PMI market trends and highlights: 3Q 2024

New notices tick-up, discussion on credit and reserving, low originations and high house prices drive fewer—larger—new PMI policies, first ILN issuances of 2024

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The 3Q 2024 NIW market is tracking levels similar to 2023. IIF levels grow modestly, driven by high average policy size. New notices ticked up, prompting further discussion on reserving, delinquency, and cure trends. The first capital market insurance-linked note (ILN) issuance of 2024 occurred—pricing at the tightest levels since early 2022.

The U.S. private mortgage insurer (PMI) market is made of up six insurers—Arch, Enact, NMI, Radian, MGIC, and Essent. As part of their financial disclosures, the PMIs summarize new insurance written (NIW) during a given reporting period, the size and performance of their insurance in force (IIF), and other financial items.

Milliman has compiled this data to build a view of the quarter for each insurer as well an aggregate for the industry as a whole. Furthermore, key statements from the PMIs' earnings calls are summarized to provide additional insight into industry trends and developments. The following update highlights key trends Milliman identified during the most recent quarter.

The PMIs reported third quarter (3Q) 2024 earnings in November 2024. NIW for the industry continues to be depressed—roughly in line with 2023 levels. Milliman outlines that the growth in NIW and IIF is largely driven by higher average policy size, as opposed to higher policy counts. New notices of default ticked up in the quarter, sparking conversations regarding underlying drivers on earnings calls.

Two capital markets insurance-linked note (ILN) issuances took place in 3Q 2024. Pricing was attractive for the PMIs and some structural enhancements were incorporated. Additional information on the PMIs' ILN issuances and performance (e.g., collateral composition and cash flow estimates from both the collateral and securities) can be obtained from Milliman Mortgage Platform for Investments and Reinsurance (M-PIRe™).

For 3Q 2024, this report provides a:

- Summary of NIW
- Summary of IIF
  - Volume, policy count, and persistency
  - Performance
- Summary of capital markets ILN issuances
  - Structure enhancements
- Appendix: Additional excerpts from earnings calls
  - New notices and claim rate assumptions

Introduction

Milliman provides consulting services and an analytic platform (Milliman M-PIRe) to mortgage investors. Both Milliman M-PIRe and our consulting services provide fundamental analysis on the risk profile and valuations of mortgage investments, including government-sponsored enterprise (GSE) credit risk transfer (CRT) securities, ILNs, and whole loans. Many of our clients either insure mortgage credit risk (direct or through reinsurance) and/or are investors in CRT and ILNs. This report summarizes key trends in the mortgage insurance (MI) industry to help our clients make informed decisions on their participation in the sector.

Quarterly NIW results and IIF trends

SUMMARY OF QUARTERLY RESULTS

Consistent with market expectation, 3Q 2024 NIW ($82.5 billion) was generally in line with 3Q 2023 and 3Q 2018 levels ($78.2 billion and $83.3 billion, respectively), but meaningfully lower than the 2019 through 2022 3Qs (which ranged from $104.1 billion to $180.7 billion). While market share amongst the six insurers was similar in 2Q 2024, 3Q 2024 NIW showed that one insurer grabbed a meaningful amount of excess share—MGIC with a 20.8% NIW share compared to the other five insurers ranging from 14.8% to 16.5%.

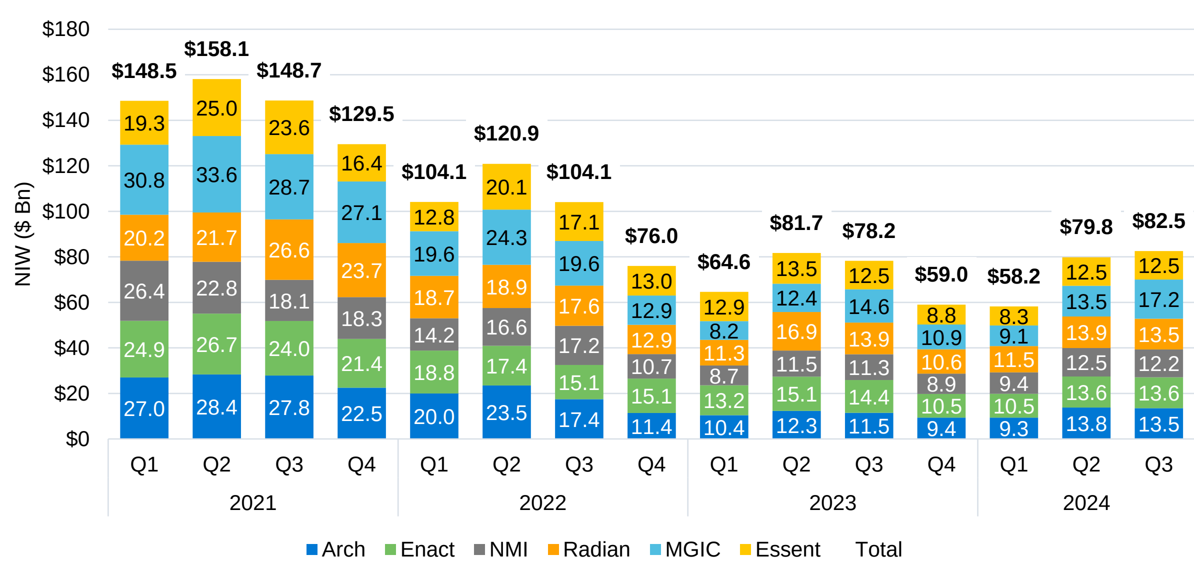
Despite IIF continuing to grow across the industry, Milliman outlines that insured policy count is flat to slightly down—i.e., the IIF growth is being driven by higher average policy size.

NIW VOLUME AND MARKET SHARE

Primary NIW in 3Q 2024 was $82.5 billion, an increase of 3% quarter-over-quarter and an increase of 5% year-over-year. The $82.5 billion is comprised of $79.5 billion of purchase mortgages (96%) and $3.0 billion of refinance mortgages (4%).

MGIC reported the largest market share in the quarter, writing $17.2 billion (20.8%), followed by Enact ($13.6 billion, 16.5%), Arch ($13.5 billion, 16.4%), Radian ($13.5 billion, 16.3%), Essent ($12.5 billion, 15.2%), and NMI (12.2 billion, 14.8%).

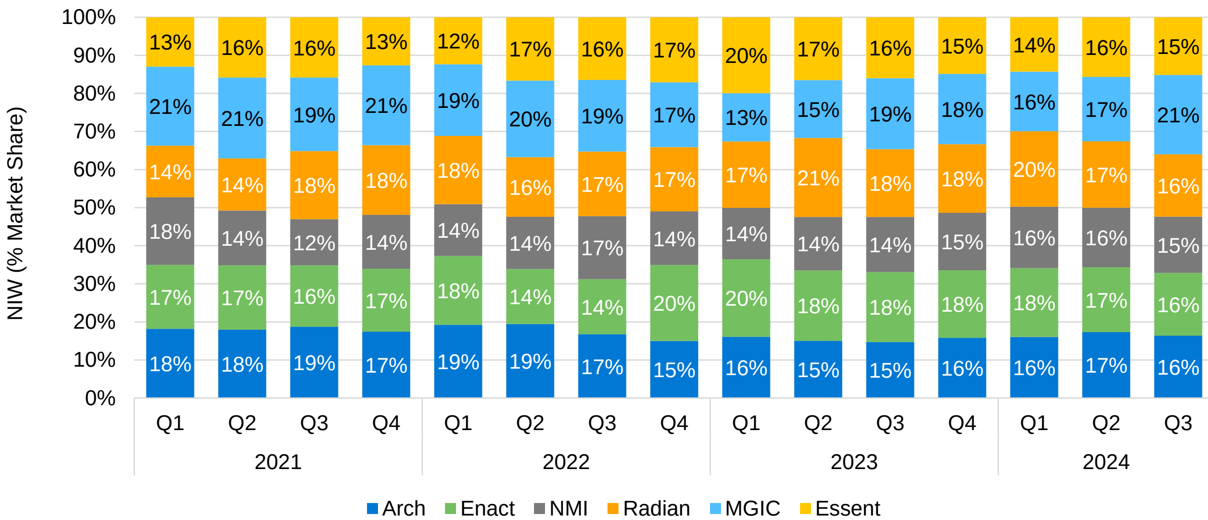
FIGURE 1: QUARTERLY NEW INSURANCE WRITTEN, $ BILLIONS BY PMI, 2021-2024



Source: PMI earnings releases, financial supplements, and 10-K/Qs.

MGIC's market share stood out as meaningfully higher than the other five insurers. The 20.8% share was the third-highest share of a quarterly NIW market that MGIC has achieved since the beginning of 2018.[1]

FIGURE 2: QUARTERLY NEW INSURANCE WRITTEN, % MARKET SHARE BY PMI, 2021-2024

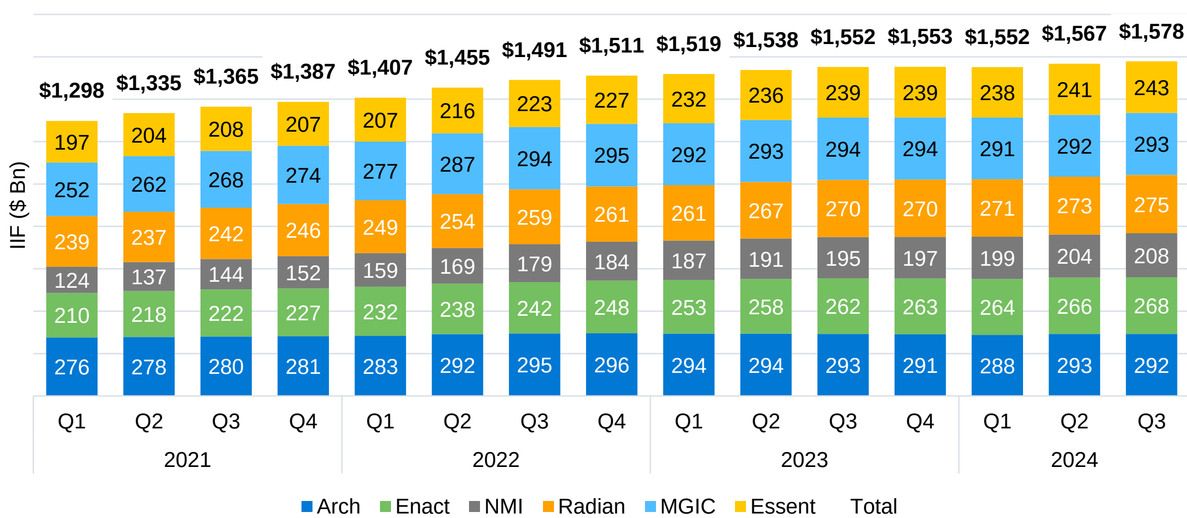


Source: PMI earnings releases, financial supplements, and 10-K/Qs.

MARKET-LEVEL IIF TRENDS

Primary IIF in 3Q 2024 was $1,578.4 billion, an increase of 0.7% quarter-over-quarter and an increase of 1.7% year-over-year. Five out of the six insurers increased IIF from the prior quarter—NMI rose 2.0%, Essent rose 0.9%, Enact rose 0.7%, Radian rose 0.7%, and MGIC rose 0.4%, while Arch fell 0.1%. IIF market share in 3Q 2024 was MGIC 18.6%, Arch 18.5%, Radian 17.4%, Enact 17.0%, Essent 15.4%, and NMI 13.1%.

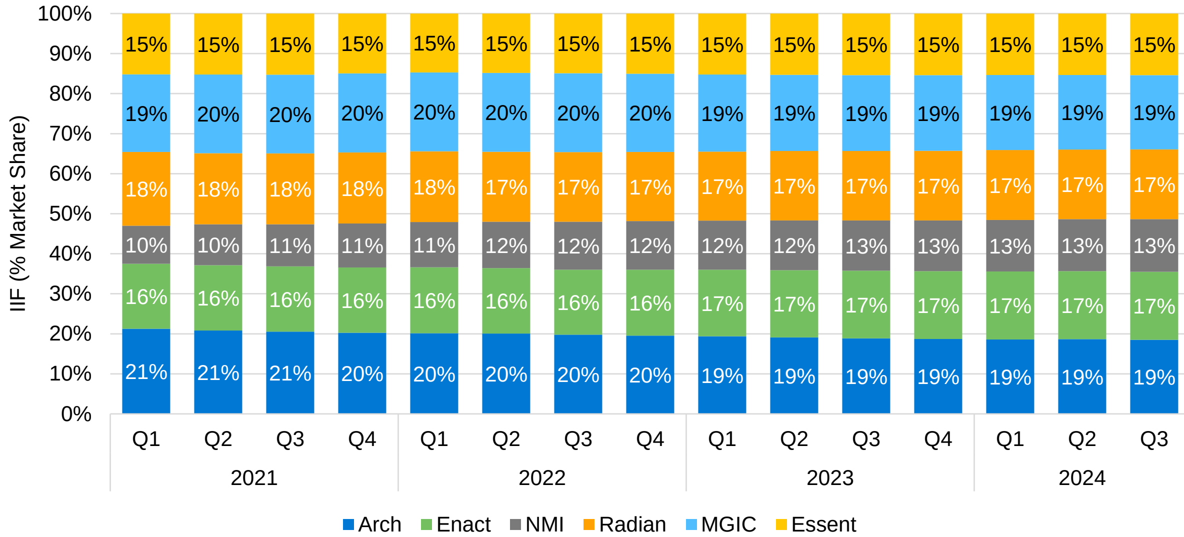
FIGURE 3: REPORTED INSURANCE IN FORCE, BY QUARTER, 2021-2024



Source: PMI earnings releases, financial supplements, and 10-K/Qs.

[1] Milliman began tracking PMI quarterly performance in 1Q 2018.

FIGURE 4: REPORTED INSURANCE IN FORCE, % MARKET SHARE BY PMI, 2021-2024



Source: PMI earnings releases, financial supplements, and 10-K/Qs.

Despite this modest growth in IIF, in past editions of this report Milliman has outlined that higher house prices as well as commensurate increases in the GSE conforming loan limit have largely driven this growth—i.e., fewer new policies are being insured than in past years, but the higher average size is still driving increases in the overall IIF.

In 3Q 2024, Milliman noted similar discussions to this dynamic in earnings calls.

Essent

Q - Bose George

Good morning. Actually, just a follow-up on Doug's question on the new notices. Are the loan sizes getting bigger, I mean, in terms of just -- because the provision for new notices, the way we calculated, went up as well. So just curious how much loan size is impacting that.

A - David Weinstock

Yeah, Bose. Clearly, the loan sizes, just in general, with what we're doing in our insurance in force, the average -- with the GSEs raising what's eligible, definitely our loan sizes have grown. And so a lot of what you're seeing, and you can see this in our supplement, we're still reserving at around the same amount for early notices as we always have been, but clearly what's going to impact that is the size of the loan when you're looking at a provision dollar number.

A - Mark A. Casale

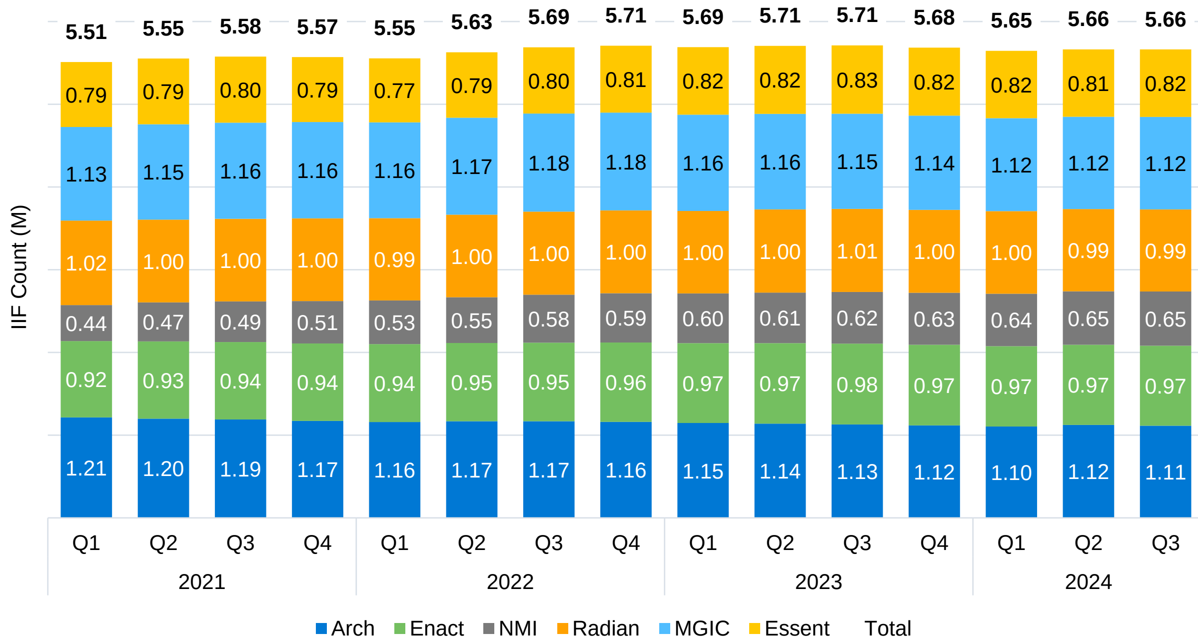
I mean, just to give you a sense of that both the average, the average loan size for our insurance in force right now is right around $290,000 when historically it was probably $226,000. And you're also seeing that on the front-end. We talk about the insurance in force portfolio has been relatively flattish over the past years, a lot of it caused by low originations, but the loan size of our portfolio has continued to grow. So new originations, NIW back in, say, 2017, '18 was like $240,000. This past year, it's probably $380,000. So when you think about growth in the portfolio and just look at units, we probably did about 130,000 units last year; we'll do less than that this year, that's really reflective of the environment, kind of that whole transactional part of the business.

We originated -- I think, between 2017 and '18, so well before COVID, kind of normalized housing, we were right around -- between those two years, we averaged 190,000 units of NIW. So when you think about future growth in the portfolio, it has the potential for renewed growth. So it works both ways, right? So you're going to see it in the losses, but eventually you'll start seeing it around kind of the growth in the portfolio.

Given low levels of home sales—as borrowers continue to be strained by housing affordability—numbers of PMI policies will likely be correspondingly low until a catalyst changes the current housing market. Below, Milliman summarizes the aggregate policies in force.

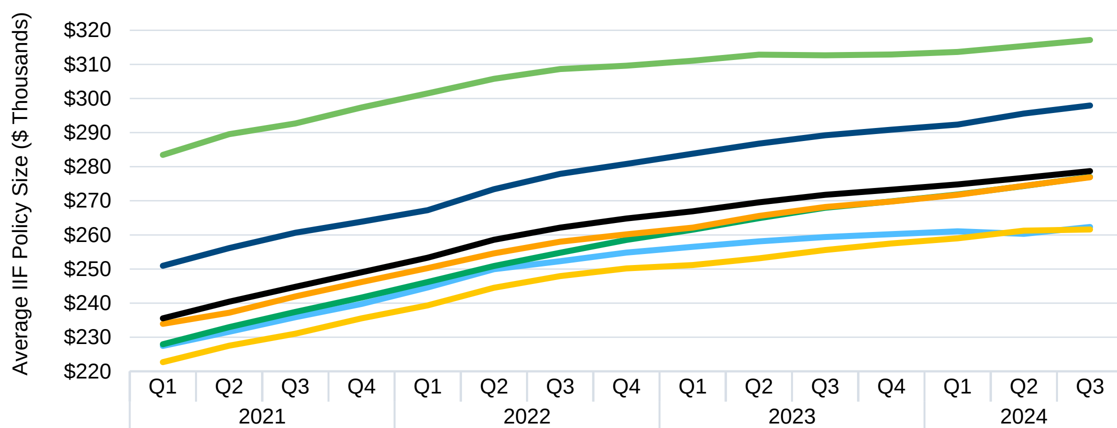
In 3Q 2024, 5.66 million primary policies were in force across the six insurers—lower than both 3Q 2023 and 3Q 2022 (5.71 million and 5.69 million, respectively).

FIGURE 5: REPORTED INSURANCE IN FORCE, POLICY COUNT, MILLIONS, BY QUARTER, 2021-2024



Source: PMI earnings releases, financial supplements, and 10-K/Qs.

FIGURE 6: AVERAGE INSURANCE IN FORCE POLICY SIZE, $ THOUSANDS BY PMI, BY QUARTER, 2021-2024



	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3
Arch	227	232	236	240	245	250	252	255	257	258	259	260	261	260	262
Enact	228	233	237	242	246	251	255	259	262	265	268	270	272	274	277
NMI	283	290	293	297	301	306	309	310	311	313	313	313	314	315	317
Radian	234	237	242	246	250	255	258	260	262	266	268	270	272	274	277
MGIC	223	228	231	236	239	244	248	250	251	253	256	258	259	261	262
Essent	251	256	261	264	267	273	278	281	284	287	289	291	292	296	298
Market Avg	236	240	245	249	253	259	262	265	267	270	272	273	275	277	279

Arch Enact NMI Radian MGIC Essent Market Avg

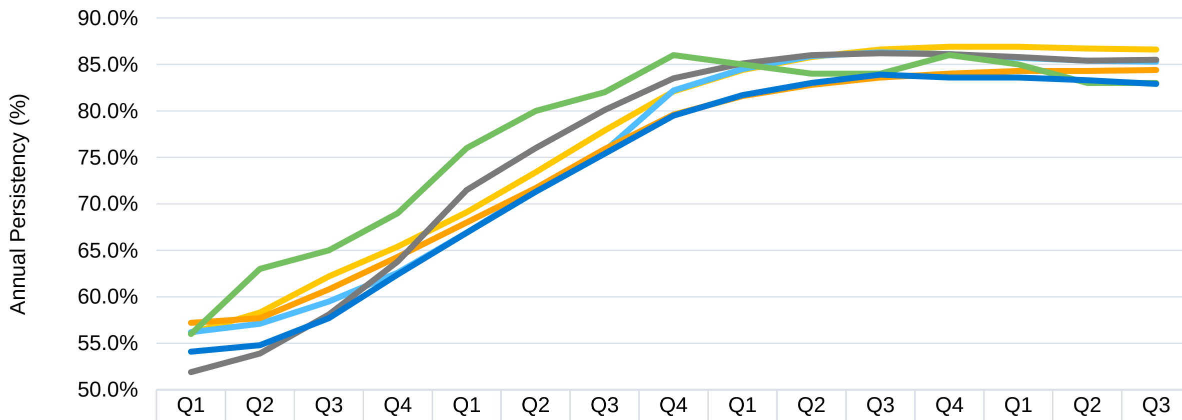
Source: PMI earnings releases, financial supplements, and 10-K/Qs.

Across the 5.66 million policies in force, the average size was $279,000. Insurers with larger legacy portfolios (e.g., Arch, MGIC, Radian, Enact) have average policy sizes less than the market average, while insurers that entered the market after the global financial crisis have average policy sizes higher than the market average.

In 3Q 2024, IIF persistency measured 84.5%, an absolute decrease of 0.1% quarter-over-quarter (84.6%) and a decrease of 0.5% year-over-year (85.0%). Persistency is defined as the percentage of IIF that remained in force after the trailing 12-month period. High persistency is consistent with elevated interest rates, as there are limited refinance opportunities for existing borrowers. Absent a decline in interest rates, it is anticipated that persistency will continue to remain elevated as high interest rates continue to depress prepayment speeds.

Higher persistency results in increased premium for a group of MI policies—as premium is paid on the in-force loan population. Potentially offsetting the benefit of increased premium levels, ultimate claim rates may increase as the policies will be in force for a longer period and potentially exposed to financial events that could result in mortgage defaults.

FIGURE 7: ANNUAL PERSISTENCY RATES, % OF IIF REMAINING IN FORCE AFTER THE TRAILING 12-MONTH PERIOD, BY QUARTER, 2021-2024



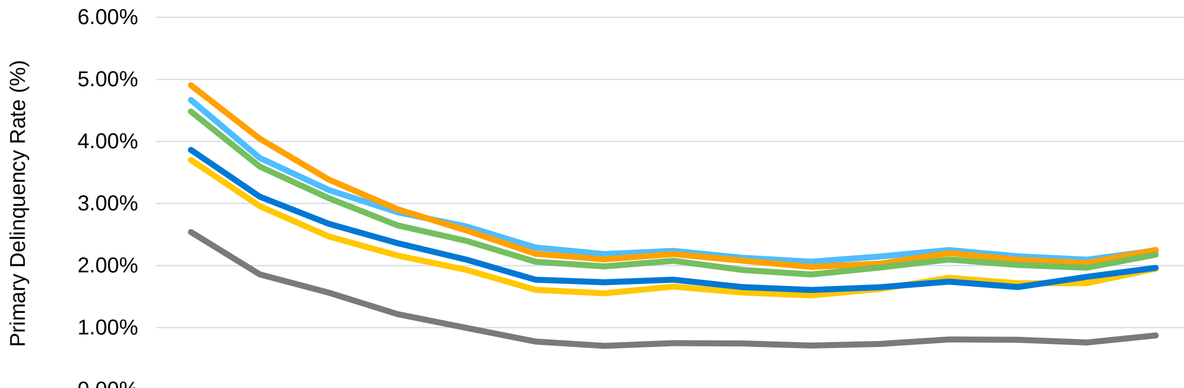
	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3
Essent	56.1%	58.3%	62.2%	65.4%	69.1%	73.4%	77.9%	82.1%	84.4%	85.8%	86.6%	86.9%	86.9%	86.7%	86.6%
MGIC	56.2%	57.1%	59.5%	62.6%	66.9%	71.5%	75.7%	82.2%	84.5%	85.9%	86.3%	86.1%	85.7%	85.4%	85.3%
Radian	57.2%	57.7%	60.8%	64.3%	68.0%	71.7%	75.9%	79.6%	81.6%	82.8%	83.6%	84.0%	84.3%	84.3%	84.4%
NMI	51.9%	53.9%	58.1%	63.8%	71.5%	76.0%	80.1%	83.5%	85.1%	86.0%	86.2%	86.1%	85.8%	85.4%	85.5%
Enact	56.0%	63.0%	65.0%	69.0%	76.0%	80.0%	82.0%	86.0%	85.0%	84.0%	84.0%	86.0%	85.0%	83.0%	83.0%
Arch	54.1%	54.8%	57.7%	62.4%	66.9%	71.3%	75.4%	79.5%	81.7%	83.0%	83.9%	83.6%	83.6%	83.3%	82.9%

Source: PMI earnings releases, financial supplements, and 10-K/Qs.

Delinquent loan performance

The charts in Figures 8 through 12 display rates that influence the primary delinquency rate (e.g., new notice rate, cure rate, paid claims rate). These rates provide information on the inflow of new delinquencies, the outflow of cured delinquencies, and the outflow of paid claims on delinquencies, respectively. Decomposition of the changes in the primary delinquency rate into these other rates can provide information on the drivers of the headline change (e.g., a decrease in the primary delinquency rate could be due to cures outpacing delinquencies, or it could be driven by minimal changes in the delinquent inventory and simply a rise in policies in force, leading to a decrease in the rate relative to the population).[2]

FIGURE 8: QUARTERLY PERCENTAGE OF IIF IN DELINQUENCY, PERCENTAGE OF ENDING POLICIES IN FORCE, COUNT-WEIGHTED, BY PMI, 2021-2024



	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
	2021				2022				2023				2024		
Essent	3.70%	2.96%	2.47%	2.16%	1.93%	1.61%	1.55%	1.66%	1.57%	1.52%	1.62%	1.80%	1.72%	1.71%	1.95%
MGIC	4.67%	3.73%	3.22%	2.86%	2.63%	2.29%	2.18%	2.24%	2.13%	2.06%	2.15%	2.25%	2.15%	2.09%	2.24%
Radian	4.91%	4.04%	3.38%	2.91%	2.56%	2.19%	2.10%	2.18%	2.08%	1.98%	2.03%	2.20%	2.09%	2.04%	2.25%
NMI	2.54%	1.86%	1.56%	1.22%	0.99%	0.77%	0.71%	0.75%	0.75%	0.71%	0.74%	0.81%	0.80%	0.76%	0.87%
Enact	4.48%	3.60%	3.08%	2.65%	2.40%	2.06%	1.99%	2.08%	1.93%	1.86%	1.97%	2.10%	2.01%	1.96%	2.17%
Arch	3.86%	3.11%	2.67%	2.36%	2.09%	1.77%	1.73%	1.77%	1.65%	1.61%	1.65%	1.74%	1.65%	1.82%	1.96%

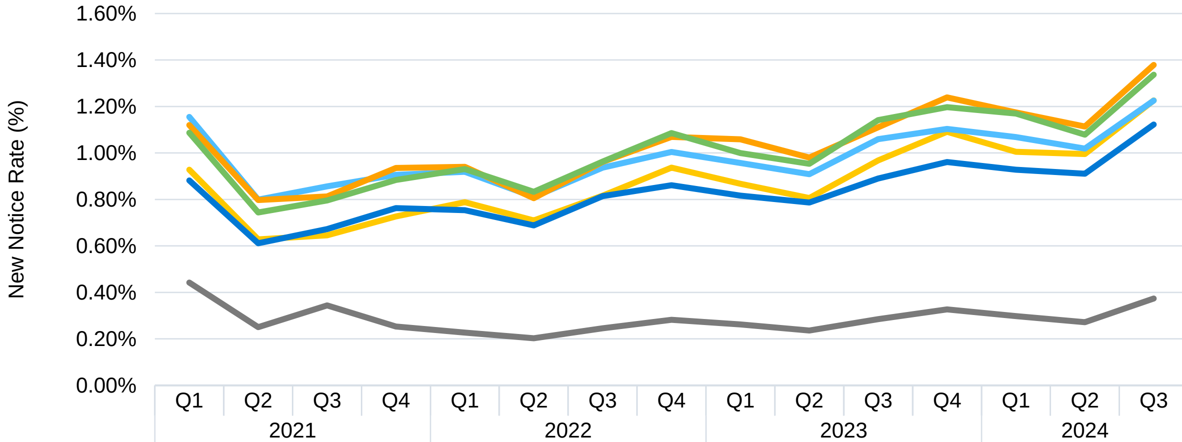
Source: PMI earnings releases, financial supplements, and 10-K/Qs.

In 3Q 2024, the weighted-average primary delinquency rate was 1.98% (Figure 8)—up from 1.80% in 2Q 2024 and 1.77% in 3Q 2023. The new notice rate was 1.15% (Figure 9)—up from 0.94% in 2Q 2024 and 0.95% in 3Q 2023. These metrics were a focus of discussion on 3Q earnings calls. Salient excerpts are summarized in the appendix of this report.

Management largely messaged that these increases were due to normal seasonal patterns, further driven by large cohorts of policies written in 2020 and 2021 reaching their peak defaulting years (typically three to six years from origination). This being said, excluding quarters impacted by COVID-19 forbearances, the 1.15% new notice rate was the highest rate observed since at least 2017.[3]

[2] Note that, for more current data, some PMIs release monthly operating statistics that provide monthly updates to the delinquency trends discussed in this section.
[3] Milliman began tracking PMI quarterly performance in 1Q 2018.

FIGURE 9: QUARTERLY NEW NOTICE OF DEFAULT RATE, % OF STARTING POLICIES IN FORCE, COUNT-WEIGHTED, BY PMI, 2021-2024



	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3
Essent	0.93%	0.63%	0.65%	0.73%	0.79%	0.71%	0.82%	0.94%	0.87%	0.81%	0.97%	1.09%	1.00%	1.00%	1.23%
MGIC	1.16%	0.80%	0.86%	0.91%	0.92%	0.81%	0.94%	1.00%	0.96%	0.91%	1.06%	1.10%	1.07%	1.02%	1.23%
Radian	1.12%	0.80%	0.81%	0.94%	0.94%	0.81%	0.96%	1.07%	1.06%	0.98%	1.11%	1.24%	1.17%	1.11%	1.38%
NMI	0.44%	0.25%	0.34%	0.25%	0.23%	0.20%	0.25%	0.28%	0.26%	0.24%	0.29%	0.33%	0.30%	0.27%	0.37%
Enact	1.09%	0.74%	0.80%	0.88%	0.93%	0.83%	0.96%	1.09%	1.00%	0.95%	1.14%	1.20%	1.17%	1.08%	1.34%
Arch	0.88%	0.61%	0.67%	0.76%	0.75%	0.69%	0.81%	0.86%	0.82%	0.79%	0.89%	0.96%	0.93%	0.91%	1.12%

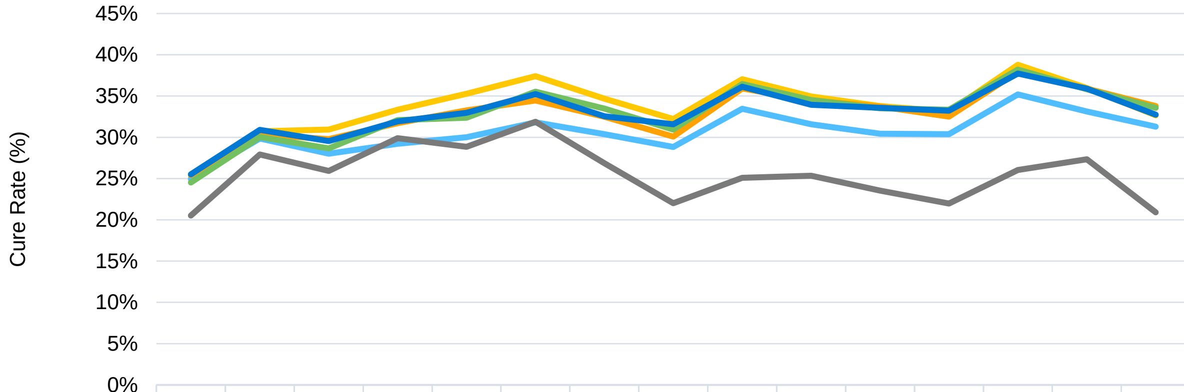
Source: PMI earnings releases, financial supplements, and 10-K/Qs.

The weighted-average cure rate was 32% in 2Q 2024 (Figure 10)—down from 35% in 2Q 2023 and in line with 32% in 3Q 2023. Comparing the number of loans curing to the number of new notices in the quarter, we can obtain a ratio that generally expresses whether the delinquent inventory is growing or shrinking in the quarter. Ignoring paid claims, rescissions, and denials, a ratio over 100% indicates a net decrease in the delinquent inventory over the quarter. In 2Q 2024, the ratio of cures to defaults was 83% (Figure 11)—down from 102% in 2Q 2023 and 90% in 3Q 2023.

Excluding 2Q 2020—the onset of the COVID-19 pandemic—the 83% cure to default ratio was the lowest rate observed since at least 2017.[4]

[4] Milliman began tracking PMI quarterly performance in 1Q 2018.

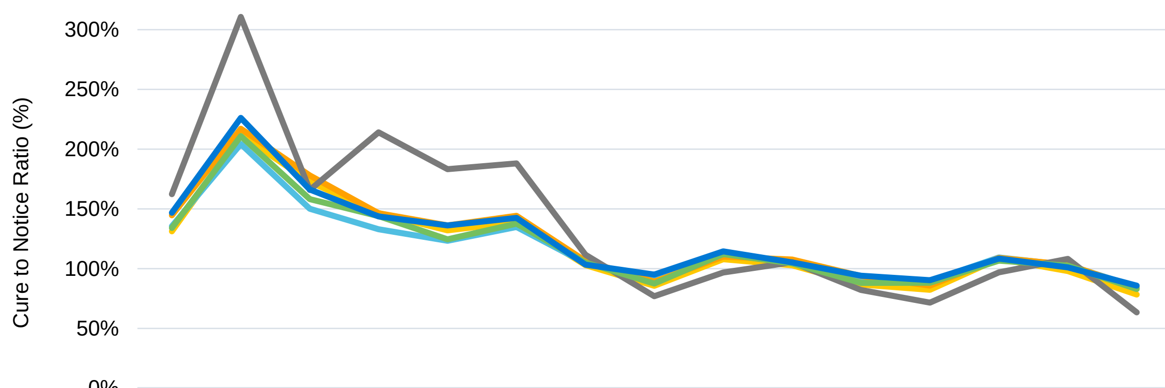
FIGURE 10: QUARTERLY CURE RATE, % OF STARTING DELINQUENCIES PLUS NEW NOTICES, COUNT-WEIGHTED, BY PMI, 2021-2024



	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3
Essent	25%	31%	31%	33%	35%	37%	35%	32%	37%	35%	34%	33%	39%	36%	33%
MGIC	25%	30%	28%	29%	30%	32%	30%	29%	33%	32%	30%	30%	35%	33%	31%
Radian	25%	30%	30%	32%	33%	34%	32%	30%	36%	34%	34%	33%	38%	36%	34%
NMI	21%	28%	26%	30%	29%	32%	27%	22%	25%	25%	24%	22%	26%	27%	21%
Enact	25%	30%	29%	32%	32%	36%	33%	31%	36%	35%	34%	33%	38%	36%	34%
Arch	26%	31%	30%	32%	33%	35%	33%	32%	36%	34%	34%	33%	38%	36%	33%

Source: PMI earnings releases, financial supplements, and 10-K/Qs.

FIGURE 11: QUARTERLY CURE TO NEW NOTICE RATIO, CURE COUNT DIVIDED BY NEW NOTICE COUNT, BY PMI, 2021-2024



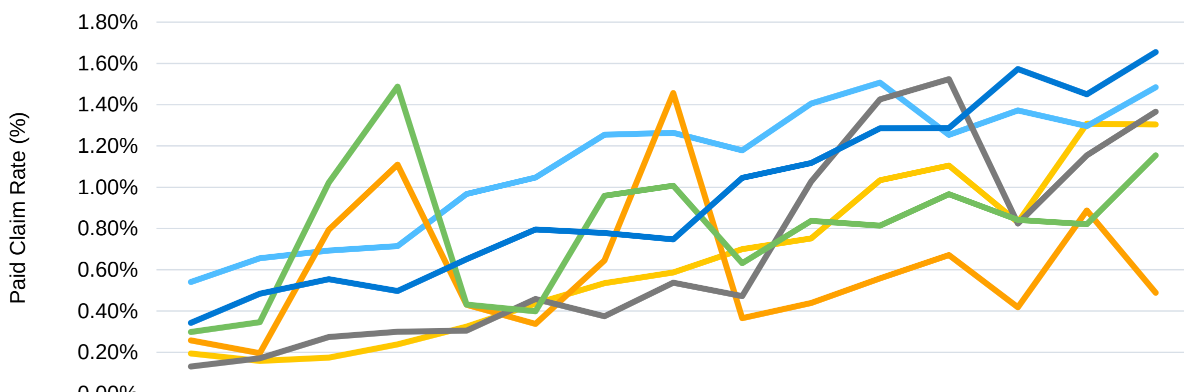
	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3
Essent	131%	212%	173%	147%	132%	139%	103%	86%	108%	103%	87%	82%	108%	98%	78%
MGIC	135%	204%	150%	133%	123%	135%	105%	92%	112%	105%	90%	89%	109%	103%	85%
Radian	145%	217%	178%	146%	136%	144%	106%	89%	110%	108%	94%	86%	109%	103%	84%
NMI	162%	311%	166%	214%	183%	188%	112%	77%	97%	105%	82%	72%	97%	108%	63%
Enact	134%	211%	158%	144%	124%	138%	105%	88%	112%	104%	88%	88%	107%	103%	83%
Arch	147%	226%	166%	144%	136%	142%	103%	95%	115%	105%	94%	90%	109%	101%	86%

Source: PMI earnings releases, financial supplements, and 10-K/Qs.

Despite the discussion on credit performance, the paid claim rate remains well below pre-COVID-19 averages—i.e., despite notices ticking up, losses are not materializing to the same degree as pre-2020.

In 3Q 2024, the weighted-average paid claims rate was 1.23% (Figure 12); in contrast, the pre-COVID-19 average was over 3% per quarter. One driver of the low level of claim rates could be the amount of home price appreciation observed from 2020 through 2024. Many insured borrowers have built up equity from home price appreciation. Therefore, if these borrowers experience financial hardship, they may be able to sell their property and avoid foreclosure. It could also be possible that enhanced loss mitigation from Fannie Mae and Freddie Mac are effective loss mitigation tools, and these policies are reducing claims to the mortgage insurers. While we note an increasing trend in the quarterly paid claims rate, Milliman will continue to monitor whether paid claims eventually return to long-run averages or if this depressed level is a "new normal."

FIGURE 12: QUARTERLY PAID CLAIMS RATE, % OF STARTING DELINQUENCIES, COUNT-WEIGHTED, BY PMI, 2021-2024



	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3
Essent	0.19%	0.16%	0.17%	0.24%	0.32%	0.44%	0.54%	0.59%	0.70%	0.75%	1.03%	1.11%	0.83%	1.31%	1.30%
MGIC	0.54%	0.66%	0.69%	0.71%	0.97%	1.05%	1.25%	1.26%	1.18%	1.41%	1.51%	1.25%	1.37%	1.30%	1.48%
Radian	0.26%	0.20%	0.79%	1.11%	0.43%	0.34%	0.64%	1.46%	0.37%	0.44%	0.56%	0.67%	0.42%	0.89%	0.49%
NMI	0.13%	0.17%	0.27%	0.30%	0.31%	0.46%	0.37%	0.54%	0.47%	1.03%	1.43%	1.52%	0.82%	1.15%	1.37%
Enact	0.30%	0.35%	1.02%	1.49%	0.43%	0.40%	0.96%	1.01%	0.63%	0.84%	0.81%	0.97%	0.84%	0.82%	1.15%
Arch	0.34%	0.48%	0.55%	0.50%	0.65%	0.80%	0.78%	0.75%	1.05%	1.12%	1.29%	1.29%	1.57%	1.45%	1.66%

Source: PMI earnings releases, financial supplements, and 10-K/Qs.

LOSS RESERVES

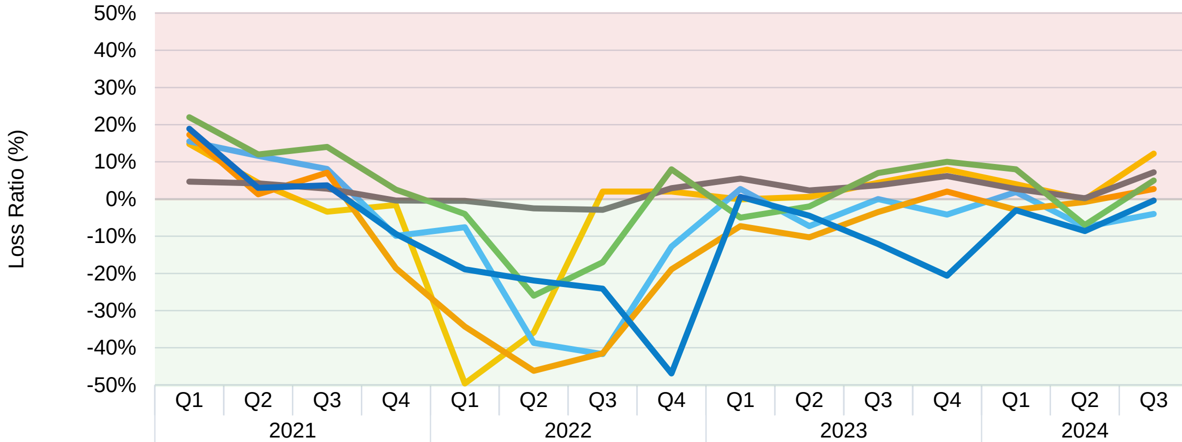
Under GAAP, the loss reserves of the PMIs are established for policies only after a loan becomes delinquent. Generally, the PMIs are notified upon a 60-day delinquency, and the reserves reflect the current delinquency episode. The PMIs estimate the liability for losses related to the outstanding delinquent inventory and establish that amount as loss reserves. The underlying claim rate and claim severity estimates used in the reserving process are typically based on historical experience but can fluctuate based on current economic circumstances (e.g., the COVID-19-caused economic disruption).

Loss ratios are generally defined as losses incurred in the quarter (which are a function of the number of loans that went delinquent in the quarter, the assumed claim rate, and the assumed loss severity) divided by the premium earned in the quarter. However, when a PMI releases reserves from prior periods, they are netted out of the new incurred losses established in the quarter.

Given the high level of new notices in 2Q 2020 and 3Q 2020, a large portion of the PMIs' reserves were from notices occurring in those quarters. The PMIs began to release reserves from some cohorts of pre- and early COVID-19-related delinquencies in 4Q 2021. This was driven largely by the performances to date of the loans—beginning to match, and eclipse, the PMIs' original cure rate assumptions (i.e., it is becoming clear that more loans will revert to "performing" than the PMIs originally assumed).

While most COVID-19-related reserves have already been released, loss ratios have remained low due to strong house price appreciation (building borrower equity in their homes) and low unemployment rates. This has led to continued low loss ratios for the industry.

FIGURE 13: QUARTERLY REPORTED LOSS RATIO, BY PMI, 2021-2024



	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3
Essent	14.8%	4.4%	-3.4%	-1.6%	-49.6%	-35.9%	2.0%	2.0%	-0.1%	0.6%	4.4%	7.9%	4.0%	-0.1%	12.2%
MGIC	15.5%	11.6%	8.1%	-9.9%	-7.6%	-38.7%	-41.7%	-12.8%	2.7%	-7.3%	0.0%	-4.2%	1.9%	-7.5%	-4.0%
Radian	17.3%	1.3%	7.1%	-18.6%	-34.3%	-46.2%	-41.5%	-18.9%	-7.3%	-10.3%	-3.5%	2.0%	-2.9%	-0.8%	2.7%
NMI	4.7%	4.2%	2.8%	-0.4%	-0.5%	-2.5%	-2.9%	2.9%	5.5%	2.3%	3.7%	6.2%	2.7%	0.2%	7.2%
Enact	22.0%	12.0%	14.0%	2.5%	-4.0%	-26.0%	-17.0%	8.0%	-5.0%	-2.0%	7.0%	10.0%	8.0%	-7.0%	5.0%
Arch	18.9%	3.0%	3.7%	-9.4%	-18.9%	-21.9%	-24.1%	-46.9%	0.6%	-4.5%	-12.1%	-20.6%	-3.0%	-8.6%	-0.4%

Source: PMI earnings releases, financial supplements, and 10-K/Qs.

Despite new notices ticking up in the quarter, earnings calls and financial supplements generally indicated no change in the claim rate assumption used in reserving—with insurers typically reserving in the 7.5% to 9% claim rate range.

On new notices, the claim severity is generally more easily estimated than the claim rate. There is typically less variation in severity across time and recent severity on paid claims can be used as a reasonable proxy, so the majority of the discussion on reserving for new notices is surrounding the claim rate assumption (also referred to as the "incidence" or "default-to-claim" assumption). Historically, as a rule of thumb in a normal environment, for a cohort of loans that reached 60-days delinquent, the PMIs reserve assuming approximately a 10% claim rate assumption—i.e., approximately 90% of those loans will cure the delinquency and "reperform" at some point, while the remaining 10% will result in a claim to the insurer.

During the COVID-19 pandemic, PMIs generally reserved for new notices using a lower claim rate, given the expectation for better-than-normal performance driven by the forbearance policies and accommodative exit options provided by the GSEs. Since then, the industry has still typically reserved for new notices less than the 10% historical average, reflecting the continued strong housing market and benign credit environment.

The appendix contains discussion of claim rate assumptions used in 2024 across several insurers. This being said, Milliman continues to monitor the metric, given the potential for economic softening in the coming quarters, as well as more discussion of these topics on earnings calls.

Risk transfer: Capital markets ILN issuances

In 3Q 2024, Arch's BMIR 24-1 (settled August 15, 2024) and Essent's RMIR 24-1 (settled September 24, 2024) were issued. They were the first PMI insurance-linked notes (ILNs) issuance in 2024 (the previous was issued in November 2023).

As discussed in prior editions of this report, ILN issuance dropped to five transactions in 2023 and four transactions in 2022, down from 12 and 14 in 2020 and 2021, respectively. The lower issuance in 2022 and 2023, was attributable to market pricing. The weighted-average (WA) spread over the Secured Overnight Financing Rate (SOFR) for new issuances widened considerably across late 2021 through 2022 and was generally regarded as uneconomical as compared to traditional reinsurance.

While 2023 and 2024 ILNs priced significantly more favorably than transactions issued in 2022, the lower volume of PMI policies being written coupled with the fact that all six PMIs have all become programmatic buyers of forward-coverage traditional reinsurance (a substitute for issuing capital markets ILNs) has continued to depress the amount of ILN issuances.

Figure 14 provides a summary of recent PMI capital market ILN issuances from late 2021 through 2024. Row 2 indicates whether a vertical slice of the structure was executed via the reinsurance market in tandem with the bond offering.[5]

FIGURE 14: RECENT PMI CAPITAL MARKETS ILN TRANSACTIONS

	Arch BMIR 21-3	NMI OMIR 21-2	Radian EMIR 21-2	Essent RMIR 21-2	Arch BMIR 22-1	MGIC HMIR 22-1	Essent RMIR 22-1	Arch BMIR 22-2	Essent RMIR 23-1	Radian EMIR 23-1	MGIC HMIR 23-1	Arch BMIR 23-1	Enact TMIR 23-1	Arch BMIR 24-1	Essent RMIR 24-1
Settle Date	9/28	10/26	11/9	11/10	1/31	4/26	9/21	9/30	8/8	10/5	10/23	10/31	11/15	8/15	9/24
ILN Reinsurance Co-Participation?	**Yes**	No	No	No	**Yes**	No	No	**Yes**	No	No	No	**Yes**	No	**Yes**	No
Total Bonds Issued ($M)	512	364	484	439	284	474	238	201	281	353	330	187	248	163	363
Coverage Attachment Point %	2.25	1.85	2.25	2.25	2.50	2.75	3.25	2.50	3.25	3.25	3.00	3.00	3.35	3.00	3.00
Coverage Detachment Point %	12.00	6.45	6.75	7.25	7.50	6.75	6.50	6.50	6.50	7.25	6.75	6.75	6.75	6.50	7.25
Min CE %	10.00*	7.45	7.75	7.75	8.50	7.50	7.00	7.50	7.00	7.75	7.25	7.75	7.25	7.50	7.25
WA Spread (bps)	207	299	302	424	350	545	731	801	506	440	538	465	554	386	362
Term (yrs)	12.5	12.5	10.0	12.5	12.5	10.0	10.0	12.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Optional Call (yrs)	7	7	6	5	7	6	5	6	6	5	5	5	5	5	5

Source: Milliman M-PIRe, Bloomberg, DBRSMorningstar, Moody's.

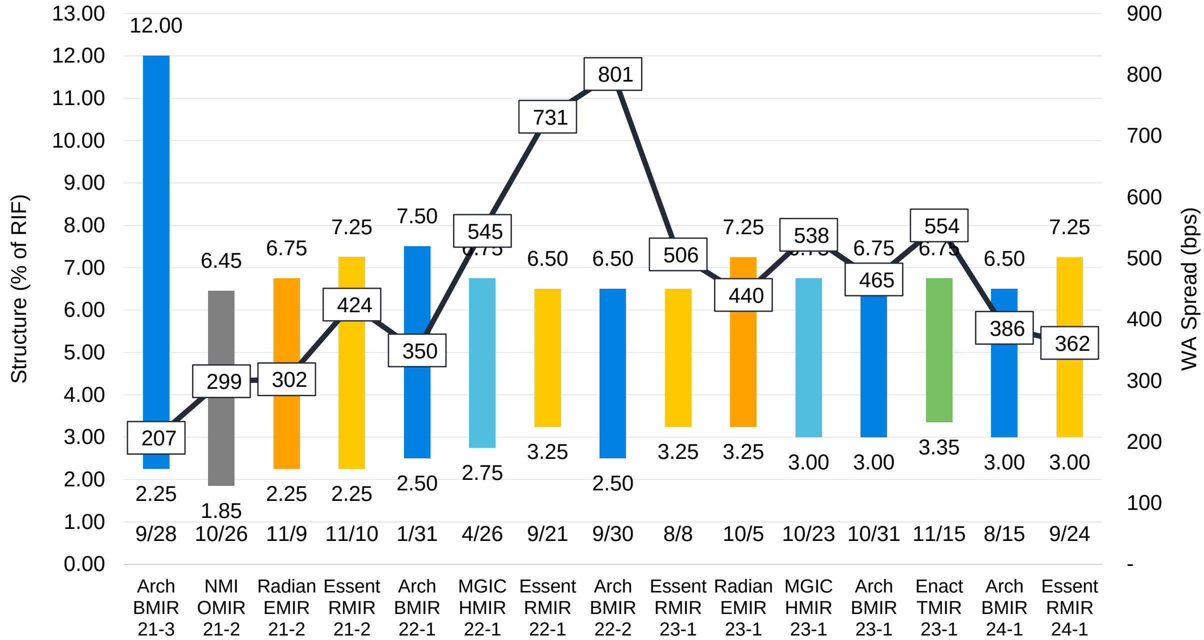
Two notable characteristics of these issuances were (1) they priced the tightest since January 2022, and (2) they represented a change to bond paydown rules after periods of high delinquencies.

Arch's BMIR 24-1 transaction priced at 3.86%, a weighted-average spread above SOFR, and Essent's RMIR 24-1 transaction priced at 3.62%, the lowest WA spread levels since Arch's BMIR 22-1 (in January 2022).

Figure 15 visually displays coverage attachment and detachment points along with the weighted-average (WA) spreads for the transactions.

[5] Several PMIs have reinsurance programs that cover a portion of the risk in their ILNs. The co-participation field refers specifically to transactions where reinsurers are offered a portion of the reference pool risk in a structure consistent with the capital markets (i.e., similar to the Freddie Mac STACR/ACIS-linked transactions).

FIGURE 15: RECENT PMI CAPITAL MARKET ILN TRANSACTIONS (BARS: CEDED RISK, LINE: WA SPREAD)



Source: Milliman M-PIRe, Bloomberg, DBRSMorningstar, Moody's.

Both transactions contained dynamic thresholds for performance tests, whereas previously the test thresholds were static across time. The excerpt below summarizes the performance tests and the threshold values and timing windows. This structural change was primarily implemented to increase the transactions efficiency via Private Mortgage Insurer Eligibility Requirements (PMIERs)[6] regulatory capital relief (the primary benefit of these transactions).

Over the past several years, many ILNs issued in the past have been receiving little to no capital credit under PMIERs despite bonds still outstanding. This translated into a cost for the PMIs with no corresponding capital relief benefit. The Risk-Based Required Asset Amount that the PMIs must hold under PMIERs naturally shrink over time via "Seasoning Weights," while, the prior static nature of the ILN performance tests—in particular the "Minimum Credit Enhancement Test"—retained excess coverage in excess of PMIERs requirements, which did not receive any credit.

[6] Freddie Mac (September 27, 2018). Private Mortgage Insurer Eligibility Requirements. Retrieved January 14, 2025, from https://sf.freddiemac.com/docs/pdf/requirements/pmiers.pdf.

Morningstar DBRS Bellemeade Re 2024-1 Ltd. Presale Report[7]

This is the first MILN transaction with dynamic thresholds for performance tests. The minimum credit enhancement test has been set to fail at the Closing Date, thus locking out the rated classes from initially receiving any principal payments until the subordinate percentage reaches target credit enhancement percentage. The delinquency test will be satisfied if the three-month average of 60+ days delinquency percentage is below applicable delinquency threshold percentage times the subordinate percentage. Additionally, if these performance tests are met and the subordinate percentage is greater than the target credit enhancement percentage, then the subordinate Notes will be entitled to accelerated principal payments until the subordinate percentage comes down to the target credit enhancement. (see the Cash Flow Structure and Features section for more detail)

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Cash Flow Structure and Features

…

Allocation of Principal Reduction Amounts

The principal payments to the tranches consist of their allocated share of the principal reduction amount to certain performance triggers as described below. If the performance tests are met, the principal reduction amount is allocated pro rata between the coverage level A and the subordinate coverage levels or else the allocation changes to a sequential priority, paying first to the coverage level A and then to the subordinate coverage levels. Additionally, if the Step Down Event is in effect, coverage level A principal reduction will be diverted to reduce subordinate coverage levels to target CE percentage.

Performance Tests

The structure locks principal reductions to coverage levels other than the coverage level A if either the minimum credit enhancement or delinquency test is not met. In these instances, the principal reduction amount will be redirected to the coverage level A to accelerate paydowns. If the tests are met, principal reduction amount is allocated pro rata between coverage level A and other coverage levels.

Minimum Credit Enhancement Test

The minimum credit enhancement test is met when the subordination percentage (sum of the coverage levels other than the coverage level A divided by the aggregate exposed principal balance) is higher than the applicable percentage indicated in the table below.

Payment Date Occurring in the Period………..Target Credit Enhancement %

Prior to September 2026…………………………………7.50

September 2026 to August 2027…………………….…….6.60

On or after September 2027…………………………..……6.00

Delinquency Test

The delinquency test is met when the three month average of the aggregate exposed principal balance that is reported as 60 or more days delinquent; in foreclosure, REO, or bankruptcy status; or where the pending claim settlement is less than the applicable percentage (indicated in the table below) times the excess of (1) the product of the subordinate percentage and the beginning aggregate exposed principal balance over (2) the monthly MI loss amount.

Payment Date Occurring in the Period………..Delinquency Test Threshold %

Prior to September 2026…………………………………75.00

September 2026 to August 2027…………………….…….80.00

On or after September 2027…………………………..……85.00

Stepdown Event

The stepdown event is in effect on or after the Payment Date in September 2026 if the performance tests are met and the subordinate percentage (rounded to two decimal places) is greater than target credit enhancement percentage. If the stepdown event is in effect, the subordinate coverage levels will receive accelerated paydowns until the subordinate percentage comes down to the target credit enhancement percentage.

The updated dynamic tests closely match the expected impacts of the PMIERs Seasoning Weights (Figure 16), which meaningfully reduce the amount of required capital across time. For instance, using the BMIR 24-1 transaction as an example, the Target Credit Enhancement closely matches the PMIERs Seasoning Weights —e.g., 6.6 / 7.5 = 88%; 6.0 / 7.5 = 80%.

FIGURE 16: PRIVATE MORTGAGE INSURER ELIGIBILITY REQUIREMENTS (PMIERS), TABLE 6, SEASONING WEIGHTS

Table 6:
Loan Vintage: Post June 2012
Loan Payment Status: Performing (current or not more than one missed monthly payment)
Loan Purpose: non-*HARP*

Seasoning Weights for Loans Aged 25 Months or More

Loan Age[1]	Weight
25 through 36 months	88%
More than 36 months through 48 months	81%
More than 48 months through 60 months	78%
More than 60 months	73%

[1]Loan age is calculated as the number of whole months between the origination date and the reporting date.

Source: Freddie Mac.

These dynamic performance tests should eliminate a portion of the mismatch between bond coverage and capital requirement—reducing unnecessary coverage and transaction cost, all else being equal.

Summary statistics of the reference pools are provided in Figure 17.

FIGURE 17: RECENT PMI CAPITAL MARKET ILN TRANSACTIONS, REFERENCE POOL CHARACTERISTICS

	Arch BMIR 21-3	NMI OMIR 21-2	Radian EMIR 21-2	Essent RMIR 21-2	Arch BMIR 22-1	MGIC HMIR 22-1	Essent RMIR 22-1	Arch BMIR 22-2	Essent RMIR 23-1	Radian EMIR 23-1	MGIC HMIR 23-1	Arch BMIR 23-1	Enact TMIR 23-1	Arch BMIR 24-1	Essent RMIR 24-1
Number of Loans (K)	93	123	153	147	119	219	152	153	134	131	202	99	149	92	121
UPB ($B)	28.7	40.4	47.2	47.2	37.3	64.2	53.0	51.7	48.5	43.0	66.1	32.4	51.4	30.4	44.2
RIF ($B)	6.6	7.9	10.8	12.4	6.3	11.8	9.3	9.0	8.7	8.8	9.1	6.2	7.9	5.8	8.5
WA Coupon (%)	3.10	3.10	3.00	3.11	3.05	3.11	4.16	4.02	6.12	5.41	5.90	6.38	6.10	6.94	6.95
WA FICO	753	752	749	744	750	749	747	753	745	746	750	751	748	751	745
WA LTV (%)	91.6	91.6	90.7	92.3	91.8	92.2	92.5	92.2	93.0	92.1	92.3	92.3	92.1	92.2	93.4
WA DTI (%)	35.8	34.5	36.1	36.8	36.3	35.7	37.6	36.8	40.2	39.1	38.3	38.7	39.8	39.5	41.4

Source: Milliman M-PIRe, Bloomberg, DBRSMorningstar, Moody's.

In addition to these new ILN issuances, Milliman noted detailed discussion of recent forward-coverage quota share placements in the traditional reinsurance market. Traditional reinsurance is typically more stable than capital markets ILNs—which have had large swings in market pricing as investors' appetites and outlooks change. Furthermore, reinsurers enter into forward coverages that allow the PMIs to get capital relief as soon as policies are written—as opposed to "warehousing" the policies without relief and issuing an ILN after a sufficient quantity has been originated.

[7] See https://dbrs.morningstar.com/research/437484/bellemeade-re-2024-1-ltd-presale-report.

MGIC[8]

Q - Geoffrey Dunn

Thank you. Good morning. Can you comment on the profit commission threshold for the new QSR?

A - Nathan Colson

Yes, Geoff, it's one of the book years is 63%, and the other is 62%. So the kind of -- (Multiple Speakers) I'm sorry, go ahead.

Q - Geoffrey Dunn

Sorry, Nathan, go ahead. I was going to say, what was the process of going 40% out of the gate? In the past, you guys have typically come out at 20% and then added 20% a year later or something like that. Why the change in process here?

A - Nathan Colson

Yes, it's really a reaction to the market. Our approach has always been what is the reinsurance market kind of telling us they want, where's the capacity, where's the right execution for us. Our preference has always been to do longer forward term commitments. Our first quarter share deal covered almost three years, the one that we did in 2013. Over time, the capacity to go out more than one year got narrower. So we shifted to doing some on a two-year basis, some on a one-year basis.

I would say the kind of demand and capacity in the space right now in the reinsurance market is quite attractive from our perspective. So that's -- hence, the upsizing a little bit from what we've done recently at the 30% quarter share level to the 40% level. And then felt like we got what is very, very attractive pricing, good cost of capital for us. And most importantly, just know having that capital commitment and kind of risk management overlay for the next two years of NIW in our business is something that we always value. But if the market doesn't have enough capacity for that multiyear, we've found other ways to transact. But I think very, very happy with the execution that we have here right now.

And I think it's a testament to the reinsurance market in the space getting broader, but also performance in this space has been quite good for some time. And similar to the primary market here, it's not growing as much as it was -- the reinsurance market for mortgage credit risk isn't growing as much as it was a couple of years ago, which is, I think, helping with demand as well. So our preference, like I said, is the place on a forward basis, multiyear, and this is really the market telling us that there's capacity at attractive pricing for us to really accomplish our multiyear goals right now.

[8] Source: Bloomberg.

Enact[9]

Q - Geoff Dunn

Thanks, good afternoon. Are you able to share the profit commission threshold on the new QSR?

A - Aurora Swithenbank

Sure. The, on the quota shares, so there's quite a bit of detail in the, in our 10-Q on this. There's a subsequent event put now, which will give you all the details, but the profit commission is up to 62% on our 2025 quota share treaty. We also fully placed our 20%, 2026 quota share treaty at the same profit commission level. And we partially placed our 2027 quota share at a 61% threshold.

Q - Geoff Dunn

Okay.

A - Adam Pollitzer

Yeah, so Geoff, these are tied for the lowest, say the lowest margins, right? Highest profit commissions that we've ever achieved. And we locked in three years' worth of coverage. As Aurora said, there's a little bit that we'll have to place as a sub for '27, but they're terrific, terrific deals. And we're really happy with the execution we were able to achieve.

[9] Source: Bloomberg.

Appendix: Additional excerpts from 3Q 2024 earnings calls[10]

Arch

Q - Cave Montazeri

Perfect. My follow-up is on the mortgage insurance business. I guess two parts to that question. The first one is the growth in the quarter, was that primarily driven by the Fed cuts that just boosted demand? And I guess linked to that is the pickup in delinquency in mortgage insurance, is that also just linked to more activity? I know you mentioned some seasonal factors, don't know what those were. If there's any details we can have on that, please.

A - Francois Morin

Yes, I'll start with that. I think that the delinquency, again, yes, it's up, but it's absolutely very much within our expectations. The one thing maybe for people to remember or appreciate is, given we refinanced a significant part of the book in 2020 and 2021, we're now entering, call it, the prime years of when delinquencies get recorded. So, that's very much part of the, again, within our expectations, right? So, as new loans get on the books, usually it takes three, four years for them to show a bit of, just call it, really predictable and normal delinquencies. So, that explains why in aggregate working on delinquency rate is trending up a little bit.

And more specifically in the seasonal aspect, I mean, every year there's fairly predictable behaviors that we see from the borrowers, whether they get their tax refunds in the first quarter, and then they catch up on their mortgages, and whether they borrow more to buy holiday presents. So, that happens. And then the third quarter is typically expected and seen as we, I mean, we've seen that in the recent history that the delinquency rate just goes up in the third quarter without any more, it's just seasonal.

So, again, we're very comfortable with the overall rate. And, again, there's a little bit -- the same differential that I mentioned last quarter related to the RMIC acquisition is still there. So, it's a pre-financial crisis book that has its own set of characteristics. So we're, again, overall very happy, very comfortable with the delinquency rate.

And, in terms of the premium, your first part of the question, I -- there's a couple of accounting differences and nuances this quarter, so I wouldn't read too much, I think, in the growth that we saw this quarter, there's a little bit of a catch-up on premium that was related to old or related to Bellemeade transactions on the ceded side, so generally speaking, I'd say the mortgage segment is relatively flat in terms of growth opportunities.

[10] Source: Bloomberg.

Essent

Q - Terry Ma

Okay. Got it. So if I look at the rate of increase year-over-year in new notices, it's kind of accelerated each of the last three quarters. Are we starting to see the effects of kind of vintage seasoning from some of the larger post-COVID vintages materialize more? And I guess going forward, how should we kind of think about how that kind of rate or trajectory evolves?

A - Mark A. Casale

Yeah. I mean, I would look at it -- we said this before. The portfolio is definitely seasoning. The average age is 32 months versus historically it was 18 months. There is a little bit of seasonality in the third and the fourth quarter. And you also have to mix in, Terry, just, again, the noise around forbearance. That probably exasperated both of the number of new defaults and the cures, people coming in and out of forbearance. That -- the rule changed last November-December. So I think we're starting to see a little bit of a normalization of that.

Looking forward, it's hard to tell. Again, we're still levered mostly to unemployment and pretty strong portfolio. Here is an interesting fact for you though. Just when you kind of think through the provision or the defaults starting to grow, one, they're right around 16,000 defaults at the end of the quarter. We were roughly 15,000 at the end of last year. So it's gone up, and I know you're talking about the ins and outs, but also take a step back with our defaults. I would say approximately 70% of the defaults, Terry, are '21 vintage and prior. The mark-to-market on those defaults is 61%. So even if they were to go to claim, the probability of us pushing cash out the door is pretty low. So just trying to put it in context of the whole portfolio and try to take a step back from the movement, again, we should see seasoning; you may see increasing defaults, but the probability of claim, which is when cash leaves the door, again, I think it's probably pretty low.

Q - Mihir Bhatia

Hi, good morning and thank you for taking my questions. I want to start on the claims -- on the default inventory. And I appreciate what you're saying, Mark,about them normalizing, increasing, but just quarter-over-quarter, I mean, you're up almost 2,000 in the default inventory. That's a bigger jump than we've seen. And I'm just trying to understand, was there anything this quarter unusual like -- well, I guess maybe talk -- maybe give us some view on like '25 or like just as things normalize, what should the default rate do you think normalize to?

A - Mark A. Casale

Mihir, our inventory default jumped 1,500 from September of '23 to December of '23. So it's -- again, I think, again, I can't do your jobs for you. I do think -- I think there's going to -- there is a lot of noise with the ins and the outs because of forbearance. So what you're really seeing is you're not seeing some of the cure activity come through because it's kind of worked its way through forbearance. So it's more of a normalization of that. But I would say, yeah, given the environment and the seasoning, just again, 32 months, it wouldn't surprise me to see the defaults increase, but again, from a mark-to-market, I think we're relatively in a good position from claims. I think our loss provision for the quarter was 12%. So again, taking a step back, we never thought we'd run the business recession free. I don't think we're in a recession or anything close to it yet. So again, I think it's just normalization of the default inventory.

A - David Weinstock

And I would just add, I think this is really normal seasonality. I mean, Mihir, if you look pre-COVID, generally, what we would see is an increase in defaults in the second half of the year and starting with the third -- in the third and fourth quarters, kind of peaking out maybe in January and then kind of falling back in the first two quarters of the year. People catch back up, they get their tax refunds and become more current on their defaults. And I think this is just kind of -- we have had a lot of disruption from COVID and the normal trends. I think this is starting to come back to normal seasonality.

NMI

Q - Terry Ma

Hey. Thank you. Good afternoon. Maybe just starting with credit, the year-over-year increase in new notices this quarter accelerated, and the cure rate was also lower. So I'm just curious if there was anything episodic that you observed, or are we just starting to see more material impact of vintage seasoning kind of play a role?

A - Adam Pollitzer

Yeah, Terry, I'll take that. I'd say, broadly speaking, we are greatly encouraged by the credit performance of our portfolio overall, including the trends that you're noting in our default population. Some of that, obviously, is the broad resiliency that we continue to see in the housing market and strength of the economy. They set quite a favorable backdrop.

More importantly, though, our existing borrowers remain well-situated. We have an incredibly high-quality book by all objective measures, and we're continuing to see that translate through to industry-leading credit experience. At September 30th, our default rate was 87 basis points, which we track as the lowest in the industry by far. Our default count did increase, as you noted, in the third quarter. I'd say this, one, it should be expected, and it really reflects a combination of what we would call normal seasonal trends and also the growth and natural seasoning of our portfolio.

And I know there's been a lot of focus through the course of calls for the industry on these items, and so I do want to elaborate a bit and make sure that everyone fully understands what it is that we're talking about when we say seasonal and seasoning dynamics. In terms of seasonality, we typically see an uptick in default experience as we move through the second half of the year. In the first half of the year, borrowers benefit from what I'll call net cash inflows, right?

Some of them receive bonuses, and many more of them are receiving tax refunds, all of which bolsters credit performance in the first half. One, it helps borrowers who are in default cure out of their default status, and it also helps ensure that performing borrowers stay current on their loans. When we roll into the second half of the year, those net cash inflows are replaced by net cash outflows. In the third quarter, what we typically see is that those inflows themselves stop, right? It's not bonus season or time for tax refunds, and so that lack of inflow coming in into the third quarter causes a seasonal shift in credit experience. That seasonal shift then continues in the fourth quarter when many households increase their spending for the holidays, and so a new outflow actually comes in. That's what it is that we talk about when we see seasonal patterns in our credit performance, our default population, and default experience.

In terms of growth and seasoning, we've talked about this one for a while now. We simply have a larger portfolio and expect our default count will increase with the growth and natural seasoning of our book, particularly as our more recent 2022 and even 2023 production begin to come into a period of normal loss incurrence, and so that's really what came through. There's nothing else to it that we would point to in the third quarter.

Enact

Q - Bose George

Actually going back to credit, I wanted to ask what do you see as a normalized delinquency ratios for the portfolio as it seasons? And can you just talk about the timeline to -- as these portfolios to get fully seasoned.

A - Dean Mitchell

Yes. Bose, thanks for the question. So normal or average delinquency development curves generally start to increase, obviously from the books origination and generally peak between years three and years 4. Peak is a little bit of a misnomer.

It's kind of plateau.

So it kind of levels off generally in that 3- to 4-year time horizon and then takes 12 to 18 months, later it starts to fall.

But I think looking that on average is -- can be a challenge. The real answer to the question is the level of delinquencies on each book is very dependent on both the credit characteristics of the insured loans as well as the macroeconomic conditions that each book is really aging through.

If I try to crystallize that, maybe just by way of example, the 2021 book year, which saw a much heavier concentration in refinance originations.

So it has lower loan to values, it has lower debt to income, and it has marginally higher FICOs.

It also has meaningful embedded equity given the environment that it's seasoned through.

So we would expect that '21 book year to produce lower delinquencies than, say, the 2022 book which had a higher concentration of purchase originations, so higher LTVs, higher DTIs and marginally lower FICOs.

It also -- the '22 book, while it has some embedded equity for sure, it has less than the 2021 book.

So there's really no rule of thumb, I think, that I can provide. And I think it probably feels a little too grainy to go book year by book year.

But the average is, as I suggested, and the books are going to vary depending on their credit characteristics and the macroeconomic conditions. And then the last thing I'd say, just on credit overall is just a reminder whether it's a '21 or '22 book, pure activity has remained very elevated, given these books still have a significant amount of embedded equity in them. Just to maybe crystallize that point, new delinquencies in the third quarter, 92% of our news had at least 10% embedded equity, 70% had at least 20% embedded equity.

So we're still seeing the impact of embedded equity on the cure activity. And when you put those two things together, I think we end up in a place where we characterized in our prepared remarks that we still believe overall credit performance remains very strong through the third quarter.

MGIC

Q - Terry Ma

Got it. Okay. And then maybe any color you're seeing on just performance of the 2022 and 2023 vintages, you already kind of mentioned that the cure rates are coming in better than your expectations. Maybe you can just talk about entry into default. It looks like the '22 and '23 curves are kind of performing worse than '21. So as we kind of look forward and those season more, should we kind of expect the total default rate to kind of start exceeding the kind of pre-pandemic levels? Thank you.

A - Nathan Colson

Terry, it's Nathan again. I mean, I certainly think over time that's possible. I mean, excluding potentially any impact from the hurricanes, I don't think that's likely to happen in the near term. I mean, like we said in the prepared remarks seasonally, our business has typically -- we've seen increases in the delinquency rate in the back half of the year and then decreases in that rate certainly in the first quarter, and oftentimes, in the first half of the year. And we saw that last year, the delinquency rate increased 16 basis points or 17 basis points in the first half of the year -- I'm sorry, and -- that's right, and then decreased in the -- or sorry, rather increased in the second half of the year.

We saw the same decrease in the first half of this year. The increase in Q3 here, 15 basis points versus, I think, it was 10 basis points in the third quarter last year is in line with what we expect. And as you can see on those delinquency curves, I do think that the 2022 vintage looks like it is performing kind of marginally worse from a new delinquency perspective than the other books around it, either '21 or '23. But these are still very, very good levels. And the other thing that we track is looking at how different cohorts are curing, what is the cumulative cure rates at various points in time.

And if we look at that by vintage, we really don't see much difference right now. So while it's something that we'll continue to monitor, and if there is something of note to report, we certainly will. I think right now, think that all the books, vintages are performing quite well, both from a new delinquency perspective, and once loans are delinquent, how are they curing. I think the kind of cumulative cure rates continue to be quite strong, which again has led to significant favorable development for us this quarter.

Radian

Q - Mihir Bhatia

Thank you. And then turning to defaults and really cures more than defaults. For many quarters now, you all have had very elevated cure rates and been releasing significant number of reserves. And I guess the question I have is, when does that become like part of your history where you start actually lowering the claim rate and taking less reserves upfront or is the thought process that it's better to be conservative, take the reserves upfront and then just release when they cure.

A - Sumita Pandit

Yeah. I think it's a good question. And I would say that when we think about our reserve assumptions, we always try to be prudent and we always try to look at it through the cycle. So clearly, like the claim rates we see today, they are very low and we are obviously focused on making sure that the accounting assumptions we make are longer-term and through the cycle.

So, I think that's the reason why we've kept our 8% default to claim rate unchanged, even though as you rightly pointed out, our actual claim experience is very, very benign. So, we don't see that environment to necessarily change our accounting assumptions and we would like to continue to be prudent.

Q - Mihir Bhatia

Can I ask when was the last-time you all hit the 8% claim rate, like any vintage that has hit that?

A - Sumita Pandit

No, none of the -- none of our current vintages, and I would say it's been a while.

A - Richard Thornberry

Yeah. I think probably the answer to that would be some time prior to COVID. I don't remember the exact timeline, but if you remember back, I got here in 2017, we were actually coming down off the great financial crisis from a default to claim assumption. And so I think to your point, Mihir, it's one of those things where we're -- as Sumita said, we're really looking forward versus like at a point in time and then we monitor that default portfolio performance.

And as you look at our schedule and the materials that we provide, we call it the triangle schedule. You can see how consistent that cure rate has been for a period of time. But I would say, pre-COVID, we were coming down off the great financial crisis. And so as we look at, kind of, the modeled losses going forward, we try to anticipate that in the reserve because remember, we reserve when loans go 2 times delinquent in default.

The other thing I would just highlight, which is just more good news is when we price, when Derek and the team price, we price through an anticipated kind of loss assumption kind of going forward. And so all the business that we've been writing that is going through that default cycle is far outperforming our pricing, which is, resulting in greater-than-expected returns on the business we wrote in previous periods.

And so when that turns, going back to Sumita's comment, we try to have a through-the-cycle view and we'll continue to try to think through sustainable trends that could influence that. We do, however, believe that the housing cycle today, remains generally positive with the supply-demand imbalance and that's giving consumers more opportunities to solve their own default and retain their equity.

So we're going to continue to monitor it closely, but it's been an extremely favorable trend that, all we can do is continue to evaluate, monitor as we go forward from an accounting point of view.

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