



# Arch Mortgage Insurance 2017 Third Quarter

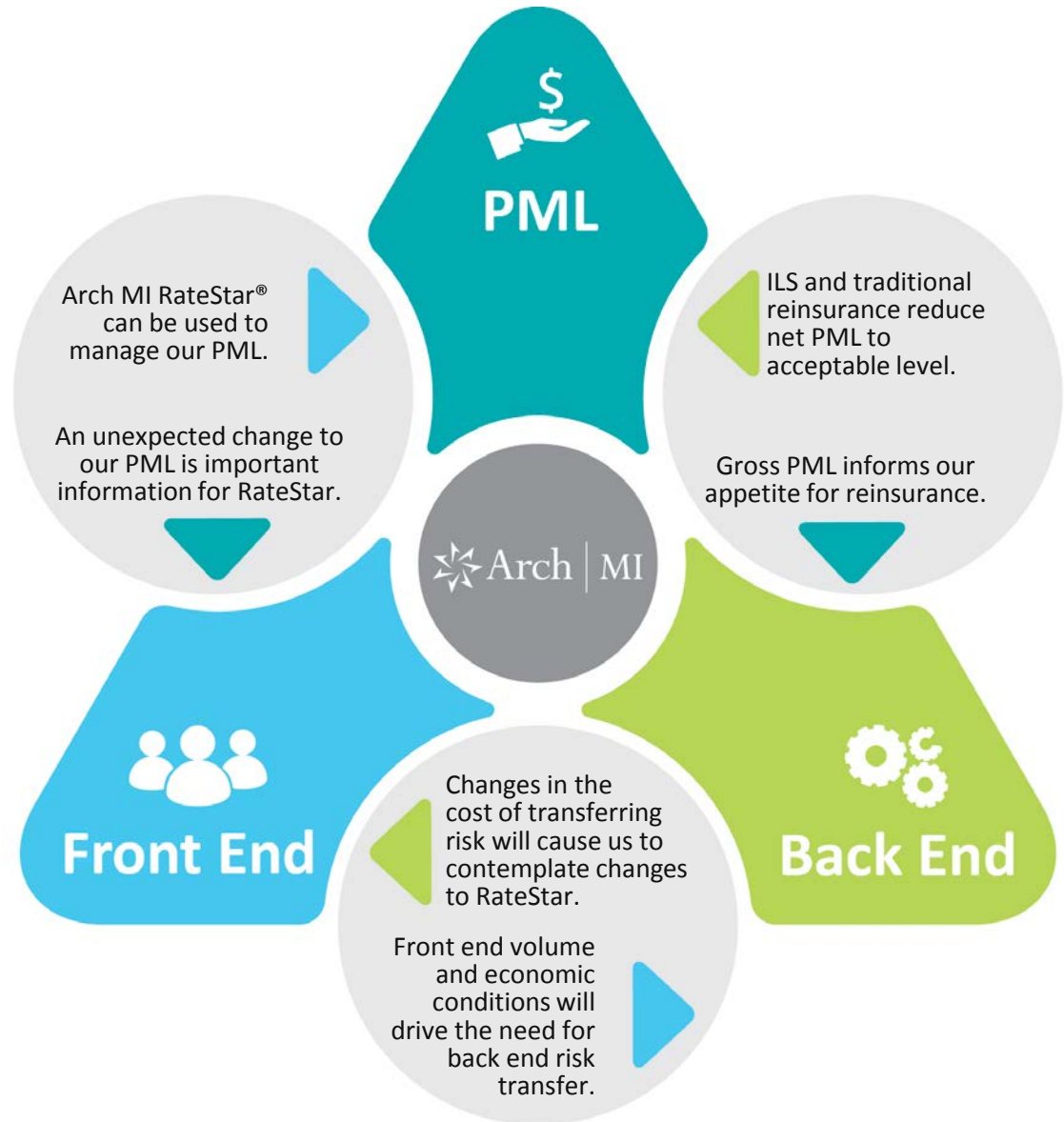
The Private Securities Litigation Reform Act of 1995 provides a "safe harbor" for forward looking statements. This presentation or any other written or oral statements made by or on behalf of Arch Capital Group Ltd. and its subsidiaries may include forward looking statements, which reflect our current 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 presentation are forward looking statements.

Forward looking statements can generally be identified by the use of forward looking terminology such as "may," "will," "expect," "intend," "estimate," "anticipate," "believe" or "continue" 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. A non-exclusive list of the important factors that could cause actual results to differ materially from those in such forward-looking statements includes the following: adverse general economic and market conditions; increased competition; pricing and policy term trends; fluctuations in the actions of rating agencies and our ability to maintain and improve our ratings; investment performance; the loss of key personnel; the adequacy of our loss reserves, severity and/or frequency of losses, greater than expected loss ratios and adverse development on claim and/or claim expense liabilities; greater frequency or severity of unpredictable natural and man-made catastrophic events; the impact of acts of terrorism and acts of war; changes in regulations and/or tax laws in the United States or elsewhere; our ability to successfully integrate, establish and maintain operating procedures as well as integrate the businesses we have acquired or may acquire into the existing operations; changes in accounting principles or policies; material differences between actual and expected assessments for guaranty funds and mandatory pooling arrangements; availability and cost to us of reinsurance to manage our gross and net exposures; the failure of others to meet their obligations to us; and other factors identified in our filings with the U.S. Securities and Exchange Commission.

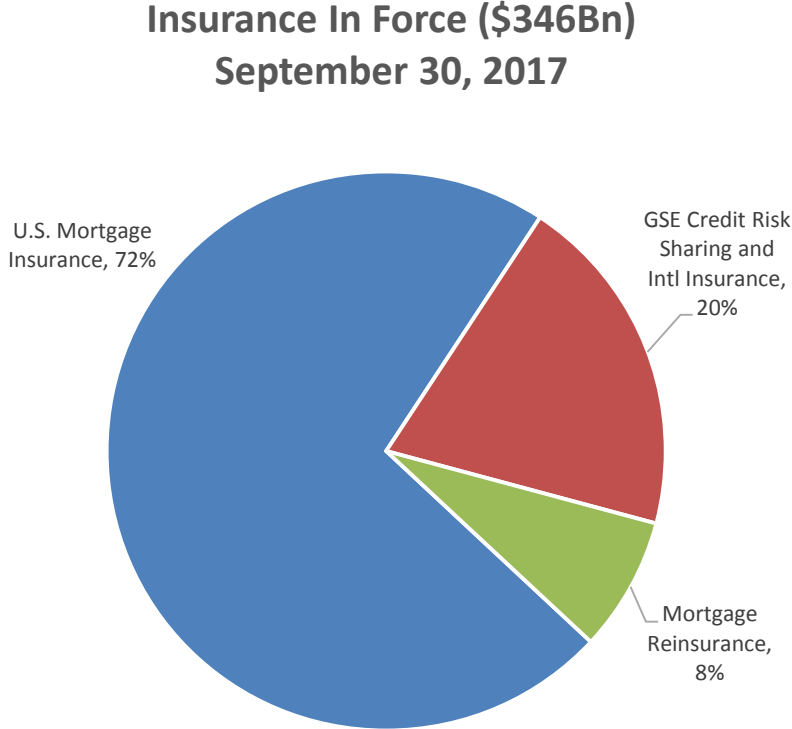
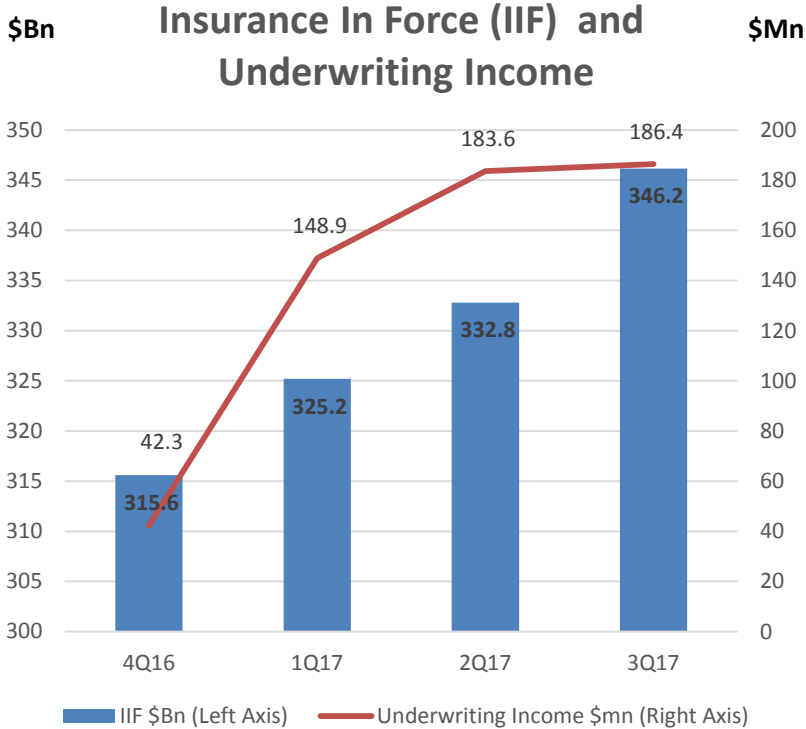
The foregoing review of important factors should not be construed as exhaustive and should be read in conjunction with other cautionary statements that are included herein or elsewhere. All subsequent written and oral forward looking statements attributable to us or persons acting on our behalf are expressly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

Some non-GAAP measures of financial performance also may be referred to during this presentation. The reconciliation to GAAP and definition of operating income can be found in the Current Report on Form 8-K furnished to the SEC by Arch Capital Group Ltd. (the "Company") in connection with its most recent earnings press release, and is also available on the Company's website: [www.archcapgroup.com](http://www.archcapgroup.com). From time to time, the Company posts additional financial information and presentations to its website, including information with respect to its subsidiaries, and investors and other recipients of this information are encouraged to check the website.

- ◆ The Arch model aggregates risk from diversified sources and then maintain a variety of options for syndicating risk on the back end.
- ◆ Arch's differentiated business model is sustainable through the economic cycle and positions Arch to deliver consistent, attractive returns to our shareholders



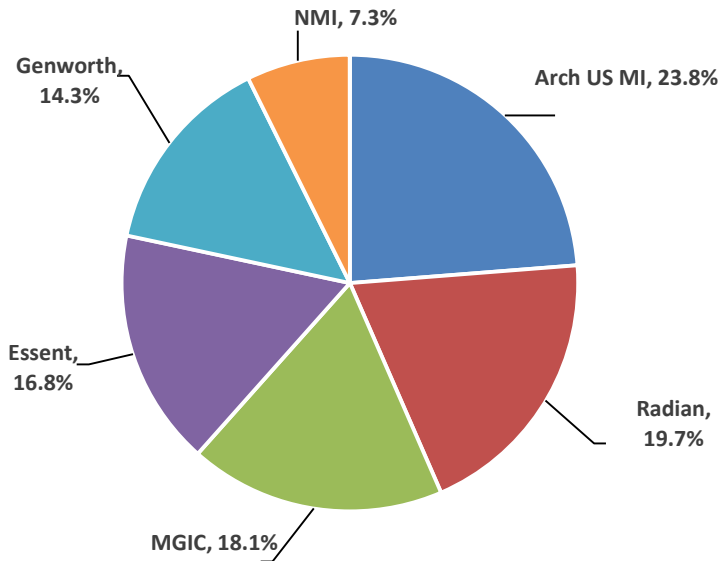
- ◆ Arch is building a portfolio of diversified mortgage businesses
- ◆ Mortgage Insurance business provides a recurring, multi-year revenue stream



- ◆ **Arch MI US – Largest US MI following acquisition of UGC**
  - ◆ Retention of client relationships
  - ◆ Combined mortgage units will generate significant scale economies
  
- ◆ **Acquisition materially improves group financial strength**
  - ◆ Enhanced scale in MI improves both earnings and earnings stability of Arch Capital Group
  - ◆ Growth opportunities in MI enhance returns on equity and allow more defensive posture in soft parts of the property casualty sector

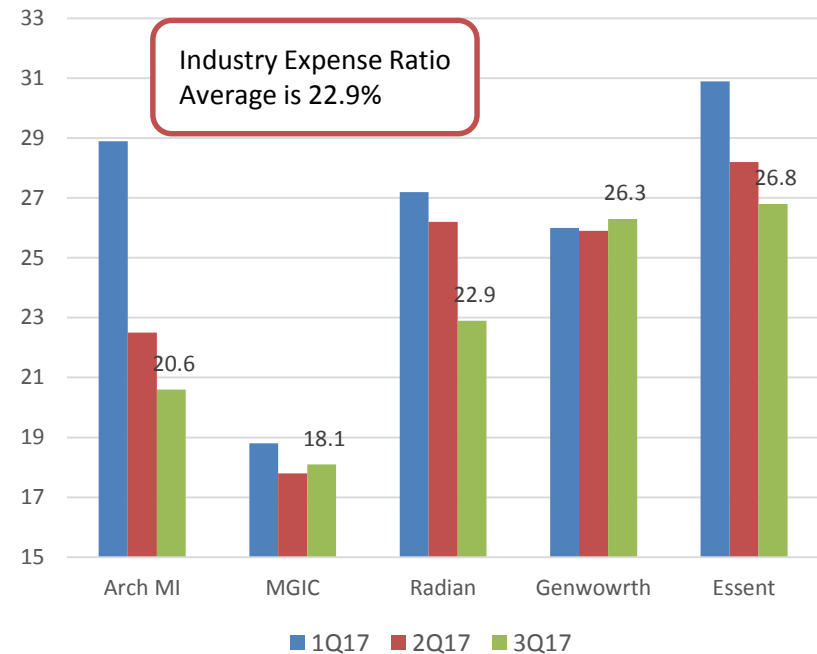
- ◆ Arch MI is the US Market Share Leader

Mortgage Insurance Market Share 9M17



- ◆ Arch MI Expense Ratio is Declining and Below The Industry's Average

GAAP Expense Ratio (%) Comparison

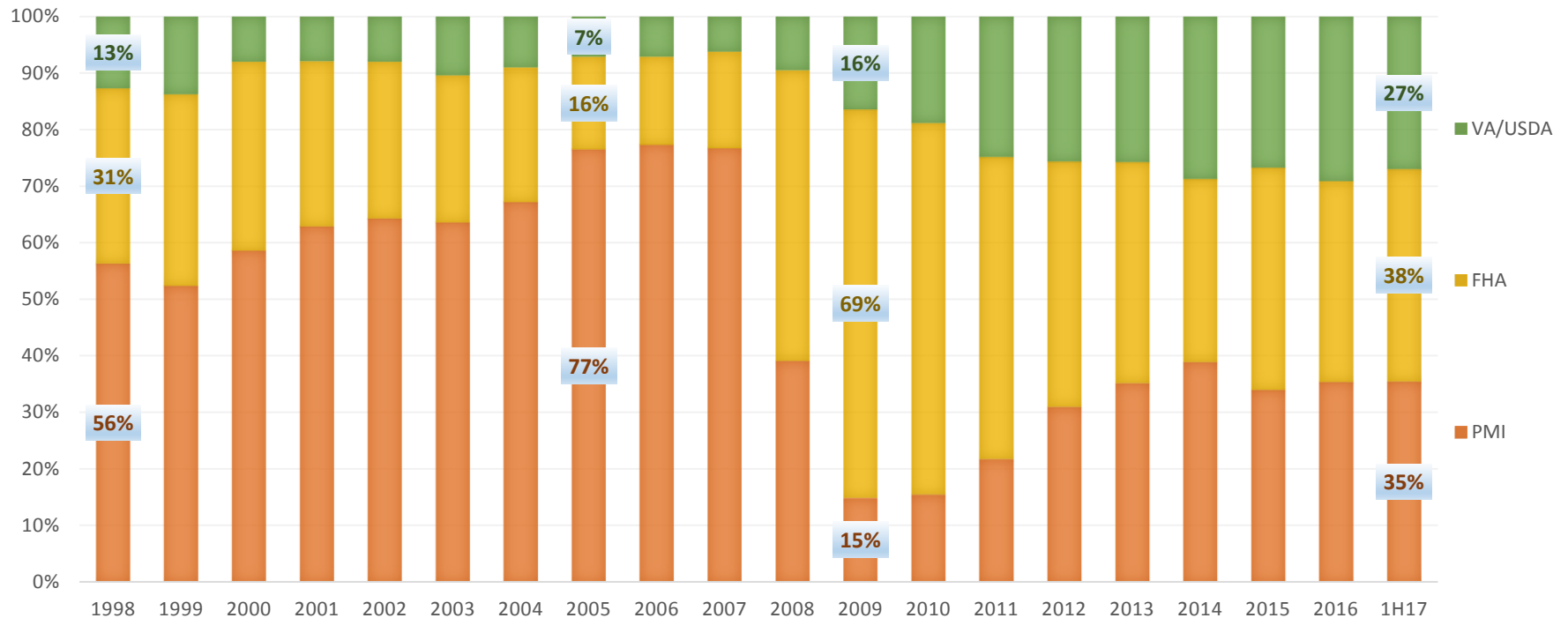


While Arch MI benefits from economies of scale, Arch spends more on analytics and risk management transactions of “tail” risk

Sources: Company reports and competitors' 8-K filings

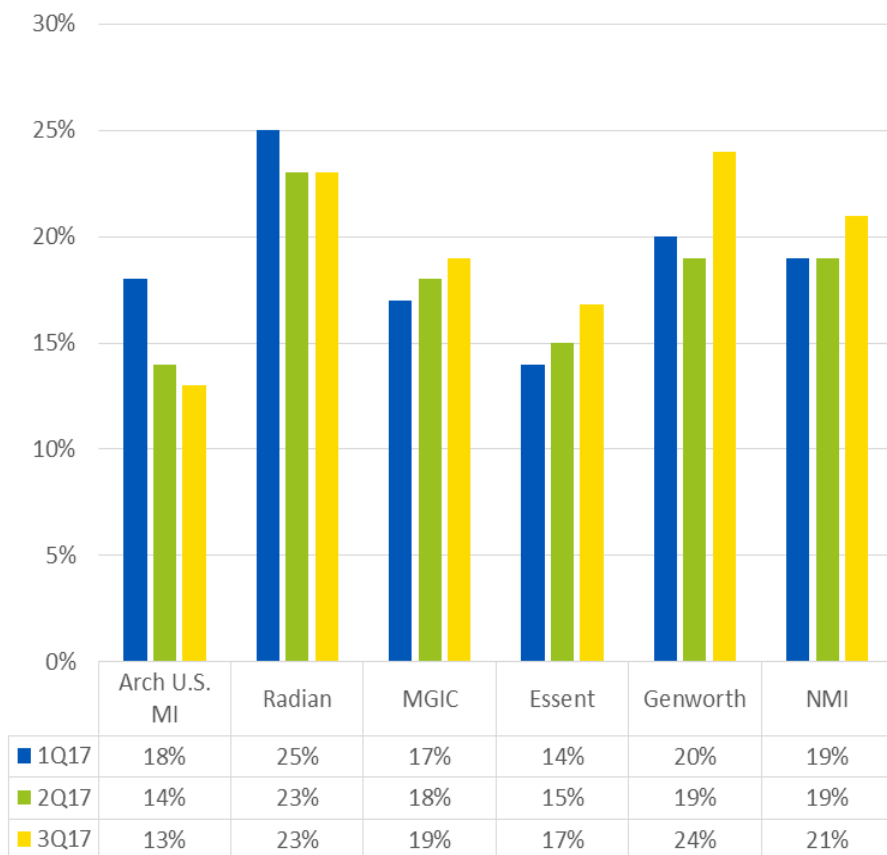
- ◆ Government MI programs (FHA + VA + USDA) share of the insured mortgage market has declined significantly since 2010

## MARKET SHARES OF INSURED ORIGINATIONS

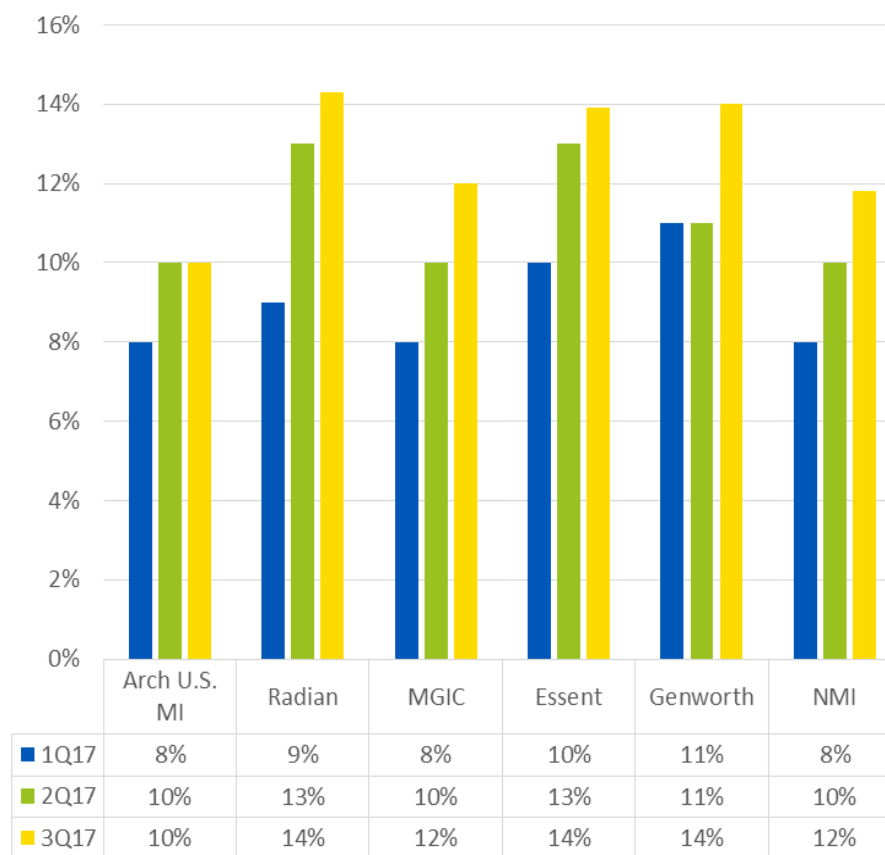


Source: Inside Mortgage Finance

### Single Premium Policies as % of Total NIW

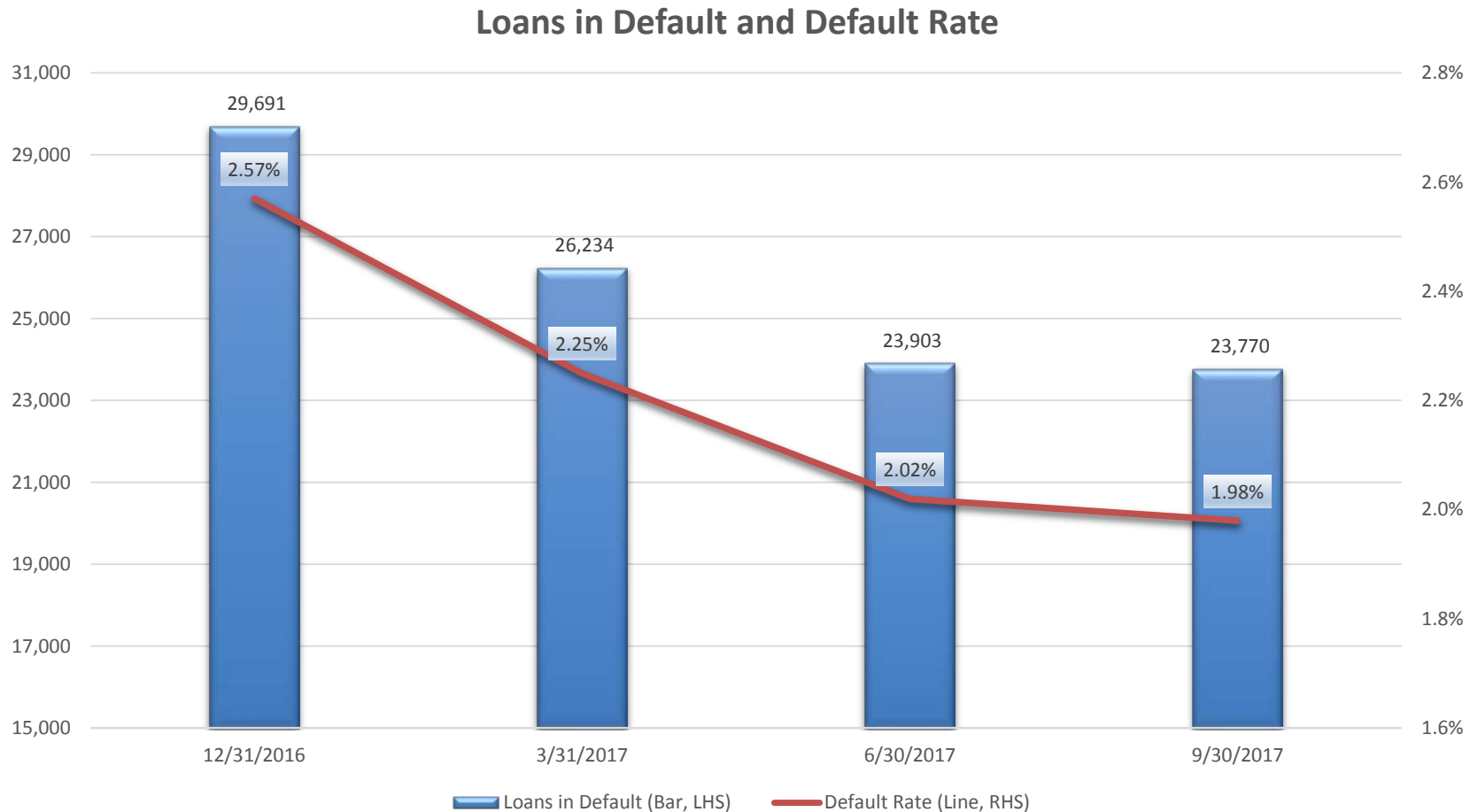


### LTV > 95% as % of Total NIW





- ◆ Number and proportion of loans in default continues to decline as mortgages originated before 2009 run-off





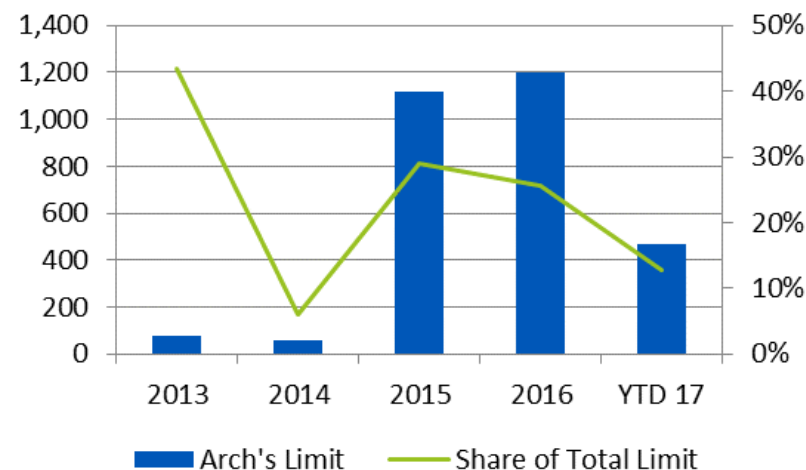
(\$Mn)	2015	2016	YTD 17
<b>Gross Premiums Written</b>	<b>9</b>	<b>56</b>	<b>53</b>
Net Premiums Earned	9	56	53
Fee Income	18	16	11
Loss and Loss Adjustment Expenses	1	10	11
Underwriting Expenses	1	3	2
<b>Underwriting Income</b>	<b>25</b>	<b>59</b>	<b>51</b>
New Insurance Written	1,119	1,200	467
Insurance In Force	N/A	2,452	2,450

Excludes Watford Re

## Observations

- ◆ GSEs have increased the amount of limit insured through CRT, but the number of insurance participants has also increased
- ◆ Arch was one of two participants on the first CRTs placed in 2013
- ◆ As many as 17 companies have participated in recent CRTs
- ◆ GSEs have begun executing CRTs that are commitments to insure loans that the GSEs will acquire in the future

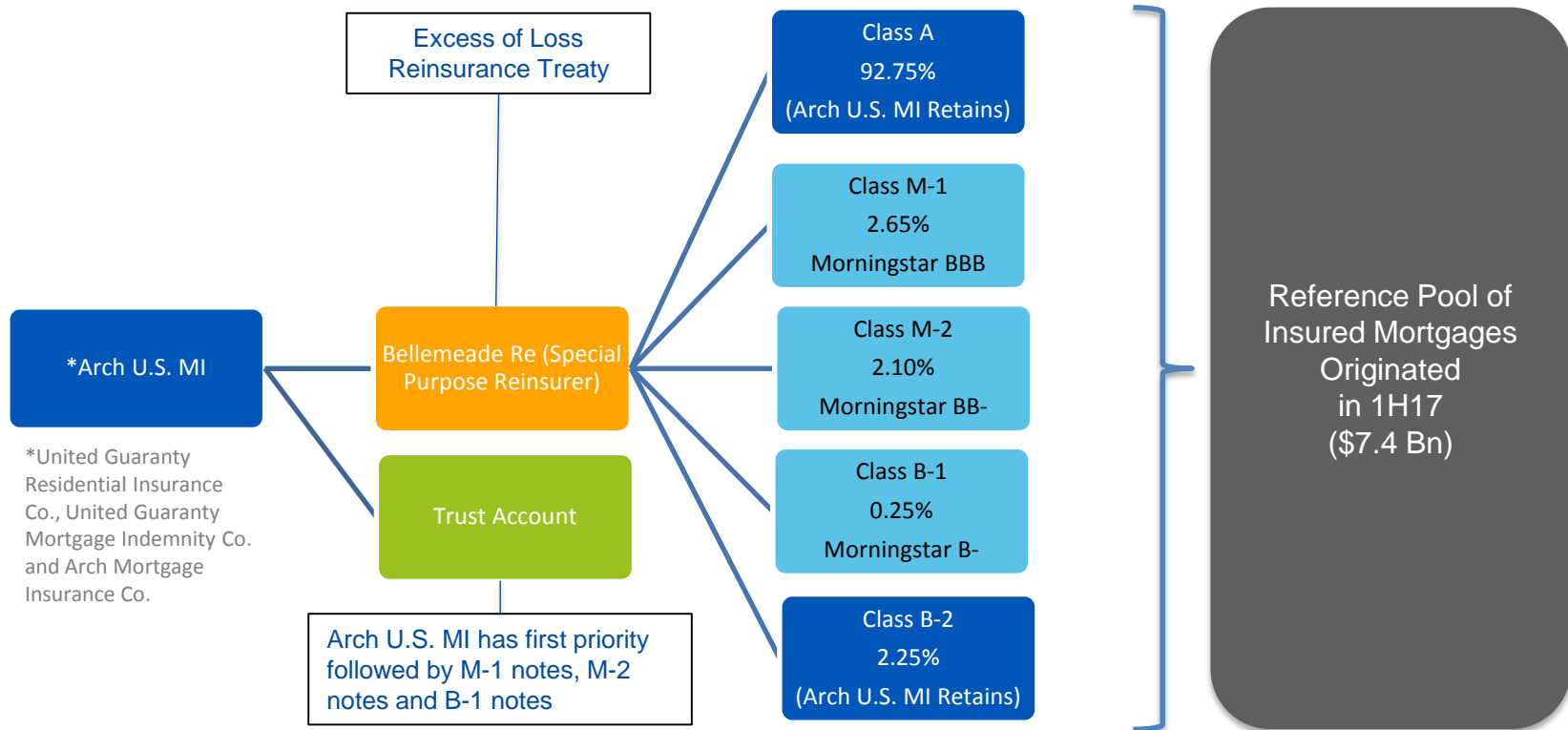
### Arch Limit and Share of CRT Deals



- ◆ **Upfront risk management through risk based pricing (Ratestar)**
  - ◆ Consists of 1.3Mn unique rates and adjustments across 17 risk dimensions
  - ◆ Reflects differences in economic conditions and can be updated in most states without need to re-file
  - ◆ Rate adjustments (i.e. surcharges) have the same level of granularity as base rates
    - ◆ Surcharges under rate cards do not vary by LTV or coverage percentage, potentially resulting in mispricing in the low and high LTV bands
  
- ◆ **Purchase reinsurance to mitigate stress losses and optimize capital**
  - ◆ Utilize Insurance Linked Securities (ILS) market through Bellemeade Re to mitigate stress losses and gain insight into capital market’s perception of Mortgage’s portfolio
  - ◆ Third party multi-line reinsurers
  
- ◆ **RDS approach facilitates understanding of Mortgage risk portfolio’s losses in a severe stress**
  - ◆ Manage risk similar to short tail property cat and longer tail casualty clash risks
  - ◆ Limits maximum exposure to 25% of tangible equity
    - ◆ Current exposure is 15.7%

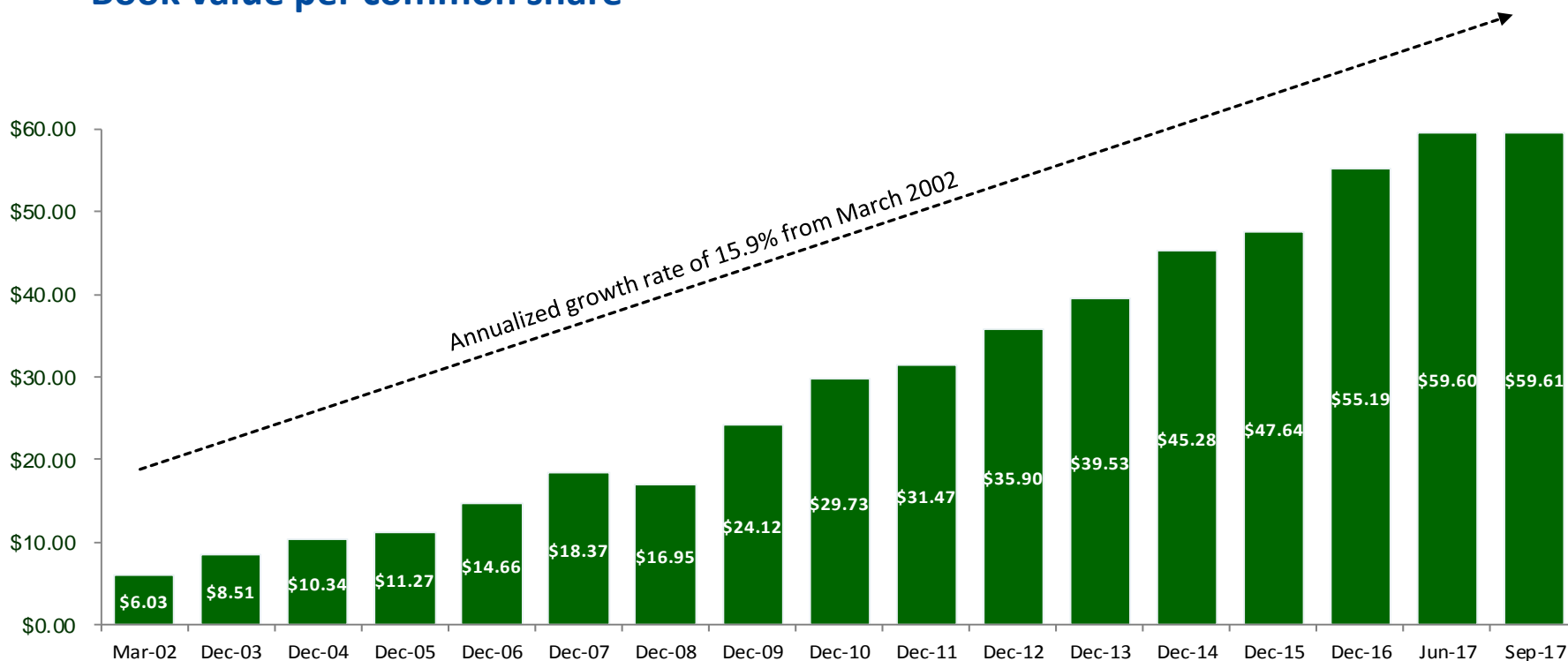
## ◆ Bellemeade Re is a critical risk management tool for Arch's Mortgage segment

- ◆ Arch U.S. MI recently closed on Bellemeade Re 2017-1 Ltd (Bellemeade Re) which provides excess of loss protection on loans originated in 1H17
- ◆ Bellemeade Re transactions also provide insight into the market's perception of our recent production
- ◆ Bellemeade Re II demonstrated insurance linked securitizations can absorb a variety of risks including loans originated before 2009



<b>Cedants</b>	<ul style="list-style-type: none"> <li>◆ United Guaranty Residential Insurance Co., United Guaranty Mortgage Indemnity Co. and Arch Mortgage Insurance Co.</li> </ul>
<b>Reinsurer</b>	<ul style="list-style-type: none"> <li>◆ Bellemeade Re 2017-1 Ltd. (Bellemeade Re), a special purpose reinsurer domiciled in Bermuda</li> </ul>
<b>Effective Date</b>	<ul style="list-style-type: none"> <li>◆ August 1, 2017</li> </ul>
<b>Maturity</b>	<ul style="list-style-type: none"> <li>◆ October 25, 2027</li> </ul>
<b>Coverage</b>	<ul style="list-style-type: none"> <li>◆ Bellemeade Re will reinsure cedants' RIF on loans originated between January 1, 2017 and July 1, 2017 that have never been delinquent or modified</li> <li>◆ Bellemeade Re is responsible for all losses exceeding 2.25% of RIF subject to an initial limit of \$368 million</li> <li>◆ Reinsurance from Bellemeade Re will inure to the benefit of Arch Re Ltd</li> </ul>
<b>Allocation of Principal Repayments</b>	<ul style="list-style-type: none"> <li>◆ If the default rate is less than 5% and Class A's subordination is at least 7.25%, Class A's coverage will be reduced by its pro rata share of principal repayments on covered loans, and the remaining principal repayments on covered loans will be allocated to the most senior class with coverage remaining</li> <li>◆ If the default rate is greater than 5% or Class A's subordination is less than 7.25%, all principal repayments on covered loans will be allocated to Class A (i.e., no amortization of bonds)</li> </ul>
<b>Allocation of Losses</b>	<ul style="list-style-type: none"> <li>◆ Covered losses are allocated sequentially to the most junior class with coverage remaining</li> </ul>
<b>Pricing</b>	<ul style="list-style-type: none"> <li>◆ Initial: M-1 (BBB rating by Morningstar): 170 basis points (bps), M-2 (BB-): 335 bps, B-1 (B+): 475 bps (weighted average: 307 bps)</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>◆ Bellemeade Re will maintain a trust account with funds equal to the coverage it provides to the cedants</li> <li>◆ Eligible investments for trust are money market funds that invest directly in U.S. Treasuries and agencies</li> </ul>

## Book value per common share<sup>1</sup>



Total Capitalization <sup>2</sup> (\$Bn):	\$1.0	\$1.9	\$2.5	\$2.8	\$3.9	\$4.3	\$3.8	\$4.7	\$4.9	\$5.0	\$5.6	\$6.5	\$7.0	\$7.1	\$10.5	\$11.1	11.0
Debt/Preferred to Total Capitalization <sup>2</sup>	0.0%	10.5%	11.8%	10.8%	7.7%	6.9%	10.4%	8.5%	8.2%	8.0%	7.2%	18.7%	17.3%	17.2%	28.7%	27.0%	26.3%

<sup>1</sup> As of September 30, 2017, excluding the effects of stock options and restricted stock units outstanding

<sup>2</sup> Available to Arch, including senior debt, preferred equity, common stock and AOCI.

- ◆ Arch operates leading mortgage insurance businesses across a wide range of geographies and products providing meaningful diversification and stability of earnings
- ◆ Experienced underwriting teams compensated for long term performance
- ◆ Disciplined risk management and conservative reserving philosophy
- ◆ Strong balance sheet with high-quality investment portfolio

**Mark D. Lyons**  
Executive Vice President and  
Chief Financial Officer

**Arch Capital Group Ltd.**  
Waterloo House, Ground Floor  
100 Pitts Bay Road  
Pembroke HM 08 Bermuda  
(441) 278-9250

[MLyons@archcapgroup.com](mailto:MLyons@archcapgroup.com)

**Investor Inquiries:**

**Donald Watson**  
Executive Vice President,  
Financial Services

**Arch Capital Services Inc.**  
360 Hamilton Ave  
Suite 600  
White Plains NY 10601  
(914) 872-3616

[DWatson@archcapservices.com](mailto:DWatson@archcapservices.com)

[www.archcapgroup.com](http://www.archcapgroup.com)