

Research

Radian Group Inc.

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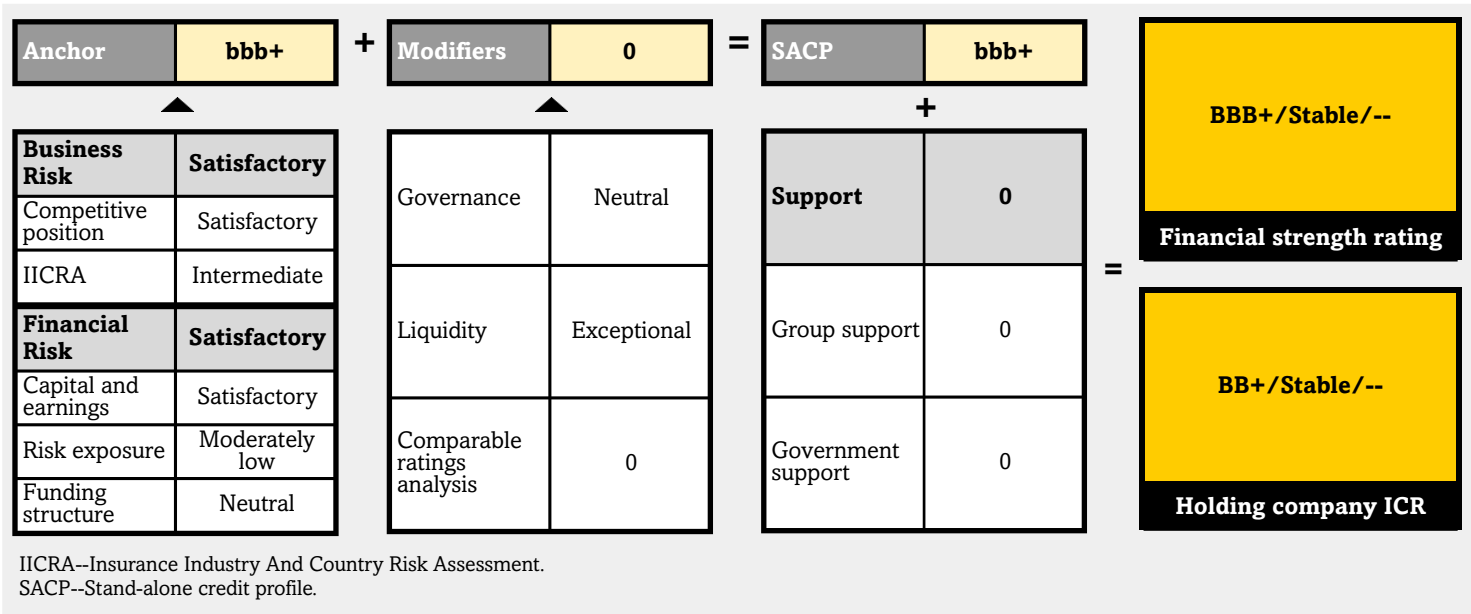
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Radian Group Inc.



Credit Highlights

Overview	
Key strengths	Key risks
One of the leading U.S. mortgage insurers, with a diverse lender base and geographic footprint	Macroeconomic headwinds, which could weigh on near-term loss ratios and earnings
Strong underwriting quality and pricing of post-financial-crisis vintages	Potential for lower returns from the decline in net premium yield
Improved capitalization supported by earnings accrual, home price appreciation, a reduction in delinquencies, and substantial reinsurance utilization	Commoditized business that is vulnerable to systemic risks and exposed to structural changes in the housing finance market

U.S. macroeconomic headwinds could result in elevated loss ratios for Radian Group Inc., though we expect earnings will be able to absorb any losses. S&P Global Ratings economists expect the U.S. economy to fall into a shallow recession in the first half of 2023. We expect the unemployment rate will peak at 5.6% in the fourth quarter before gradually descending to 4.7% by fourth-quarter 2025. And with the rise in the unemployment rate, we expect mortgage delinquencies to increase, resulting in elevated loss ratios. However, mortgage insurers' strong underwriting portfolio quality, significant home equity cushion, and substantial reinsurance protection could enable Radian's earnings to absorb potential losses. In addition, we think rising mortgage rates could have a modest impact on Radian's existing underwriting portfolio because more than 95% of the loans underwritten are fixed-rate mortgages with terms of 30 years or more. Nonetheless, we believe loans underwritten in 2022 and beyond could be more vulnerable. Therefore, maintaining underwriting discipline, effective risk selection, and exposure management could be key to Radian navigating through these economic pressures.

We expect Radian's risk-adjusted capitalization to remain well redundant at the 'BBB' stress level through 2024. The company's risk-adjusted capitalization, as measured by S&P Global Ratings' risk-based capital adequacy model, had

improved materially as of year-end 2021, and we expect that it ended 2022 at similar levels. The reduction in delinquent loans, along with substantial house price appreciation, has resulted in lower expected losses, thereby significantly reducing capital requirements. While the company entered this stressed macroeconomic environment with strengthened capital, we believe capital requirements through 2024 could increase. This is because we anticipate rising mortgage delinquencies, growing insurance in force (due to a higher persistency rate), moderating home price appreciation, a continued decrease in portfolio premium yields, a potential increase in reinsurance costs, and a potential increase in some borrower risk metrics, like debt to income.

Radian is one of the leading players in U.S. mortgage insurance, with a diverse lender base and broad geographic reach. Radian's market share, based on 2022 new insurance written (NIW), is about 16.8%, supported by a diverse lender base that is largely anchored by long-standing relationships with national lenders and banks. We believe mortgage insurance in the U.S. is a commoditized product, with limited differentiation among the six private U.S. mortgage insurance players. Thus, we expect long-term market share to be prorated among these insurers. Nonetheless, Radian continues to make efforts to expand its business outside of mortgage insurance with its Homegenius segment. But this segment is still small compared with the mortgage insurance business and does not add materially to Radian's competitive position.

Outlook: Stable

The stable outlook reflects our expectation that, although risks persist, earnings will be able to absorb insured losses and capitalization will likely remain sufficiently redundant at the 'BBB' stress level, helped by Radian's access to reinsurance protection.

Downside scenario

We could lower our rating in the next two years if:

- Losses are higher than anticipated, such that they lead to a capital event or a deterioration in operating performance where it becomes significantly worse than that of Radian's peers;
- Capitalization is not materially redundant at the 'BBB' stress level; or
- The company intends to manage its financial leverage above 30%.

Upside scenario

We don't anticipate raising our rating during the next two years. However, we could raise the rating if U.S. economic and housing fundamentals are supportive and if:

- Risk-adjusted capitalization sustainably strengthens to a level that is sufficiently redundant at the 'A' stress level; or
- The company demonstrates strong underwriting discipline and risk controls, supporting sustainable risk-adjusted returns through the cycle that are better than those of its peers.

Assumptions

- Real U.S. GDP growth of -0.1% in 2023, 1.4% in 2024, and 1.8% in 2025
- 10-year U.S. Treasury note yield of 3.9% in 2023, 3.4% in 2024, and 3.3% in 2025
- U.S. core Consumer Price Index increase of 4.7% in 2023, 2.8% in 2024, and 2.4% in 2025
- Unemployment rate of 4.9% in 2023, 5.3% in 2024, and 4.8% in 2025
- Payroll employment of 152 million in 2023, 151.5 million in 2024, and 152.6 million in 2025
- Declining mortgage originations in the sector for 2023-2024 due to significant drop-in refinance activity

Radian Group Inc.--Key Metrics

	2024f	2023f	2022	2021	2020
New insurance written (mil. \$)	*	*	67,954	91,830	105,024
Change in new insurance written (%)	Flattish	Low-teens to mid-teens decrease	(26.0)	(12.6)	47.2
Insurance in force (mil. \$)	*	*	260,994	245,972	246,144
Change in insurance in force (%)	Mid-single-digit increase	Mid-single-digit to high-single-digit increase	6.1	(0.1)	2.3
Mortgage insurance segment--net premiums earned (mil. \$)	925-975	900-950	957.2	998.3	1,092.8
Change in net premiums earned (%)	Low-single-digit increase	Low-single-digit decrease	(4.1)	(8.6)	(3.6)
Combined ratio (%)	48-53	50-55	(8.8)	27.2	65.4
Net income attributable to all shareholders (mil. \$)	375-425	350-400	742.9	600.7	393.6
Consolidated return on shareholders' equity (%)	High single digits to low double digits	High single digits	18.2	14.1	9.4
S&P Global Ratings' risk-adjusted capital adequacy	Materially redundant at BBB	Materially redundant at BBB	Redundant at A§	Redundant at A	Materially redundant at BBB
Financial leverage including net present value of operating leases treated as debt and tax-adjusted pension deficits (%)†	Low 20s to mid-20s	~25	27.3	25.7	25.5
EBITDA fixed-charge coverage (x)	>8	>8	13.5	10.3	7.5

*Not disclosed. §Projected. †Excludes Federal Home Loan Bank borrowings. f--Forecast.

Business Risk Profile: Satisfactory

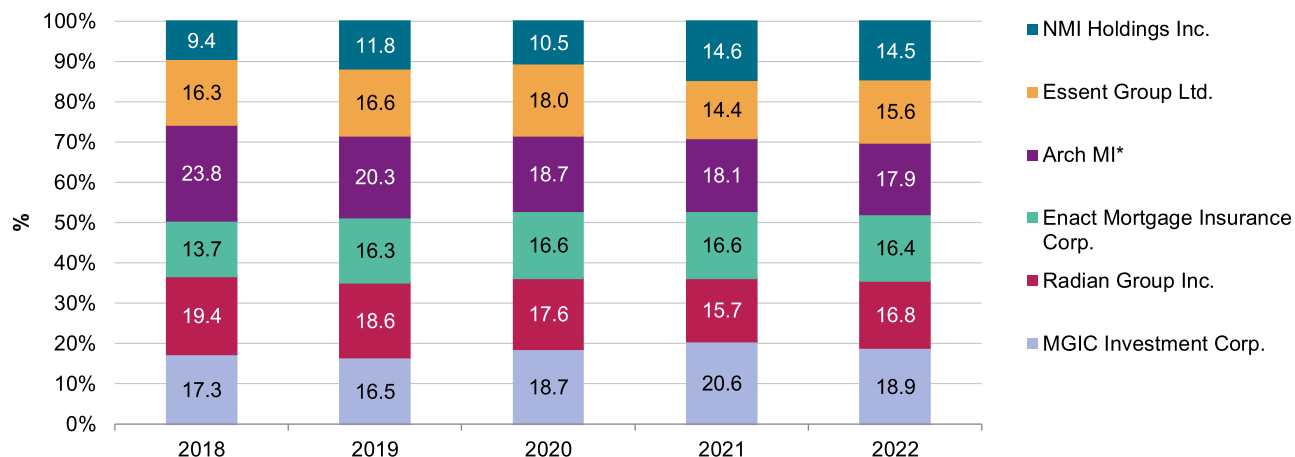
Radian is a major, longtime player in the U.S. mortgage insurance sector with a national footprint. Its business is supported by a diverse lender base, largely anchored by long-standing relationships with national lenders, banks, and credit unions. Its portfolio credit quality is strong and has propelled strong earnings in recent years.

However, the commoditized monoline business and systemic exposure to the economy and housing market constrain our view of the company's business profile. Its Homegenius segment, which includes title, real estate, and technology products and services, is growing but still needs time before it can contribute meaningfully to the overall business. We

also believe the Homegenius segment, along with the company's core mortgage insurance operations, will feel the strain from slowing mortgage originations.

Chart 1

U.S. Private Mortgage Insurers--Market Share By New Insurance Written



*Arch Capital Group Ltd.'s U.S. primary mortgage insurance business. Sources: Company filings and S&P Global Ratings.

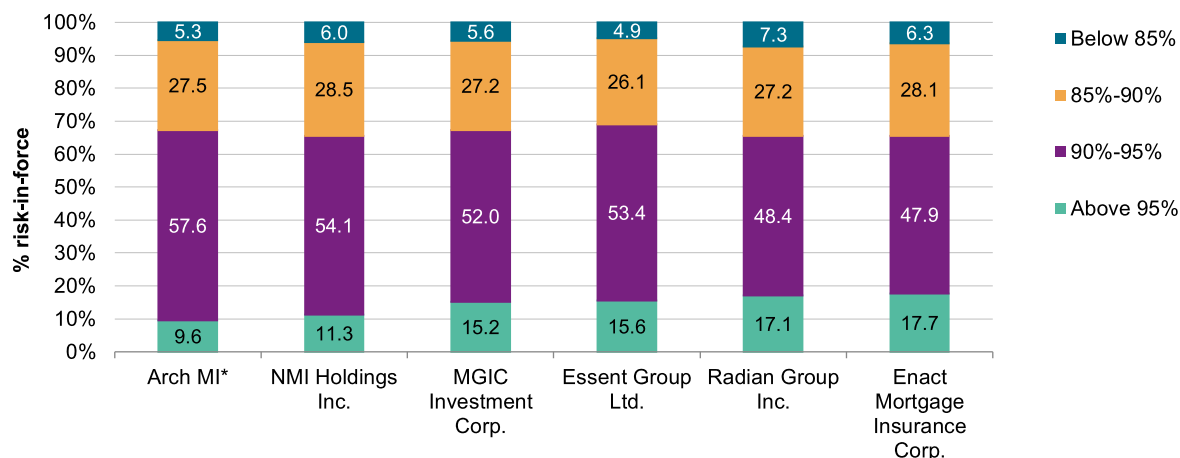
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In 2022, Radian's NIW fell to \$68 billion from \$91.8 billion in 2021 because of a significant slowdown in refinancing activity. We expect NIW will continue to decline as mortgage originations slow. The Mortgage Bankers Assn. projects mortgage originations in 2023 will decline to \$1.8 trillion from \$2.2 trillion in 2022. However, with increasing persistency rates (i.e., a lower lapse rate), we expect the company's insurance in force (IIF) to grow, offsetting the impact on premiums written due to lower mortgage originations.

We believe Radian will maintain its position as one of the leading players in the sector. Given the adoption of risk-based pricing by the sector at large, market share can move around quickly. However, we expect market share to be generally even across all mortgage insurers, since they're all part of a competitive market for a commoditized product. Nonetheless, we believe more sophistication in pricing will be key to managing risk and could be a competitive advantage.

Chart 2

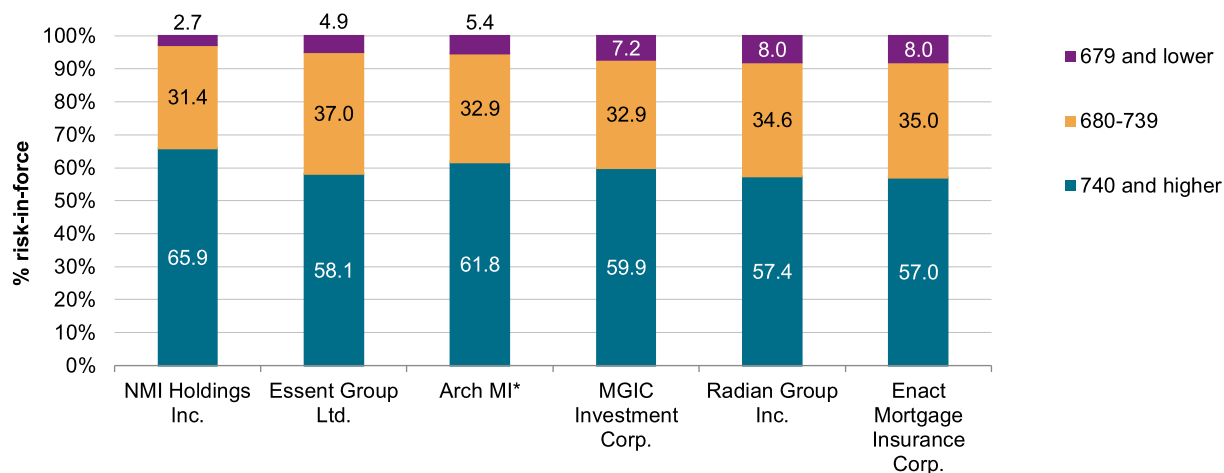
Mortgage Insurance Portfolio Risk-In-Force Distribution By Loan To Value
As of Dec. 31, 2022



*Arch Capital Group Ltd.'s U.S. primary mortgage insurance business. Source: Company filings.
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Chart 3

Mortgage Insurance Portfolio Risk-In-Force Distribution By Credit Quality (FICO)
As of Dec. 31, 2022



*Arch Capital Group Ltd.'s U.S. primary mortgage insurance business. Source: Company filings.
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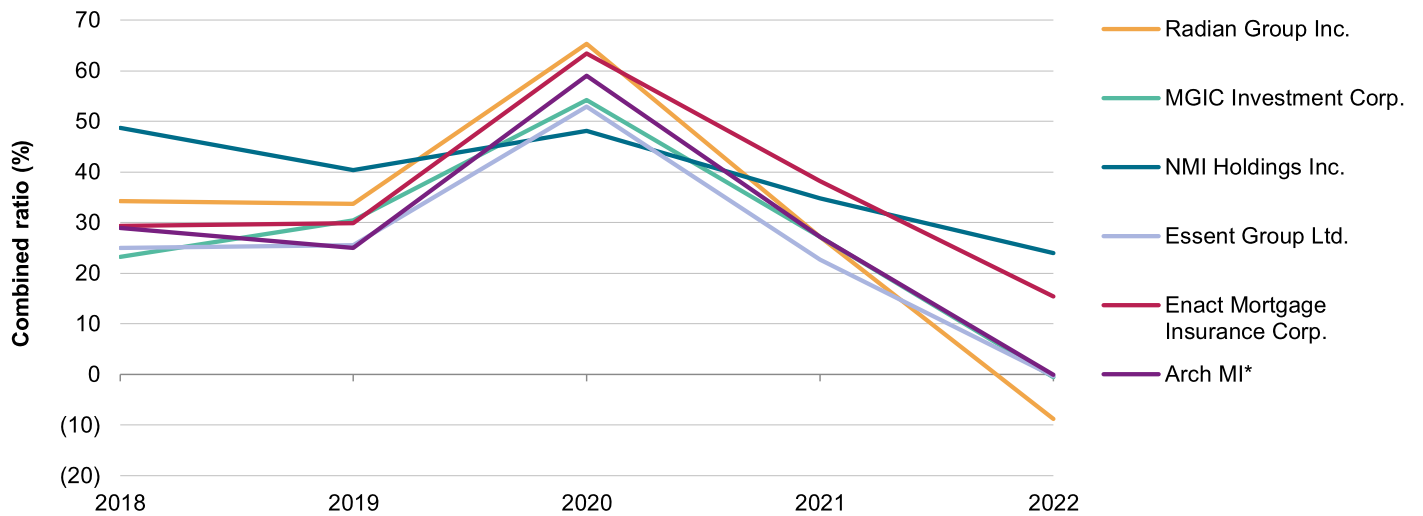
Mortgage portfolio credit quality remains sound as a result of tightened underwriting after the 2008-2009 financial crisis, the company's efforts to better manage its risk exposure, and better pricing. A key development is Radian's

risk-based pricing engine (RADAR), which enabled the company to implement price increases and manage risk quickly in response to changing market conditions after COVID-19 emerged. The tighter underwriting standards and improved credit quality of the in-force book are reflected in the company's strong underwriting performance. Radian's average combined ratio over the past five years (2018-2022) was 30.3% (under 100% indicates an underwriting profit), with a loss ratio of 6.5% and an expense ratio of 23.8%.

The U.S. economy's strong post-pandemic recovery resulted in significant cure activity (i.e., borrowers restarting their mortgage payments), which more than offset new notices of default. As a result, the company released reserves established for COVID-19 incurred losses in 2020, leading to a loss ratio of -35.5% in 2022 and a combined ratio of -8.8%. The delinquency rate dropped to 2.18% in 2022 from a high of 6.52% in June 2020. Radian's book of business, however, is still influenced by its exposure to pre-2008 vintages, which can lead to higher loss ratios. While these vintages represented only 3.5% of IIF, they accounted for 25.9% of the overall delinquency count as of year-end 2022.

Chart 4

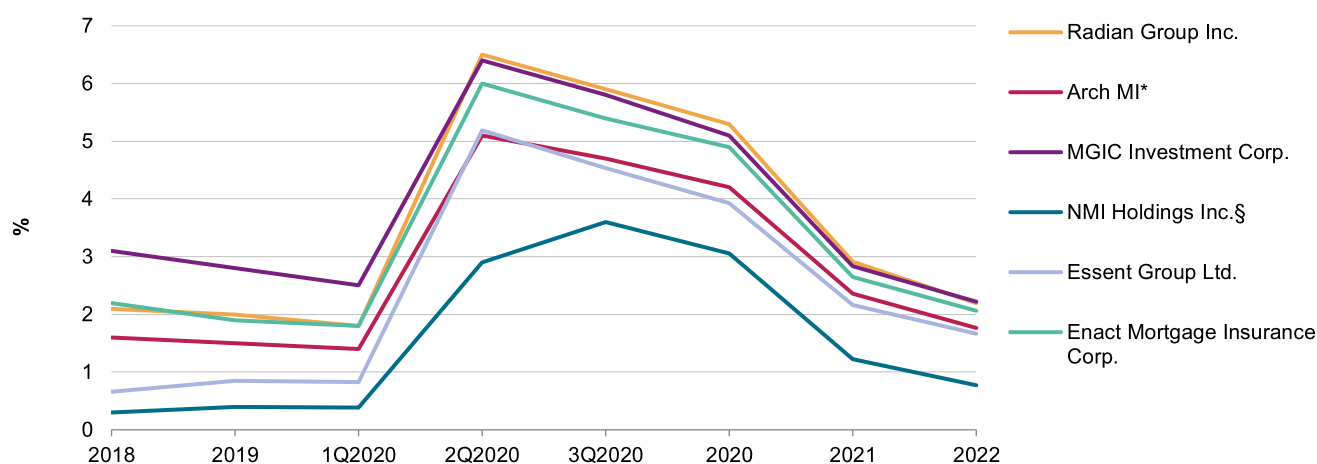
U.S. Private Mortgage Insurers--Underwriting Performance



*Arch Capital Group Ltd.'s U.S. mortgage insurance business. Source: Company filings. Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

Chart 5

U.S. Private Mortgage Insurers--Historical Delinquency Rate



*Arch Capital Group Ltd.'s U.S. mortgage insurance business. §Because NMI Holdings Inc.'s delinquency reporting is slightly different from that of the sector, its reported peak delinquency ratio lags the sector by one month. Source: Company filings.

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Our expectations for the company's performance in 2023-2024 are tempered by the potential for elevated losses, given the tough economic conditions and our view that rising unemployment rates could result in an increase in mortgage delinquencies. We expect Radian's combined ratio to be 50%-55% in 2023 and 48%-53% in 2024.

S&P Global Ratings economists expect that the U.S. will fall into a shallow recession in the first half of 2023 and that the unemployment rate will rise and peak in the fourth quarter (see "Economic Outlook U.S. Q1 2023: Tipping Toward Recession," Nov. 28, 2022). We expect housing activity to remain subdued in 2023-2024 and mortgage originations (according to the Mortgage Bankers Assn.) to remain low in 2023 before gradually improving in 2024.

Financial Risk Profile: Satisfactory

Radian's risk-adjusted capitalization was redundant at the 'A' stress level as of year-end 2021. The continued reduction in delinquent loans and persistently strong home price appreciation have led to a substantial home equity cushion, resulting in reduced loss severity in the underlying loan portfolio and stronger capitalization.

However, we think that prospective capital requirements could increase because of continued expansion in IIF, elevated delinquencies, moderating house price appreciation, lower premium yields, potentially higher reinsurance costs, and expected increases in borrower and loan risk metrics, like debt to income and loan to value.

Furthermore, mark-to-market investment losses, along with the company's dividends and share repurchases, could hinder capital growth, though these factors are partially offset by strong earnings accrual. In 2022, shareholders' equity fell by 7.9% to \$3.9 billion, primarily because of realized and unrealized investment losses of \$658 million (which

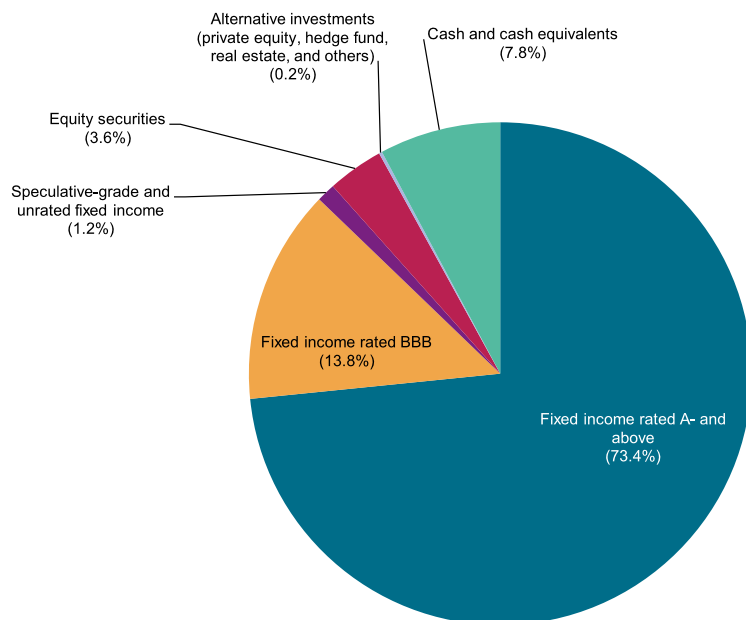
includes other comprehensive income losses on investments of \$577 million and investment losses reported above net income of \$81 million), largely offset by strong operating profits. Overall, we expect Radian's capital adequacy through 2024 will be well redundant at the 'BBB' stress level.

We expect the company will continue to effectively execute its reinsurance strategy, but its reliance on reinsurance to manage capitalization has been somewhat high. Of the asset and capital requirements as calculated under government-sponsored enterprises' Private Mortgage Insurer Eligibility Requirements (PMIERS) framework, about 24% were met by reinsurance as of the first nine months of 2022. While the use of reinsurance protection helps mitigate tail risks, heavy use can result in dependence and create uncertainty if it's not readily available--a dynamic we saw at the onset of the pandemic in 2020, when capacity became constrained. Radian did not access the insurance-linked notes market in 2022, but it has secured quota share protection, which provides 20% quota share reinsurance coverage on NIW from Jan. 1, 2022, to June 30, 2023. As of Sept. 30, 2022, Radian had \$1.6 billion (44%) of excess assets above PMIERS' minimum asset requirements.

We believe rising interest rates and difficult macroeconomic conditions will have a modest impact on existing loan portfolios, given the large concentration of fixed-rate mortgages and significant home price appreciation, which has materially added to the home equity cushion. However, the effect of macroeconomic headwinds could be evident in new business written. The significant jump in mortgage rates, along with higher home prices, has hurt affordability. This has suppressed borrower demand, and housing activity since early 2022 has slowed considerably. Existing home sales, which are the majority of home sales in the U.S., have decreased for 12 straight months going into January 2023.

Therefore, we expect NIW in 2023-2024 to be lower than 2022 levels. But given higher persistency rates (and lower lapse rates) on existing loans, IIF will likely continue to expand. We believe the growth in IIF could benefit mortgage insurers because underwriting expenses and reinsurance benefits could be optimized. However, we think new business written in 2022 and beyond could be more vulnerable to losses because borrowers will have a lower equity cushion, and risk metrics could be somewhat elevated. Thus, we think loss ratios could rise in the next two years. Furthermore, the larger vintages of recent years will approach their peak loss period in the next few years, which will push the normalized loss ratio higher, as well.

Radian's investments are primarily high-quality fixed-income securities, balanced with the higher volatility inherent in its underwriting mortgage exposure. Financial leverage as of year-end 2022 was 27.3%, up from 25.7% in 2021, mostly because of the reduction in shareholders' equity. However, we expect leverage to decline after that--to the low-to-mid 20s by 2024--as a result of earnings accrual and maturing debt. We expect fixed-charge coverage to remain above 8x for 2023-2024.

Chart 6**Radian Group Inc.'s Investment Portfolio Allocation As Of Year-End 2022**
% of total invested assets including cash

Reported on a generally accepted accounting principles basis. Source: Company filings.

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Other Credit Considerations

Governance

Radian is a publicly listed company with an independent board providing management oversight. The company has focused on improving its portfolio credit quality and strengthening its market position, although its move to create supplemental businesses to diversify earnings has not come to fruition. After the 2008-2009 financial crisis, Radian's appreciation for risk management increased, with the company focusing on developing a robust enterprise risk management framework and making considerable progress in risk controls, as well as pricing and underwriting models.

Liquidity

We view Radian's liquidity as exceptional owing to its high-quality investment portfolio and positive operating cash flow. In 2022, Radian generated \$388 million in cash from operations.

Factors specific to the holding company

Radian's dependence on dividends and payments (under expense-sharing agreements) from operating subsidiaries domiciled in the U.S., where structural subordination is higher, leads to a three-notch differential between our

long-term operating company ratings and the holding company rating. Under expense-sharing agreements, Radian's operating subsidiaries pay their allocated share of the holding company's interest payments and other expenses.

Environmental, social, and governance

ESG Credit Indicators

E-1	E-2	E-3	E-4	E-5	S-1	S-2	S-3	S-4	S-5	G-1	G-2	G-3	G-4	G-5
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ESG credit indicators provide additional disclosure and transparency at the entity level and reflect S&P Global Ratings' opinion of the influence that environmental, social, and governance factors have on our credit rating analysis. They are not a sustainability rating or an S&P Global Ratings ESG Evaluation. The extent of the influence of these factors is reflected on an alphanumerical 1-5 scale where 1 = positive, 2 = neutral, 3 = moderately negative, 4 = negative, and 5 = very negative. For more information, see our commentary "ESG Credit Indicators: Definition And Applications," published Oct. 13, 2021.

Environmental, social, and governance factors have no material influence on our credit rating analysis of Radian.

Accounting considerations

Radian files both U.S. generally accepted accounting principles and statutory financials. A mortgage insurer's loss reserve reflects management's expectation for paid losses on delinquent loans only, without any reserves set for mortgages that are currently performing. The assumptions for expected losses include, among other items, the default-to-claims rate and recovery. Therefore, the reported losses can increase significantly during periods of high unemployment and falling house prices.

Related Criteria

- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- Criteria | Insurance | General: Insurers Rating Methodology, July 1, 2019
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Insurance | General: Methodology: Mortgage Insurer Capital Adequacy, March 2, 2015
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011
- Criteria | Insurance | General: Refined Methodology And Assumptions For Analyzing Insurer Capital Adequacy Using The Risk-Based Insurance Capital Model, June 7, 2010

Related Research

- Economic Outlook U.S. Q1 2023: Tipping Toward Recession, Nov. 28, 2022

Business And Financial Risk Matrix

Business risk profile	Financial risk profile							
	Excellent	Very Strong	Strong	Satisfactory	Fair	Marginal	Weak	Vulnerable
Excellent	aa+	aa	aa-	a+	a-	bbb	bb+	b+
Very Strong	aa	aa/aa-	aa-/a+	a+/a	a-/bbb+	bbb/bbb-	bb+/bb	b+
Strong	aa-/a+	a+/a	a/a-	a-/bbb+	bbb+/bbb	bbb-/bb+	bb/bb-	b+/b
Satisfactory	a	a/a-	a-/bbb+	bbb+/bbb	bbb/bbb-	bb+/bb	bb-/b+	b/b-
Fair	a-	a-/bbb+	bbb+/bbb	bbb/bbb-	bbb-/bb+	bb/bb-	b+/b	b-
Weak	bbb+/bbb	bbb/bbb-	bbb-/bb+	bb+/bb	bb/bb-	bb-/b+	b/b-	b-
Vulnerable	bbb-/bb+	bb+/bb	bb/bb-	bb-/b+	b+/b	b/b-	b-	b-

Note: Where table indicates two possible outcomes, we determine the anchor as follows: For financial risk profiles that we assess as satisfactory or stronger, we consider the relative strength of both the business risk and financial risk profiles within the cell. This is based on a holistic assessment of the relative strengths of the rating factors of the business risk profile and financial risk profile. For financial risk profiles that we assess as fair or weaker, we typically place more weight on the relative strength of the rating factors of the financial risk profile.

Ratings Detail (As Of March 22, 2023)***Radian Group Inc.**

Issuer Credit Rating

Local Currency

BB+/Stable/--

Senior Unsecured

BB+

Related Entities**Radian Guaranty Inc.**

Financial Strength Rating

Local Currency

BBB+/Stable/--

Issuer Credit Rating

Local Currency

BBB+/Stable/--

Domicile

Pennsylvania

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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