Investor Presentation

KBW Mortgage Fireside Chat

June 2020



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Mortgage Insurance Industry is better positioned

- Mortgage underwriting box has remained tight post Global Financial Crisis.
  - 2/3 of Mortgages underwritten in 2007 are not eligible for PMI post 2009.
  - Credit quality of borrowers was very good before entering this recession.
- Government support for borrowers was early and material.
  - Forbearance programs keep borrowers in homes allowing time to find employment.
  - Unemployment benefits were generous.
- Fundamentals in the housing markets are significantly better than they were in 2007.
  - Home prices rising to date with limited price declines expected through year end.
  - Home price affordability is good.
  - Housing supply is tight.
  - Demographic demand is high.

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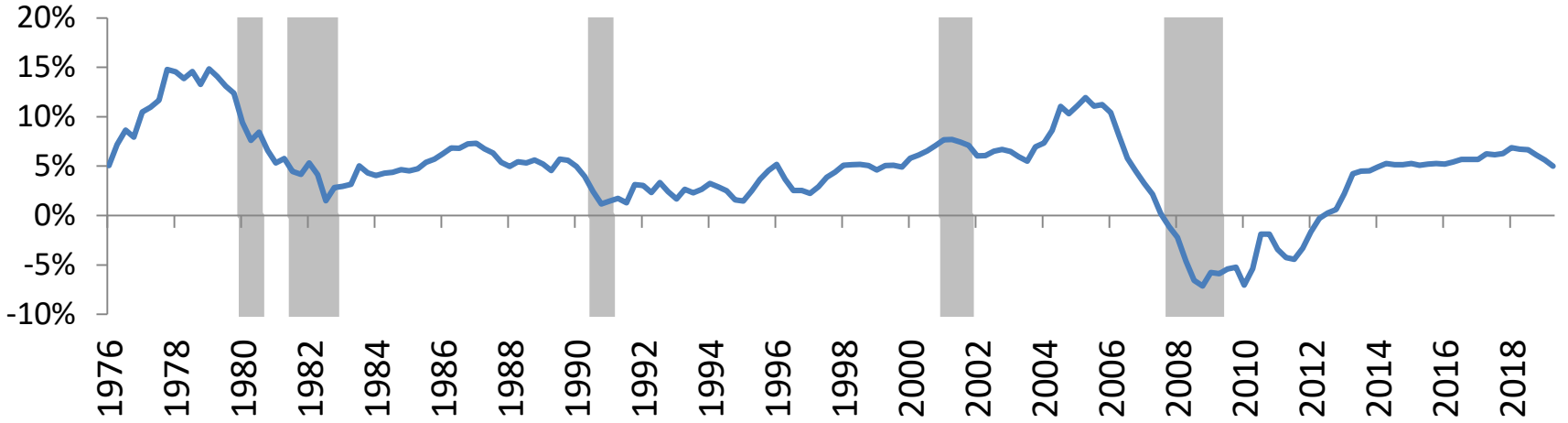
Housing Markets in Past Recessions

Of the past five recessions, only one resulted in negative home price growth. Conditions in housing markets are much more favorable today than they were before the last crisis.

U.S. Annual Home Price Growth (Gray Bars Indicate Recessions)



Housing Market 2007	Housing Market 2020
Overbuilt	Underbuilt by a million +
Poor loan quality	High loan quality
Buyer irrational exuberance	Cautious buyers
Poor affordability, on avg.	Decent affordability, on avg.
Loosely regulated	Tightly regulated

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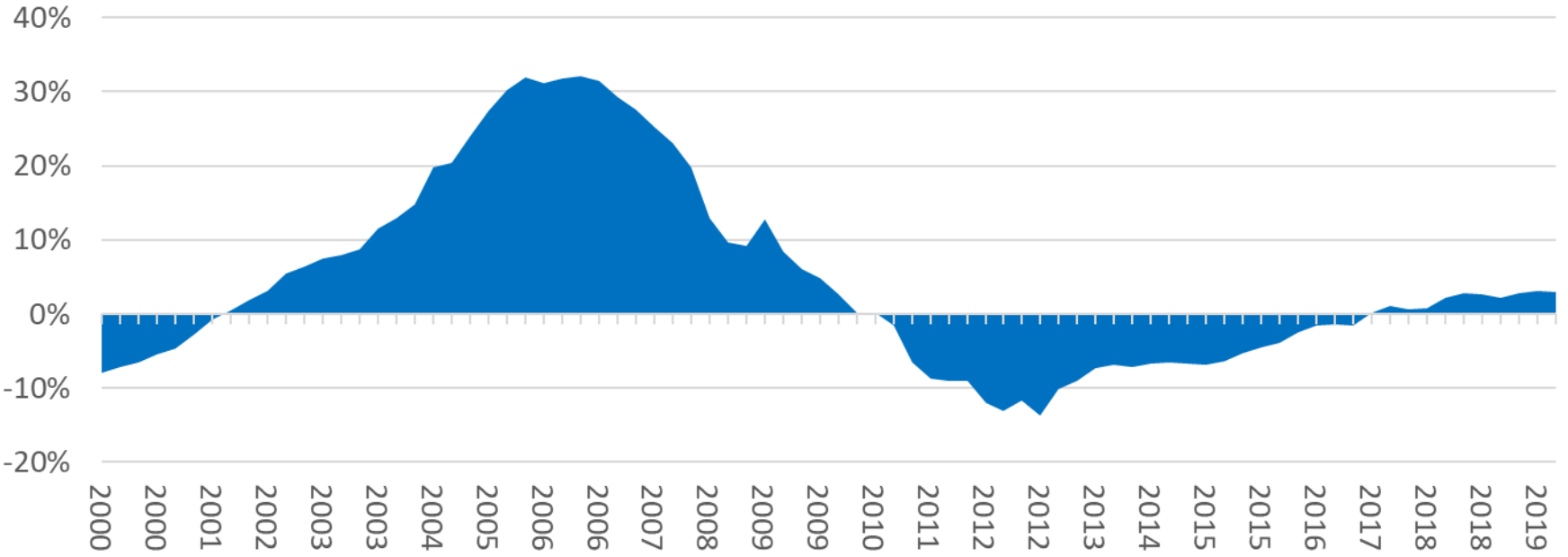
Home Prices More Appropriately Valued Today

Today, home prices approximate their fair value based on household incomes, compared with significant overvaluation in 2006 and 2007.

Nationwide Over/(Under) Valuation of Home Prices Relative to Household Income



Source: Company Reports, FHFA

In addition to being more appropriately valued, housing is also significantly more affordable today than it was in 2007

- The National Association of REALTORS® Housing Affordability Index was 162 in March 2020, compared to 104 in July 2007 (higher value indicates housing is more affordable).

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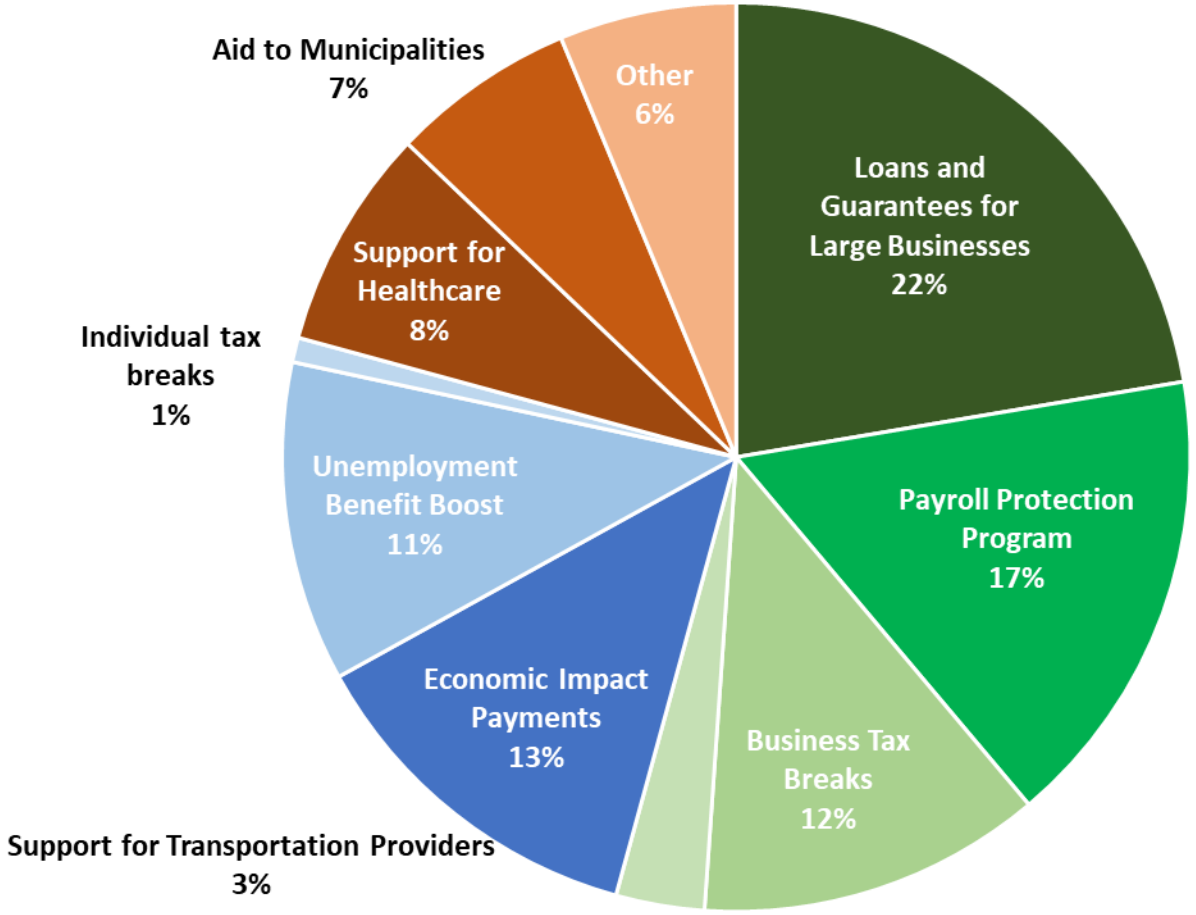
Unprecedented Government Stimulus

CARES Act provides $2.3 trillion of support.

Breakdown of CARES Act Spending



Potential direct support for borrowers includes:

- Economic Impact Payments of $1,200 per eligible adult plus $500 child
- Bonus unemployment benefit of $600 per week
- Additional 13 weeks of unemployment benefits

Potential indirect support for borrowers includes:

- Payroll Protection Program, which gives small employers funds to pay employees
- Loans and Guarantees that help large employers avoid bankruptcy and include restrictions on layoffs

Source: JP Morgan Chase and U.S. Treasury

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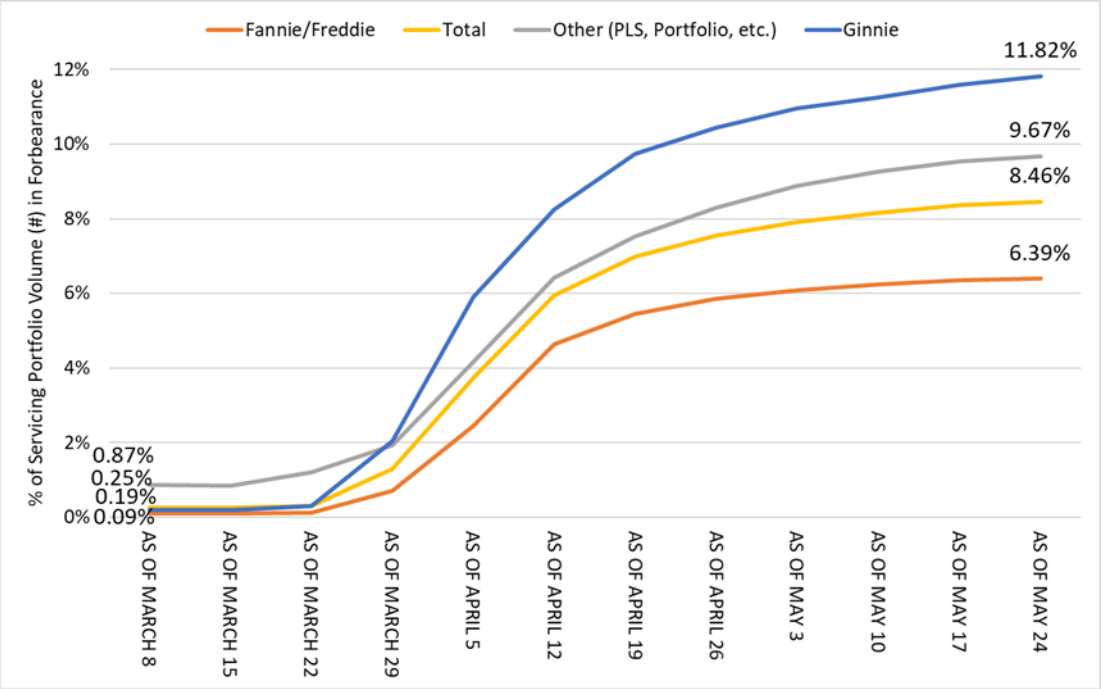
Industry Forbearance Trends (MBA)

Forbearances continue to rise, but rate of increase has slowed.

Percent of Servicing Portfolio Volume in Forbearance by Investor Type over Time



Source: MBA Forbearance and Call Volume Survey – Release date 6/1/20.

"Of the borrowers under forbearance who have an enterprise backed mortgage, about one-third are continuing to make their payments."

- FHFA Director Mark Calabria
MBA Live: State of the Industry
May 19, 2020

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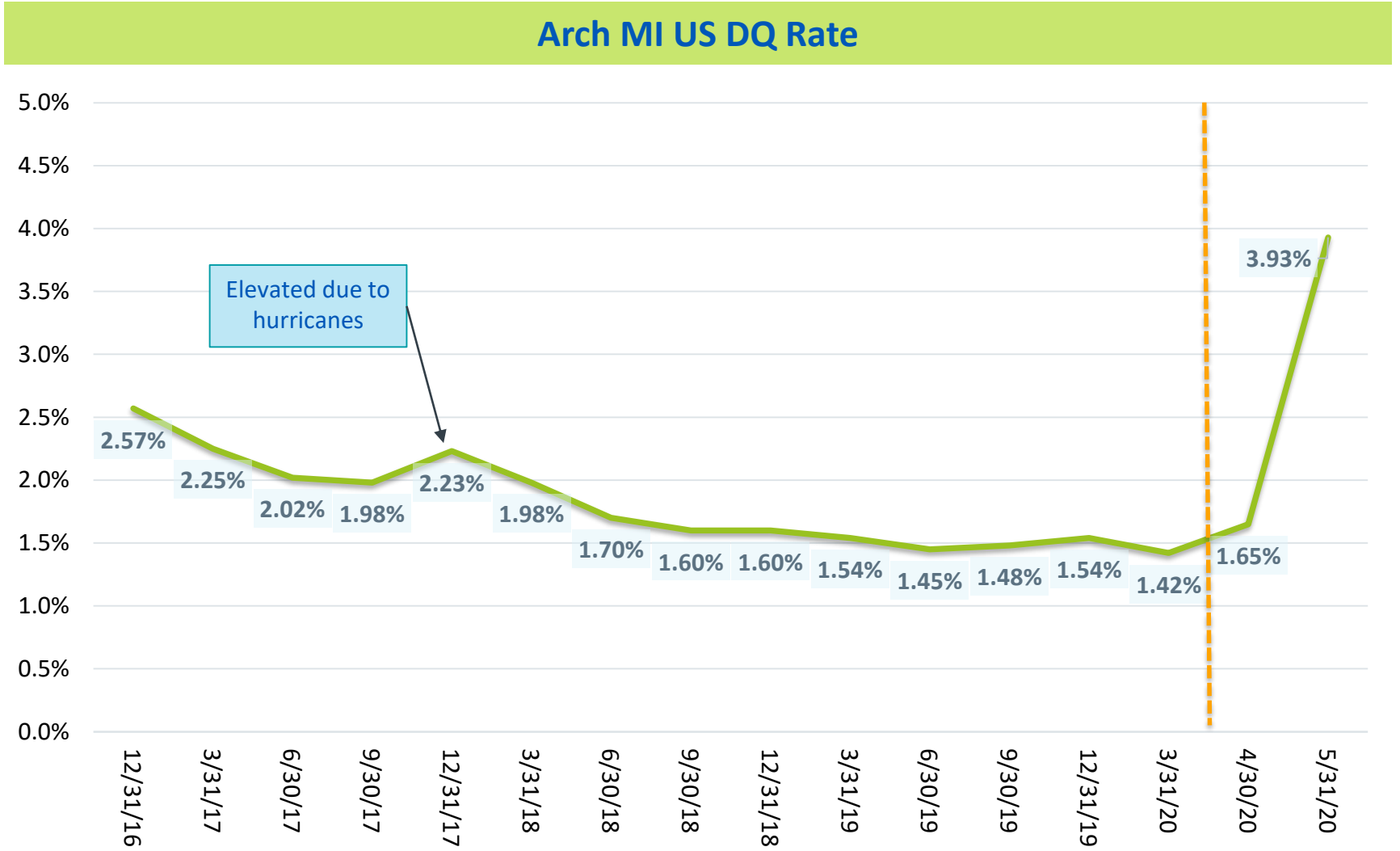
Arch MI US DQ Rate

Increase in delinquency rate has been less severe than increase in unemployment.



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Arch MI US – Strong PMIERs Capital Position

Arch MI US PMIERs Capital as of March 31, 2020 – DQ Rate to exhaust excess

Avg. Net RIF per Performing Loan	Incremental Required Assets as % of RIF	Incremental Required Assets per loan	PMIERs Excess ($M)	Incremental Covid19 DQs	# of DQs at 3/31/2020	Pro Forma # of DQs at 3/31/2020	DQ Rate at 3/31/2020	Pro Forma DQ Rate required to exhaust PMIERs Excess
30,125	10.0%	3,013	1,355	449,714	17,931	467,645	1.42%	37%

Notes: For Arch U.S. MI (GSE approved entities), Net Risk in Force (RIF) per Performing Loan reflects affiliate reinsurance and MILN coverage. DQ is delinquencies.

The pro-forma DQ rate required to exhaust PMIERs Excess is 37% if we assume all DQs are 2-3 missed payments. If we assume that all the DQs age to greater than or equal to twelve missed monthly payments, the pro-forma DQ rate required to exhaust PMIERs Excess is 20%.

Computation of required assets as percentage of RIF as of March 31, 2020

	PMIERs Risk Charge
2-3 Missed Payment DQs	55.00%
FEMA Disaster Multiplier	0.3
	16.5%
Performing Risk Charge	(6.5%)
Incremental Risk Charge	10.0%

- Under PMIERs delinquent loans are subject to non-performing risk charges based on the number of missed monthly payments.
- For 2-3 missed payments, the risk charge is 55% of the RIF. The longer the delinquency ages, the higher the risk based charge. Arch MI's portfolio risk charge was 6.5% at March 31, 2020.
- PMIERs prescribes that a 0.30 multiplier be applied to the risk-based required assets (a 70% haircut to the required asset requirement) for delinquencies in FEMA Declared Major Disaster Areas, for 120 days or longer if the forbearance plan was executed in response to a FEMA Declared Major Disaster Area eligible for individual assistance. All 50 states have been declared Major Disaster Areas.

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Arch MI US – Bellemeade Reinsurance Coverage by Vintage

As of March 31, 2020 ($ in millions)

Vintage	Gross RIF	Est. RIF Ceded to QS	RIF net of QS[1]	Est Bellemeade Coverage as % of RIF	Bellemeade Reference Pool
2010 and prior	3,763	0	3,763	85%	3,200
2011	422	0	422	35%	148
2012	1,604	0	1,604	35%	558
2013	3,156	0	3,156	86%	2,716
2014	3,511	1,565	1,946	99%	1,917
2015	6,395	2,801	3,594	99%	3,558
2016	9,997	2,635	7,362	99%	7,274
2017	10,454	202	10,252	100%	10,241
2018	11,914	194	11,721	100%	11,686
2019	17,246	177	17,069	36%	6,076
2020	4,104	0	4,104	0%	0
Total	**72,566**	**7,574**	**64,993**	**73%**	**47,376**

[1] RIF net of QS and excess of loss reinsurance is $58,693

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Arch MI US – Bellemeade Reinsurance Coverage by Deal

March 31, 2020 ($ in millions)	Bellemeade Re Insurance-Linked Notes Key Metrics (1)								
	2017-1	2018-1	2018-2	2018-3	2019-1	2019-2	2019-3	2019-4	Total
Coverage dates for policies issued between	**1/17-6/17**	**7/17-12/17**	**4/13-12/15**	**1/18-6/18**	**2005-2008 (2)**	**7/18-12/18**	**2016**	**1/19-6/19**	
Current Risk in force	4,688	5,476	7,995	5,591	4,103	6,070	7,293	6,161	47,376
Initial coverage at issuance date	368	374	653	506	342	621	701	577	4,143
Current coverage	190	300	381	383	229	462	603	563	3,112
Arch's retention layer	166	169	352	179	208	222	232	162	1,690
Claims paid under Arch's retention layer	3	2	3	1	8	1	1	-	18
Remaining retention before BMIR reinsurance	163	167	350	178	200	221	232	162	1,672
Delinquency % (3)	0.94%	0.85%	0.69%	0.87%	3.86%	0.90%	0.68%	0.31%	1.00%
Delinquency trigger % (4)	5.00%	5.00%	4.00%	5.00%	8.00%	5.00%	4.00%	5.00%	
Initial Attachment % (cumulative losses as % of RIF)	2.25%	2.25%	2.75%	2.25%	3.50%	2.50%	2.50%	2.25%	
Initial Detachment % (cumulative losses as % of RIF)	5.00%	5.00%	5.10%	6.35%	5.75%	7.00%	7.55%	8.00%	
Current Attachment % (5) (cumulative losses as % of RIF)	3.53%	3.08%	4.41%	3.21%	5.07%	3.65%	3.18%	2.64%	
Current Detachment % (6) (cumulative losses as % of RIF)	7.59%	8.55%	9.17%	10.06%	10.65%	11.27%	11.46%	11.78%	

(1) Through March 31, 2020, the Company has entered into various aggregate excess of loss mortgage reinsurance agreements with special purpose reinsurance companies domiciled in Bermuda (the "Bellemeade Agreements"). 'The Bellemeade issuers are not subsidiaries or affiliates of the Company. Based on applicable accounting guidance, the Company does not consolidate such entities in its consolidated financial statements.

(2) Policies primarily issued between 2005-2008 under United Guaranty Residential Insurance Company ("UGRIC"); as well as policies issued through 2015 under both UGRIC and Arch Mortgage Insurance Company.

(3) Represents the percentage of risk in force that is 60 or more days delinquent.

(4) When delinquency triggers reached then bond amortization stops and coverage remains constant

(5) Represents the amount of cumulative losses as a percentage of current risk in force that the Company retains prior to the Bellemeade notes absorbing losses.

(6) Represents the amount of cumulative losses as a percentage of current risk in force that must be reached before the Company restarts absorbing losses again.

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