attributable to third party investors is recorded in the consolidated statements of income in ‘net (income) loss attributable to noncontrolling interests.’

The following table sets forth activity in the non-redeemable noncontrolling interests:

	June 30, 2017	2016
Three Months Ended		
Balance, beginning of period	$868,186	$754,915
Amounts attributable to noncontrolling interests	9,346	33,716

Foreign currency translation adjustments attributable to noncontrolling interests	(76)	(42)
Balance, end of period	$877,456	$788,589
Six Months Ended		
Balance, beginning of year	$851,854	$738,831
Amounts attributable to noncontrolling interests	25,670	49,958
Foreign currency translation adjustments attributable to noncontrolling interests	(68)	(200)
Balance, end of period	$877,456	$788,589

Redeemable noncontrolling interests

The Company accounts for redeemable noncontrolling interests in the mezzanine section of its consolidated balance sheets in accordance with applicable accounting guidance. Such redeemable noncontrolling interests relate to the 9,065,200 cumulative redeemable preference shares ("Watford Preference Shares") issued in March 2014 with a par value of $0.01 per share and a liquidation preference of $25.00 per share. Preferred dividends, including the accretion of the discount and issuance costs, are included in 'net (income) loss attributable to noncontrolling interests' in the Company's consolidated statements of income.

The following table sets forth activity in the redeemable non-controlling interests:

	June 30,	
	2017	2016
Three Months Ended		
Balance, beginning of period	$205,644	$205,274
Accretion of preference share issuance costs	92	92
Balance, end of period	$205,736	$205,366
Six Months Ended		
Balance, beginning of year	$205,553	$205,182
Accretion of preference share issuance costs	183	184
Balance, end of period	$205,736	$205,366

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The portion of Watford Re's income or loss attributable to third party investors, recorded in the Company's consolidated statements of income in 'net (income) loss attributable to noncontrolling interests,' are summarized in the table below:

	June 30, 2017	2016
Three Months Ended		
Amounts attributable to non-redeemable noncontrolling interests	$(9,346)	$(33,716)
Dividends attributable to redeemable noncontrolling interests	(4,586)	(4,586)
Net (income) loss attributable to noncontrolling interests	$(13,932)	$(38,302)
Six Months Ended		
Amounts attributable to non-redeemable noncontrolling interests	$(25,670)	$(49,958)
Dividends attributable to redeemable noncontrolling interests	(9,170)	(9,173)
Net (income) loss attributable to noncontrolling interests	$(34,840)	$(59,131)

Bellemeade Re I and II
Upon closing of the UGC acquisition, the Company acquired the rights and obligations related to aggregate excess of loss reinsurance agreements with Bellemeade Re I Ltd. ("Bellemeade I"), entered into in July 2015, and with Bellemeade Re II Ltd. ("Bellemeade II"), entered into in May 2016 (the "Bellemeade Agreements"). Bellemeade I and Bellemeade II are special purpose reinsurance companies domiciled in Bermuda, each of which provided for up to approximately $300 million of aggregate excess of loss reinsurance coverage at inception for new delinquencies on portfolios of in-force policies issued.
As a result of the evaluation of the Bellemeade Agreements, the Company concluded that both Bellemeade I and Bellemeade II are VIEs. However, given that the ceding insurers do not have the unilateral power to direct those activities that are significant to the economic performance of Bellemeade I and Bellemeade II, the Company does not consolidate Bellemeade I and Bellemeade II in its consolidated financial statements.
The following table presents total assets of Bellemeade I and Bellemeade II as well as the Company's maximum exposure to loss associated with these VIEs:

		Maximum Exposure to Loss		
	Total VIE Assets	On-Balance Sheet	Off-Balance Sheet	Total
Bellemeade I	$129,475	$489	$ 1,165	$1,654
Bellemeade II	238,310	58	929	987
Total	$367,785	$547	$ 2,094	$2,641

Irving Partners Limited Partnership
Upon closing of the UGC acquisition, the Company acquired a limited partnership interest in Irving Partners Limited Partnership ("Irving Partners"), which owns and operates an office building in Greensboro, North Carolina in which the Company is the main tenant. The Company concluded that Irving Partners is a VIE but that it is not the primary beneficiary. The Company's maximum exposure to loss is approximately $13.9 million at June 30, 2017.

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4. Earnings Per Common Share

The following table sets forth the computation of basic and diluted earnings per common share:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Numerator:				
Net income	$ 199,099	$ 249,357	$ 473,134	$ 424,984
Amounts attributable to noncontrolling interests	(13,932)	(38,302)	(34,840)	(59,131)
Net income available to Arch	185,167	211,055	438,294	365,853
Preferred dividends	(11,349)	(5,485)	(22,567)	(10,969)
Net income available to Arch common shareholders	$ 173,818	$ 205,570	$ 415,727	$ 354,884
Denominator:				
Weighted average common shares outstanding	123,009,234	120,599,060	122,145,469	120,513,620
Series D preferred shares (1)	11,477,430	—	12,116,574	—
Weighted average common shares and common share equivalents outstanding — basic	134,486,664	120,599,060	134,262,043	120,513,620
Effect of dilutive common share equivalents:				
Nonvested restricted shares	1,482,963	1,295,342	1,556,963	1,374,272
Stock options (2)	3,275,019	2,471,194	3,321,626	2,537,234
Weighted average common shares and common share equivalents outstanding — diluted	139,244,646	124,365,596	139,140,632	124,425,126
Earnings per common share:				
Basic	$ 1.29	$ 1.70	$ 3.10	$ 2.94
Diluted	$ 1.25	$ 1.65	$ 2.99	$ 2.85

(1) Such shares are convertible non-voting common equivalent preferred shares issued in connection with the UGC acquisition.

(2) Certain stock options were not included in the computation of diluted earnings per share where the exercise price of the stock options exceeded the average market price and would have been anti-dilutive or where, when applying the treasury stock method to in-the-money options, the sum of the proceeds, including unrecognized compensation, exceeded the average market price and would have been anti-dilutive. For the 2017 second quarter and 2016 second quarter, the number of stock options excluded were 499,999 and 575,931, respectively. For the six months ended June 30, 2017 and 2016, the number of stock options excluded were 764,076 and 1,027,784, respectively.

5. Segment Information

The Company classifies its businesses into three underwriting segments — insurance, reinsurance and mortgage — and two other operating segments — ‘other’ and corporate (non-underwriting). The Company determined its reportable segments using the management approach described in accounting guidance regarding disclosures about segments of an enterprise and related information. The accounting policies of the segments are the same as those used for the preparation of the Company’s consolidated financial statements. Intersegment business is allocated to the segment accountable for the underwriting results.

The Company’s insurance, reinsurance and mortgage segments each have managers who are responsible for the overall profitability of their respective segments and who are directly accountable to the Company’s chief operating decision makers, the Chairman and Chief Executive Officer, the President and Chief Operating Officer, and the Chief Financial Officer of ACGL. The chief operating decision makers do not assess performance, measure return on equity or make resource allocation decisions on a line of business basis. Management measures segment performance for its three underwriting segments based on underwriting income or loss. The Company does not manage its assets by underwriting segment, with the exception of goodwill and intangible assets, and, accordingly, investment income is not allocated to each underwriting segment.

The insurance segment consists of the Company’s insurance underwriting units which offer specialty product lines on a worldwide basis. Product lines include: construction and national accounts; excess and surplus casualty; lenders products; professional lines; programs; property, energy, marine and aviation; travel, accident and health; and other (consisting of alternative markets, excess workers' compensation and surety business).

The reinsurance segment consists of the Company’s reinsurance underwriting units which offer specialty product lines on a worldwide basis. Product lines include: casualty; marine and aviation; other specialty; property catastrophe; property excluding property catastrophe (losses on a single risk, both excess of loss and pro rata); and other (consisting of life reinsurance, casualty clash and other).

The mortgage segment includes the Company’s U.S. and international mortgage insurance and reinsurance operations as well as government sponsored enterprise (“GSE”) credit-risk sharing transactions. Arch Mortgage Insurance Company, United Guaranty Residential Insurance Company and United Guaranty Mortgage Indemnity Company (combined “Arch MI U.S.”) are approved as eligible mortgage insurers by Federal National Mortgage Association (“Fannie Mae”) and Federal Home Loan Mortgage Corporation (“Freddie Mac”), each a GSE.

The corporate (non-underwriting) segment results include net investment income, other income (loss), corporate expenses, UGC transaction costs and other, interest expense, dividends related to the Company’s non-cumulative preferred shares, net realized gains or losses, net impairment losses included in earnings, equity in net income or loss of investment funds accounted for using the equity method, net foreign exchange gains or losses and income taxes. Such amounts exclude the results of the ‘other’ segment.

The ‘other’ segment includes the results of Watford Re (see Note 3). Watford Re has its own management and board of directors that is responsible for the overall profitability of the ‘other’ segment. For the ‘other’ segment, performance is measured based on net income or loss.

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The following tables summarize the Company’s underwriting income or loss by segment, together with a reconciliation of underwriting income or loss to net income available to common shareholders:

	Three Months Ended June 30, 2017					
	Insurance	Reinsurance	Mortgage	Sub-Total	Other	Total
Gross premiums written (1)	$743,902	$453,186	$336,226	$1,533,142	$152,813	$1,609,659
Premiums ceded	(247,446)	(115,262)	(62,314)	(424,850)	(12,410)	(360,964)
Net premiums written	496,456	337,924	273,912	1,108,292	140,403	1,248,695
Change in unearned premiums	21,118	(23,222)	(16,068)	(18,172)	10,351	(7,821)
Net premiums earned	517,574	314,702	257,844	1,090,120	150,754	1,240,874
Other underwriting income (loss)	—	(279)	4,277	3,998	824	4,822
Losses and loss adjustment expenses	(350,939)	(207,606)	(20,694)	(579,239)	(110,621)	(689,860)
Acquisition expenses	(78,872)	(51,151)	(25,666)	(155,689)	(34,747)	(190,436)
Other operating expenses	(92,267)	(36,711)	(32,150)	(161,128)	(8,853)	(169,981)
Underwriting income (loss)	$(4,504)	$18,955	$183,611	198,062	(2,643)	195,419
Net investment income				92,520	18,604	111,124
Net realized gains (losses)				18,046	3,689	21,735
Net impairment losses recognized in earnings				(1,730)	—	(1,730)
Equity in net income (loss) of investment funds accounted for using the equity method				32,706	—	32,706
Other income (loss)				(1,994)	—	(1,994)
Corporate expenses (2)				(22,201)	—	(22,201)
UGC transaction costs and other (2)				(2,675)	—	(2,675)
Amortization of intangible assets				(30,824)	—	(30,824)
Interest expense				(25,912)	(2,837)	(28,749)
Net foreign exchange gains (losses)				(37,821)	(1,722)	(39,543)
Income (loss) before income taxes				218,177	15,091	233,268
Income tax expense				(34,169)	—	(34,169)
Net income (loss)				184,008	15,091	199,099
Dividends attributable to redeemable noncontrolling interests				—	(4,586)	(4,586)
Amounts attributable to nonredeemable noncontrolling interests				—	(9,346)	(9,346)
Net income (loss) available to Arch				184,008	1,159	185,167
Preferred dividends				(11,349)	—	(11,349)
Net income (loss) available to Arch common shareholders				$172,659	$1,159	$173,818
Underwriting Ratios						
Loss ratio	67.8 %	66.0 %	8.0 %	53.1 %	73.4 %	55.6 %
Acquisition expense ratio	15.2 %	16.3 %	10.0 %	14.3 %	23.0 %	15.3 %
Other operating expense ratio	17.8 %	11.7 %	12.5 %	14.8 %	5.9 %	13.7 %

Combined ratio	100.8 %	94.0 %	30.5 %	82.2 %	102.3 %	84.6 %
Goodwill and intangible assets	$24,480	$609	$680,236	$705,325	$7,650	$712,975

(1) Certain amounts included in the gross premiums written of each segment are related to intersegment transactions. Accordingly, the sum of gross premiums written for each segment does not agree to the total gross premiums written as shown in the table above due to the elimination of intersegment transactions in the total.

(2) Certain expenses have been excluded from ‘corporate expenses’ and reflected in ‘UGC transaction costs and other.’

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	Three Months Ended June 30, 2016					
	Insurance	Reinsurance	Mortgage	Sub-Total	Other	Total
Gross premiums written (1)	$762,043	$412,053	$118,434	$1,292,199	$109,285	$1,329,936
Premiums ceded	(246,875)	(119,951)	(6,969)	(373,464)	(4,457)	(306,373)
Net premiums written	515,168	292,102	111,465	918,735	104,828	1,023,563
Change in unearned premiums	12,482	(846)	(44,953)	(33,317)	15,739	(17,578)
Net premiums earned	527,650	291,256	66,512	885,418	120,567	1,005,985
Other underwriting income (loss)	—	20,118	4,137	24,255	969	25,224
Losses and loss adjustment expenses	(354,633)	(146,091)	(366)	(501,090)	(83,502)	(584,592)
Acquisition expenses	(77,312)	(55,756)	(5,964)	(139,032)	(33,645)	(172,677)
Other operating expenses	(91,440)	(36,914)	(22,847)	(151,201)	(6,113)	(157,314)
Underwriting income (loss)	$4,265	$72,613	$41,472	118,350	(1,724)	116,626
Net investment income				70,397	17,941	88,338
Net realized gains (losses)				40,927	27,291	68,218
Net impairment losses recognized in earnings				(5,343)	—	(5,343)
Equity in net income (loss) of investment funds accounted for using the equity method				8,737	—	8,737
Other income (loss)				(7)	—	(7)
Corporate expenses				(17,200)	—	(17,200)
Amortization of intangible assets				(4,880)	—	(4,880)
Interest expense				(12,432)	(3,231)	(15,663)
Net foreign exchange gains (losses)				22,461	2,201	24,662
Income (loss) before income taxes				221,010	42,478	263,488
Income tax expense				(14,131)	—	(14,131)
Net income (loss)				206,879	42,478	249,357
Dividends attributable to redeemable noncontrolling interests				—	(4,586)	(4,586)
Amounts attributable to nonredeemable noncontrolling interests				—	(33,716)	(33,716)
Net income (loss) available to Arch				206,879	4,176	211,055
Preferred dividends				(5,485)	—	(5,485)
Net income (loss) available to Arch common shareholders				$201,394	$4,176	$205,570
Underwriting Ratios						
Loss ratio	67.2 %	50.2 %	0.6 %	56.6 %	69.3 %	58.1 %
Acquisition expense ratio	14.7 %	19.1 %	9.0 %	15.7 %	27.9 %	17.2 %
Other operating expense ratio	17.3 %	12.7 %	34.4 %	17.1 %	5.1 %	15.6 %
Combined ratio	99.2 %	82.0 %	44.0 %	89.4 %	102.3 %	90.9 %
Goodwill and intangible assets	$27,457	$1,440	$59,430	$88,327	$—	$88,327

(1) Certain amounts included in the gross premiums written of each segment are related to intersegment transactions. Accordingly, the sum of gross premiums written for each segment does not agree to the total gross premiums written as shown in the table above due to the elimination of intersegment transactions in the total.

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	Six Months Ended June 30, 2017					
	Insurance	Reinsurance	Mortgage	Sub-Total	Other	Total
Gross premiums written (1)	$1,526,183	$928,968	$684,849	$3,139,828	$306,933	$3,267,649
Premiums ceded	(481,541)	(281,354)	(136,239)	(898,962)	(22,844)	(742,694)
Net premiums written	1,044,642	647,614	548,610	2,240,866	284,089	2,524,955
Change in unearned premiums	(21,422)	(88,061)	(46,243)	(155,726)	(11,338)	(167,064)
Net premiums earned	1,023,220	559,553	502,367	2,085,140	272,751	2,357,891
Other underwriting income (loss)	—	(585)	8,400	7,815	1,640	9,455
Losses and loss adjustment expenses	(683,580)	(313,060)	(49,759)	(1,046,399)	(196,031)	(1,242,430)
Acquisition expenses	(153,740)	(97,298)	(54,432)	(305,470)	(67,255)	(372,725)
Other operating expenses	(180,393)	(74,244)	(74,020)	(328,657)	(16,043)	(344,700)
Underwriting income (loss)	$5,507	$74,366	$332,556	412,429	(4,938)	407,491
Net investment income				188,332	40,666	228,998
Net realized gains (losses)				46,558	9,330	55,888
Net impairment losses recognized in earnings				(3,537)	—	(3,537)
Equity in net income (loss) of investment funds accounted for using the equity method				80,794	—	80,794
Other income (loss)				(2,776)	—	(2,776)
Corporate expenses (2)				(34,409)	—	(34,409)
UGC transaction costs and other (2)				(18,259)	—	(18,259)
Amortization of intangible assets				(62,118)	—	(62,118)
Interest expense				(51,668)	(5,757)	(57,425)
Net foreign exchange gains (losses)				(57,666)	(1,281)	(58,947)
Income (loss) before income taxes				497,680	38,020	535,700
Income tax expense				(62,566)	—	(62,566)
Net income (loss)				435,114	38,020	473,134
Dividends attributable to redeemable noncontrolling interests				—	(9,170)	(9,170)
Amounts attributable to nonredeemable noncontrolling interests				—	(25,670)	(25,670)
Net income (loss) available to Arch				435,114	3,180	438,294
Preferred dividends				(22,567)	—	(22,567)
Net income (loss) available to Arch common shareholders				$412,547	$3,180	$415,727
Underwriting Ratios						
Loss ratio	66.8%	55.9%	9.9%	50.2%	71.9%	52.7%
Acquisition expense ratio	15.0%	17.4%	10.8%	14.6%	24.7%	15.8%

Other operating expense ratio	17.6 %	13.3 %	14.7 %	15.8 %	5.9 %	14.6 %
Combined ratio	99.4 %	86.6 %	35.4 %	80.6 %	102.5 %	83.1 %

(1) Certain amounts included in the gross premiums written of each segment are related to intersegment transactions. Accordingly, the sum of gross premiums written for each segment does not agree to the total gross premiums written as shown in the table above due to the elimination of intersegment transactions in the total.

(2) Certain expenses have been excluded from ‘corporate expenses’ and reflected in ‘UGC transaction costs and other.’

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	Six Months Ended June 30, 2016					
	Insurance	Reinsurance	Mortgage	Sub-Total	Other	Total
Gross premiums written (1)	$1,560,596	$893,443	$229,714	$2,683,260	$257,891	$2,767,902
Premiums ceded	(495,664)	(280,517)	(11,736)	(787,424)	(8,929)	(623,104)
Net premiums written	1,064,932	612,926	217,978	1,895,836	248,962	2,144,798
Change in unearned premiums	(24,193)	(60,462)	(89,701)	(174,356)	(12,878)	(187,234)
Net premiums earned	1,040,739	552,464	128,277	1,721,480	236,084	1,957,564
Other underwriting income (loss)	—	20,443	7,930	28,373	1,898	30,271
Losses and loss adjustment expenses	(678,242)	(257,689)	(8,995)	(944,926)	(162,615)	(1,107,541)
Acquisition expenses	(151,660)	(110,514)	(11,757)	(273,931)	(66,584)	(340,515)
Other operating expenses	(176,498)	(73,172)	(46,341)	(296,011)	(11,451)	(307,462)
Underwriting income (loss)	$34,339	$131,532	$69,114	234,985	(2,668)	232,317
Net investment income				140,806	41,267	182,073
Net realized gains (losses)				72,789	32,753	105,542
Net impairment losses recognized in earnings				(12,982)	—	(12,982)
Equity in net income (loss) of investment funds accounted for using the equity method				15,392	—	15,392
Other income (loss)				(32)	—	(32)
Corporate expenses				(26,583)	—	(26,583)
Amortization of intangible assets				(9,628)	—	(9,628)
Interest expense				(25,059)	(6,711)	(31,770)
Net foreign exchange gains (losses)				420	676	1,096
Income (loss) before income taxes				390,108	65,317	455,425
Income tax expense				(30,441)	—	(30,441)
Net income (loss)				359,667	65,317	424,984
Dividends attributable to redeemable noncontrolling interests				—	(9,173)	(9,173)
Amounts attributable to nonredeemable noncontrolling interests				—	(49,958)	(49,958)
Net income (loss) available to Arch				359,667	6,186	365,853
Preferred dividends				(10,969)	—	(10,969)
Net income (loss) available to Arch common shareholders				$348,698	$6,186	$354,884
Underwriting Ratios						
Loss ratio	65.2%	46.6%	7.0%	54.9%	68.9%	56.6%
Acquisition expense ratio	14.6%	20.0%	9.2%	15.9%	28.2%	17.4%
Other operating expense ratio	17.0%	13.2%	36.1%	17.2%	4.9%	15.7%
Combined ratio	96.8%	79.8%	52.3%	88.0%	102.0%	89.7%

(1) Certain amounts included in the gross premiums written of each segment are related to intersegment transactions. Accordingly, the sum of gross premiums written for each segment does not agree to the total gross premiums written as shown in the table above due to the elimination of intersegment transactions in the total.

6. Reserve for Losses and Loss Adjustment Expenses

The following table represents an analysis of losses and loss adjustment expenses and a reconciliation of the beginning and ending reserve for losses and loss adjustment expenses:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Reserve for losses and loss adjustment expenses at beginning of period	$10,296,821	$9,378,987	$10,200,960	$9,125,250
Unpaid losses and loss adjustment expenses recoverable	2,095,130	1,937,724	2,083,575	1,828,837
Net reserve for losses and loss adjustment expenses at beginning of period	8,201,691	7,441,263	8,117,385	7,296,413
Net incurred losses and loss adjustment expenses relating to losses occurring in:				
Current year	759,261	670,381	1,395,037	1,249,359
Prior years	(69,401)	(85,789)	(152,607)	(141,818)
Total net incurred losses and loss adjustment expenses	689,860	584,592	1,242,430	1,107,541
Net foreign exchange losses (gains)	75,295	(48,328)	106,574	(14,733)
Net paid losses and loss adjustment expenses relating to losses occurring in:				
Current year	(80,499)	(107,957)	(115,502)	(157,036)
Prior years	(482,046)	(401,691)	(946,586)	(764,306)
Total net paid losses and loss adjustment expenses	(562,545)	(509,648)	(1,062,088)	(921,342)
Net reserve for losses and loss adjustment expenses at end of period	8,404,301	7,467,879	8,404,301	7,467,879
Unpaid losses and loss adjustment expenses recoverable	2,116,210	2,003,768	2,116,210	2,003,768
Reserve for losses and loss adjustment expenses at end of period	$10,520,511	$9,471,647	$10,520,511	$9,471,647

Development on Prior Year Loss Reserves

2017 Second Quarter

During the 2017 second quarter, the Company recorded net favorable development on prior year loss reserves of $69.4 million, which consisted of $39.5 million from the reinsurance segment, $2.0 million from the insurance segment, $29.8 million from the mortgage segment and adverse development of $1.9 million from the ‘other’ segment.
The reinsurance segment’s net favorable development of $39.5 million, or 12.6 points, for the 2017 second quarter consisted of $28.1 million from short-tailed lines and $11.4 million from long-tailed and medium-tailed lines. Favorable development in short-tailed lines included $16.9 million from property catastrophe and property other than property catastrophe reserves, across most underwriting years (i.e., all premiums and losses attributable to contracts having an inception or renewal date within the given twelve-month period), reflecting lower levels of reported and paid claims activity than previously anticipated which led to decreases in certain loss ratio selections during the period. Favorable development in long-tailed and medium-tailed lines reflected reductions in casualty reserves of $9.0 million based on varying levels of reported and paid claims activity, primarily from the 2002 to 2004 underwriting

years, and favorable development in marine reserves of $2.4 million across most underwriting years.

The insurance segment's net favorable development of $2.0 million, or 0.4 points, for the 2017 second quarter consisted of $5.3 million of net favorable development in short-tailed lines, partially offset by $3.3 million of net adverse development in long-tailed and medium-tailed lines. Net favorable development in short-tailed lines primarily resulted from property (including special risk other than marine) reserves from the 2012 to 2016 accident years (i.e., the year in which a loss occurred). Net adverse development in medium-tailed and long-tailed lines reflected $12.2 million of adverse development on programs, primarily on a small number of programs in the 2014 and 2015 accident years, and $8.9 million on construction reserves across various accident years. Such amounts were partially offset by net favorable development of $17.8 million in other medium-tailed lines, primarily in professional liability with $12.1 million of favorable development across most accident years, and surety with $3.6 million of favorable development.
The mortgage segment's net favorable development was $29.8 million, or 11.5 points, for the 2017 second quarter. The 2017 second quarter development was primarily driven by continued lower than expected claim emergence across most origination years and also reflected $4.9 million related to subrogation recoveries on second lien and other portfolios.

2016 Second Quarter

During the 2016 second quarter, the Company recorded net favorable development on prior year loss reserves of $85.8 million, which consisted of $69.8 million from the reinsurance segment, $4.9 million from the insurance segment, $11.1 million from the mortgage segment and minimal activity from the ‘other’ segment.

The reinsurance segment’s net favorable development of $69.8 million, or 24.0 points, for the 2016 second quarter consisted of $48.9 million from short-tailed lines and $20.9 million from long-tailed and medium-tailed lines. Favorable development in short-tailed lines included $39.5 million from property catastrophe and property other than property catastrophe reserves, across most underwriting years, reflecting lower levels of reported and paid claims activity than previously anticipated which led to decreases in certain loss ratio selections during the period. Favorable development in long-tailed lines reflected reductions in casualty reserves of $22.8 million based on varying levels of reported and paid claims activity, primarily from the 2002 to 2009 underwriting years and 2012 to 2013 underwriting years.

The insurance segment’s net favorable development of $4.9 million, or 0.9 points, for the 2016 second quarter consisted of $8.1 million of net favorable development in long-tailed lines and $6.5 million of net favorable development in short-tailed lines, partially offset by $9.7 million of net adverse development in medium-tailed lines. Net favorable development in long-tailed lines reflected net reductions in executive assurance reserves from the 2008 to 2012 accident years (i.e., the year in which a loss occurred), and net reductions in casualty reserves from the 2004 to 2012 accident years, offset by a large energy casualty claim from the 2015 accident year. Net favorable development in short-tailed lines primarily resulted from reductions in property (including special risk other than marine) reserves from the 2012 to 2014 accident years and the 2008 accident year, primarily due to varying levels of reported claims activity. Such amount included $4.1 million of favorable development on the 2005 to 2015 named catastrophic events. Net adverse development in medium-tailed lines primarily resulted from an increase in programs of $16.4 million stemming in part from terminated programs, partially offset by favorable development of $6.7 million in other medium-tailed lines, primarily in professional liability and surety.

The mortgage segment’s net favorable development was $11.1 million, or 16.6 points, for the 2016 second quarter. The 2016 second quarter development was primarily driven by lower than expected claim rates across most origination years.

Six Months Ended June 30, 2017

During the six months ended June 30, 2017, the Company recorded net favorable development on prior year loss reserves

of $152.6 million, which consisted of $96.8 million from the reinsurance segment, $4.1 million from the insurance segment, $53.4 million from the mortgage segment and adverse development of $1.7 million from the ‘other’ segment.

The reinsurance segment’s net favorable development of $96.8 million, or 17.3 points, for the 2017 period consisted of $68.9 million from short-tailed lines and $27.9 million from long-tailed and medium-tailed lines. Favorable development in short-tailed lines included $51.0 million from property catastrophe and property other than property catastrophe reserves, across most underwriting years, reflecting lower levels of reported and paid claims activity than previously anticipated which led to decreases in certain loss ratio selections during the period. Favorable development in long-tailed and medium-tailed lines reflected reductions in casualty reserves of $15.6 million based on varying levels of reported and paid claims activity, primarily from the 2002 to 2013 underwriting years, and favorable development in marine reserves of $12.3 million across most underwriting years.

The insurance segment’s net favorable development of $4.1 million, or 0.4 points, for the 2017 period consisted of $7.2 million of net favorable development in short-tailed lines and $6.6 million of net favorable development in long-tailed lines, partially offset by $9.7 million of net adverse development in medium-tailed lines. Net favorable development in short-tailed lines primarily resulted from property (including special risk other than marine) reserves from the 2011 to 2016 accident years. Net favorable development in long-tailed lines reflected net reductions in executive assurance reserves from the 2008 to 2014 accident years and reductions in healthcare reserves across various accident years,

partially offset by $13.4 million on construction reserves across various accident years. Net adverse development in medium-tailed lines primarily resulted from an increase in programs of $26.4 million stemming in part from development on a small number of programs in the 2013 to 2015 accident years, partially offset by net favorable development of $16.7 million in other medium-tailed lines, primarily in professional liability and surety.
The mortgage segment's net favorable development was $53.4 million, or 10.6 points, for the 2017 period. The development was primarily driven by continued lower than expected claim emergence across most origination years and also reflected $13.1 million related to subrogation recoveries on second lien and other portfolios.
Six Months Ended June 30, 2016
During the six months ended June 30, 2016, the Company recorded net favorable development on prior year loss reserves of $141.8 million, which consisted of $117.2 million from the reinsurance segment, $11.1 million from the insurance segment, $13.8 million from the mortgage segment and adverse development of $0.2 million from the 'other' segment.

The reinsurance segment's net favorable development of $117.2 million, or 21.2 points, for the 2016 period consisted of $85.4 million from short-tailed lines and $31.8 million from long-tailed and medium-tailed lines. Favorable development in short-tailed lines included $69.4 million from property catastrophe and property other than property catastrophe reserves, across most underwriting years. The net reduction of loss estimates for the reinsurance segment's short-tailed lines primarily resulted from varying levels of reported and paid claims activity than previously anticipated which led to decreases in certain loss ratio selections during the period. Favorable development in long-tailed lines reflected reductions in casualty reserves of $37.0 million based on varying levels of reported and paid claims activity, primarily from the 2002 to 2013 underwriting years. Such amounts were partially offset by net adverse development on marine reserves of $3.9 million, primarily from the 2002 and 2015 underwriting years, partially offset by favorable development from most other underwriting years.

The insurance segment's net favorable development of $11.1 million, or 1.1 points, for the 2016 period consisted of $18.0 million of net favorable development in long-tailed lines and $10.2 million of net favorable development in short-tailed lines, partially offset by $17.1 million of net adverse development in medium-tailed lines. Net favorable development in long-tailed lines reflected net reductions in executive assurance reserves from the 2008 to 2012 accident years, and net reductions in casualty reserves from the 2004 to 2013 accident years, partially offset by a large energy casualty claim from the 2015 accident year. Net favorable development in short-tailed lines primarily resulted from reductions in property (including special risk other than marine) reserves from the 2012 to 2014 accident years, primarily due to varying levels of reported claims activity. Such amount included $7.3 million of favorable development on the 2005 to 2015 named catastrophic events. Net adverse development in medium-tailed lines primarily resulted from an increase in programs of $22.4 million stemming in part from terminated programs, partially offset by favorable development of $5.3 million in other medium-tailed lines, primarily in professional liability and surety.

The mortgage segment's net favorable development was $13.8 million, or 10.8 points, for the 2016 period. The development was primarily driven by lower than expected claim rates across most origination years.

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7. Investment Information

At June 30, 2017, total investable assets of $21.11 billion included $19.17 billion managed by the Company and $1.93 billion attributable to Watford Re.

Available For Sale Investments

The following table summarizes the fair value and cost or amortized cost of the Company's investments classified as available for sale:

	Estimated Fair Value	Gross Unrealized Gains	Gross Unrealized Losses	Cost or Amortized Cost	OTTI Unrealized Losses (2)
June 30, 2017					
Fixed maturities (1):					
Corporate bonds	$4,262,411	$42,142	$(23,632)	$4,243,901	$(468)
Mortgage backed securities	331,082	4,650	(1,596)	328,028	(3,102)
Municipal bonds	2,618,827	29,728	(9,841)	2,598,940	—
Commercial mortgage backed securities	521,272	3,448	(6,363)	524,187	—
U.S. government and government agencies	3,425,196	4,673	(15,246)	3,435,769	—
Non-U.S. government securities	1,375,796	30,114	(21,466)	1,367,148	—
Asset backed securities	1,739,695	10,540	(4,494)	1,733,649	(22)
Total	14,274,279	125,295	(82,638)	14,231,622	(3,592)
Equity securities	467,870	79,953	(7,200)	395,117	—
Other investments	248,661	39,748	(28)	208,941	—
Short-term investments	914,356	446	(122)	914,032	—
Total	$15,905,166	$245,442	$(89,988)	$15,749,712	$(3,592)
December 31, 2016					
Fixed maturities (1):					
Corporate bonds	$4,392,373	$27,606	$(46,905)	$4,411,672	$(2,285)
Mortgage backed securities	490,093	4,794	(8,357)	493,656	(3,323)
Municipal bonds	3,713,434	8,554	(29,154)	3,734,034	(201)
Commercial mortgage backed securities	536,051	2,876	(6,508)	539,683	—
U.S. government and government agencies	2,804,540	9,319	(24,437)	2,819,658	—
Non-U.S. government securities	1,096,440	19,036	(56,872)	1,134,276	—
Asset backed securities	1,123,987	6,897	(6,526)	1,123,616	(22)
Total	14,156,918	79,082	(178,759)	14,256,595	(5,831)
Equity securities	532,680	62,627	(17,517)	487,570	—
Other investments	167,970	21,358	(2,465)	149,077	—
Short-term investments	612,005	272	(145)	611,878	—
Total	$15,469,573	$163,339	$(198,886)	$15,505,120	$(5,831)

(1) In securities lending transactions, the Company receives collateral in excess of the fair value of the securities pledged. For purposes of this table, the Company has excluded the collateral received under securities lending, at fair value and included the securities pledged under securities lending, at fair value. See "—Securities Lending Agreements."

(2) Represents the total other-than-temporary impairments ("OTTI") recognized in accumulated other comprehensive income ("AOCI"). It does not include the change in fair value subsequent to the impairment measurement date. At June 30, 2017, the net unrealized gain related to securities for which a non-credit OTTI was recognized in AOCI

was $0.8 million, compared to a net unrealized gain of $2.8 million at December 31, 2016.

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

	Less than 12 Months		12 Months or More		Total	
	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
June 30, 2017						
Fixed maturities (1):						
Corporate bonds	$1,384,481	$(22,572)	$15,198	$(1,060)	$1,399,679	$(23,632)
Mortgage backed securities	189,816	(1,534)	1,573	(62)	191,389	(1,596)
Municipal bonds	788,714	(9,329)	39,912	(512)	828,626	(9,841)
Commercial mortgage backed securities	249,658	(6,232)	3,383	(131)	253,041	(6,363)
U.S. government and government agencies	2,662,818	(15,246)	—	—	2,662,818	(15,246)
Non-U.S. government securities	1,017,781	(21,360)	11,123	(106)	1,028,904	(21,466)
Asset backed securities	751,464	(4,220)	12,282	(274)	763,746	(4,494)
Total	7,044,732	(80,493)	83,471	(2,145)	7,128,203	(82,638)
Equity securities	167,176	(7,200)	—	—	167,176	(7,200)
Other investments	1,562	(28)	—	—	1,562	(28)
Short-term investments	22,941	(122)	—	—	22,941	(122)
Total	$7,236,411	$(87,843)	$83,471	$(2,145)	$7,319,882	$(89,988)
December 31, 2016						
Fixed maturities (1):						
Corporate bonds	$1,700,813	$(43,011)	$46,902	$(3,894)	$1,747,715	$(46,905)
Mortgage backed securities	402,699	(8,134)	6,105	(223)	408,804	(8,357)
Municipal bonds	1,513,308	(28,504)	29,636	(650)	1,542,944	(29,154)
Commercial mortgage backed securities	231,374	(6,331)	5,635	(177)	237,009	(6,508)
U.S. government and government agencies	1,888,018	(24,437)	—	—	1,888,018	(24,437)
Non-U.S. government securities	807,598	(56,872)	—	—	807,598	(56,872)
Asset backed securities	627,557	(5,465)	65,723	(1,061)	693,280	(6,526)
Total	7,171,367	(172,754)	154,001	(6,005)	7,325,368	(178,759)
Equity securities	269,381	(17,517)	—	—	269,381	(17,517)
Other investments	39,299	(2,465)	—	—	39,299	(2,465)
Short-term investments	29,146	(145)	—	—	29,146	(145)
Total	$7,509,193	$(192,881)	$154,001	$(6,005)	$7,663,194	$(198,886)

(1) In securities lending transactions, the Company receives collateral in excess of the fair value of the securities pledged. For purposes of this table, the Company has excluded the collateral received under securities lending, at fair value and included the securities pledged under securities lending, at fair value. See "—Securities Lending Agreements."

At June 30, 2017, on a lot level basis, approximately 3,150 security lots out of a total of approximately 7,610 security lots were in an unrealized loss position and the largest single unrealized loss from a single lot in the Company's fixed maturity portfolio was $2.5 million. At December 31, 2016, on a lot level basis, approximately 3,540 security lots out of a total of approximately 7,240 security lots were in an unrealized loss position and the largest single unrealized loss from a single lot in the Company's fixed maturity portfolio was $4.6 million.

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The contractual maturities of the Company’s fixed maturities are shown in the following table. Expected maturities, which are management’s best estimates, will differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

	June 30, 2017		December 31, 2016	
Maturity	Estimated Fair Value	Amortized Cost	Estimated Fair Value	Amortized Cost
Due in one year or less	$580,006	$579,694	$560,830	$557,675
Due after one year through five years	7,240,600	7,222,772	6,158,148	6,211,099
Due after five years through 10 years	3,542,222	3,528,439	4,676,847	4,710,017
Due after 10 years	319,402	314,853	610,962	620,849
	11,682,230	11,645,758	12,006,787	12,099,640
Mortgage backed securities	331,082	328,028	490,093	493,656
Commercial mortgage backed securities	521,272	524,187	536,051	539,683
Asset backed securities	1,739,695	1,733,649	1,123,987	1,123,616
Total (1)	$14,274,279	$14,231,622	$14,156,918	$14,256,595

(1) In securities lending transactions, the Company receives collateral in excess of the fair value of the securities pledged. For purposes of this table, the Company has excluded the collateral received under securities lending, at fair value and included the securities pledged under securities lending, at fair value. See “—Securities Lending Agreements.”

Securities Lending Agreements
The Company enters into securities lending agreements with financial institutions to enhance investment income whereby it loans certain of its securities to third parties, primarily major brokerage firms, for short periods of time through a lending agent. The Company maintains legal control over the securities it lends, retains the earnings and cash flows associated with the loaned securities and receives a fee from the borrower for the temporary use of the securities. An indemnification agreement with the lending agent protects the Company in the event a borrower becomes insolvent or fails to return any of the securities on loan from the Company.
The Company receives collateral in the form of cash or securities. At June 30, 2017, the fair value of the cash collateral received on securities lending was $36.7 million and the fair value of security collateral received was $591.1 million. At December 31, 2016, the fair value of the cash collateral received on securities lending was $212.5 million, and the fair value of security collateral received was $550.1 million. Cash collateral is reinvested in short-term investments.
The Company’s securities lending transactions were accounted for as secured borrowings with significant investment categories as follows:

	Remaining Contractual Maturity of the Agreements				
	Overnight and Continuous	Less than 30 Days	30-90 Days	90 Days or More	Total
June 30, 2017					
U.S. government and government agencies	$406,753	$10,175	$133,449	$29,984	$580,361
Corporate bonds	40,488	—	—	—	40,488
Equity securities	7,003	—	—	—	7,003
Total	$454,244	$10,175	$133,449	$29,984	$627,852
Gross amount of recognized liabilities for securities lending in offsetting disclosure in Note 9					$—

Amounts related to securities lending not included in offsetting disclosure in Note 9					$627,852
December 31, 2016					
U.S. government and government agencies	$556,015	$31,244	$126,093	$5,140	$718,492
Corporate bonds	29,078	—	—	—	29,078
Equity securities	14,984	—	—	—	14,984
Total	$600,077	$31,244	$126,093	$5,140	$762,554
Gross amount of recognized liabilities for securities lending in offsetting disclosure in Note 9					$—
Amounts related to securities lending not included in offsetting disclosure in Note 9					$762,554

Other Investments

The following table summarizes the Company's other investments, including available for sale and fair value option components:

	June 30, 2017	December 31, 2016
Available for sale:		
Asian and emerging markets	$114,594	$ 84,778
Investment grade fixed income	52,266	33,923
Credit related funds	14,632	7,469
Other	67,169	41,800
Total available for sale	248,661	167,970
Fair value option:		
Term loan investments (par value: $1,367,178 and $1,208,537)	1,334,590	1,190,799
Mezzanine debt funds	141,066	127,943
Credit related funds	197,144	218,298
Investment grade fixed income	86,389	75,468
Asian and emerging markets	245,866	178,568
Other (1)	138,710	129,717
Total fair value option	2,143,765	1,920,793
Total	$2,392,426	$ 2,088,763

(1) Includes fund investments with strategies in mortgage servicing rights, transportation, infrastructure and other.

Certain of the Company's other investments are in investment funds for which the Company has the option to redeem at agreed upon values as described in each investment fund's subscription agreement. Depending on the terms of the various subscription agreements, investments in investment funds may be redeemed daily, monthly, quarterly or on other terms. Two common redemption restrictions which may impact the Company's ability to redeem these investment funds are gates and lockups. A gate is a suspension of redemptions which may be implemented by the general partner or investment manager of the fund in order to defer, in whole or in part, the redemption request in the event the aggregate amount of redemption requests exceeds a predetermined percentage of the investment fund's net assets which may otherwise hinder the general partner or investment manager's ability to liquidate holdings in an orderly fashion in order to generate the cash necessary to fund extraordinarily large redemption payouts. A lockup period is the initial amount of time an investor is contractually required to hold the security before having the ability to redeem. If the investment funds are eligible to be redeemed, the time to redeem such fund can take weeks or months following the notification.

Fair Value Option

The following table summarizes the Company's assets and liabilities which are accounted for using the fair value option:

	June 30, 2017	December 31, 2016
Fixed maturities	$1,074,961	$ 1,099,116
Other investments	2,143,765	1,920,793
Short-term investments	527,384	373,669
Equity securities	81,298	27,642
Investments accounted for using the fair value option	$3,827,408	$ 3,421,220

Limited partnership interests

In the normal course of its activities, the Company invests in limited partnerships as part of its overall investment strategy. Such amounts are included in ‘investments accounted for using the equity method’ and ‘investments accounted for using the fair value option.’ The Company has determined that it is not required to consolidate these investments because it is not the primary beneficiary of the funds. The Company’s maximum exposure to loss with respect to these investments is limited to the investment carrying amounts reported in the Company’s consolidated balance sheet and any unfunded commitment.

The following table summarizes investments in limited partnership interests where the Company has a variable interest by balance sheet line item:

	June 30, 2017	December 31, 2016
Investments accounted for using the equity method (1)	$948,856	$ 800,970
Investments accounted for using the fair value option (2)	86,888	90,804
Total	$1,035,744	$ 891,774

(1) Aggregate unfunded commitments were $961.0 million at June 30, 2017, compared to $776.6 million at December 31, 2016.

(2) Aggregate unfunded commitments were $67.7 million at June 30, 2017, compared to $16.7 million at December 31, 2016.

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Net Investment Income
The components of net investment income were derived from the following sources:

	June 30, 2017	2016
Three Months Ended		
Fixed maturities	$94,270	$77,994
Term loan investments	19,105	18,608
Equity securities (dividends)	3,654	3,663
Short-term investments	2,016	816
Other (1)	14,971	8,260
Gross investment income	134,016	109,341
Investment expenses	(22,892)	(21,003)
Net investment income	$111,124	$88,338
Six Months Ended		
Fixed maturities	$188,663	$151,667
Term loan investments	40,275	38,620
Equity securities (dividends)	6,297	7,098
Short-term investments	3,775	1,312
Other (1)	33,381	22,003
Gross investment income	272,391	220,700
Investment expenses	(43,393)	(38,627)
Net investment income	$228,998	$182,073

(1) Includes income distributions from investment funds and other items.

Net Realized Gains (Losses)
Net realized gains (losses) were as follows, excluding other than-temporary impairment provision.

	June 30, 2017	2016
Three Months Ended		
Available for sale securities:		
Gross gains on investment sales	$76,730	$74,695
Gross losses on investment sales	(52,619)	(43,293)
Change in fair value of assets and liabilities accounted for using the fair value option:		
Fixed maturities	9,656	18,632
Other investments	637	13,136
Equity securities	2,829	401
Short-term investments	3,328	(621)
Derivative instruments (1)	(4,770)	20,334
Other (2)	(14,056)	(15,066)
Net realized gains (losses)	$21,735	$68,218
Six Months Ended		
Available for sale securities:		
Gross gains on investment sales	$145,905	$182,514
Gross losses on investment sales	(113,981)	(106,424)
Change in fair value of assets and liabilities accounted for using the fair value option:		

Fixed maturities	30,197	18,299
Other investments	17,885	(8,412)
Equity securities	6,374	437
Short-term investments	3,332	(1,043)
Derivative instruments (1)	(13,951)	41,066
Other (2)	(19,873)	(20,895)
Net realized gains (losses)	$55,888	$105,542

(1) See Note 9 for information on the Company's derivative instruments.
(2) Includes the re-measurement of contingent consideration liability amounts.

Equity in Net Income (Loss) of Investment Funds Accounted for Using the Equity Method

The Company recorded $32.7 million of equity in net income related to investment funds accounted for using the equity method in the 2017 second quarter, compared to $8.7 million for the 2016 second quarter, and $80.8 million for the six months ended June 30, 2017, compared to $15.4 million for the 2016 period. In applying the equity method, investments are initially recorded at cost and are subsequently adjusted based on the Company's proportionate share of the net income or loss of the funds (which include changes in the market value of the underlying securities in the funds). Such investments are generally recorded on a one to three month lag based on the availability of reports from the investment funds.

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Other-Than-Temporary Impairments
The Company performs quarterly reviews of its available for sale investments in order to determine whether declines in fair value below the amortized cost basis were considered other-than-temporary in accordance with applicable guidance.
The following table details the net impairment losses recognized in earnings by asset class:

	June 30, 2017	2016
Three Months Ended		
Fixed maturities:		
Mortgage backed securities	$(92)	$(82)
Corporate bonds	(1,401)	(775)
Non-U.S. government securities	—	(51)
Asset backed securities	—	(2,500)
Municipal bonds	(173)	—
Total	(1,666)	(3,408)
Equity securities	—	(1,935)
Other investments	(64)	—
Net impairment losses recognized in earnings	$(1,730)	$(5,343)
Six Months Ended		
Fixed maturities:		
Mortgage backed securities	$(1,411)	$(555)
Corporate bonds	(1,402)	(5,655)
Non-U.S. government securities	(198)	(232)
Asset backed securities	—	(2,506)
Municipal bonds	(173)	—
Total	(3,184)	(8,948)
Equity securities	(186)	(3,037)
Other investments	(167)	(997)
Net impairment losses recognized in earnings	$(3,537)	$(12,982)

Net impairment losses recognized in earnings in the 2017 second quarter were primarily related to foreign currency fluctuations on corporate bonds. For the six months ended June 30, 2017, net impairment losses recognized in earnings reflected the Company's decision to liquidate a portfolio of mortgage backed securities in April 2017. The Company recorded impairment losses on securities in such portfolio that were in an unrealized loss position at March 31, 2017.
The Company believes that the $3.6 million of OTTI included in accumulated other comprehensive income at June 30, 2017 on the securities which were considered by the Company to be impaired was due to market and sector-related factors (i.e., not credit losses). At June 30, 2017, the Company did not intend to sell these securities, or any other securities which were in an unrealized loss position, and determined that it is more likely than not that the Company will not be required to sell such securities before recovery of their cost basis.

The following table provides a roll forward of the amount related to credit losses recognized in earnings for which a portion of an OTTI was recognized in accumulated other comprehensive income:

	June 30, 2017	2016
Three Months Ended		

Balance at start of period	$12,537	$18,291
Credit loss impairments recognized on securities not previously impaired	31	287
Credit loss impairments recognized on securities previously impaired	172	—
Reductions for increases in cash flows expected to be collected that are recognized over the remaining life of the security	—	—
Reductions for securities sold during the period	(8,303)	(3,731)
Balance at end of period	$4,437	$14,847
Six Months Ended		
Balance at start of year	$13,138	$26,875
Credit loss impairments recognized on securities not previously impaired	31	1,350
Credit loss impairments recognized on securities previously impaired	195	522
Reductions for increases in cash flows expected to be collected that are recognized over the remaining life of the security	—	—
Reductions for securities sold during the period	(8,927)	(13,900)
Balance at end of period	$4,437	$14,847

Restricted Assets

The Company is required to maintain assets on deposit, which primarily consist of fixed maturities, with various regulatory authorities to support its insurance and reinsurance operations. The Company's insurance and reinsurance subsidiaries maintain assets in trust accounts as collateral for insurance and reinsurance transactions with affiliated companies and also have investments in segregated portfolios primarily to provide collateral or guarantees for letters of credit to third parties. See Note 10 for further details.

The following table details the value of the Company's restricted assets:

	June 30, 2017	December 31, 2016
Assets used for collateral or guarantees:		
Affiliated transactions	$4,003,009	$ 3,871,971
Third party agreements	1,672,159	1,513,079
Deposits with U.S. regulatory authorities	618,448	472,890
Deposits with non-U.S. regulatory authorities	45,493	44,399
Total restricted assets	$6,339,109	$ 5,902,339

8. Fair Value

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

The levels in the hierarchy are defined as follows:

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

Following is a description of the valuation methodologies used for securities measured at fair value, as well as the general classification of such securities pursuant to the valuation hierarchy. The Company reviews its securities measured at fair value and discusses the proper classification of such investments with investment advisers and others. The Company determines the existence of an active market based on its judgment as to whether transactions for the financial instrument occur in such market with sufficient frequency and volume to provide reliable pricing information. The independent pricing sources obtain market quotations and actual transaction prices for securities that have quoted prices in active markets. The Company uses quoted values and other data provided by nationally recognized independent pricing sources as inputs into its process for determining fair values of its fixed maturity investments. To validate the techniques or models used by pricing sources, the Company's review process includes, but is not limited to: (i) quantitative analysis (e.g.,

comparing the quarterly return for each managed portfolio to its target benchmark, with significant differences identified and investigated); (ii) a review of the average number of prices obtained in the pricing process and the range of resulting fair values; (iii) initial and ongoing evaluation of methodologies used by outside parties to calculate fair value; (iv) a comparison of the fair value estimates to the Company’s knowledge of the current market; (v) a comparison of the pricing services' fair values to other pricing services' fair values for the same investments; and (vi) periodic back-testing, which includes randomly selecting purchased or sold securities and comparing the executed prices to the fair value estimates from the pricing service. A price source hierarchy was maintained in order to determine which price source would be used (i.e., a price obtained from a pricing service with more seniority in the hierarchy will be used over a less senior one in all cases). The hierarchy prioritizes pricing services based on availability and reliability and assigns the highest priority to index providers. Based on the above review, the Company will challenge any prices for a security or portfolio which are considered not to be representative of fair value. The Company did not adjust any of the prices obtained from the independent pricing sources at June 30, 2017. In certain circumstances, when fair values are unavailable from these independent pricing sources, quotes are obtained directly from broker-dealers who are active in the corresponding markets. Such quotes are subject to the validation procedures noted above. Of the $19.92 billion of financial assets and liabilities measured at fair value at June 30, 2017, approximately $140.9 million, or 0.7%, were priced using non-binding broker-dealer quotes. Of the $19.10 billion of financial assets and liabilities measured at fair value at December 31, 2016, approximately $234.0 million, or 1.2%, were priced using non-binding broker-dealer quotes.

Fixed maturities

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

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

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

•Corporate bonds — valuations provided by independent pricing services, substantially all through index providers and pricing vendors with a small amount through broker-dealers. The fair values of these securities are generally determined using the spread above the risk-free yield curve. These spreads are generally obtained from the new issue market, secondary trading and from broker-dealers who trade in the relevant security market. As the significant inputs used in the pricing process for corporate bonds are observable market inputs, the fair value of these securities are classified within Level 2. Two securities are included in Level 3 due to a low level of transparency on the inputs used in the pricing process.

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

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

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

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

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

Equity securities

The Company determined that exchange-traded equity securities would be included in Level 1 as their fair values are based on quoted market prices in active markets. Other equity securities are included in Level 2 of the valuation hierarchy.

Other investments

The Company determined that exchange-traded investments in mutual funds would be included in Level 1 as their fair values are based on quoted market prices in active markets. Other investments also include term loan investments for which fair values are estimated by using quoted prices of term loan investments with similar characteristics, pricing models or matrix pricing. Such investments are generally classified within Level 2. The fair values for certain of the Company's other investments are determined using net asset values as advised by external fund managers. The net asset value is based on the fund manager's valuation of the underlying holdings in accordance with the fund's governing documents. In accordance with applicable accounting guidance, certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. One security is included in Level 3 due to the lack on available independent price source for such security.

Derivative instruments

The Company's futures contracts, foreign currency forward contracts, interest rate swaps and other derivatives trade in the over-the-counter derivative market. The Company uses the market approach valuation technique to estimate the fair value for these derivatives based on significant observable market inputs from third party pricing vendors, non-binding broker-dealer quotes and/or recent trading activity. As the significant inputs used in the pricing process for these derivative instruments are observable market inputs, the fair value of these securities are classified within Level 2.

Short-term investments

The Company determined that certain of its short-term investments held in highly liquid money market-type funds,

Treasury bills and commercial paper would be included in Level 1 as their fair values are based on quoted market prices in active markets. The fair values of other short-term investments are generally determined using the spread above the risk-free yield curve and are classified within Level 2.

Contingent consideration liabilities

Contingent consideration liabilities (included in 'other liabilities' in the consolidated balance sheets) include amounts related to the acquisition of CMG Mortgage Insurance Company and its affiliated mortgage insurance companies and other acquisitions. Such amounts are remeasured at fair value at each balance sheet date with changes in fair value recognized in 'net realized gains (losses).' To determine the fair value of contingent consideration liabilities, the Company estimates future payments using an income approach based on modeled inputs which include a weighted average cost of capital. The Company determined that contingent consideration liabilities would be included within Level 3.

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The following table presents the Company’s financial assets and liabilities measured at fair value by level at June 30, 2017:

		Estimated Fair Value Measurements Using:		
	Estimated Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets measured at fair value (1):				
Available for sale securities:				
Fixed maturities:				
Corporate bonds	$4,262,411	$—	$4,250,841	$ 11,570
Mortgage backed securities	331,082	—	331,082	—
Municipal bonds	2,618,827	—	2,618,827	—
Commercial mortgage backed securities	521,272	—	521,272	—
U.S. government and government agencies	3,425,196	3,360,752	64,444	—
Non-U.S. government securities	1,375,796	—	1,375,796	—
Asset backed securities	1,739,695	—	1,739,695	—
Total	14,274,279	3,360,752	10,901,957	11,570
Equity securities	467,870	463,015	4,855	—
Short-term investments	914,356	906,191	8,165	—
Other investments	170,402	170,402	—	—
Other investments measured at net asset value (2)	78,259			
Total other investments	248,661	170,402	—	—
Derivative instruments (4)	30,215	—	30,215	—
Fair value option:				
Corporate bonds	749,399	—	749,399	—
Non-U.S. government bonds	75,084	—	75,084	—
Mortgage backed securities	19,812	—	19,812	—
Asset backed securities	16,291	—	16,291	—
U.S. government and government agencies	209,583	209,583	—	—
Short-term investments	527,384	524,167	3,217	—
Equity securities	76,915	57,523	19,392	—
Other investments	1,392,973	92,860	1,275,113	25,000
Other investments measured at net asset value (2)	750,792			
Total	3,818,233	884,133	2,158,308	25,000
Total assets measured at fair value	$19,753,614	$5,784,493	$13,103,500	$ 36,570
Liabilities measured at fair value:				
Contingent consideration liabilities	$(57,246)	$—	$—	$ (57,246)

Securities sold but not yet purchased (3)	(69,273)	—	(69,273)	—
Derivative instruments (4)	(35,004)	—	(35,004)	—
Total liabilities measured at fair value	$(161,523)	$—	$(104,277)	$ (57,246)

(1) In securities lending transactions, the Company receives collateral in excess of the fair value of the securities pledged. For purposes of this table, the Company has excluded the collateral received under securities lending, at fair value and included the securities pledged under securities lending, at fair value. See Note 7, "Investment Information—Securities Lending Agreements."

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

(3) Represents the Company's obligations to deliver securities that it did not own at the time of sale. Such amounts are included in "other liabilities" on the Company's consolidated balance sheets.

(4) See Note 9, "Derivative Instruments."

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The following table presents the Company’s financial assets and liabilities measured at fair value by level at December 31, 2016:

	Estimated Fair Value	Estimated Fair Value Measurements Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets measured at fair value (1):				
Available for sale securities:				
Fixed maturities:				
Corporate bonds	$4,392,373	$—	$4,374,029	$ 18,344
Mortgage backed securities	490,093	—	490,093	—
Municipal bonds	3,713,434	—	3,713,434	—
Commercial mortgage backed securities	536,051	—	536,051	—
U.S. government and government agencies	2,804,540	2,691,575	112,965	—
Non-U.S. government securities	1,096,440	—	1,096,440	—
Asset backed securities	1,123,987	—	1,112,698	11,289
Total	14,156,918	2,691,575	11,435,710	29,633
Equity securities	532,680	529,695	2,985	—
Short-term investments	612,005	608,862	3,143	—
Other investments	112,313	112,313	—	—
Other investments measured at net asset value (2)	55,657			
Total other investments	167,970	112,313	—	—
Derivative instruments (4)	28,410	—	28,410	—
Fair value option:				
Corporate bonds	790,935	—	790,935	—
Non-U.S. government bonds	61,747	—	61,747	—
Mortgage backed securities	18,624	—	18,624	—
Asset backed securities	30,324	—	30,324	—
U.S. government and government agencies	197,486	197,486	—	—
Short-term investments	373,669	309,127	64,542	—
Equity securities	27,642	25,328	2,314	—
Other investments	1,226,242	80,706	1,120,536	25,000
Other investments measured at net asset value (2)	694,551			
Total	3,421,220	612,647	2,089,022	25,000
Total assets measured at fair value	$18,919,203	$4,555,092	$13,559,270	$ 54,633
Liabilities measured at fair value:				
Contingent consideration liabilities	$(122,350)	$—	$—	$ (122,350)

Securities sold but not yet purchased (3)	(33,157)	—	(33,157)	—
Derivative instruments (4)	(26,049)	—	(26,049)	—
Total liabilities measured at fair value	$(181,556)	$—	$(59,206)	$(122,350)

(1) In securities lending transactions, the Company receives collateral in excess of the fair value of the securities pledged. For purposes of this table, the Company has excluded the collateral received under securities lending, at fair value and included the securities pledged under securities lending, at fair value. See Note 7, "Investment Information—Securities Lending Agreements."

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

(3) Represents the Company's obligations to deliver securities that it did not own at the time of sale. Such amounts are included in "other liabilities" on the Company's consolidated balance sheets.

(4) See Note 9, "Derivative Instruments."

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The following table presents a reconciliation of the beginning and ending balances for all financial assets and liabilities measured at fair value on a recurring basis using Level 3 inputs:

	Assets				Liabilities
s	Available For Sale		Fair Value Option		
	Asset Backed Securities	Corporate Bonds	Other Investments	Total	Contingent Consideration Liabilities
Three Months Ended June 30, 2017					
Balance at beginning of period	$10,637	$18,601	$ 25,000	$54,238	$ (125,544)
Total gains or (losses) (realized/unrealized)					
Included in earnings (1)	3,072	636	—	3,708	(3,441)
Included in other comprehensive income	—	—	—	—	—
Purchases, issuances, sales and settlements					
Purchases	—	4,935	—	4,935	—
Issuances	—	—	—	—	—
Sales	(13,640)	(12,602)	—	(26,242)	—
Settlements	(69)	—	—	(69)	71,739
Transfers in and/or out of Level 3	—	—	—	—	—
Balance at end of period	$—	$11,570	$ 25,000	$36,570	$ (57,246)
Three Months Ended June 30, 2016					
Balance at beginning of period	$57,500	$15,166	$ —	$72,666	$ (100,710)
Total gains or (losses) (realized/unrealized)					
Included in earnings (1)	(2,500)	1,363	—	(1,137)	(10,923)
Included in other comprehensive income	—	—	—	—	(37)
Purchases, issuances, sales and settlements					
Purchases	—	776	—	776	—
Issuances	—	—	—	—	—
Sales	—	—	—	—	—
Settlements	(5,789)	—	—	(5,789)	—
Transfers in and/or out of Level 3	—	—	—	—	—
Balance at end of period	$49,211	$17,305	$ —	$66,516	$ (111,670)
Six Months Ended June 30, 2017					
Balance at beginning of year	$11,289	$18,344	$ 25,000	$54,633	$ (122,350)
Total gains or (losses) (realized/unrealized)					
Included in earnings (1)	3,779	893	—	4,672	(7,087)
Included in other comprehensive income	—	—	—	—	—
Purchases, issuances, sales and settlements					
Purchases	—	4,935	—	4,935	—
Issuances	—	—	—	—	—
Sales	(13,640)	(12,602)	—	(26,242)	—
Settlements	(1,428)	—	—	(1,428)	72,191
Transfers in and/or out of Level 3	—	—	—	—	—
Balance at end of period	$—	$11,570	$ 25,000	$36,570	$ (57,246)

Six Months Ended June 30, 2016					
Balance at beginning of year	$57,500	$16,368	$ —	$73,868	$ (96,048)
Total gains or (losses) (realized/unrealized)					
Included in earnings (1)	(2,500)	161	—	(2,339)	(16,121)
Included in other comprehensive income	—	—	—	—	(37)
Purchases, issuances, sales and settlements					
Purchases	—	776	—	776	—
Issuances	—	—	—	—	—
Sales	—	—	—	—	—
Settlements	(5,789)	—	—	(5,789)	536
Transfers in and/or out of Level 3	—	—	—	—	—
Balance at end of period	$49,211	$17,305	$ —	$66,516	$ (111,670)

(1) For the 2017 periods, gains or losses were included in net realized gains (losses). For the 2016 periods, losses on asset backed securities were included in net impairment losses recognized in earnings gains or losses while gains or losses on corporate bonds and contingent consideration liabilities were included in net realized gains (losses).

Financial Instruments Disclosed, But Not Carried, At Fair Value

The Company uses various financial instruments in the normal course of its business. The carrying values of cash, accrued investment income, receivable for securities sold, certain other assets, payable for securities purchased and certain other liabilities approximated their fair values at June 30, 2017, due to their respective short maturities. As these financial instruments are not actively traded, their respective fair values are classified within Level 2.

At June 30, 2017, the senior notes of ACGL were carried at their cost, net of debt issuance costs, of $297.0 million and had a fair value of $407.0 million, while the senior notes of Arch Capital Group (U.S.) Inc. ("Arch-U.S.") were carried at their cost, net of debt issuance costs, of $494.6 million and had a fair value of $564.2 million. The senior notes of Arch Capital Finance LLC due in 2026 were carried at their cost, net of debt issuance costs, of $495.9 million and had a fair value of $518.2 million, while the senior notes due in 2046 were carried at their cost, net of debt issuance costs, of $445.1 million and had a fair value of $505.5 million. The fair values of the senior notes were obtained from a third party pricing service and are based on observable market inputs. As such, the fair values of the senior notes are classified within Level 2.

9. Derivative Instruments

The Company's investment strategy allows for the use of derivative instruments. The Company's derivative instruments are recorded on its consolidated balance sheets at fair value. The Company utilizes exchange traded U.S. Treasury note, Eurodollar and other futures contracts and commodity futures to manage portfolio duration or replicate investment positions in its portfolios and the Company routinely utilizes foreign currency forward contracts, currency options, index futures contracts and other derivatives as part of its total return objective. In addition, certain of the Company's investments are managed in portfolios which incorporate the use of foreign currency forward contracts which are intended to provide an economic hedge against foreign currency movements.

In addition, the Company purchases to-be-announced mortgage backed securities ("TBAs") as part of its investment strategy. TBAs represent commitments to purchase a future issuance of agency mortgage backed securities. For the period between purchase of a TBA and issuance of the underlying security, the Company's position is accounted for as a derivative. The Company purchases TBAs in both long and short positions to enhance investment performance and as part of its overall investment strategy.

The following table summarizes information on the fair values and notional values of the Company's derivative instruments:

	Estimated Fair Value		
	Asset Derivatives	Liability Derivatives	Notional Value (1)
June 30, 2017			
Futures contracts (2)	$4,490	$(9,988)	$2,402,654
Foreign currency forward contracts (2)	13,854	(16,659)	1,068,430
TBAs (3)	4,970	—	4,978
Other (2)	11,871	(8,357)	1,747,025
Total	$35,185	$(35,004)	
December 31, 2016			
Futures contracts (2)	$360	$(9,398)	$1,655,530
Foreign currency forward contracts (2)	9,354	(12,941)	1,186,386
TBAs (3)	—	—	—
Other (2)	20,287	(3,710)	1,014,863
Total	$30,001	$(26,049)	

(1) Represents the absolute notional value of all outstanding contracts, consisting of long and short positions.

(2) The fair value of asset derivatives are included in ‘other assets’ and the fair value of liability derivatives are included in ‘other liabilities.’

(3) The fair value of TBAs are included in ‘fixed maturities available for sale, at fair value.’

The Company did not hold any derivatives which were designated as hedging instruments at June 30, 2017 or December 31, 2016.

The Company’s derivative instruments can be traded under master netting agreements, which establish terms that apply to all derivative transactions with a counterparty. In the event of a bankruptcy or other stipulated event of default, such agreements provide that the non-defaulting party may elect to terminate all outstanding derivative transactions, in which case all individual derivative positions (loss or gain) with a counterparty are closed out and netted and replaced with a single amount, usually referred to as the termination amount, which is expressed in a single currency. The resulting single net amount, where positive, is payable to the party “in-the-money” regardless of whether or not it is the defaulting party, unless the parties have agreed that only the non-defaulting party is entitled to receive a termination payment where the net amount is positive and is in its favor. Contractual close-out netting reduces derivatives credit exposure from gross to net exposure.

At June 30, 2017, asset derivatives and liability derivatives of $33.1 million and $34.5 million, respectively, were subject to a master netting agreement, compared to $28.4 million and $26.0 million, respectively, at December 31, 2016. The remaining derivatives included in the preceding table were not subject to a master netting agreement.

All realized and unrealized contract gains and losses on the Company’s derivative instruments are reflected in net realized gains (losses) in the consolidated statements of income, as summarized in the following table:

Derivatives not designated as hedging instruments:	June 30, 2017	2016
Three Months Ended		
Net realized gains (losses):		
Futures contracts	$(5,310)	$34,871
Foreign currency forward contracts	(272)	(13,782)
TBAs	86	37
Other	726	(792)
Total	$(4,770)	$20,334
Six Months Ended		
Net realized gains (losses):		
Futures contracts	$2,410	$61,322
Foreign currency forward contracts	(12,038)	(18,534)
TBAs	21	334
Other	(4,344)	(2,056)
Total	$(13,951)	$41,066

10. Commitments and Contingencies

Investment Commitments

The Company’s investment commitments, which are primarily related to agreements entered into by the Company to invest in funds and separately managed accounts when called upon, were approximately $1.56 billion at June 30, 2017.

11. Share Transactions

Share-Based Compensation

During the 2017 second quarter, the Company granted 492,466 stock options and 511,636 restricted shares and units to certain employees and directors with weighted average grant-date fair values of $24.66 and $96.28, respectively. During the 2016 second quarter, the Company granted 427,379 stock options and 456,217 restricted shares and units to certain employees and directors with weighted average grant-date fair values of $17.46 and $71.61, respectively. The stock options were valued at the grant date using the Black-Scholes option pricing model. Such values are being amortized over the respective substantive vesting period. For awards granted to retirement-eligible employees where no service is required for the employee to retain the award, the grant date fair value is immediately recognized as compensation expense at the grant date because the employee is able to retain the award without continuing to provide service. For employees near retirement eligibility, attribution of compensation cost is recognized over the period from the grant date to the retirement eligibility date.

Share Repurchases

The board of directors of ACGL has authorized the investment in ACGL’s common shares through a share repurchase program. Since the inception of the share repurchase program, ACGL has repurchased approximately 125.2 million common shares for an aggregate purchase price of $3.68 billion. For the six months ended June 30, 2017, the Company did not repurchase any shares under the share repurchase program, compared to 1.1 million common shares

repurchased for the six months ended June 30, 2016 with an aggregate purchase price of $75.3 million (no repurchases in the 2016 second quarter). At June 30, 2017, $446.5 million of share repurchases were available under the program, which may be effected from time to time in open market or privately negotiated transactions through December 31, 2019. The timing and amount of the repurchase transactions under this program will depend on a variety of factors, including market conditions and corporate and regulatory considerations.
Conversion of Convertible Non-Voting Common Equivalent Preferred Shares
On June 8, 2017, ACGL and AIG entered into Amendment No. 1 (the "Amendment") to the Investor Rights Agreement (the "Investor Rights Agreement") dated as of December 31, 2016 to amend the restrictions on transfers of the 1,276,282 shares of ACGL's convertible non-voting common-equivalent preference shares owned by AIG (the "Convertible Preferred Shares"). The Convertible Preferred Shares were issued to AIG as part of the consideration in UGC acquisition. Pursuant to the certificate of designations for the Convertible Preferred Shares and in accordance with the terms and conditions set forth therein, each Convertible Preferred Share is convertible into ten common shares of ACGL.
Pursuant to the Amendment, ACGL permitted AIG to transfer: (i) 638,141 Convertible Preferred Shares from and after June 8, 2017, and up to an additional 95,721 of the Convertible Preferred Shares to the extent that the several underwriters exercise the option to purchase additional securities expected to be granted pursuant to an underwritten secondary offering of AGCL common shares issuable upon conversion of the Convertible Preferred Shares by AIG and (ii) any and all of the Convertible Preferred Shares from and after January 15, 2018, subject to certain exceptions, and in each case subject to the terms and conditions of the Investor Rights Agreement. All other terms of the Investor Rights Agreement remain in effect.
In June 2017, ACGL completed an underwritten public secondary offering of 7,088,620 common shares by AIG following transfer of 708,862 Convertible Preferred Shares. Proceeds from the sale of common shares pursuant to the public offering were received by AIG. At June 30, 2017, 567,420 Convertible Preferred Shares were outstanding.

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12. Other Comprehensive Income (Loss)

The following tables present details about amounts reclassified from accumulated other comprehensive income and the tax effects allocated to each component of other comprehensive income (loss):

Details About AOCI Components	Consolidated Statement of Income Line Item That Includes Reclassification	Amounts Reclassified from AOCI Three Months Ended June 30, 2017	2016	Six Months Ended June 30, 2017	2016
Unrealized appreciation on available-for-sale investments					
	Net realized gains (losses)	$24,111	$31,404	$31,924	$76,091
	Other-than-temporary impairment losses	(1,730)	(5,395)	(3,537)	(13,132)
	Total before tax	22,381	26,009	28,387	62,959
	Income tax (expense) benefit	(5,157)	(3,915)	(6,119)	(8,642)
	Net of tax	$17,224	$22,094	$22,268	$54,317

	Before Tax Amount	Tax Expense (Benefit)	Net of Tax Amount
Three Months Ended June 30, 2017			
Unrealized appreciation (decline) in value of investments:			
Unrealized holding gains (losses) arising during period	$108,011	$15,042	$92,969
Portion of other-than-temporary impairment losses recognized in other comprehensive income (loss)	—	—	—
Less reclassification of net realized gains (losses) included in net income	22,381	5,157	17,224
Foreign currency translation adjustments	18,509	212	18,297
Other comprehensive income (loss)	$104,139	$10,097	$94,042
Three Months Ended June 30, 2016			
Unrealized appreciation (decline) in value of investments:			
Unrealized holding gains (losses) arising during period	$117,904	$15,444	$102,460
Portion of other-than-temporary impairment losses recognized in other comprehensive income (loss)	(52)	—	(52)
Less reclassification of net realized gains (losses) included in net income	26,009	3,915	22,094
Foreign currency translation adjustments	(18,186)	(35)	(18,151)
Other comprehensive income (loss)	$73,657	$11,494	$62,163
Six Months Ended June 30, 2017			
Unrealized appreciation (decline) in value of investments:			
Unrealized holding gains (losses) arising during period	$219,483	$25,722	$193,761
Portion of other-than-temporary impairment losses recognized in other comprehensive income (loss)	—	—	—
Less reclassification of net realized gains (losses) included in net income	28,387	6,119	22,268
Foreign currency translation adjustments	21,674	253	21,421
Other comprehensive income (loss)	$212,770	$19,856	$192,914
Six Months Ended June 30, 2016			
Unrealized appreciation (decline) in value of investments:			

Unrealized holding gains (losses) arising during period	$270,078	$34,637	$235,441
Portion of other-than-temporary impairment losses recognized in other comprehensive income (loss)	(150)	—	(150)
Less reclassification of net realized gains (losses) included in net income	62,959	8,642	54,317
Foreign currency translation adjustments	(326)	512	(838)
Other comprehensive income (loss)	$206,643	$26,507	$180,136

13. Guarantor Financial Information

The following tables present condensed financial information for ACGL, Arch-U.S., a 100% owned subsidiary of ACGL, and ACGL's other subsidiaries.

	June 30, 2017				
Condensed Consolidating Balance Sheet	ACGL (Parent Guarantor)	Arch-U.S. (Subsidiary Issuer)	Other ACGL Subsidiaries	Consolidating Adjustments and Eliminations	ACGL Consolidated
Assets					
Total investments	$258	$69,569	$20,644,025	$(14,700)	$20,699,152
Cash	2,742	46,002	691,576	—	740,320
Investments in subsidiaries	9,292,102	3,967,022	—	(13,259,124)	—
Due from subsidiaries and affiliates	27	248	1,888,499	(1,888,774)	—
Premiums receivable	—	—	1,948,630	(634,066)	1,314,564
Reinsurance recoverable on unpaid and paid losses and loss adjustment expenses	—	—	6,390,582	(4,235,475)	2,155,107
Contractholder receivables	—	—	1,826,966	—	1,826,966
Ceded unearned premiums	—	—	2,218,529	(1,257,199)	961,330
Deferred acquisition costs	—	—	651,295	(144,547)	506,748
Goodwill and intangible assets	—	—	712,975	—	712,975
Other assets	14,101	65,626	2,042,421	(176,671)	1,945,477
Total assets	$9,309,230	$4,148,467	$39,015,498	$(21,610,556)	$30,862,639
Liabilities					
Reserve for losses and loss adjustment expenses	$—	$—	$14,728,976	$(4,208,465)	$10,520,511
Unearned premiums	—	—	4,936,850	(1,257,199)	3,679,651
Reinsurance balances payable	—	—	995,065	(634,065)	361,000
Contractholder payables	—	—	1,826,966	—	1,826,966
Collateral held for insured obligations	—	—	338,737		338,737
Senior notes	297,007	494,572	940,991	—	1,732,570
Revolving credit agreement borrowings	100,000	—	586,452	—	686,452
Due to subsidiaries and affiliates	301	536,831	1,352,313	(1,889,445)	—
Other liabilities	13,035	60,878	2,008,318	(347,558)	1,734,673
Total liabilities	410,343	1,092,281	27,714,668	(8,336,732)	20,880,560
Redeemable noncontrolling interests	—	—	220,436	(14,700)	205,736
Shareholders' Equity					
Total shareholders' equity available to Arch	8,898,887	3,056,186	10,202,938	(13,259,124)	8,898,887
Non-redeemable noncontrolling interests	—	—	877,456	—	877,456
Total shareholders' equity	8,898,887	3,056,186	11,080,394	(13,259,124)	9,776,343
Total liabilities, noncontrolling interests and shareholders' equity	$9,309,230	$4,148,467	$39,015,498	$(21,610,556)	$30,862,639

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	December 31, 2016				
Condensed Consolidating Balance Sheet	ACGL (Parent Guarantor)	Arch-U.S. (Subsidiary Issuer)	Other ACGL Subsidiaries	Consolidating Adjustments and Eliminations	ACGL Consolidated
Assets					
Total investments	$2,612	$41,672	$19,690,067	$(14,700)	$19,719,651
Cash	1,687	71,955	769,300	—	842,942
Investments in subsidiaries	8,660,586	3,716,681	—	(12,377,267)	—
Due from subsidiaries and affiliates	14,297	51,298	1,866,681	(1,932,276)	—
Premiums receivable	—	—	1,579,865	(507,430)	1,072,435
Reinsurance recoverable on unpaid and paid losses and loss adjustment expenses	—	—	6,114,518	(4,000,380)	2,114,138
Contractholder receivables	—	—	1,717,436	—	1,717,436
Ceded unearned premiums	—	—	1,985,311	(1,125,744)	859,567
Deferred acquisition costs	—	—	577,461	(129,901)	447,560
Goodwill and intangible assets	—	—	781,553	—	781,553
Other assets	15,725	49,244	1,901,786	(149,928)	1,816,827
Total assets	$8,694,907	$3,930,850	$36,983,978	$(20,237,626)	$29,372,109
Liabilities					
Reserve for losses and loss adjustment expenses	$—	$—	$14,164,191	$(3,963,231)	$10,200,960
Unearned premiums	—	—	4,532,614	(1,125,744)	3,406,870
Reinsurance balances payable	—	—	807,837	(507,430)	300,407
Contractholder payables	—	—	1,717,436	—	1,717,436
Collateral held for insured obligations	—	—	301,406	—	301,406
Deposit accounting liabilities	—	—	22,150	—	22,150
Senior notes	296,957	494,525	940,776	—	1,732,258
Revolving credit agreement borrowings	100,000	—	656,650	—	756,650
Due to subsidiaries and affiliates	26,270	535,584	1,370,422	(1,932,276)	—
Other liabilities	17,962	54,823	1,867,040	(316,978)	1,622,847
Total liabilities	441,189	1,084,932	26,380,522	(7,845,659)	20,060,984
Redeemable noncontrolling interests	—	—	220,253	(14,700)	205,553
Shareholders' Equity					
Total shareholders' equity available to Arch	8,253,718	2,845,918	9,531,349	(12,377,267)	8,253,718
Non-redeemable noncontrolling interests	—	—	851,854	—	851,854
Total shareholders' equity	8,253,718	2,845,918	10,383,203	(12,377,267)	9,105,572
Total liabilities, noncontrolling interests and shareholders' equity	$8,694,907	$3,930,850	$36,983,978	$(20,237,626)	$29,372,109

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	Three Months Ended June 30, 2017				
Condensed Consolidating Statement of Income and Comprehensive Income	ACGL (Parent Guarantor)	Arch-U.S. (Subsidiary Issuer)	Other ACGL Subsidiaries	Consolidating Adjustments and Eliminations	ACGL Consolidated
Revenues					
Net premiums earned	$—	$—	$1,240,874	$—	$1,240,874
Net investment income	1	184	133,627	(22,688)	111,124
Net realized gains (losses)	—	—	21,735	—	21,735
Net impairment losses recognized in earnings	—	—	(1,730)	—	(1,730)
Other underwriting income	—	—	4,822	—	4,822
Equity in net income (loss) of investment funds accounted for using the equity method	—	—	32,706	—	32,706
Other income (loss)	(437)	—	(1,557)	—	(1,994)
Total revenues	(436)	184	1,430,477	(22,688)	1,407,537
Expenses					
Losses and loss adjustment expenses	—	—	689,860	—	689,860
Acquisition expenses	—	—	190,436	—	190,436
Other operating expenses	—	—	169,981	—	169,981
Corporate expenses	21,816	1,309	1,751	—	24,876
Amortization of intangible assets	—	—	30,824	—	30,824
Interest expense	6,075	11,989	33,050	(22,365)	28,749

Net foreign exchange (gains) losses	—	—	29,843	9,700	39,543
Total expenses	27,891	13,298	1,145,745	(12,665)	1,174,269
Income (loss) before income taxes	(28,327)	(13,114)	284,732	(10,023)	233,268
Income tax (expense) benefit	—	4,069	(38,238)	—	(34,169)
Income (loss) before equity in net income of subsidiaries	(28,327)	(9,045)	246,494	(10,023)	199,099
Equity in net income of subsidiaries	213,494	86,156	—	(299,650)	—
Net income	185,167	77,111	246,494	(309,673)	199,099
Net (income) loss attributable to noncontrolling interests	—	—	(14,254)	322	(13,932)
Net income available to Arch	185,167	77,111	232,240	(309,351)	185,167
Preferred dividends	(11,349)	—	—	—	(11,349)
Net income available to Arch common shareholders	$173,818	$77,111	$232,240	$(309,351)	$173,818
Comprehensive income (loss) available to Arch	$279,285	$105,302	$475,747	$(581,049)	$279,285

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Condensed Consolidating Statement of Income and Comprehensive Income	Three Months Ended June 30, 2016				
	ACGL (Parent Guarantor)	Arch-U.S. (Subsidiary Issuer)	Other ACGL Subsidiaries	Consolidating Adjustments and Eliminations	ACGL Consolidated
Revenues					
Net premiums earned	$—	$ —	$ 1,005,985	$ —	$ 1,005,985
Net investment income	—	775	94,097	(6,534)	88,338
Net realized gains (losses)	—	—	68,218	—	68,218
Net impairment losses recognized in earnings	—	—	(5,343)	—	(5,343)
Other underwriting income	—	—	41,450	(16,226)	25,224
Equity in net income (loss) of investment funds accounted for using the equity method	—	—	8,737	—	8,737
Other income (loss)	(7)	—	—	—	(7)
Total revenues	(7)	775	1,213,144	(22,760)	1,191,152
Expenses					
Losses and loss adjustment expenses	—	—	584,592	—	584,592
Acquisition expenses	—	—	172,677	—	172,677
Other operating expenses	—	—	157,314	—	157,314
Corporate expenses	17,441	359	(600)	—	17,200
Amortization of intangible assets	—	—	4,880	—	4,880
Interest expense	5,929	6,647	25,527	(22,440)	15,663

Net foreign exchange (gains) losses	—	—	(14,125)	(10,537)	(24,662)
Total expenses	23,370	7,006	930,265	(32,977)	927,664
Income (loss) before income taxes	(23,377)	(6,231)	282,879	10,217	263,488
Income tax (expense) benefit	—	2,086	(16,217)	—	(14,131)
Income (loss) before equity in net income of subsidiaries	(23,377)	(4,145)	266,662	10,217	249,357
Equity in net income of subsidiaries	234,432	19,873	—	(254,305)	—
Net income	211,055	15,728	266,662	(244,088)	249,357
Net (income) loss attributable to noncontrolling interests	—	—	(38,623)	321	(38,302)
Net income available to Arch	211,055	15,728	228,039	(243,767)	211,055
Preferred dividends	(5,485)	—	—	—	(5,485)
Net income available to Arch common shareholders	$205,570	$ 15,728	$228,039	$ (243,767)	$205,570
Comprehensive income (loss) available to Arch	$273,260	$ 28,536	$300,542	$ (329,078)	$273,260

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	Six Months Ended June 30, 2017				
Condensed Consolidating Statement of Income and Comprehensive Income	ACGL (Parent Guarantor)	Arch-U.S. (Subsidiary Issuer)	Other ACGL Subsidiaries	Consolidating Adjustments and Eliminations	ACGL Consolidated
Revenues					
Net premiums earned	$—	$—	$2,357,891	$—	$2,357,891
Net investment income	6	1,000	271,608	(43,616)	228,998
Net realized gains (losses)	—	—	55,888	—	55,888
Net impairment losses recognized in earnings	—	—	(3,537)	—	(3,537)
Other underwriting income	—	—	9,455	—	9,455
Equity in net income of investment funds accounted for using the equity method	—	—	80,794	—	80,794
Other income (loss)	(266)	—	(2,510)	—	(2,776)
Total revenues	(260)	1,000	2,769,589	(43,616)	2,726,713
Expenses					
Losses and loss adjustment expenses	—	—	1,242,430	—	1,242,430
Acquisition expenses	—	—	372,725	—	372,725
Other operating expenses	—	—	344,700	—	344,700
Corporate expenses	39,063	3,317	10,288	—	52,668
Amortization of intangible assets	—	—	62,118	—	62,118
Interest expense	12,090	23,919	64,386	(42,970)	57,425

Net foreign exchange losses (gains)	—	—	45,191	13,756	58,947
Total expenses	51,153	27,236	2,141,838	(29,214)	2,191,013
Income (loss) before income taxes	(51,413)	(26,236)	627,751	(14,402)	535,700
Income tax (expense) benefit	—	8,942	(71,508)	—	(62,566)
Income (loss) before equity in net income of subsidiaries	(51,413)	(17,294)	556,243	(14,402)	473,134
Equity in net income of subsidiaries	489,707	163,529	—	(653,236)	—
Net income	438,294	146,235	556,243	(667,638)	473,134
Amounts attributable to noncontrolling interests	—	—	(35,485)	645	(34,840)
Net income available to Arch	438,294	146,235	520,758	(666,993)	438,294
Preferred dividends	(22,567)	—	—	—	(22,567)
Net income available to Arch common shareholders	$415,727	$ 146,235	$520,758	$ (666,993)	$415,727
Comprehensive income (loss) available to Arch	$631,276	$ 193,083	$699,920	$ (893,003)	$631,276

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	Six Months Ended June 30, 2016				
Condensed Consolidating Statement of Income and Comprehensive Income	ACGL (Parent Guarantor)	Arch-U.S. (Subsidiary Issuer)	Other ACGL Subsidiaries	Consolidating Adjustments and Eliminations	ACGL Consolidated
Revenues					
Net premiums earned	$—	$ —	$ 1,957,564	$ —	$ 1,957,564
Net investment income	1	1,548	194,358	(13,834)	182,073
Net realized gains (losses)	—	—	105,542	—	105,542
Net impairment losses recognized in earnings	—	—	(12,982)	—	(12,982)
Other underwriting income	—	—	46,769	(16,498)	30,271
Equity in net income of investment funds accounted for using the equity method	—	—	15,392	—	15,392
Other income (loss)	199	—	(231)	—	(32)
Total revenues	200	1,548	2,306,412	(30,332)	2,277,828
Expenses					
Losses and loss adjustment expenses	—	—	1,107,541	—	1,107,541
Acquisition expenses	—	—	340,515	—	340,515
Other operating expenses	—	—	307,462	—	307,462
Corporate expenses	26,796	941	(1,154)	—	26,583
Amortization of intangible assets	—	—	9,628	—	9,628
Interest expense	11,863	13,319	36,279	(29,691)	31,770

Net foreign exchange losses (gains)	—	—	2,370	(3,466)	(1,096)
Total expenses	38,659	14,260	1,802,641	(33,157)	1,822,403
Income (loss) before income taxes	(38,459)	(12,712)	503,771	2,825	455,425
Income tax (expense) benefit	—	4,330	(34,771)	—	(30,441)
Income (loss) before equity in net income of subsidiaries	(38,459)	(8,382)	469,000	2,825	424,984
Equity in net income of subsidiaries	404,312	42,739	—	(447,051)	—
Net income	365,853	34,357	469,000	(444,226)	424,984
Amounts attributable to noncontrolling interests	—	—	(59,773)	642	(59,131)
Net income available to Arch	365,853	34,357	409,227	(443,584)	365,853
Preferred dividends	(10,969)	—	—	—	(10,969)
Net income available to Arch common shareholders	$354,884	$ 34,357	$409,227	$ (443,584)	$354,884
Comprehensive income (loss) available to Arch	$546,189	$ 87,185	$592,793	$ (679,978)	$546,189

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ARCH CAPITAL GROUP LTD. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

	Six Months Ended June 30, 2017				
Condensed Consolidating Statement of Cash Flows	ACGL (Parent Guarantor)	Arch-U.S. (Subsidiary Issuer)	Other ACGL Subsidiaries	Consolidating Adjustments and Eliminations	ACGL Consolidated
Operating Activities					
Net Cash Provided By (Used For) Operating Activities	$7,483	$ 27,853	$ 976,969	$ (458,238)	$ 554,067
Investing Activities					
Purchases of fixed maturity investments	—	—	(19,899,326)	—	(19,899,326)
Purchases of equity securities	—	—	(400,155)	—	(400,155)
Purchases of other investments	—	—	(883,704)	—	(883,704)
Proceeds from the sales of fixed maturity investments	—	—	19,611,680	—	19,611,680
Proceeds from the sales of equity securities	—	—	473,064	—	473,064
Proceeds from the sales, redemptions and maturities of other investments	—	—	614,494	—	614,494
	—	—	447,941	—	447,941

Proceeds from redemptions and maturities of fixed maturity investments					
Net settlements of derivative instruments	—	—	(5,984)	—	(5,984)
Net (purchases) sales of short-term investments	2,354	(27,896)	(419,661)	—	(445,203)
Change in cash collateral related to securities lending	—	—	175,693	—	175,693
Contributions to subsidiaries	20,641	(72,900)	(342,950)	395,209	—
Issuance of intercompany loans	—	—	(47,000)	47,000	—
Repayment of intercompany loans	—	47,000	—	(47,000)	—
Purchases of fixed assets	(18)	(10)	(11,075)	—	(11,103)
Other	—	—	6,849	(20,641)	(13,792)
Net Cash Provided By (Used For) Investing Activities	22,977	(53,806)	(680,134)	374,568	(336,395)
Financing Activities					
Proceeds from common shares issued, net	(6,838)	—	395,209	(395,209)	(6,838)

Proceeds from intercompany borrowings	—	—	47,000	(47,000)	—
Repayments of intercompany borrowings	—	—	(47,000)	47,000	—
Repayments of borrowings	—	—	(72,000)	—	(72,000)
Change in cash collateral related to securities lending	—	—	(175,693)	—	(175,693)
Dividends paid to redeemable noncontrolling interests	—	—	(9,632)	638	(8,994)
Dividends paid to parent (1)	—	—	(457,600)	457,600	—
Other	—	—	(62,339)	20,641	(41,698)
Preferred dividends paid	(22,567)	—	—	—	(22,567)
Net Cash Provided By (Used For) Financing Activities	(29,405)	—	(382,055)	83,670	(327,790)
Effects of exchange rates changes on foreign currency cash	—	—	7,496	—	7,496
Increase (decrease) in cash	1,055	(25,953)	(77,724)	—	(102,622)
Cash beginning of year	1,687	71,955	769,300	—	842,942
Cash end of period	$ 2,742	$ 46,002	$ 691,576	$ —	$ 740,320

(1) Dividends received by parent are included in net cash provided by (used for) operating activities.

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ARCH CAPITAL GROUP LTD. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

Six Months Ended June 30, 2016					
Condensed Consolidating Statement of Cash Flows	ACGL (Parent Guarantor)	Arch-U.S. (Subsidiary Issuer)	Other ACGL Subsidiaries	Consolidating Adjustments and Eliminations	ACGL Consolidated
Operating Activities					
Net Cash Provided By (Used For) Operating Activities	$89,499	$ 10,732	$ 588,067	$ (147,074)	$ 541,224
Investing Activities					
Purchases of fixed maturity investments	—	—	(17,541,731)	—	(17,541,731)
Purchases of equity securities	—	—	(212,678)	—	(212,678)
Purchases of other investments	—	—	(650,613)	—	(650,613)
Proceeds from the sales of fixed maturity investments	—	—	16,978,549	—	16,978,549
Proceeds from the sales of equity securities	—	—	337,619	—	337,619
Proceeds from the sales, redemptions and maturities of other investments	—	—	636,535	—	636,535
	—	41,500	329,480	—	370,980

Proceeds from redemptions and maturities of fixed maturity investments					
Net settlements of derivative instruments	—	—	45,174	—	45,174
Net (purchases) sales of short-term investments	(76)	(53,729)	(250,655)	—	(304,460)
Change in cash collateral related to securities lending	—	—	(18,715)	—	(18,715)
Contributions to subsidiaries	(3,300)	—	(2,779)	6,079	—
Acquisitions, net of cash	—	—	(1,460)	—	(1,460)
Purchases of fixed assets	(8)	—	(8,276)	—	(8,284)
Other	2,000	—	11,416	—	13,416
Net Cash Provided By (Used For) Investing Activities	(1,384)	(12,229)	(348,134)	6,079	(355,668)
Financing Activities					
Purchases of common shares under share repurchase program	(75,256)	—	—	—	(75,256)
Proceeds from common shares	(1,487)	—	6,079	(6,079)	(1,487)

issued, net					
Proceeds from borrowings	—	—	46,000	—	46,000
Repayments of borrowings	—	—	(179,171)	—	(179,171)
Change in cash collateral related to securities lending	—	—	18,715	—	18,715
Dividends paid to redeemable noncontrolling interests	—	—	(9,632)	638	(8,994)
Dividends paid to parent (1)	—	—	(146,436)	146,436	—
Other	—	200	(2,423)	—	(2,223)
Preferred dividends paid	(10,969)	—	—	—	(10,969)
Net Cash Provided By (Used For) Financing Activities	(87,712)	200	(266,868)	140,995	(213,385)
Effects of exchange rates changes on foreign currency cash	—	—	(8,906)	—	(8,906)
Increase (decrease) in cash	403	(1,297)	(35,841)	—	(36,735)
Cash beginning of year	6,809	17,023	529,494	—	553,326
Cash end of period	$7,212	$ 15,726	$ 493,653	$ —	$ 516,591

(1) Dividends received by parent are included in net cash provided by (used for) operating activities.

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ARCH CAPITAL GROUP LTD. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

14. Income Taxes

The Company’s income tax provision on income before income taxes resulted in an expense of 11.7% for the six months ended June 30, 2017, compared to an expense of 6.7% for the 2016 period. The Company’s effective tax rate, which is based upon the expected annual effective tax rate, may fluctuate from period to period based on the relative mix of income or loss reported by jurisdiction and the varying tax rates in each jurisdiction. For interim reporting purposes, the Company has calculated its effective tax rate for the full year of 2017 by treating any excess tax benefits that arise from the accounting for stock based compensation as a discrete item. As such, this amount is not included when projecting the Company’s full year effective tax rate but rather is accounted for at the U.S. Federal statutory rate of 35% after applying the projected full year effective tax rate to actual six-month results before the discrete item. The impact of the discrete item resulted in a benefit of 1.2% for the six months ended June 30, 2017.

The Company had a net deferred tax asset of $221.1 million at June 30, 2017, compared to $221.2 million at December 31, 2016. In addition, the Company paid $3.9 million and $26.6 million of income taxes for the six months ended June 30, 2017 and 2016, respectively.

15. Legal Proceedings

The Company, in common with the insurance industry in general, is subject to litigation and arbitration in the normal course of its business. As of June 30, 2017, the Company was not a party to any litigation or arbitration which is expected by management to have a material adverse effect on the Company’s results of operations and financial condition and liquidity.

16. Transactions with Related Parties

Kewsong Lee, a director of ACGL, is a Managing Director and Deputy Chief Investment Officer for Corporate Private Equity of The Carlyle Group (“Carlyle”). As part of its investment philosophy, the Company invests a portion of its investment portfolio in alternative investment funds. As of June 30, 2017, the total value of the Company’s investments in funds or other investments managed by Carlyle was approximately $228.5 million, and the Company had aggregate unfunded commitments to funds managed by Carlyle of $493.0 million. The Company may make additional commitments to funds managed by Carlyle from time to time. During the six months ended June 30, 2017 and 2016, the Company made aggregate capital contributions to funds managed by Carlyle of $57.2 million and $56.6 million, respectively, and received aggregate cash distributions from funds managed by Carlyle of $38.3 million and $13.8 million, respectively.

17. Subsequent Event

On July 1, 2017, the Company completed its previously announced acquisition of AIG United Guaranty Insurance (Asia) Limited following the payment of $40.0 million to AIG. The Company plans to operate such operation as Arch MI Asia Limited. This acquisition adds to the Company’s existing private mortgage insurance businesses, which have operations in the United States, Europe and Australia.

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ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following is a discussion and analysis of our financial condition and results of operations. This should be read in conjunction with our consolidated financial statements included in Item 1 of this report and also our Management's Discussion and Analysis of Financial Condition and Results of Operations contained in our Annual Report on Form 10-K for the year ended December 31, 2016 ("2016 Form 10-K"). In addition, readers should review "Risk Factors" set forth in Item 1A of Part I of our 2016 Form 10-K. Tabular amounts are in U.S. Dollars in thousands, except share amounts, unless otherwise noted.

Arch Capital Group Ltd. ("ACGL" and, together with its subsidiaries, "we" or "us") is a Bermuda public limited liability company with approximately $11.13 billion in capital at June 30, 2017 and, through operations in Bermuda, the United States, Europe, Canada and Australia, writes insurance, reinsurance and mortgage insurance on a worldwide basis.

CURRENT OUTLOOK

The broad property casualty insurance market environment continues to be competitive in our business, consistent with our view in prior quarters, reflecting slight deterioration in rates across certain sectors. As in the 2017 first quarter, this has led to flat or lower writings in certain property casualty lines in the 2017 second quarter. With the continued low interest rate environment, additional price increases are needed in many lines in order for us to achieve our return requirements. Our underwriting teams continue to execute a disciplined strategy by emphasizing small and medium-sized accounts over large accounts and by utilizing reinsurance purchases to reduce volatility on large account, high capacity business.

Our mortgage segment continues to experience favorable market conditions. The mortgage segment includes our U.S. primary mortgage insurance operations, international mortgage insurance and reinsurance operations as well as government sponsored enterprise ("GSE") credit-risk sharing transactions. On December 31, 2016, we completed the acquisition of United Guaranty Corporation, a North Carolina corporation ("UGC") from American International Group, Inc. ("AIG"). The acquisition of UGC expanded our U.S. primary mortgage insurance operations by combining UGC's position as the market leader in the U.S. private mortgage insurance industry with Arch's financial strength and history of innovation. On July 1, 2017, we completed our previously announced acquisition of AIG United Guaranty Insurance (Asia) Limited from AIG. We plan to operate such operation as Arch MI Asia Limited.

Our objective is to achieve an average operating return on average equity of 15% or greater over the insurance cycle, which we believe to be an attractive return to our common shareholders given the risks we assume. We continue to look for opportunities to find acceptable books of business to underwrite without sacrificing underwriting discipline and continue to write a portion of our overall book in catastrophe-exposed business which has the potential to increase the volatility of our operating results.

Changing economic conditions could have a material impact on the frequency and severity of claims and, therefore, could negatively impact our underwriting returns. In addition, volatility in the financial markets could continue to significantly affect our investment returns, reported results and shareholders' equity. We consider the potential impact of economic trends in the estimation process for establishing unpaid losses and loss adjustment expenses and in determining our investment strategies. In addition, weakness of the U.S., European countries and other key economies, projected budget deficits for the U.S., European countries and other governments and the consequences associated with potential downgrades of securities of the U.S., European countries and other governments by credit rating agencies is inherently unpredictable and could have a material adverse effect on financial markets and economic conditions in the U.S. and throughout the world. In turn, this could have a material adverse effect on our business, financial condition and results of operations and, in particular, this could have a material adverse effect on the value and liquidity of securities in our investment portfolio.

NATURAL CATASTROPHE RISK

We monitor our natural catastrophe risk globally for all perils and regions, in each case, where we believe there is significant exposure. Our models employ both proprietary and vendor-based systems and include cross-line correlations for property, marine, offshore energy, aviation, workers compensation and personal accident. Currently, we seek to limit our 1-in-250 year return period net probable maximum pre-tax loss from a severe catastrophic event in any geographic zone to approximately 25% of total shareholders' equity available to Arch. We reserve the right to change this threshold at any time.

Based on in-force exposure estimated as of July 1, 2017, our modeled peak zone catastrophe exposure was a windstorm affecting the Northeastern U.S., with a net probable maximum pre-tax loss of $500 million, followed by windstorms affecting the Gulf of Mexico and Florida Tri-County regions with net

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probable maximum pre-tax losses of $439 million and $370 million, respectively. Our exposures to other perils, such as U.S. earthquake and international events, were less than the exposures arising from U.S. windstorms and hurricanes. As of July 1, 2017, our modeled peak zone earthquake exposure (Los Angeles earthquake) represented approximately 59% of our peak zone catastrophe exposure, and our modeled peak zone international exposure (Japan earthquake) was substantially less than both our peak zone windstorm and earthquake exposures.

Net probable maximum pre-tax loss estimates are net of expected reinsurance recoveries, before income tax and before excess reinsurance reinstatement premiums. Loss estimates are reflective of the zone indicated and not the entire portfolio. Since hurricanes and windstorms can affect more than one zone and make multiple landfalls, our loss estimates include clash estimates from other zones. The loss estimates shown above do not represent our maximum exposures and it is highly likely that our actual incurred losses would vary materially from the modeled estimates. There can be no assurances that we will not suffer a net loss greater than 25% of total shareholders’ equity available to Arch from one or more catastrophic events due to several factors, including the inherent uncertainties in estimating the frequency and severity of such events and the margin of error in making such determinations resulting from potential inaccuracies and inadequacies in the data provided by clients and brokers, the modeling techniques and the application of such techniques or as a result of a decision to change the percentage of shareholders’ equity exposed to a single catastrophic event. Actual losses may also increase if our reinsurers fail to meet their obligations to us or the reinsurance protections purchased by us are exhausted or are otherwise unavailable. See “Risk Factors—Risks Relating to Our Industry” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Natural and Man-Made Catastrophic Events” in our 2016 Form 10-K.

FINANCIAL MEASURES

Management uses the following three key financial indicators in evaluating our performance and measuring the overall growth in value generated for ACGL’s common shareholders:

Book Value per Common Share

Book value per common share represents total common shareholders’ equity available to Arch divided by the number of common shares outstanding. Management uses growth in book value per common share as a key measure of the value generated for our common shareholders each period and believes that book value per common share is the key driver of ACGL’s share price over time. Book value per common share is impacted by, among other factors, our underwriting results, investment returns and share repurchase activity, which has an

accretive or dilutive impact on book value per common share depending on the purchase price.

Book value per common share was $59.60 at June 30, 2017, compared to $57.69 at March 31, 2017 and $51.73 at June 30, 2016. The 3.3% increase in the 2017 second quarter and the 15.2% increase over the trailing twelve months reflected strong underwriting and investment returns.

Operating Return on Average Common Equity

Operating return on average common equity (“Operating ROAE”) represents annualized after-tax operating income available to Arch common shareholders divided by the average of beginning and ending common shareholders’ equity available to Arch during the period. After-tax operating income available to Arch common shareholders, a non-GAAP financial measure as defined in Regulation G, represents net income available to Arch common shareholders, excluding net realized gains or losses, net impairment losses recognized in earnings, equity in net income or loss of investment funds accounted for using the equity method, net foreign exchange gains or losses, UGC transaction costs and other and income taxes. Management uses Operating ROAE as a key measure of the return generated to common shareholders. See “Comment on Non-GAAP Financial Measures.”

Our Operating ROAE was 8.5% for the 2017 second quarter, compared to 9.1% for the 2016 second quarter, and 9.4% for the six months ended June 30, 2017, compared to 9.4% for the 2016 period, reflecting satisfactory underwriting returns and favorable investment returns.

Total Return on Investments

Total return on investments includes investment income, equity in net income or loss of investment funds accounted for using the equity method, net realized gains and losses and the change in unrealized gains and losses generated by

Arch’s investment portfolio. Total return is calculated on a pre-tax basis and before investment expenses, excludes amounts reflected in the ‘other’ segment, and reflects the effect of financial market conditions along with foreign currency fluctuations. In addition, total return incorporates the timing of investment returns during the periods. The following table summarizes our total return compared to the benchmark return against which we measured our portfolio during the periods. See “Comment on Non-GAAP Financial Measures.”

	Arch Portfolio	Benchmark Return
2017 Second Quarter	1.63 %	1.53 %
2016 Second Quarter	1.27 %	1.08 %
Six Months Ended June 30, 2017	3.37 %	3.05 %
Six Months Ended June 30, 2016	3.11 %	3.50 %

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Excluding the effects of foreign exchange, total return was 1.29% for the 2017 second quarter and 2.94% for the six months ended June 30, 2017, reflecting favorable returns on equity and fixed income strategies. Total return for the 2017 second quarter reflected the weakening of the U.S. Dollar against the Euro, British Pound Sterling and other major currencies on non-U.S. Dollar denominated investments.

The benchmark return index included weightings to the following indices, which are primarily from The Bank of America Merrill Lynch ("BoAML"):

	%
BoAML 1-10 Year U.S. Corporate & All Yankees, A - AAA Rated Index	20.00 %
BoAML 1-5 Year U.S. Treasury Index	13.00
BoAML 1-10 Year U.S. Municipal Securities Index	17.00
BoAML 3-5 Year Fixed Rate Asset Backed Securities Index	7.00
BoAML 5-10 Year U.S. Treasury Index	5.00
Barclays CMBS Inv. Grade, AAA Rated Index	5.00
MSCI All Country World Gross Total Return Index	5.00
BoAML German Government Index	4.50
BoAML U.S. Mortgage Backed Securities Index	4.00
Hedge Fund Research HFRX Fixed Income Credit Index	2.50
Hedge Fund Research HFRX Equal Weighted Strategies	2.50
BoAML U.S. High Yield Constrained Index	2.50
BoAML 1-5 Year U.K. Gilt Index	3.00
BoAML 1-5 Year Australian Governments Index	2.50
S&P Leveraged Loan Index	2.50
BoAML 0-3 Month U.S. Treasury Bill Index	2.00
BoAML 1-5 Year Canada Government Index	1.50
BoAML 20+ Year Canada Government Index	0.50
Total	100.00 %

The benchmark return index is a customized combination of indices intended to approximate a target portfolio by asset mix and average credit quality while also matching the approximate estimated duration and currency mix of our insurance and reinsurance liabilities. Although the estimated duration and average credit quality of this index will move as the duration and rating of its constituent securities change, generally we do not adjust the composition of the benchmark return index except to incorporate changes to the mix of liability currencies and durations noted above. The benchmark return index should not be interpreted as expressing a preference for or aversion to any particular sector or sector weight. The index is intended solely to provide, unlike many master indices that change based on the size of their constituent indices, a relatively stable basket of investable indices. At June 30, 2017, the benchmark return index had an average credit quality of "Aa2" by Moody's Investors Service ("Moody's"), and an estimated duration of 3.54 years.

COMMENT ON NON-GAAP FINANCIAL MEASURES

Throughout this filing, we present our operations in the way we believe will be the most meaningful and useful to investors, analysts, rating agencies and others who use our financial information in evaluating the performance of our company. This presentation includes the use of after-tax operating income available to Arch common shareholders, which is defined as net income available to Arch common shareholders, excluding net realized gains or losses, net impairment losses recognized in earnings, equity in net income or loss of investment funds accounted for using the equity method, net foreign exchange gains or losses and UGC transaction costs and other and income taxes, and the use of annualized operating return on average common equity. The presentation of after-tax operating income available to Arch common shareholders and annualized operating return on average common equity are non-GAAP financial measures as defined in Regulation G. The reconciliation of such measures to net income available to Arch common shareholders and annualized return on average common equity (the most directly comparable GAAP

financial measures) in accordance with Regulation G is included under “Results of Operations” below.
We believe that net realized gains or losses, net impairment losses recognized in earnings, equity in net income or loss of investment funds accounted for using the equity method, net foreign exchange gains or losses and UGC transaction costs and other in any particular period are not indicative of the performance of, or trends in, our business. Although net realized gains or losses, net impairment losses recognized in earnings, equity in net income or loss of investment funds accounted for using the equity method and net foreign exchange gains or losses are an integral part of our operations, the decision to realize investment gains or losses, the recognition of the change in the carrying value of investments accounted for using the fair value option in net realized gains or losses, the recognition of net impairment losses, the recognition of equity in net income or loss of investment funds accounted for using the equity method and the recognition of foreign exchange gains or losses are independent of the insurance underwriting process and result, in large part, from general economic and financial market conditions. Furthermore, certain users of our financial information believe that, for many companies, the timing of the realization of investment gains or losses is largely opportunistic. In addition, net impairment losses recognized in earnings on our investments represent other-than-temporary declines in expected recovery values on securities without actual realization. The use of the equity method on certain of our investments in certain funds that invest in fixed maturity securities is driven by the ownership structure of such funds (either limited partnerships or limited liability companies). In applying the equity method, these investments are initially recorded at cost and are subsequently adjusted based on our proportionate share of the net income or loss of the funds (which

include changes in the market value of the underlying securities in the funds). This method of accounting is different from the way we account for our other fixed maturity securities and the timing of the recognition of equity in net income or loss of investment funds accounted for using the equity method may differ from gains or losses in the future upon sale or maturity of such investments. UGC transaction costs and other include advisory, financing, legal, severance, incentive compensation and other transaction costs related to the UGC acquisition. The Company believes that UGC transaction costs and other, due to their non-recurring nature, are not indicative of the performance of, or trends in, the Company's business performance. Due to these reasons, we exclude net realized gains or losses, net impairment losses recognized in earnings, equity in net income or loss of investment funds accounted for using the equity method, net foreign exchange gains or losses and UGC transaction costs and other from the calculation of after-tax operating income available to Arch common shareholders.

We believe that showing net income available to Arch common shareholders exclusive of the items referred to above reflects the underlying fundamentals of our business since we evaluate the performance of and manage our business to produce an underwriting profit. In addition to presenting net income available to Arch common shareholders, we believe that this presentation enables investors and other users of our financial information to analyze our performance in a manner similar to how management analyzes performance. We also believe that this measure follows industry practice and, therefore, allows the users of financial information to compare our performance with our industry peer group. We believe that the equity analysts and certain rating agencies which follow us and the insurance industry as a whole generally exclude these items from their analyses for the same reasons.

Our segment information includes the presentation of consolidated underwriting income or loss and a subtotal of underwriting income or loss before the contribution from the 'other' segment. Such measures represent the pre-tax profitability of our underwriting operations and include net premiums earned plus other underwriting income, less losses and loss adjustment expenses, acquisition expenses and other operating expenses. Other operating expenses include those operating expenses that are incremental and/or directly attributable to our individual underwriting operations. Underwriting income or loss does not incorporate items included in our corporate (non-underwriting) segment. While these measures are presented in Note 5, "Segment Information," of the notes accompanying our consolidated financial statements, they are considered non-GAAP financial measures when presented elsewhere on a consolidated basis. The reconciliations of underwriting income or loss to income before income taxes (the most directly comparable GAAP financial measure) on a consolidated basis and a subtotal before the contribution from the 'other' segment, in accordance with

Regulation G, is shown in Note 5, "Segment Information" of the notes accompanying our consolidated financial statements.

We measure segment performance for our three underwriting segments based on underwriting income or loss. We do not manage our assets by underwriting segment and, accordingly, investment income and other non-underwriting related items are not allocated to each underwriting segment. For the 'other' segment, performance is measured based on net income or loss.

Along with consolidated underwriting income, we provide a subtotal of underwriting income or loss before the contribution from the 'other' segment. Pursuant to generally accepted accounting principles, Watford Re is considered a variable interest entity and we concluded that we are the primary beneficiary of Watford Re. As such, we consolidate the results of Watford Re in our consolidated financial statements, although we only own approximately 11% of Watford Re's common equity. Watford Re has its own management and board of directors that is responsible for its overall profitability. In addition, we do not guarantee or provide credit support for Watford Re. Since Watford Re is an independent company, the assets of Watford Re can be used only to settle obligations of Watford Re and Watford Re is solely responsible for its own liabilities and commitments. Our financial exposure to Watford Re is limited to our investment in Watford Re's common and preferred shares and counterparty credit risk (mitigated by collateral) arising from the reinsurance transactions. We believe that presenting certain information excluding the 'other' segment enables investors and other users of our financial information to analyze our performance in a manner similar to how our management analyzes performance

Our presentation of segment information includes the use of a current year loss ratio which excludes favorable or adverse development in prior year loss reserves. This ratio is a non-GAAP financial measure as defined in Regulation G. The reconciliation of such measure to the loss ratio (the most directly comparable GAAP financial measure) in accordance with Regulation G is shown on the individual segment pages. Management utilizes the current year loss ratio in its analysis of the underwriting performance of each of our underwriting segments.

Total return on investments includes investment income, equity in net income or loss of investment funds accounted for using the equity method, net realized gains and losses and the change in unrealized gains and losses generated by Arch’s investment portfolio. Total return is calculated on a pre-tax basis and before investment expenses, excludes amounts reflected in the ‘other’ segment, and reflects the effect of financial market conditions along with foreign currency fluctuations. In addition, total return incorporates the timing of investment returns during the periods. There is no directly comparable GAAP financial measure for total return. Management uses total return on investments as a key measure of the return generated to Arch common shareholders on the capital held in the business, and compares the return generated by our investment portfolio against benchmark returns which we measured our portfolio against during the periods.

RESULTS OF OPERATIONS

The following table summarizes our consolidated financial data, including a reconciliation of net income available to Arch common shareholders to after-tax operating income available to Arch common shareholders. Each line item reflects the impact of our approximate 11% ownership of Watford Re's common equity.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Net income available to Arch common shareholders	$173,818	$205,570	$415,727	$354,884
Net realized (gains) losses	(18,452)	(43,935)	(47,586)	(76,399)
Net impairment losses recognized in earnings	1,730	5,343	3,537	12,982
Equity in net (income) loss of investment funds accounted for using the equity method	(32,706)	(8,737)	(80,794)	(15,392)
Net foreign exchange (gains) losses	38,012	(22,703)	57,808	(494)
UGC transaction costs and other	2,675	—	18,259	—
Income tax (benefit) expense (1)	3,842	5,036	(67)	10,735
After-tax operating income available to Arch common shareholders	$168,919	$140,574	$366,884	$286,316
Beginning common shareholders' equity	$7,833,289	$6,050,248	$7,481,163	$5,841,542
Ending common shareholders' equity	8,126,332	6,340,583	8,126,332	6,340,583
Average common shareholders' equity	$7,979,811	$6,195,416	$7,803,748	$6,091,063
Annualized return on average common equity %	8.7	13.3	10.7	11.7
Annualized operating return on average common equity %	8.5	9.1	9.4	9.4

(1) Income tax on net realized gains or losses, net impairment losses recognized in earnings, equity in net income or loss of investment funds accounted for using the equity method, net foreign exchange gains or losses and UGC transaction costs and other reflects the relative mix reported by jurisdiction and the varying tax rates in each jurisdiction.

Segment Information

We classify our businesses into three underwriting segments — insurance, reinsurance and mortgage — and two other operating segments — corporate (non-underwriting) and 'other.' Our insurance, reinsurance and mortgage segments each have managers who are responsible for the overall profitability of their respective segments and who are directly accountable to our chief operating decision makers, the Chairman and Chief Executive Officer, the President and Chief Operating Officer, and the Chief Financial Officer of ACGL. The chief operating decision makers do not assess performance, measure return on equity or make resource allocation decisions on a line of business basis. Management measures segment performance for our three underwriting segments based on underwriting income or loss. We do not manage our assets by underwriting segment, with the exception of goodwill and intangible assets, and, accordingly, investment income is not allocated to each underwriting segment.

We determined our reportable segments using the management approach described in accounting guidance regarding disclosures about segments of an enterprise and related information. The accounting policies of the segments are the same as those used for the preparation of our consolidated financial statements. Intersegment business is allocated to the segment accountable for the underwriting results.

Insurance Segment

The following tables set forth our insurance segment's underwriting results:

	Three Months Ended June 30,		
	2017	2016	% Change
Gross premiums written	$743,902	$762,043	(2.4)
Premiums ceded	(247,446)	(246,875)	
Net premiums written	496,456	515,168	(3.6)
Change in unearned premiums	21,118	12,482	
Net premiums earned	517,574	527,650	(1.9)
Other underwriting income	—	—	
Losses and loss adjustment expenses	(350,939)	(354,633)	
Acquisition expenses	(78,872)	(77,312)	
Other operating expenses	(92,267)	(91,440)	
Underwriting income	$(4,504)	$4,265	(205.6)
Underwriting Ratios			% Point Change
Loss ratio	67.8 %	67.2 %	0.6
Acquisition expense ratio	15.2 %	14.7 %	0.5
Other operating expense ratio	17.8 %	17.3 %	0.5
Combined ratio	100.8 %	99.2 %	1.6

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	Six Months Ended June 30,		
	2017	2016	% Change
Gross premiums written	$1,526,183	$1,560,596	(2.2)
Premiums ceded	(481,541)	(495,664)	
Net premiums written	1,044,642	1,064,932	(1.9)
Change in unearned premiums	(21,422)	(24,193)	
Net premiums earned	1,023,220	1,040,739	(1.7)
Other underwriting income	—	—	
Losses and loss adjustment expenses	(683,580)	(678,242)	
Acquisition expenses	(153,740)	(151,660)	
Other operating expenses	(180,393)	(176,498)	
Underwriting income	$5,507	$34,339	(84.0)
Underwriting Ratios			% Point Change
Loss ratio	66.8 %	65.2 %	1.6
Acquisition expense ratio	15.0 %	14.6 %	0.4
Other operating expense ratio	17.6 %	17.0 %	0.6
Combined ratio	99.4 %	96.8 %	2.6

The insurance segment consists of our insurance underwriting units which offer specialty product lines on a worldwide basis. Product lines include:

•Construction and national accounts: primary and excess casualty coverages to middle and large accounts in the construction industry and a wide range of products for middle and large national accounts, specializing in loss sensitive primary casualty insurance programs (including large deductible, self-insured retention and retrospectively rated programs).

•Excess and surplus casualty: primary and excess casualty insurance coverages, including middle market energy business, and contract binding, which primarily provides casualty coverage through a network of appointed agents to small and medium risks.

•Lenders products: collateral protection, debt cancellation and service contract reimbursement products to banks, credit unions, automotive dealerships and original equipment manufacturers and other specialty programs that pertain to automotive lending and leasing.

•Professional lines: directors' and officers' liability, errors and omissions liability, employment practices liability, fiduciary liability, crime, professional indemnity and other financial related coverages for corporate, private equity, venture capital, real estate investment trust, limited partnership, financial institution and not-for-profit clients of all sizes and medical professional and general liability insurance coverages for the healthcare industry. The business is predominately written on a claims-made basis.

•Programs: primarily package policies, underwriting workers' compensation and umbrella liability business in support of desirable package programs, targeting program managers with unique expertise and niche products offering general liability, commercial automobile, inland marine and property business with minimal catastrophe exposure.

•Property, energy, marine and aviation: primary and excess general property insurance coverages, including catastrophe-exposed property coverage, for commercial clients. Coverages for marine include hull, war, specie and liability. Aviation and stand alone terrorism are also offered.

•Travel, accident and health: specialty travel and accident and related insurance products for individual, group travelers, travel agents and suppliers, as well as accident and health, which provides accident, disability and medical plan insurance coverages for employer groups, medical plan members, students and other participant groups.

•Other: includes alternative market risks (including captive insurance programs), excess workers' compensation and employer's liability insurance coverages for qualified self-insured groups, associations and trusts, and contract and commercial surety coverages, including contract bonds (payment and performance bonds) primarily for medium and

large contractors and commercial surety bonds for Fortune 1,000 companies and smaller transaction business programs.
Premiums Written.
The following table sets forth our insurance segment's net premiums written by major line of business:

	Three Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Professional lines	$110,784	22.3	$107,519	20.9
Programs	93,428	18.8	75,420	14.6
Construction and national accounts	73,474	14.8	85,260	16.5
Travel, accident and health	52,690	10.6	54,456	10.6
Property, energy, marine and aviation	46,031	9.3	50,194	9.7
Excess and surplus casualty	45,222	9.1	60,412	11.7
Lenders products	21,459	4.3	25,254	4.9
Other	53,368	10.7	56,653	11.0
Total	$496,456	100.0	$515,168	100.0

2017 Second Quarter versus 2016 Second Quarter. Gross premiums written by the insurance segment in the 2017 second quarter were 2.4% lower than in the 2016 second quarter, while net premiums written were 3.6% lower than in the 2016 second quarter. The decrease in net premiums written largely reflected our response to weaker market conditions, with reductions in construction, excess and surplus casualty and property lines, partially offset by growth in programs. The lower level of construction premiums reflected non-renewals as well as lower

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audit and project premium, while excess and surplus casualty reflected a targeted reduction in certain exposures, increased use of reinsurance and other factors. The reduction in property lines reflected continued weak market conditions while growth in program business primarily reflected the continued impact of two newer programs.

	Six Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Professional lines	$219,252	21.0	$216,986	20.4
Programs	193,385	18.5	165,204	15.5
Construction and national accounts	173,451	16.6	189,734	17.8
Travel, accident and health	118,218	11.3	111,719	10.5
Property, energy, marine and aviation	86,135	8.2	100,169	9.4
Excess and surplus casualty	91,054	8.7	114,069	10.7
Lenders products	46,164	4.4	50,038	4.7
Other	116,983	11.2	117,013	11.0
Total	$1,044,642	100.0	$1,064,932	100.0

Six Months Ended June 30, 2017 versus 2016 period. Gross premiums written by the insurance segment for the six months ended June 30, 2017 were 2.2% lower than in the 2016 period, while net premiums written were 1.9% lower than in the 2016 period. The decrease in net premiums written largely reflected our response to weaker market conditions, with reductions in construction, excess and surplus casualty and property lines, partially offset by growth in programs and travel, accident and health. The lower level of construction premiums reflected non-renewals as well as lower audit and project premium, while excess and surplus casualty reflected a targeted reduction in certain exposures, increased use of reinsurance and other factors. The reduction in property lines reflected continued weak market conditions. Growth in program business primarily reflected the continued impact of two newer programs while the increase in travel, accident and health reflected continued expansion in existing travel accounts.

Net Premiums Earned.

The following tables set forth our insurance segment's net premiums earned by major line of business:

	Three Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Professional lines	$108,375	20.9	$108,556	20.6
Programs	87,582	16.9	90,595	17.2
Construction and national accounts	80,848	15.6	84,414	16.0
Travel, accident and health	63,436	12.3	59,821	11.3
Property, energy, marine and aviation	41,423	8.0	47,076	8.9
Excess and surplus casualty	48,850	9.4	57,155	10.8
Lenders products	24,562	4.7	23,007	4.4
Other	62,498	12.1	57,026	10.8
Total	$517,574	100.0	$527,650	100.0

	Six Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Professional lines	$217,013	21.2	$213,500	20.5
Programs	172,762	16.9	189,096	18.2
Construction and national accounts	158,271	15.5	161,457	15.5
Travel, accident and health	121,917	11.9	107,366	10.3
Property, energy, marine and aviation	79,501	7.8	96,113	9.2
Excess and surplus casualty	99,857	9.8	112,120	10.8

Lenders products	48,661	4.8	47,409	4.6
Other	125,238	12.2	113,678	10.9
Total	$1,023,220	100.0	$1,040,739	100.0

Net premiums written are primarily earned on a pro rata basis over the terms of the policies for all products, usually 12 months. Net premiums earned reflect changes in net premiums written over the previous five quarters. Net premiums earned in the 2017 second quarter were 1.9% lower than in the 2016 second quarter, and 1.7% lower for the six months ended June 30, 2017 than in the 2016 period.

Losses and Loss Adjustment Expenses.

The table below shows the components of the insurance segment's loss ratio:

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2017	2016	2017	2016
Current year	68.2 %	68.1 %	67.2 %	66.3 %
Prior period reserve development	(0.4)%	(0.9)%	(0.4)%	(1.1)%
Loss ratio	67.8 %	67.2 %	66.8 %	65.2 %

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Current Year Loss Ratio.
The insurance segment's current year loss ratio in the 2017 second quarter was 0.1 points higher than in the 2016 second quarter and reflected 1.6 points of current year catastrophic activity, compared to 3.9 points in the 2016 second quarter. The insurance segment's current year loss ratio for the six months ended June 30, 2017 was 0.9 points higher than in the 2016 period and reflected 1.1 points of current year catastrophic activity, compared to 2.0 points in the 2016 period. The current year loss ratios for the 2017 periods reflected changes in the mix of business and loss cost trends.
Prior Period Reserve Development.
The insurance segment's net favorable development was $2.0 million, or 0.4 points, for the 2017 second quarter, compared to $4.9 million, or 0.9 points, for the 2016 second quarter, and $4.1 million, or 0.4 points, for the six months ended June 30, 2017, compared to $11.1 million, or 1.1 points, for the 2016 period. See note 6, "Reserve for Losses and Loss Adjustment Expenses," of the notes accompanying our consolidated financial statements for information about the insurance segment's prior year reserve development.
Underwriting Expenses.
2017 Second Quarter versus 2016 Second Quarter: The insurance segment's underwriting expense ratio was 33.0% in the 2017 second quarter, compared to 32.0% in the 2016 second quarter. The comparison of the underwriting expense ratios reflects changes in the level of reinsurance ceded on a quota share basis and changes in the mix of business.
Six Months Ended June 30, 2017 versus 2016 period: The insurance segment's underwriting expense ratio was 32.6% for the six months ended June 30, 2017, compared to 31.6% for the 2016 period. The comparison of the underwriting expense ratios reflects changes in the level of reinsurance ceded on a quota share basis and changes in the mix of business.

Reinsurance Segment
The following tables set forth our reinsurance segment's underwriting results:

	Three Months Ended June 30,		
	2017	2016	% Change
Gross premiums written	$453,186	$412,053	10.0
Premiums ceded	(115,262)	(119,951)	
Net premiums written	337,924	292,102	15.7
Change in unearned premiums	(23,222)	(846)	
Net premiums earned	314,702	291,256	8.0
Other underwriting income	(279)	20,118	
Losses and loss adjustment expenses	(207,606)	(146,091)	
Acquisition expenses	(51,151)	(55,756)	
Other operating expenses	(36,711)	(36,914)	
Underwriting income	$18,955	$72,613	(73.9)
Underwriting Ratios			% Point Change
Loss ratio	66.0 %	50.2 %	15.8
Acquisition expense ratio	16.3 %	19.1 %	(2.8)
Other operating expense ratio	11.7 %	12.7 %	(1.0)
Combined ratio	94.0 %	82.0 %	12.0

	Six Months Ended June 30,		
	2017	2016	% Change
Gross premiums written	$928,968	$893,443	4.0
Premiums ceded	(281,354)	(280,517)	
Net premiums written	647,614	612,926	5.7
Change in unearned premiums	(88,061)	(60,462)	

Net premiums earned	559,553	552,464	1.3
Other underwriting income	(585)	20,443	
Losses and loss adjustment expenses	(313,060)	(257,689)	
Acquisition expenses	(97,298)	(110,514)	
Other operating expenses	(74,244)	(73,172)	
Underwriting income	$74,366	$131,532	(43.5)
Underwriting Ratios			% Point Change
Loss ratio	55.9 %	46.6 %	9.3
Acquisition expense ratio	17.4 %	20.0 %	(2.6)
Other operating expense ratio	13.3 %	13.2 %	0.1
Combined ratio	86.6 %	79.8 %	6.8

The reinsurance segment consists of our reinsurance underwriting units which offer specialty product lines on a worldwide basis. Product lines include:

•Casualty: provides coverage to ceding company clients on third party liability and workers' compensation exposures from ceding company clients, primarily on a treaty basis. Exposures include, among others, executive assurance, professional liability, workers' compensation, excess and umbrella liability, excess motor and healthcare business.

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•Marine and aviation: provides coverage for energy, hull, cargo, specie, liability and transit, and aviation business, including airline and general aviation risks. Business written may also include space business, which includes coverages for satellite assembly, launch and operation for commercial space programs.
•Other specialty: provides coverage to ceding company clients for proportional motor and other lines including surety, accident and health, workers' compensation catastrophe, agriculture, trade credit and political risk.
•Property catastrophe: provides protection for most catastrophic losses that are covered in the underlying policies written by reinsureds, including hurricane, earthquake, flood, tornado, hail and fire, and coverage for other perils on a case-by-case basis. Property catastrophe reinsurance provides coverage on an excess of loss basis when aggregate losses and loss adjustment expense from a single occurrence of a covered peril exceed the retention specified in the contract.
•Property excluding property catastrophe: provides coverage for both personal lines and commercial property exposures and principally covers buildings, structures, equipment and contents. The primary perils in this business include fire, explosion, collapse, riot, vandalism, wind, tornado, flood and earthquake. Business is assumed on both a proportional and excess of loss basis. In addition, facultative business is written which focuses on commercial property risks on an excess of loss basis.
•Other. includes life reinsurance business on both a proportional and non-proportional basis, casualty clash business and, in limited instances, non-traditional business which is intended to provide insurers with risk management solutions that complement traditional reinsurance.

Premiums Written.
The following table sets forth our reinsurance segment's net premiums written by major line of business:

	Three Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Other specialty	$155,328	46.0	$113,943	39.0
Property excluding property catastrophe	69,115	20.5	69,831	23.9
Casualty	63,054	18.7	61,555	21.1
Property catastrophe	37,127	11.0	41,771	14.3
Marine and aviation	8,932	2.6	1,463	0.5
Other	4,368	1.3	3,539	1.2
Total	$337,924	100.0	$292,102	100.0
Pro rata	$200,893	59.4	$146,231	50.1
Excess of loss	137,031	40.6	145,871	49.9
Total	$337,924	100.0	$292,102	100.0

2017 Second Quarter versus 2016 Second Quarter. Gross premiums written by the reinsurance segment in the 2017 second quarter were 10.0% higher than in the 2016 second quarter, while net premiums written were 15.7% higher than in the 2016 second quarter. Gross and net premiums written in both periods reflected an increase in other specialty business related to certain retroactive reinsurance contracts. For the 2017 second quarter, net premiums written included $53.6 million related to such contracts, compared to $40.2 million in the 2016 second quarter. Such premiums, which were with the same cedent but covered different underwriting years, were substantially earned in each period and resulted in a corresponding increase to losses and loss adjustment expenses. In addition to the retroactive reinsurance contracts noted above, the increase in net premiums written in the 2017 second quarter reflected growth in other specialty, primarily new international motor quota share business, partially offset by a reduction in property catastrophe business.

	Six Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Other specialty	$269,746	41.7	$214,763	35.0

Property excluding property catastrophe	144,502	22.3	143,554	23.4
Casualty	173,674	26.8	188,038	30.7
Property catastrophe	29,650	4.6	39,476	6.4
Marine and aviation	18,473	2.9	19,003	3.1
Other	11,569	1.8	8,092	1.3
Total	$647,614	100.0	$612,926	100.0
Pro rata	$329,909	50.9	$258,440	42.2
Excess of loss	317,705	49.1	354,486	57.8
Total	$647,614	100.0	$612,926	100.0

Six Months Ended June 30, 2017 versus 2016 period. Gross premiums written by the reinsurance segment for the six months ended June 30, 2017 were 4.0% higher than in the 2016 period, while net premiums written were 5.7% higher than in the 2016 period. Gross and net premiums written in both periods reflected an increase in other specialty business related to certain retroactive reinsurance contracts noted above. In addition to the retroactive reinsurance contracts noted above, the increase in net premiums written in the six months ended June 30, 2017 reflected growth in other specialty, primarily new international motor quota share business, partially offset by reductions in casualty and property catastrophe business.

Net Premiums Earned.

The following tables set forth our reinsurance segment's net premiums earned by major line of business:

	Three Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Other specialty	$141,565	45.0	$109,493	37.6
Property excluding property catastrophe	62,884	20.0	65,487	22.5
Casualty	79,903	25.4	80,157	27.5
Property catastrophe	15,759	5.0	19,823	6.8
Marine and aviation	9,986	3.2	12,559	4.3
Other	4,605	1.5	3,737	1.3
Total	$314,702	100.0	$291,256	100.0
Pro rata	$181,988	57.8	$153,933	52.9
Excess of loss	132,714	42.2	137,323	47.1
Total	$314,702	100.0	$291,256	100.0

	Six Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Other specialty	$211,530	37.8	$183,742	33.3
Property excluding property catastrophe	132,736	23.7	137,440	24.9
Casualty	152,871	27.3	156,210	28.3
Property catastrophe	31,936	5.7	37,776	6.8
Marine and aviation	19,476	3.5	30,437	5.5
Other	11,004	2.0	6,859	1.2
Total	$559,553	100.0	$552,464	100.0
Pro rata	$315,080	56.3	$293,626	53.1
Excess of loss	244,473	43.7	258,838	46.9
Total	$559,553	100.0	$552,464	100.0

Net premiums written, irrespective of the class of business, are generally earned on a pro rata basis over the terms of the underlying policies or reinsurance contracts. For the 2017 second quarter, net premiums earned were 8.0% higher than in the 2016 second quarter, while net premiums earned for the six months ended June 30, 2017 were 1.3% higher than in the 2016 period. Net premiums earned reflects changes in net premiums written over the previous five quarters.

Other Underwriting Income (Loss).

Other underwriting income (loss) for the 2017 second quarter and six months ended June 30, 2017 was de minimis, compared to $20.1 million for the 2016 second quarter, and $20.4 million for the 2016 year-to-date period. The 2016 periods included $19.1 million related to a contract which was commuted during the 2016 second quarter. This contract had been reflected as a deposit accounting liability (i.e., a contract that, in accordance with GAAP, does not pass risk transfer) prior to the commutation.

Losses and Loss Adjustment Expenses.

The table below shows the components of the reinsurance segment's loss ratio:

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2017	2016	2017	2016
Current year	78.6 %	74.2 %	73.2 %	67.8 %
Prior period reserve development	(12.6)%	(24.0)%	(17.3)%	(21.2)%
Loss ratio	66.0 %	50.2 %	55.9 %	46.6 %

Current Year Loss Ratio.

The reinsurance segment's current year loss ratio in the 2017 second quarter was 4.4 points higher than in the 2016 second quarter and reflected 5.4 points of current year catastrophic activity, compared to 6.1 points in the 2016 second quarter. The reinsurance segment's current year loss ratio for the six months ended June 30, 2017 was 5.4 points higher than in the 2016 period and reflected 4.8 points of current year catastrophic activity, compared to 3.9 points in the 2016 second quarter. The balance of the change in the 2017 current year loss ratios resulted, in part, from a higher level of property facultative loss activity and changes in the mix of business.

Prior Period Reserve Development.

The reinsurance segment's net favorable development was $39.5 million, or 12.6 points, for the 2017 second quarter, compared to $69.8 million, or 24.0 points, for the 2016 second quarter, and $96.8 million, or 17.3 points, for the six months ended June 30, 2017, compared to $117.2 million, or 21.2 points, for the 2016 period. See note 6, "Reserve for Losses and Loss Adjustment Expenses," of the notes accompanying our consolidated financial statements for information about the reinsurance segment's prior year reserve development.

Underwriting Expenses.

2017 Second Quarter versus 2016 Second Quarter: The underwriting expense ratio for the reinsurance segment was 28.0% in the 2017 second quarter, compared to 31.8% in the 2016 second quarter. The retroactive reinsurance contracts noted above improved the reported 2017 second quarter

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underwriting expense ratio by 5.6 points, compared to 5.0 points in the 2016 second quarter. The comparison of the underwriting expense ratios primarily reflected changes in the mix and type of business and a higher level of net premiums earned in the 2017 second quarter.
Six Months Ended June 30, 2017 versus 2016 period: The underwriting expense ratio for the reinsurance segment was 30.7% for the six months ended June 30, 2017, compared to 33.2% for the 2016 period. The comparison of the underwriting expense ratios primarily reflected changes in the mix and type of business.
Mortgage Segment
The following tables set forth our mortgage segment's underwriting results. On December 31, 2016, we completed the acquisition of UGC. As such, the 2017 results reflect the combination of Arch and UGC while the 2016 periods do not reflect UGC activity.

	Three Months Ended June 30,		
	2017	2016	% Change
Gross premiums written	$336,226	$118,434	183.9
Premiums ceded	(62,314)	(6,969)	
Net premiums written	273,912	111,465	145.7
Change in unearned premiums	(16,068)	(44,953)	
Net premiums earned	257,844	66,512	287.7
Other underwriting income	4,277	4,137	
Losses and loss adjustment expenses	(20,694)	(366)	
Acquisition expenses	(25,666)	(5,964)	
Other operating expenses	(32,150)	(22,847)	
Underwriting income	$183,611	$41,472	342.7
Underwriting Ratios			% Point Change
Loss ratio	8.0%	0.6%	7.4
Acquisition expense ratio	10.0%	9.0%	1.0
Other operating expense ratio	12.5%	34.4%	(21.9)
Combined ratio	30.5%	44.0%	(13.5)

	Six Months Ended June 30,		
	2017	2016	% Change
Gross premiums written	$684,849	$229,714	198.1
Premiums ceded	(136,239)	(11,736)	
Net premiums written	548,610	217,978	151.7
Change in unearned premiums	(46,243)	(89,701)	
Net premiums earned	502,367	128,277	291.6
Other underwriting income	8,400	7,930	
Losses and loss adjustment expenses	(49,759)	(8,995)	
Acquisition expenses	(54,432)	(11,757)	
Other operating expenses	(74,020)	(46,341)	
Underwriting income	$332,556	$69,114	381.2
Underwriting Ratios			% Point Change
Loss ratio	9.9%	7.0%	2.9
Acquisition expense ratio	10.8%	9.2%	1.6
Other operating expense ratio	14.7%	36.1%	(21.4)
Combined ratio	35.4%	52.3%	(16.9)

The mortgage segment includes the results of our U.S. primary mortgage insurance operations, including Arch Mortgage Insurance Company, United Guaranty Residential Insurance Company and United Guaranty Mortgage Indemnity Company (combined “Arch MI U.S.”), which are approved as eligible mortgage insurers by Federal National Mortgage Association (“Fannie Mae”) and Federal Home Loan Mortgage Corporation (“Freddie Mac”), each a GSE. Arch MI U.S. and Arch Mortgage Insurance Designated Activity Company are leading providers of mortgage insurance products and services to the U.S. and European markets, respectively. The mortgage segment also includes GSE credit risk-sharing transactions and mortgage reinsurance for the U.S. and Australian markets.

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Premiums Written.

The following tables set forth our mortgage segment's net premiums written by client location and underwriting location (i.e., where the business is underwritten):

	Three Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Client location:				
United States	$253,456	92.5	$66,261	59.4
Other	20,456	7.5	45,204	40.6
Total	$273,912	100.0	$111,465	100.0
Underwriting location:				
United States	$227,266	83.0	$42,442	38.1
Other	46,646	17.0	69,023	61.9
Total	$273,912	100.0	$111,465	100.0

	Six Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Client location:				
United States	494,592	90.2	122,064	56.0
Other	54,018	9.8	95,914	44.0
Total	$548,610	100.0	$217,978	100.0
Underwriting location:				
United States	$443,995	80.9	$77,772	35.7
Other	104,615	19.1	140,206	64.3
Total	$548,610	100.0	$217,978	100.0

2017 Second Quarter versus 2016 Second Quarter. Gross premiums written by the mortgage segment in the 2017 second quarter were 183.9% higher than in the 2016 second quarter, primarily reflecting the growth in insurance in force due to the acquisition of UGC. The lower increase in net premiums written of 145.7% primarily reflected cessions to AIG under the 50% quota share reinsurance agreement, which covers 2014 to 2016 policy years of UGC business on a run-off basis.

Six Months Ended June 30, 2017 versus 2016 period. Gross premiums written by the mortgage segment were 198.1% higher than in the 2016 period, primarily reflecting the growth in insurance in force due to the acquisition of UGC. The lower increase in net premiums written of 151.7% reflected the 50% quota share agreement noted above.

The persistency rate, which represents the percentage of mortgage insurance in force at the beginning of a 12-month period that remains in force at the end of such period, of the Arch MI U.S. portfolio of mortgage loans was 78.1% at June 30, 2017, compared to 76.6% at March 31, 2017. The higher persistency rate at June 30, 2017 reflects changes in level of mortgage refinance activity and mortgage interest rates.

Arch MI U.S. generated $17.3 billion of new insurance written ("NIW") in the 2017 second quarter, compared to $6.4 billion

in the 2016 second quarter. NIW represents the original principal balance of all loans that received coverage during the period. Our NIW for the 2017 second quarter reflected the combination of Arch and UGC, a higher percentage of monthly premium business and a lower level of refinance activity, as detailed in the following table.

The following tables provide details on the NIW generated by Arch MI U.S.:

(U.S. Dollars in millions)	Three Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%

Total new insurance written (NIW) (1)	$17,303		$6,420	
Credit quality (FICO):				
>=740	$9,814	56.7	$3,950	61.5
680-739	6,274	36.3	2,162	33.7
620-679	1,215	7.0	307	4.8
<620	—	—	1	—
Total	$17,303	100.0	$6,420	100.0
Loan-to-value (LTV):				
95.01% and above	$1,700	9.8	$551	8.6
90.01% to 95.00%	8,372	48.4	2,983	46.5
85.01% to 90.00%	5,462	31.6	2,078	32.4
85.01% and below	1,769	10.2	808	12.6
Total	$17,303	100.0	$6,420	100.0
Monthly vs. single:				
Monthly	$14,832	85.7	$5,182	80.7
Single	2,471	14.3	1,238	19.3
Total	$17,303	100.0	$6,420	100.0
Purchase vs. refinance:				
Purchase	$16,063	92.8	$5,309	82.7
Refinance	1,240	7.2	1,111	17.3
Total	$17,303	100.0	$6,420	100.0

(1) Represents the original principal balance of all loans that received coverage during the period.

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(U.S. Dollars in millions)	Six Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Total new insurance written (NIW) (1)	$29,963		$9,326	
Credit quality (FICO):				
>=740	$16,998	56.7	$5,758	61.7
680-739	10,889	36.3	3,121	33.5
620-679	2,076	6.9	446	4.8
<620	—	—	1	—
Total	$29,963	100.0	$9,326	100.0
Loan-to-value (LTV):				
95.01% and above	$2,672	8.9	$726	7.8
90.01% to 95.00%	14,357	47.9	4,216	45.2
85.01% to 90.00%	9,523	31.8	3,099	33.2
85.01% and below	3,411	11.4	1,285	13.8
Total	$29,963	100.0	$9,326	100.0
Monthly vs. single:				
Monthly	$25,200	84.1	$7,371	79.0
Single	4,763	15.9	1,955	21.0
Total	$29,963	100.0	$9,326	100.0
Purchase vs. refinance:				
Purchase	$26,783	89.4	$7,364	79.0
Refinance	3,180	10.6	1,962	21.0
Total	$29,963	100.0	$9,326	100.0

(1) Represents the original principal balance of all loans that received coverage during the period.

Net Premiums Earned.

The following tables set forth our mortgage segment’s net premiums earned by client location and underwriting location:

	Three Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Client Location:				
United States	$246,656	95.7	$61,046	91.8
Other	11,188	4.3	5,466	8.2
Total	$257,844	100.0	$66,512	100.0
Underwriting location:				
United States	$219,084	85.0	$34,124	51.3
Other	38,760	15.0	32,388	48.7
Total	$257,844	100.0	$66,512	100.0

	Six Months Ended June 30,			
	2017		2016	
	Amount	%	Amount	%
Client Location:				
United States	$482,687	96.1	$118,178	92.1

Other	19,680	3.9	10,099	7.9
Total	$502,367	100.0	$128,277	100.0
Underwriting location:				
United States	$427,783	85.2	$66,644	52.0
Other	74,584	14.8	61,633	48.0
Total	$502,367	100.0	$128,277	100.0

Net premiums earned for the 2017 periods were higher than in the 2016 periods, primarily due to the UGC acquisition and growth in insurance in force for Arch MI U.S.

Other Underwriting Income.

Other underwriting income, which is primarily related to older GSE risk-sharing transactions receiving derivative accounting treatment, was $4.3 million for the 2017 second quarter, compared to $4.1 million for the 2016 second quarter, and $8.4 million for the six months ended June 30, 2017, compared to $7.9 million for the 2016 period.

Losses and Loss Adjustment Expenses.

The table below shows the components of the mortgage segment's loss ratio:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Current year	19.5 %	17.2 %	20.5 %	17.8 %
Prior period reserve development	(11.5)%	(16.6)%	(10.6)%	(10.8)%
Loss ratio	8.0 %	0.6 %	9.9 %	7.0 %

Current Year Loss Ratio.

The mortgage segment's current year loss ratio was 2.3 points higher in the 2017 second quarter than in the 2016 second quarter and 2.7 points higher for the six months ended June 30, 2017 than in the 2016 period. The current year loss ratio for the 2017 second quarter reflects the UGC acquisition and growth in insurance in force.

Prior Period Reserve Development.

The mortgage segment's net favorable development was $29.8 million, or 11.5 points, for the 2017 second quarter, compared to $11.1 million, or 16.6 points, for the 2016 second quarter, and $53.4 million, or 10.6 points for the six months ended June 30, 2017, compared to $13.8 million, or 10.8 points, for the 2016 period. See note 6, "Reserve for Losses and Loss Adjustment Expenses," of the notes accompanying our consolidated financial statements for information about the mortgage segment's prior year reserve development.

Underwriting Expenses.

2017 Second Quarter versus 2016 Second Quarter. The underwriting expense ratio for the mortgage segment was 22.5% in the 2017 second quarter, compared to 43.4% in the 2016 second quarter. The improvement primarily resulted from a higher level of net premiums earned reflecting the UGC acquisition as Arch MI U.S. has increased its scale of operations.

Six Months Ended June 30, 2017 versus 2016 period. The underwriting expense ratio for the mortgage segment was

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25.5% for the six months ended June 30, 2017, compared to 45.3% for the 2016 period. The improvement primarily resulted from a higher level of net premiums earned reflecting the UGC acquisition as Arch MI U.S. has increased its scale of operations.

Corporate (Non-Underwriting) Segment

The corporate (non-underwriting) segment results include net investment income, other income (loss), corporate expenses, UGC transaction costs and other, amortization of intangible assets, interest expense, dividends on our non-cumulative preferred shares, net realized gains or losses, net impairment losses included in earnings, equity in net income or loss of investment funds accounted for using the equity method, net foreign exchange gains or losses and income taxes. Such amounts exclude the results of the ‘other’ segment.

Net Investment Income.

The components of net investment income were derived from the following sources:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Fixed maturities	$83,656	$64,365	$166,437	$123,366
Term loan investments	3,881	5,669	6,995	10,527
Equity securities	3,976	3,984	6,942	7,740
Short-term investments	1,669	618	3,110	1,076
Other (1)	14,417	8,152	32,537	21,824
Gross investment income	107,599	82,788	216,021	164,533
Investment expenses (2)	(15,079)	(12,391)	(27,689)	(23,727)
Net investment income	$92,520	$70,397	$188,332	140,806

(1) Amounts include dividends and interest distributions on investment funds and other items.

(2) Investment expenses were approximately 0.33% of average invested assets for the 2017 second quarter, compared to 0.36% for the 2016 second quarter, and 0.29% for the six months ended June 30, 2017, compared to 0.33% for the 2016 period.

Net investment income for the 2017 periods reflected income on the acquired UGC portfolio and higher returns on fund investments than in the 2016 periods. The pre-tax investment income yield, calculated based on amortized cost and on an annualized basis, was 2.04% for the 2017 second quarter, compared to 2.08% for the 2016 second quarter, and 2.10% for the six months ended June 30, 2017, compared to 2.12% for the 2016 period.

Corporate Expenses.

Corporate expenses were $22.2 million for the 2017 second quarter, compared to $17.2 million for the 2016 second quarter, and $34.4 million for the six months ended June 30, 2017, compared to $26.6 million for the 2016 period. The higher level of corporate expenses in the 2017 periods was primarily due to higher incentive compensation costs.

UGC Transaction Costs and Other.

UGC transaction costs and other were $2.7 million for the 2017 second quarter and $18.3 million for the six months ended June 30, 2017. UGC transaction costs and other include advisory, financing, legal and other transaction costs related to the UGC acquisition. Amounts for the 2017 second quarter primarily related to severance and severance related costs, while the total for the six months ended June 30, 2017 reflected $10.8 million of severance and severance related costs, with the remainder primarily due to incentive compensation paid in conjunction with the UGC acquisition.

Amortization of Intangible Assets.

Amortization of intangible assets for the 2017 second quarter was $30.8 million, compared to $4.9 million for the 2016 second quarter, and $62.1 million for the six months ended June 30, 2017, compared to $9.6 million for the 2016 period. During the 2017 first quarter, we reclassified our income statement presentation of amortization of intangible assets to reflect such item separately (previously reflected in acquisition and/or other operating expenses). The higher level of expense for the 2017 periods reflects the amortization of intangible assets included in the UGC acquisition, including intangible assets related to acquired insurance contracts and distribution relationships.

Interest Expense.

Interest expense was $25.9 million for the 2017 second quarter, compared to $12.4 million for the 2016 second quarter, and $51.7 million for the six months ended June 30, 2017, compared to $25.1 million for the 2016 period. The increase in the 2017 periods primarily reflects the impact of the issuance of the Company’s 2026 and 2046 senior notes in December 2016 and the higher level of borrowings outstanding under our revolving credit agreement. The proceeds from the debt offering and additional borrowings under the revolving credit agreement were used to close the UGC acquisition on December 31, 2016.

Net Realized Gains or Losses.

We recorded net realized gains of $18.0 million for the 2017 second quarter, compared to net realized gains of $40.9 million for the 2016 second quarter, and net realized gains of $46.6 million for the six months ended June 30, 2017, compared to net realized gains of $72.8 million for the 2016 period. Currently, our portfolio is actively managed to maximize total return within certain guidelines. The effect of financial market movements on the investment portfolio will directly impact net realized gains and losses as the portfolio is adjusted and rebalanced. Net realized gains or losses from the sale of fixed maturities primarily results from our decisions to reduce credit exposure, to change duration targets, to rebalance our portfolios or due to relative value determinations. Net realized gains or losses also includes realized and unrealized contract gains and losses on our derivative instruments, changes in the fair value of assets and liabilities accounted for using the fair value option along with re-measurement of contingent consideration liability amounts.

Net Impairment Losses Recognized in Earnings.

We recorded $1.7 million of impairment losses for the 2017 second quarter, compared to $5.3 million for the 2016 second quarter, and $3.5 million for the six months ended June 30, 2017, compared to $13.0 million for the 2016 period. See note 7, “Investment Information—Other-Than-Temporary Impairments,” of the notes accompanying our consolidated financial statements for additional information.

Equity in Net Income (Loss) of Investment Funds Accounted for Using the Equity Method.

We recorded $32.7 million of equity in net income related to investment funds accounted for using the equity method in the 2017 second quarter, compared to $8.7 million of income for the 2016 second quarter, and $80.8 million of income for the six months ended June 30, 2017, compared to $15.4 million of income for the 2016 period. Investment funds accounted for using the equity method totaled $948.9 million at June 30, 2017, compared to $811.3 million at December 31, 2016.

Net Foreign Exchange Gains or Losses.

Net foreign exchange losses for the 2017 second quarter were $37.8 million, compared to net foreign exchange gains for the 2016 second quarter of $22.5 million, and net foreign exchange losses of $57.7 million for the six months ended June 30, 2017, compared to net foreign exchange gains of $0.4 million for the 2016 period. Amounts in such periods were primarily unrealized and resulted from the effects of revaluing our net insurance liabilities required to be settled in foreign currencies at each balance sheet date.

Income Tax Expense.

Our income tax provision on income before income taxes resulted in an expense of 15.7% for the 2017 second quarter, compared to an expense of 6.4% for the 2016 second quarter, and 12.6% for the six months ended June 30, 2017, compared to 7.8% for the 2016 period. The effective tax rates for the 2017 second quarter and six months ended June 30, 2017 included a discrete income tax benefit of $3.9 million and $6.4 million, respectively, arising from the change in accounting for stock based compensation. Our effective tax rate, which is based upon

the expected annual effective tax rate, may fluctuate from period to period based on the relative mix of income or loss reported by jurisdiction and the varying tax rates in each jurisdiction.

Other Segment

The ‘other’ segment includes the results of Watford Re. Pursuant to generally accepted accounting principles, Watford Re is considered a variable interest entity and we concluded that we are the primary beneficiary of Watford Re. As such, we consolidate the results of Watford Re in our consolidated financial statements, although we only own approximately 11% of Watford Re’s common equity. See note 3, “Variable Interest Entities and Noncontrolling Interests” and note 5, “Segment Information,” of the notes accompanying our consolidated financial statements for additional information on Watford Re.

CRITICAL ACCOUNTING POLICIES, ESTIMATES AND RECENT ACCOUNTING PRONOUNCEMENTS

Critical accounting policies, estimates and recent accounting pronouncements are discussed in Management’s Discussion and Analysis of Financial Condition and Results of Operations contained in our 2016 Form 10-K, updated where applicable in the notes accompanying our consolidated financial statements, including note 2, “Recent Accounting Pronouncements.”

FINANCIAL CONDITION, LIQUIDITY AND CAPITAL RESOURCES

Financial Condition

Investable Assets

At June 30, 2017, total investable assets of $21.11 billion included $19.17 billion held by Arch and $1.93 billion included in the ‘other’ segment (i.e., attributable to Watford Re).

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Investable Assets Held by Arch

The following table summarizes the fair value of the investable assets held by Arch:

Investable assets (1):	Estimated Fair Value	% of Total
June 30, 2017		
Fixed maturities (2)	$14,682,692	76.6
Short-term investments	966,775	5.0
Cash	676,391	3.5
Equity securities (2)	529,776	2.8
Other investments (2)	1,423,895	7.4
Investments accounted for using the equity method	948,856	4.9
Securities transactions entered into but not settled at the balance sheet date	(54,676)	(0.3)
Total investable assets held by Arch	$19,173,709	100.0
December 31, 2016		
Fixed maturities (2)	$14,521,774	77.9
Short-term investments	676,547	3.6
Cash	768,049	4.1
Equity securities (2)	558,008	3.0
Other investments (2)	1,276,841	6.9
Investments accounted for using the equity method	811,273	4.4
Securities transactions entered into but not settled at the balance sheet date	23,697	0.1
Total investable assets held by Arch	$18,636,189	100.0

(1) In securities lending transactions, we receive collateral in excess of the fair value of the securities pledged. For purposes of this table, we have excluded the collateral received under securities lending, at fair value and included the securities pledged under securities lending, at fair value.

(2) Includes investments carried as available for sale, at fair value and at fair value under the fair value option.

At June 30, 2017, our fixed income portfolio, which includes fixed maturity securities and short-term investments, had average credit quality ratings from Standard & Poor’s Rating Services (“S&P”)/Moody’s of “AA/Aa2” and an average yield to maturity (embedded book yield), before investment expenses, of 2.27%. At December 31, 2016, our fixed income portfolio had average credit quality ratings from S&P/Moody’s of “AA-/Aa3” and an average yield to maturity of 2.03%. Our investment portfolio had an average effective duration of 3.41 years at June 30, 2017, compared to 3.64 years at December 31, 2016. At June 30, 2017, approximately $13.37 billion, or 70%, of total investable assets held by Arch were internally managed, compared to $13.90 billion, or 75%, at December 31, 2016.

The following table summarizes our fixed maturities and fixed maturities pledged under securities lending agreements (“Fixed Maturities”) by type:

	Estimated Fair Value	% of Total
June 30, 2017		
Corporate bonds	$4,598,288	31.3
Mortgage backed securities	344,572	2.3
Municipal bonds	2,618,827	17.8
Commercial mortgage backed securities	521,272	3.6
U.S. government and government agencies	3,425,196	23.3
Non-U.S. government securities	1,434,842	9.8
Asset backed securities	1,739,695	11.8
Total	$14,682,692	100.0

December 31, 2016		
Corporate bonds	$4,696,079	32.3
Mortgage backed securities	504,677	3.5
Municipal bonds	3,713,434	25.6
Commercial mortgage backed securities	536,051	3.7
U.S. government and government agencies	2,804,811	19.3
Non-U.S. government securities	1,142,735	7.9
Asset backed securities	1,123,987	7.7
Total	$14,521,774	100.0

The following table provides the credit quality distribution of our Fixed Maturities. For individual fixed maturities, S&P ratings are used. In the absence of an S&P rating, ratings from Moody's are used, followed by ratings from Fitch Ratings.

	Estimated Fair Value	% of Total
June 30, 2017		
U.S. government and gov't agencies (1)	$3,710,779	25.3
AAA	4,659,940	31.7
AA	2,636,762	18.0
A	2,091,875	14.2
BBB	800,125	5.4
BB	285,952	1.9
B	175,908	1.2
Lower than B	81,493	0.6
Not rated	239,858	1.6
Total	$14,682,692	100.0
December 31, 2016		
U.S. government and gov't agencies (1)	$3,210,899	22.1
AAA	3,918,739	27.0
AA	3,148,226	21.7
A	2,338,834	16.1
BBB	1,203,942	8.3
BB	226,321	1.6
B	156,405	1.1
Lower than B	90,833	0.6
Not rated	227,574	1.6
Total	$14,521,774	100.0

(1) Includes U.S. government-sponsored agency residential mortgage-backed securities and agency commercial mortgage-backed securities.

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The following table provides information on the severity of the unrealized loss position as a percentage of amortized cost for all Fixed Maturities which were in an unrealized loss position:

Severity of gross unrealized losses:	Estimated Fair Value	Gross Unrealized Losses	% of Total Gross Unrealized Losses
June 30, 2017			
0-10%	$7,031,570	$(64,424)	78.0
10-20%	94,549	(17,555)	21.2
20-30%	1,835	(519)	0.6
Greater than 30%	249	(140)	0.2
Total	$7,128,203	$(82,638)	100.0
December 31, 2016			
0-10%	$7,078,582	$(127,909)	71.6
10-20%	155,403	(24,219)	13.5
20-30%	89,887	(25,929)	14.5
Greater than 30%	1,496	(702)	0.4
Total	$7,325,368	$(178,759)	100.0

The following table summarizes our top ten exposures to fixed income corporate issuers by fair value at June 30, 2017, excluding guaranteed amounts and covered bonds:

	Estimated Fair Value	Credit Rating (1)
Apple Inc.	$ 141,619	AA+/Aa1
Microsoft Corporation	131,332	AAA/Aaa
JPMorgan Chase & Co.	118,359	A-/A3
The Bank of New York Mellon Corporation	94,126	A/A1
Wells Fargo & Company	86,082	A/A2
Massmutual Global Funding II C	82,409	AA+/Aa2
Citigroup Inc.	81,149	A-/A3
MetLife, Inc.	77,893	AA-/Aa3
New York Life Insurance Company	69,203	AA+/Aaa
Morgan Stanley	64,765	BBB+/A3
Total	$ 946,937	

(1) Average credit ratings as assigned by S&P and Moody’s, respectively.

The following table provides information on our structured securities, which includes residential mortgage-backed securities (“RMBS”), commercial mortgage-backed securities (“CMBS”) and asset-backed securities (“ABS”):

	Agencies	Investment Grade	Below Investment Grade	Total
June 30, 2017				
RMBS	$281,187	$20,705	$ 42,680	$344,572
CMBS	4,397	468,001	48,874	521,272
ABS	—	1,624,303	115,392	1,739,695
Total	$285,584	$2,113,009	$ 206,946	$2,605,539
December 31, 2016				
RMBS	$393,188	$60,600	$ 50,889	$504,677

CMBS	12,900	513,266	9,885	536,051
ABS	—	1,077,614	46,373	1,123,987
Total	$406,088	$1,651,480	$ 107,147	$2,164,715

At June 30, 2017, our structured securities included $27.3 million par value in sub-prime securities with a fair value of $23.5 million and average credit quality ratings from S&P/Moody’s of “CCC-/Ca.” At December 31, 2016, our fixed income portfolio included $25.3 million par value in sub-prime securities with a fair value of $23.3 million and average credit quality ratings from S&P/Moody’s of “CCC/Caa3.”

At June 30, 2017, our equity portfolio included $529.8 million of equity securities, compared to $558.0 million at December 31, 2016. Our equity portfolio includes publicly traded common stocks in the natural resources, energy, consumer staples and other sectors.

The following table provides information on the severity of the unrealized loss position as a percentage of cost for all equity securities classified as available for sale which were in an unrealized loss position:

Severity of gross unrealized losses:	Estimated Fair Value	Gross Unrealized Losses	% of Total Gross Unrealized Losses
June 30, 2017			
0-10%	$ 151,242	$ (3,262)	45.3
10-20%	11,309	(1,879)	26.1
20-30%	3,388	(1,019)	14.2
Greater than 30%	1,237	(1,040)	14.4
Total	$ 167,176	$ (7,200)	100.0
December 31, 2016			
0-10%	$ 214,364	$ (8,776)	50.1
10-20%	52,034	(7,100)	40.5
20-30%	1,983	(607)	3.5
Greater than 30%	1,000	(1,034)	5.9
Total	$ 269,381	$ (17,517)	100.0

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The following table provides information on the fair value of our Eurozone investments at June 30, 2017:

Country (1)	Sovereign (2)	Corporate Bonds	Other (3)	Total
Netherlands	$ 100,046	$ 108,724	$ 3,492	$ 212,262
Germany	113,430	49,448	43,334	206,212
Belgium	35,278	7,667	—	42,945
France	4,816	13,193	23,790	41,800
Luxembourg	—	13,559	11,827	25,386
Austria	16,525	—	—	16,525
Spain	—	1,668	12,899	14,567
Ireland	—	6,049	2,285	8,335
Supranational (4)	7,282	—	—	7,282
Italy	—	—	6,540	6,540
Finland	—	—	3,464	3,464
Greece	—	155	1,220	1,375
Portugal	—	—	562	562
Total	$ 277,378	$ 200,464	$ 109,412	$ 587,254

(1) The country allocations set forth in the table are based on various assumptions made by us in assessing the country in which the underlying credit risk resides, including a review of the jurisdiction of organization, business operations and other factors. Based on such analysis, we do not believe that we have any other Eurozone investments at June 30, 2017.

(2) Includes securities issued and/or guaranteed by Eurozone governments.

(3) Includes bank loans, equities and other.

(4) Includes World Bank, European Investment Bank, International Finance Corp. and European Bank for Reconstruction and Development.

The following table summarizes our other investments:

	June 30, 2017	December 31, 2016
Available for sale:		
Asian and emerging markets	$ 114,594	$ 84,778
Investment grade fixed income	52,266	33,923
Credit related funds	14,632	7,469
Other	67,169	41,800
Total available for sale	248,661	167,970
Fair value option:		
Term loan investments	409,126	378,877
Mezzanine debt funds	141,066	127,943
Credit related funds	197,144	218,298
Investment grade fixed income	86,389	75,468
Asian and emerging markets	202,799	178,568
Other (1)	138,710	129,717
Total fair value option	1,175,234	1,108,871
Total	$ 1,423,895	$ 1,276,841

(1) Includes fund investments with strategies in mortgage servicing rights, transportation and infrastructure assets and other.

Investable Assets in the ‘Other’ Segment

Investable assets in the ‘other’ segment are managed by Watford Re. The board of directors of Watford Re establishes their investment policies and guidelines. Watford Re’s investments are accounted for using the fair value option with changes in

the carrying value of such investments recorded in net realized gains or losses.
The following table summarizes investable assets in the 'other' segment:

	June 30, 2017	December 31, 2016
Investments accounted for using the fair value option:		
Other investments	$968,531	$811,922
Fixed maturities	666,548	734,260
Short-term investments	474,965	309,127
Equity securities	19,392	2,314
Total	2,129,436	1,857,623
Cash	63,929	74,893
Securities sold but not yet purchased	(69,273)	(33,157)
Securities transactions entered into but not settled at the balance sheet date	(191,534)	(41,596)
Total investable assets included in 'other' segment	$1,932,558	$1,857,763

Premiums Receivable and Reinsurance Recoverables

At June 30, 2017, 77.7% of premiums receivable of $1.31 billion represented amounts not yet due, while amounts in excess of 90 days overdue were 3.8% of the total. At December 31, 2016, 81.0% of premiums receivable of $1.07 billion represented amounts not yet due, while amounts in excess of 90 days overdue were 5.2% of the total. Our reserves for doubtful accounts were approximately $23.2 million at June 30, 2017, compared to $21.0 million at December 31, 2016.

At June 30, 2017 and December 31, 2016, approximately 75.3% and 75.7% of reinsurance recoverables on paid and unpaid losses (not including ceded unearned premiums) of $2.16 billion and $2.11 billion, respectively, were due from carriers which had an A.M. Best rating of "A-" or better while 24.7% and 24.3%, respectively, were from companies not rated. For items not rated, over 90% of such amount was collateralized through reinsurance trusts or letters of credit at June 30, 2017 and December 31, 2016. The largest reinsurance recoverables from any one carrier was approximately 2.1% and 2.4%, respectively, of total shareholders' equity available to Arch at June 30, 2017 and December 31, 2016. Approximately 4.1% of the $38.9 million of paid losses and loss adjustment expenses recoverable at June 30, 2017 were more than 90 days overdue, compared to 6.7% of the $30.6 million of paid losses and loss adjustment expenses recoverable at December 31, 2016. No collection issues were indicated on the amount in excess of 90 days overdue at June 30, 2017.

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The effects of reinsurance on written and earned premiums and losses and loss adjustment expenses (“LAE”) with unaffiliated reinsurers were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Premiums written:				
Direct	$1,093,558	$839,844	$2,190,313	$1,697,954
Assumed	516,101	490,092	1,077,336	1,069,948
Ceded	(360,964)	(306,373)	(742,694)	(623,104)
Net	$1,248,695	$1,023,563	$2,524,955	$2,144,798
Premiums earned:				
Direct	$1,071,648	$795,358	$2,095,100	$1,575,128
Assumed	513,814	473,331	930,159	894,389
Ceded	(344,588)	(262,704)	(667,368)	(511,953)
Net	$1,240,874	$1,005,985	$2,357,891	$1,957,564
Losses and LAE:				
Direct	$544,061	$525,719	$1,051,179	$981,052
Assumed	303,582	265,321	490,538	457,781
Ceded	(157,783)	(206,448)	(299,287)	(331,292)
Net	$689,860	$584,592	$1,242,430	$1,107,541

Reserves for Losses and Loss Adjustment Expenses

We establish reserves for losses and loss adjustment expenses (“Loss Reserves”) which represent estimates involving actuarial and statistical projections, at a given point in time, of our expectations of the ultimate settlement and administration costs of losses incurred. Estimating Loss Reserves is inherently difficult, which is exacerbated by the fact that we have relatively limited historical experience upon which to base such estimates. We utilize actuarial models as well as available historical insurance industry loss ratio experience and loss development patterns to assist in the establishment of Loss Reserves. Actual losses and loss adjustment expenses paid will deviate, perhaps substantially, from the reserve estimates reflected in our financial statements.

At June 30, 2017 and December 31, 2016, our Loss Reserves, net of unpaid losses and loss adjustment expenses recoverable, by type and by operating segment were as follows:

	June 30, 2017	December 31, 2016
Insurance segment:		
Case reserves	$1,494,732	$ 1,414,603
IBNR reserves	3,218,063	3,187,451
Total net reserves	4,712,795	4,602,054
Reinsurance segment:		
Case reserves	928,379	762,730
Additional case reserves	93,693	92,524
IBNR reserves	1,485,774	1,517,983
Total net reserves	2,507,846	2,373,237
Mortgage segment:		
Case reserves	491,124	593,222
IBNR reserves	74,127	59,791
Total net reserves (1)	565,251	653,013
Other segment:		

Case reserves	209,184	125,703
Additional case reserves	11,110	9,513
IBNR reserves	398,115	353,865
Total net reserves	618,409	489,081
Total:		
Case reserves	3,123,419	2,896,258
Additional case reserves	104,803	102,037
IBNR reserves	5,176,079	5,119,090
Total net reserves	$ 8,404,301	$ 8,117,385

(1) Includes $510.3 million of net reserves from U.S. primary mortgage insurance business, of which 74.1% represents policy years 2007 and prior, 12.2% from 2008 and the remainder from later policy years.

At June 30, 2017 and December 31, 2016, the insurance segment's Loss Reserves by major line of business, net of unpaid losses and loss adjustment expenses recoverable, were as follows:

	June 30, 2017	December 31, 2016
Insurance segment:		
Professional lines (1)	$ 1,331,585	$ 1,293,667
Construction and national accounts	1,044,929	976,109
Excess and surplus casualty (2)	688,583	687,305
Programs	662,774	667,677
Property, energy, marine and aviation	270,265	302,057
Travel, accident and health	75,512	72,726
Lenders products	45,213	42,147
Other (3)	593,934	560,366
Total net reserves	$ 4,712,795	$ 4,602,054

(1) Includes professional liability, executive assurance and healthcare business.
(2) Includes casualty and contract binding business.
(3) Includes alternative markets, excess workers' compensation and surety business.

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At June 30, 2017 and December 31, 2016, the reinsurance segment's Loss Reserves by major line of business, net of unpaid losses and loss adjustment expenses recoverable, were as follows:

	June 30, 2017	December 31, 2016
Reinsurance segment:		
Casualty (1)	$1,416,618	$ 1,355,362
Other specialty (2)	498,497	428,205
Property excluding property catastrophe (3)	315,683	297,200
Marine and aviation	139,608	147,700
Property catastrophe	77,834	86,026
Other (4)	59,606	58,744
Total net reserves	$2,507,846	$ 2,373,237

(1) Includes executive assurance, professional liability, workers' compensation, excess motor, healthcare and other.
(2) Includes non-excess motor, surety, accident and health, workers' compensation catastrophe, agriculture, trade credit and other.
(3) Includes facultative business.
(4) Includes life, casualty clash and other.

Mortgage Operations Supplemental Information

The mortgage segment's insurance in force ("IIF") and risk in force ("RIF") were as follows at the end of the last two quarters:

(U.S. Dollars in millions)	June 30, 2017		March 31, 2017	
	Amount	%	Amount	%
Insurance In Force (IIF) (1):				
U.S. primary mortgage insurance	$244,235	73.4	$237,769	73.1
Mortgage reinsurance	26,120	7.8	25,846	7.9
Other (2)	62,503	18.8	61,596	18.9
Total	$332,858	100.0	$325,211	100.0
Risk In Force (RIF) (3):				
U.S. primary mortgage insurance	$62,362	92.6	$60,591	92.5
Mortgage reinsurance	2,453	3.6	2,494	3.8
Other (2)	2,517	3.7	2,409	3.7
Total	$67,332	100.0	$65,494	100.0

(1) Represents the aggregate dollar amount of each insured mortgage loan's current principal balance.
(2) Includes GSE credit risk-sharing transactions and international insurance business.
(3) Represents the aggregate dollar amount of each insured mortgage loan's current principal balance multiplied by the insurance coverage percentage specified in the policy for insurance policies issued and after contract limits and/or loss ratio caps for credit risk-sharing or reinsurance transactions.

The insurance in force and risk in force for our U.S. primary mortgage insurance business by policy year were as follows at June 30, 2017:

(U.S. Dollars in millions)	IIF		RIF		Delinquency	
	Amount	%	Amount	%	Rate (1)	
Policy year:						
2007 and prior	$22,865	9.4	$5,222	8.4	10.12	%
2008	6,089	2.5	1,500	2.4	6.78	%
2009	1,369	0.6	323	0.5	2.41	%
2010	1,472	0.6	395	0.6	1.62	%
2011	4,423	1.8	1,208	1.9	1.07	%

2012	15,205	6.2	4,159	6.7	0.56	%
2013	24,871	10.2	6,764	10.8	0.69	%
2014	25,916	10.6	6,889	11.0	0.69	%
2015	46,682	19.1	11,941	19.1	0.39	%
2016	65,720	26.9	16,476	26.4	0.21	%
2017	29,623	12.1	7,485	12.0	0.03	%
Total	$244,235	100.0	$62,362	100.0	2.02	%

(1) Represents the ending percentage of loans in default.

The following tables provide supplemental disclosures on risk in force for our U.S. primary mortgage insurance business at the end of the last two quarters:

(U.S. Dollars in millions)	June 30, 2017		March 31, 2017	
	Amount	%	Amount	%
Credit quality (FICO):				
>=740	$36,378	58.3	$35,396	58.4
680-739	20,122	32.3	19,343	31.9
620-679	5,118	8.2	5,065	8.4
<620	744	1.2	787	1.3
Total	$62,362	100.0	$60,591	100.0
Weighted average FICO score	743		743	
Loan-to-value (LTV):				
95.01% and above	$5,983	9.6	$5,808	9.6
90.01% to 95.00%	34,718	55.7	33,617	55.5
85.01% to 90.00%	18,810	30.2	18,346	30.3
85.00% and below	2,851	4.6	2,820	4.7
Total	$62,362	100.0	$60,591	100.0
Weighted average LTV	92.8	%	92.9	%
Total RIF, net of external reinsurance	$45,774		$43,606	

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(U.S. Dollars in millions)	June 30, 2017		March 31, 2017	
	Amount	%	Amount	%
Total RIF by State:				
Texas	$5,075	8.1	$4,995	8.2
California	3,524	5.7	3,333	5.5
Virginia	2,691	4.3	2,625	4.3
Florida	2,622	4.2	2,467	4.1
North Carolina	2,346	3.8	2,278	3.8
Washington	2,311	3.7	2,313	3.8
Georgia	2,239	3.6	2,153	3.6
Maryland	2,160	3.5	2,107	3.5
Illinois	2,157	3.5	2,109	3.5
Minnesota	2,072	3.3	2,003	3.3
Others	35,165	56.4	34,208	56.5
Total	$62,362	100.0	$60,591	100.0

The following table provides supplemental disclosures for our U.S. primary mortgage insurance business related to insured loans and loss metrics:

(U.S. Dollars in thousands, except policy, loan and claim count)	Three Months Ended June 30, 2017	March 31, 2017
Roll-forward of insured loans in default:		
Beginning delinquent number of loans	26,234	29,691
New notices	8,858	9,863
Cures	(9,078)	(11,707)
Paid claims	(2,111)	(1,613)
Ending delinquent number of loans (1)	23,903	26,234
Ending number of policies in force (1)	1,183,659	1,164,929
Delinquency rate (1)	2.02 %	2.25 %
Losses:		
Number of claims paid	2,111	1,613
Total paid claims	$85,539	$70,784
Average per claim	$40.5	$43.9
Severity (2)	104.4 %	102.0 %
Average reserve per default (in thousands) (1)	$20.4	$20.4

(1) Includes first lien primary and pool policies.
(2) Represents total paid claims divided by RIF of loans for which claims were paid.

The risk-to-capital ratio, which represents total current (non-delinquent) risk in force, net of reinsurance, divided by total statutory capital, for Arch MI U.S. was approximately 11.7 to 1 at June 30, 2017, compared to 12.0 to 1 at March 31, 2017.

Shareholders’ Equity and Book Value per Share

Total shareholders’ equity available to Arch was $8.90 billion at June 30, 2017, compared to $8.25 billion at December 31, 2016. The increase was primarily attributable to net income, reflecting contributions from both underwriting and investing activities.

The following table presents the calculation of book value per share:

(U.S. dollars in thousands, except share data)	June 30, 2017	December 31, 2016
Total shareholders’ equity available to Arch	$ 8,898,887	$ 8,253,718
Less preferred shareholders’ equity	772,555	772,555
Common shareholders’ equity available to Arch	$ 8,126,332	$ 7,481,163
Common shares and common share equivalents outstanding, net of treasury shares (1)	136,354,159	135,550,337
Book value per share	$ 59.60	$ 55.19

(1) Excludes the effects of 6,972,369 and 6,872,494 stock options and 429,583 and 381,461 restricted stock units outstanding at June 30, 2017 and December 31, 2016, respectively.

Liquidity and Capital Resources

Refer to the ‘Liquidity and Capital Resources’ section contained in Item 7 of our 2016 Form 10-K for a general discussion of our liquidity and capital resources. This section does not include information specific to Watford Re. We do not guarantee or provide credit support for Watford Re, and our financial exposure to Watford Re is limited to our investment in Watford Re’s common and preferred shares and counterparty credit risk (mitigated by collateral) arising from reinsurance transactions with Watford Re.

The following table provided an analysis of our capital structure:

(U.S. dollars in thousands, except share data)	June 30, 2017	December 31, 2016
Debt:		
ACGL senior notes, due May 2034	$ 297,007	$ 296,957
Arch-U.S. senior notes, due Nov 2043 (1)	494,572	494,525
ACF senior notes, due Dec 2026 (2)	495,868	495,689
ACF senior notes, due Dec 2046 (2)	445,123	445,087
Revolving credit agreement borrowings due Oct 2021	500,000	500,000
Total	$ 2,232,570	$ 2,232,258
Shareholders’ equity available to Arch:		
Series C non-cumulative preferred shares	$ 322,555	$ 322,555
Series E non-cumulative preferred shares	450,000	450,000
Common shareholders’ equity	8,126,332	7,481,163
Total	$ 8,898,887	$ 8,253,718
Total capital available to Arch	$ 11,131,457	$ 10,485,976
Debt to total capital (%)	20.1	21.3
Debt and prefered to total capital (%)	27.0	28.7

(1) Issued by Arch Capital Group (U.S.) Inc., a wholly owned subsidiary of ACGL, and fully and unconditionally guaranteed by ACGL.

(2) Issued by Arch Capital Finance LLC (“ACF”), a wholly owned subsidiary of Arch U.S. MI Holdings Inc., and fully and unconditionally guaranteed by ACGL.

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For the six months ended June 30, 2017, ACGL received dividends of $56.0 million from Arch Reinsurance Ltd. (“Arch Re Bermuda”), our Bermuda-based reinsurer and insurer, which can pay approximately $1.91 billion to ACGL during the remainder of 2017 without providing an affidavit to the Bermuda Monetary Authority (“BMA”).
Our U.S. insurance and reinsurance subsidiaries are subject to insurance laws and regulations in the jurisdictions in which they operate. The ability of our regulated insurance subsidiaries to pay dividends or make distributions is dependent on their ability to meet applicable regulatory standards. These regulations include restrictions that limit the amount of dividends or other distributions, such as loans or cash advances, available to shareholders without prior approval of the insurance regulatory authorities.
In addition, Arch MI U.S. is required to maintain compliance with the GSEs requirements, known as the Private Mortgage Insurer Eligibility Requirements or “PMIERs.” The financial requirements require an eligible mortgage insurer’s available assets, which generally include only the most liquid assets of an insurer, to meet or exceed “minimum required assets” as of each quarter end. Minimum required assets are calculated from PMIERs tables with several risk dimensions (including origination year, original loan-to-value and original credit score of performing loans, and the delinquency status of non-performing loans) and are subject to a minimum amount. Arch MI U.S. satisfied the PMIERs’ financial requirements as of June 30, 2017 with an estimated PMIER sufficiency ratio of 122%, compared to 122% at March 31, 2017.
For the six months ended June 30, 2017, Arch U.S. MI Holdings Inc., a subsidiary of Arch-U.S., received $319.0 million of dividends from subsidiaries of United Guaranty Corporation including United Guaranty Residential Insurance Company. Of such amount, $263.0 million was contributed to Arch Mortgage Insurance Company. No additional dividends are available to be paid to Arch U.S. MI Holdings Inc. for the remainder of 2017.
Pursuant to our 2014 acquisition of the CMG Entities, we made a contingent consideration payment of $71.7 million in April 2017. The maximum amount of remaining contingent consideration payments over the remaining earn-out period is $68.2 million.

The following table summarizes our cash flows from operating, investing and financing activities, excluding amounts related to the ‘other’ segment (i.e., Watford Re). See Note 3, “Variable Interest Entities,” for cash flows related to Watford Re.

	Six Months Ended June 30,	
	2017	2016
Total cash provided by (used for):		
Operating activities	$420,287	$410,213
Investing activities	(266,273)	(341,882)
Financing activities	(252,009)	(65,796)
Effects of exchange rate changes on foreign currency cash	6,337	(5,246)
Increase (decrease) in cash	$(91,658)	$(2,711)

•Cash provided by operating activities for the six months ended June 30, 2017 was higher than in the 2016 period, primarily reflecting higher premiums collected, partially offset by a higher level of paid losses.
•Cash used for investing activities for the six months ended June 30, 2017 was lower than in the 2016 period, reflecting changes in cash collateral related to securities lending. In addition, activity for the 2017 period reflected higher net purchases of investments than in the 2016 period, including re-balancing of the UGC portfolio.
•Cash used for financing activities for the six months ended June 30, 2017 was higher than in the 2016 period, reflecting changes in cash collateral related to securities lending. Activity for the 2016 period reflected $75.3 million of repurchases under our share repurchase program.
At June 30, 2017, our investable assets were $19.17 billion (excluding the $1.93 billion of investable assets related to the ‘other’ segment). Our unfunded investment commitments totaled approximately $1.56 billion at June 30, 2017. Please refer to Item 1A “Risk Factors” of our 2016 Form 10-K for a discussion of other risks relating to our business and investment portfolio.

We expect that our liquidity needs, including our anticipated (re)insurance obligations and operating and capital expenditure needs, for the next twelve months, at a minimum, will be met by funds generated from underwriting activities and investment income, as well as by our balance of cash, short-term investments, proceeds on the sale or maturity of our investments, and our credit facilities.

Off-Balance Sheet Arrangements

Off-balance sheet arrangements are discussed in Management’s Discussion and Analysis of Financial Condition and Results of Operations contained in our 2016 Form 10-K.

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Market Sensitive Instruments and Risk Management
In accordance with the SEC's Financial Reporting Release No. 48, we performed a sensitivity analysis to determine the effects that market risk exposures could have on the future earnings, fair values or cash flows of our financial instruments as of June 30, 2017. Market risk represents the risk of changes in the fair value of a financial instrument and is comprised of several components, including liquidity, basis and price risks. We have not included Watford Re in the following analyses as we do not guarantee or provide credit support for Watford Re, and our financial exposure to Watford Re is limited to our investment in Watford Re's common and preferred shares and counterparty credit risk (mitigated by collateral) arising from reinsurance transactions.
An analysis of material changes in market risk exposures at June 30, 2017 that affect the quantitative and qualitative disclosures presented in our 2016 Form 10-K (see section captioned "Management's Discussion and Analysis of Financial Condition and Results of Operations—Market Sensitive Instruments and Risk Management") were as follows:
Investment Market Risk
Fixed Income Securities. We invest in interest rate sensitive securities, primarily debt securities. We consider the effect of interest rate movements on the fair value of our fixed maturities, fixed maturities pledged under securities lending agreements, short-term investments and certain of our other investments which invest in fixed income securities and the corresponding change in unrealized appreciation. As interest rates rise, the fair value of our interest rate sensitive securities falls, and the converse is also true. Based on historical observations, there is a low probability that all interest rate yield curves would shift in the same direction at the same time. Accordingly, the actual effect of interest rate movements may differ materially from the amounts set forth in the following tables.
The following table summarizes the effect that an immediate, parallel shift in the interest rate yield curve would have had on our fixed income securities:

(U.S. dollars in billions)	Interest Rate Shift in Basis Points				
	-100	-50	—	+50	+100
Jun. 30, 2017					
Total fair value	$18.58	$18.27	$17.97	$17.66	$17.37
Change from base	3.40 %	1.70 %		(1.70)%	(3.30)%
Change in unrealized value	$0.61	$0.31		$(0.31)	$(0.59)
Dec. 31, 2016					
Total fair value	$17.95	$17.62	$17.31	$17.00	$16.70
Change from base	3.70 %	1.80 %		(1.80)%	(3.50)%
Change in unrealized value	$0.64	$0.31		$(0.31)	$(0.61)

In addition, we consider the effect of credit spread movements on the fair value of our fixed income securities and the corresponding change in unrealized appreciation. As credit spreads widen, the fair value of our fixed income securities falls, and the converse is also true.
The following table summarizes the effect that an immediate, parallel shift in credit spreads in a static interest rate environment would have had on our fixed income securities:

(U.S. dollars in billions)	Credit Spread Shift in Percentage Points				
	-100	-50	—	+50	+100
Jun. 30, 2017					
Total fair value	$18.38	$18.18	$17.97	$17.75	$17.55
Change from base	2.30 %	1.20 %		(1.20)%	(2.30)%
Change in unrealized value	$0.41	$0.22		$(0.22)	$(0.41)
Dec. 31, 2016					
Total fair value	$17.79	$17.55	$17.31	$17.07	$16.83
Change from base	2.80 %	1.40 %		(1.40)%	(2.80)%
Change in unrealized value	$0.48	$0.24		$(0.24)	$(0.48)

Another method that attempts to measure portfolio risk is Value-at-Risk (“VaR”). VaR attempts to take into account a broad cross-section of risks facing a portfolio by utilizing relevant securities volatility data skewed towards the most recent months and quarters. VaR measures the amount of a portfolio at risk for outcomes 1.65 standard deviations from the mean based on normal market conditions over a one year time horizon and is expressed as a percentage of the portfolio’s initial value. In other words, 95% of the time, should the risks taken into account in the VaR model perform per their historical tendencies, the portfolio’s loss in any one year period is expected to be less than or equal to the calculated VaR, stated as a percentage of the measured portfolio’s initial value. As of June 30, 2017, our portfolio’s VaR was estimated to be 3.69% compared to an estimated 3.75% at December 31, 2016.

Equity Securities. At June 30, 2017 and December 31, 2016, the fair value of our investments in equity securities totaled $529.8 million and $558.0 million, respectively. These investments are exposed to price risk, which is the potential loss arising from decreases in fair value. An immediate hypothetical 10% decline in the value of each position would reduce the fair value of such investments by approximately $53.0 million and $55.8 million at June 30, 2017 and December 31, 2016, respectively, and would have decreased book value per common share by approximately $0.39 and $0.41, respectively. An immediate hypothetical 10% increase in the value of each position would increase the fair value of such investments by approximately $53.0 million and $55.8 million at June 30, 2017 and December 31, 2016, respectively, and would have increased book value per common share by approximately $0.39 and $0.41, respectively.

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Investment-Related Derivatives. At June 30, 2017, the notional value of all derivative instruments (excluding to-be-announced mortgage backed securities which are included in the fixed income securities analysis above and foreign currency forward contracts which are included in the foreign currency exchange risk analysis below) was $3.63 billion, compared to $2.12 billion at December 31, 2016. If the underlying exposure of each investment-related derivative held at June 30, 2017 depreciated by 100 basis points, it would have resulted in a reduction in net income of approximately $36.3 million, and a decrease in book value per common share of approximately $0.27 per share, compared to $21.2 million and $0.16 per share, respectively, on investment-related derivatives held at December 31, 2016. If the underlying exposure of each investment-related derivative held at June 30, 2017 appreciated by 100 basis points, it would have resulted in an increase in net income of approximately $36.3 million, and an increase in book value per common share of approximately $0.27 per share, compared to $21.2 million and $0.16 per share, respectively, on investment-related derivatives held at December 31, 2016. See note 9, "Derivative Instruments," of the notes accompanying our consolidated financial statements for additional disclosures concerning derivatives.

Foreign Currency Exchange Risk

Foreign currency rate risk is the potential change in value, income and cash flow arising from adverse changes in foreign currency exchange rates. Through our subsidiaries and branches located in various foreign countries, we conduct our insurance and reinsurance operations in a variety of local currencies other than the U.S. Dollar. We generally hold investments in foreign currencies which are intended to mitigate our exposure to foreign currency fluctuations in our net insurance liabilities and also utilize foreign currency forward contracts and currency options as part of our investment strategy. From time to time, we may elect to over or underweight one or more currencies, which could increase our exposure to foreign currency fluctuations and increase the volatility of our shareholders' equity.

For further discussion on foreign exchange activity, please refer to "—Results of Operations" and note 9, "Derivative Instruments," of the notes accompanying our consolidated financial statements.

The following table provides a summary of our net foreign currency exchange exposures, as well as foreign currency derivatives in place to manage these exposures:

(U.S. dollars in thousands, except per share data)	June 30, 2017	December 31, 2016
Net assets (liabilities), denominated in foreign currencies, excluding shareholders' equity and derivatives	$(314,239)	$ (63,077)
Shareholders' equity denominated in foreign currencies (1)	305,326	290,752
Net foreign currency forward contracts outstanding (2)	(194,170)	(250,263)
Net exposures denominated in foreign currencies	$(203,083)	$ (22,588)
Pre-tax impact of a hypothetical 10% appreciation of the U.S. Dollar against foreign currencies:		
Shareholders' equity	$20,308	$ 2,259
Book value per common share	$0.15	$ 0.02
Pre-tax impact of a hypothetical 10% decline of the U.S. Dollar against foreign currencies:		
Shareholders' equity	$(20,308)	$ (2,259)
Book value per common share	$(0.15)	$ (0.02)

(1) Represents capital contributions held in the foreign currencies of our operating units.
(2) Represents the net notional value of outstanding foreign currency forward contracts.

Historical observations indicate a low probability that all foreign currency exchange rates would shift against the U.S. Dollar in the same direction and at the same time and, accordingly, the actual effect of foreign currency rate movements may differ materially from the amounts set forth above.

Other Financial Information

The consolidated financial statements as of June 30, 2017 and for the three month and six month periods ended June 30, 2017 and 2016 have been reviewed by PricewaterhouseCoopers LLP, the registrant's independent public accountants, whose report is included as an exhibit to this filing. The report of PricewaterhouseCoopers LLP states that they did not audit and they do not express an opinion on that unaudited financial information. Accordingly, the degree of reliance on their report on such information should be restricted in light of the limited nature of the review procedures applied. PricewaterhouseCoopers LLP is not subject to the liability provisions of Section 11 of the Securities Act of 1933 for their report on the unaudited financial information because that report is not a "report" or a "part" of the registration statement prepared or certified by PricewaterhouseCoopers LLP within the meaning of Sections 7 and 11 of the Securities Act of 1933.

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ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Reference is made to the information appearing above under the subheading “Market Sensitive Instruments and Risk Management” under the caption “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” which information is hereby incorporated by reference.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

In connection with the filing of this Form 10-Q, our management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of disclosure controls and procedures pursuant to applicable Exchange Act Rules as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective as of the end of and during the period covered by this report with respect to information being recorded, processed, summarized and reported within time periods specified in the SEC’s rules and forms and with respect to timely communication to them and other members of management responsible for preparing periodic reports of all material information required to be disclosed in this report as it relates to ACGL and its consolidated subsidiaries.

We continue to enhance our operating procedures and internal controls to effectively support our business and our regulatory and reporting requirements. Our management does not expect that our disclosure controls or our internal controls will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. As a result of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons or by collusion of two or more people. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in

achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. As a result of the inherent limitations in a cost-effective control system, misstatement due to error or fraud may occur and not be detected. Accordingly, our disclosure controls and procedures are designed to provide reasonable, not absolute, assurance that the disclosure controls and procedures are met.

Changes in Internal Controls Over Financial Reporting

We acquired all of the issued and outstanding capital stock of UGC on December 31, 2016. As allowed under SEC guidance, management’s assessment of and conclusion regarding the design and effectiveness of internal control over financial reporting excluded the internal control over financial reporting of UGC, which is relevant to the Company’s consolidated financial statements as of and for the six months ended June 30, 2017. UGC represents 14% of total assets as of June 30, 2017 and 14% of our total revenues for the six months ended June 30, 2017. The financial reporting systems of UGC have not yet been fully integrated into our financial reporting systems and, as such, we did not have the practical ability to perform an assessment of UGC’s internal control over financial reporting in time for the current quarter-end. Management expects to complete the process of integrating UGC’s internal control over financial reporting during 2017. The UGC acquisition represents a material change in internal control over financial reporting as defined in Exchange Act Rule 13a-15(f) for the six months ended June 30, 2017.

There have been no changes in internal control over financial reporting that occurred during the quarter ended June 30, 2017 that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting, other than the UGC acquisition as described in the preceding paragraph.

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PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We, in common with the insurance industry in general, are subject to litigation and arbitration in the normal course of our business. As of June 30, 2017, we were not a party to any litigation or arbitration which is expected by management to have a material adverse effect on our results of operations and financial condition and liquidity.

ITEM 1A. RISK FACTORS

There were no material changes from the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016.

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ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

The following table summarizes our purchases of our common shares for the 2017 second quarter:

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet be Purchased Under the Plan or Programs (2)
4/1/2017 - 4/30/2017	10,403	$ 95.44	—	$ 446,501
5/1/2017 - 5/31/2017	114,538	95.22	—	$ 446,501
6/1/2017 - 6/30/2017	1,844	94.20	—	$ 446,501
Total	126,785	$ 95.22	—	$ 446,501

(1) Represents repurchases by ACGL of shares, from time to time, from employees in order to facilitate the payment of withholding taxes on restricted shares granted and the exercise of stock appreciation rights. We purchased these shares at their fair value, as determined by reference to the closing price of our common shares on the day the restricted shares vested or the stock appreciation rights were exercised.

(2) Remaining amount available at June 30, 2017 under ACGL's share repurchase authorization, under which repurchases may be effected from time to time in open market or privately negotiated transactions through December 31, 2019.

ITEM 5. OTHER INFORMATION

In accordance with Section 10a(i)(2) of the Securities Exchange Act of 1934, as amended, we are responsible for disclosing non-audit services to be provided by our independent auditor, PricewaterhouseCoopers LLP, which are approved by the Audit Committee of our board of directors. During the 2017 second quarter, the Audit Committee approved engagements of PricewaterhouseCoopers LLP for permitted non-audit services, which consisted of tax consulting services, tax compliance services and other accounting consulting services.

Disclosure of Certain Activities Under Section 13(r) of the Securities Exchange Act of 1934

Section 13(r) of the Securities Exchange Act of 1934, as amended, requires an issuer to disclose in its annual or quarterly reports whether it or an affiliate knowingly engaged in certain activities described in that section, including certain activities related to Iran during the period covered by the report.

Effective January 16, 2016, the Office of Foreign Assets Control of the U.S. Department of the Treasury adopted General License H which authorizes non-U.S. entities that are owned or controlled by a U.S. person to engage in certain activities with Iran so long as they comply with certain specific requirements set forth therein.

Certain of our non-U.S. subsidiaries provide global marine policies that provide coverage for vessels navigating into and out of ports worldwide. In light of European Union and U.S. modifications to Iran sanctions this year, including the issuance of General License H, and consistent with General License H, we have been notified that certain of our policyholders have begun to, or will begin to, ship cargo to and from Iran, and that such cargo may include transporting crude oil from Iran to another country. Since these policies insure multiple voyages and fleets containing multiple ships, we are unable to attribute gross revenues and net profits from such marine policies to these activities involving Iran. We intend for our non-U.S. subsidiaries to continue to provide such coverage to the extent permitted by applicable law.

ITEM 6. EXHIBITS

See Exhibit Index for a list of exhibits filed as part of this report.

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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.

	ARCH CAPITAL GROUP LTD. (REGISTRANT)
	/s/ Constantine Iordanou
Date: August 4, 2017	Constantine Iordanou
	Chief Executive Officer (Principal Executive Officer) and Chairman of the Board of Directors
	/s/ Mark D. Lyons
Date: August 4, 2017	Mark D. Lyons
	Executive Vice President, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)

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EXHIBIT INDEX

Exhibit No.	Description
10.1	First Amendment to Stock Purchase Agreement between Arch Capital Group Ltd. and AIG International Group, Inc.
10.2	Second Amendment to Stock Purchase Agreement between Arch Capital Group Ltd. and AIG International Group, Inc.
10.3	Restricted Share Agreement with Arch Capital Group Ltd. substantially in the form signed by the Non-Employee Directors of Arch Capital Group Ltd. for May 4, 2017 grants†
10.4	Restricted Share Agreement with Arch Capital Group Ltd. substantially in the form signed by each of Constantine Iordanou, Mark D. Lyons, Marc Grandisson, W. Preston Hutchings, Andrew Rippert, Nicolas Papadopoulo and Louis T. Petrillo for May 8, 2017 grants†
10.5	Non-Qualified Stock Option Agreement with Constantine Iordanou, Mark D. Lyons, Marc Grandisson, W. Preston Hutchings, David McElroy, Andrew Rippert, Nicolas Papadopoulo and Louis T. Petrillo for May 8, 2017 grants†
10.6	Restricted Share Unit Agreement, dated as of May 8, 2017, between Arch Capital Group Ltd. and David McElroy†
15	Accountants' Awareness Letter (regarding unaudited interim financial information)
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	The following financial information from Arch Capital Group Ltd.'s Quarterly Report 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 Income for the three and six month periods ended June 30, 2017 and 2016; (iii) Consolidated Statements of Comprehensive Income for the three and six month periods ended June 30, 2017 and 2016; (iv) Consolidated Statements of Changes in Shareholders' Equity for the six month periods ended June 30, 2017 and 2016; (v) Consolidated Statements of Cash Flows for the six month periods ended June 30, 2017 and 2016; and (vi) Notes to Consolidated Financial Statements.

† Management contract or compensatory plan or arrangement.