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CREDIT OPINION
24 October 2019

Update

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RATINGS

Radian Guaranty Inc.

Domicile	PHILADELPHIA, Pennsylvania, United States
Long Term Rating	Baa1
Type	Insurance Financial Strength
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Radian Guaranty Inc.

Update following upgrade to Baa1

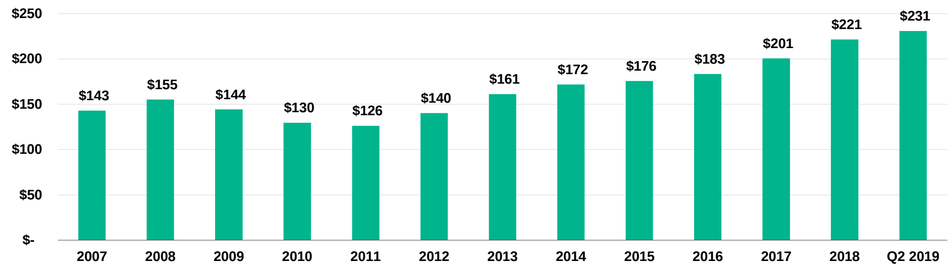
Summary

Radian Guaranty Inc. (Radian Guaranty) is the principal operating subsidiary of Radian Group Inc. (Radian Group – senior debt Ba1 stable), a US insurance holding company whose subsidiaries provide mortgage insurance to lenders and borrowers primarily for high LTV mortgage loans purchased by Fannie Mae and Freddie Mac (the GSEs). At Q2 2019, Radian Group had approximately $231 billion of direct primary insurance in force. Radian also owns several businesses that provide mortgage and real estate services.

Radian Guaranty's Baa1 insurance financial strength rating reflects its strong position in the US mortgage insurance market, its diverse customer base, comfortable cushion in its compliance with the GSEs' capital standards (PMIERs) and recent actions to extend its debt maturity profile and increase liquidity at the holding company. These strengths are tempered by the commodity-like nature of the mortgage insurance product the sensitivity of the mortgage insurance business model to economic conditions and the potential for price competition in the US mortgage insurance market.

Exhibit 1

Primary insurance in force trending higher
(USD Bil.)



Source: Company reports

Credit strengths

» One of the market leaders in the US private mortgage insurance sector

» Diverse customer base of lenders mitigates some of the challenges in a commodity business

» High quality post-2008 business written enhances profitability and capital growth

» GSE's risk-based capital requirements (PMIERs) increases protection for policyholders and creditors

» Reinsurance program mitigates tail risk in stress scenarios

Credit challenges

» Lack of unrestricted dividend capacity (though does have an interest and expense sharing agreement)

» Mortgage insurance is largely a commodity business

» Sector's fortunes are greatly influenced by lenders, the GSEs, public policy decisions, and other uncontrollable variables, including competition from the FHA and VA

» Price competition in the private US mortgage insurance market could adversely impact profitability

Outlook

On October 17, 2019, Moody's upgraded Radian Guaranty's IFS rating to Baa1 from Baa2. The outlook for the ratings is stable. Radian has improved its financial profile in recent years by reducing its financial leverage and improving its debt maturity profile. We expect the firm to continue to improve its financial leverage metrics through organic capital generation in the favorable environment for mortgage credit. Key items to watch include potential GSE reform and the role private mortgage insurers have following potential changes to the US housing finance system and the potential for increased price competition with the sector-wide adoption of black box pricing engines.

Factors that could lead to an upgrade

» More comprehensive reinsurance coverage on its entire insured portfolio

» Adjusted financial leverage in the 15% range

» Maintaining its top-tier market position in the US mortgage insurance market.

» Sustained PMIERs compliance with the maintenance of a comfortable capital adequacy buffer

Factors that could lead to a downgrade

» Non-compliance with PMIERs

» Decline in shareholders' equity (including share repurchases) by more than 10% over a rolling twelve month period

» Deterioration in the parent company's ability to meet its debt service requirements

» Adjusted financial leverage above 25%

Key Indicators

Exhibit 2

Radian Group Inc.

Radian Guaranty Inc. [1]	2018	2017	2016	2015	2014
New Insurance Written	56,547	53,905	50,530	41,411	37,349
Total Primary Insurance in Force	221,443	200,724	183,450	175,584	171,810
Total Primary Risk in Force	56,728	51,288	46,741	44,627	43,239
Net Income	606	121	308	287	960
Total Shareholders' Equity	3,489	3,000	2,872	2,497	2,097
PMIERs Sufficiency %	121%	116%	105%	NA	NA
Avg. NIW as a % of Total Industry NIW	11.5%	10.6%	9.7%	9.1%	12.3%
Prime loans % RIF	97.4%	96.6%	95.1%	93.9%	92.6%
Client Concentration	5.3%	6.6%	8.7%	11.3%	14.6%
Geographic Concentration	28.2%	27.6%	26.9%	26.8%	27.1%
Adjusted Risk to Capital	14.4x	14.0x	16.5x	18.2x	20.8x
Return on Capital (GAAP)	13.9%	3.0%	7.9%	8.1%	36.8%
Combined Ratio (SAP) [2]	41.0%	50.4%	60.4%	49.3%	62.4%
Cash Flow Coverage	0.0x	0.0x	0.0x	0.0x	0.0x
Adjusted Financial Leverage	24.2%	26.5%	28.0%	33.7%	36.7%
Total Leverage	25.6%	26.5%	28.0%	33.7%	38.3%

[1] Information based on US GAAP financial statements of Radian Group Inc. as of Fiscal YE December 31
[2] Information based on SAP financial statements of Radian Guaranty Inc. as of Fiscal YE December 31
Source: Company Reports, Moody's Investors Service

Profile

Radian Group is a leading provider of private mortgage insurance in the United States, primarily through Radian Guaranty. The company also provides risk management products and real estate services to financial institutions through Clayton and other non-regulated subsidiaries. At Q2 2019, Radian had approximately $231 billion of direct primary insurance in force and shareholders' equity of approximately $3.8 billion.

Detailed credit considerations

Moody's rates Radian Guaranty Baa1 for insurance financial strength, which is in line with the adjusted rating indicated by Moody's insurance financial strength rating scorecard.

Insurance financial strength rating

The key factors currently influencing the ratings and outlook are:

Market position: First tier market share and diverse customer base of lenders

Radian Guaranty's A score for market position reflects its strong market presence in the US mortgage insurance market. During the first six months of 2019, Radian Guaranty's private MI market share was approximately 18.8% (full year 2018: 19.4%), which places Radian Guaranty in the first tier of US mortgage insurers. Radian Guaranty has a diverse customer base of lenders, including many small and regional lenders that are sometimes more flexible in their dealings with insurers than the larger banks and mortgage lenders.

Radian's Mortgage and Real Estate Services business segment (primarily through Clayton) provides outsourced services, information-based analytics and specialty consulting for buyers and sellers of, and investors in, mortgage loans, real estate-related loans and securities and other asset-backed securities. In Moody's opinion, these operations complement Radian's MI business and provide the firm with useful insights into current housing and real estate market conditions.

Housing market attributes: Good demand for private mortgage insurance amid a favorable housing market environment

We assign the same score (currently A on an adjusted and unadjusted basis) for this rating factor to all of our rated US mortgage insurers.

I. Demand for mortgage insurance

The private mortgage insurance (PMI) industry is well established in the US with PMIs benefiting from the GSEs' requirement, under their federal charter, to use credit enhancement on mortgages with loan-to-value (LTV) ratios in excess of 80%. During 2018, the PMI industry's market share of insured loans was approximately 44%, up significantly from a low of 16% in 2009. While pre-crisis PMI market share peaked at 77% during 2007, this business included higher risk loans that are no longer within the risk appetite of the PMIs.

PMIs' franchises may come under pressure as a result of housing market reform. To the extent changes to the housing finance system result in a narrower role for the GSEs, the core franchises of PMIs would be adversely impacted. Competing products and providers of mortgage credit enhancement will also require the PMIs to adapt and evolve over time. While the timing and extent of housing finance reform could affect demand for mortgage insurance, PMIs currently benefit from the slow pace of GSE reform, which maintains the current status-quo.

The GSE capital standards under PMIERs require PMIs to hold significantly more capital relative to their risk-in-force, than was the case under the prior GSE capital requirements, or relative to capital levels required by state insurance regulators. While the PMIERs financial requirements are stringent, particularly for legacy PMIs, they provide a standardized risk-based approach to capital adequacy, and position the PMIs as viable counterparties and providers of private capital to the US housing finance market. Overall, we consider the PMIERs to be credit positive for the PMI industry.

II. Generic loan attributes

Overall, we consider the US mortgage market to be healthy, due to continued strong mortgage underwriting standards, the partial recourse nature of mortgage lending and strong loan servicing practices. Since the financial crisis, US PMIs have been writing business almost exclusively in the prime, first-lien segment of the mortgage market. We expect underwriting standards to remain prudent, though they have loosened somewhat over the past several years. As mortgage interest rates increase, purchase originations, which tend to be made to borrowers with lower credit scores, are expected to make up the significant majority of new mortgage loan volume.

Insured mortgage loans in the US are typically long-term, fixed-rate products with partial recourse to the borrower. While residential mortgage loans in the US are secured by the underlying property, lenders generally have no recourse beyond the property itself. The mortgage insurers also insure a material amount of highest LTV loans, though their >95% LTV new production has greatly declined since 2009. Historically, exposure to the highest LTV loans has made mortgage insurers more vulnerable to housing downturns.

III. Housing market conditions

We believe the current US housing finance environment is credit positive for the PMIs. Moderate interest rates (relative to historical standards) and steady house price appreciation have contributed to a robust housing market. Housing affordability metrics, which despite some weakening, remain above the long-term average on a nationwide basis, though certain metro areas, particularly those located on the East and West coasts of the US, have seen significant declines in housing affordability. Finally, expectations for macroeconomic fundamentals, including moderate GDP growth, and continued steady employment levels, support a stable underlying macroeconomic environment for the PMIs.

In addition to favorable housing and macroeconomic conditions, the sector could benefit from certain demographic factors. The below-trend homeownership rate, particularly among Millennials, has resulted in a build-up of potential homeowners and an expected pent-up demand for homes. A strong US economy, with good prospects for employment and the increased availability of mortgage credit are key factors that could contribute to an increase in the homeownership rate. PMIs would directly benefit from such a scenario since much of the demand for housing will be driven by first-time homebuyers that are typical users of mortgage insurance.

Capital adequacy: Improving capital adequacy with comfortable PMIERs cushion

Radian Guaranty's risk-adjusted capital adequacy continues to improve as the company's higher risk legacy exposures amortize. The company has made significant use of reinsurance over the past several years to manage its capital requirements under the PMIERs, including two issuances of insurance-linked notes (ILNs) totaling approximately $1 billion and has also sourced additional risk transfer protection through excess of loss and quota-share coverage in the traditional reinsurance market. Through these arrangements, Radian has reinsurance covering nearly all of its business written during 2017 and 2018, providing significant capital resources to absorb losses during periods of elevated mortgage credit losses. However, assuming Radian systematically uses ILNs to reinsure new business going forward, it will take time for Radian to have comprehensive reinsurance coverage on substantial majority of its risk in force.

Radian Guaranty has a comfortable PMIERs cushion. As of Q2 2019, the company had available assets of approximately $3.2 billion vs. required assets of $2.6 billion, resulting in a cushion of approximately 26% of required assets. The firm also maintains strong liquidity at the holding company that could be used to increase available assets at the operating company for PMIERs compliance purposes.

Profitability: Profitability improving as legacy business shrinks

During the first six months of 2019, Radian reported GAAP net income of approximately $338 million (6M2018: $323 million). The company's net income return on capital during 2018 was 13.9%. Profitability within the sector is likely to decline somewhat by the round of premium rate cuts that took effect in June 2018 as well as the industry's transition to "black box" pricing engines, which decreases price transparency in the market. However, we believe it will take a couple of years for new business written at lower premium rates to make a significant impact on overall realized premiums. We expect the US mortgage insurers to continue to post strong returns due to the run-off of legacy books, which lowers incurred losses, and the favorable macro-economic environment which is expected to keep defaults on more recent vintage loans low.

We lower the adjusted score for profitability to Baa from the unadjusted score of A to account for Radian's uneven profitability relative to its peers in recent years, which has included significant goodwill impairments related to the company's Mortgage and Real Estate Services segment.

Financial flexibility: Deleveraging and improved debt maturity profile has improved financial flexibility

Radian's improved liquidity at the holding company and the deleveraging that has occurred over the past several years are credit positive. Pro forma for the redemptions of 2020 and 2021 notes, Radian's adjusted debt to capital ratio was around 20% at Q2 2019. In addition to lowering its adjusted financial leverage, Radian has also extended its debt maturity profile, with the company's next debt maturity in 2024.

We raise the adjusted score for financial flexibility to Baa from the unadjusted score of Ba to account for the firm's tax, interest and expense sharing agreement which mitigates the lack of unrestricted dividend capacity.

Liquidity analysis

Radian Guaranty currently has no unrestricted dividend capacity due to its large negative unassigned surplus balance (Q2 2019: -$606 million). However, the firm is able to access funds at the operating company outside of ordinary dividends through a tax, interest and expense sharing agreement. As of Q2 2019, Radian Group had immediately available unrestricted cash and liquid investments of approximately $879 million and also had access to a $267.5 million revolving credit facility (currently undrawn).

Environmental, social and governance considerations

In line with our general view for the mortgage insurance sector, Radian has low exposure to environmental risks. While catastrophic events can cause a significant increase in mortgage loan delinquencies in affected areas post-event, the significant majority of these defaults typically cure within 6 to 12 months, as has been historically observed with past MI default activity following major hurricanes and floods. We note that US mortgage insurers are not responsible for physical damage to properties arising from catastrophes, as the contractual language in mortgage insurance master policies states that the mortgage insurer may deny a claim if physical damage to the property is the primary cause of the default on the mortgage loan. As a result, the owner of the mortgage loan (typically Fannie Mae or Freddie Mac) retains the risk of mortgage defaults resulting from uninsured or underinsured property losses arising from natural disasters.

Structural considerations

The three notch differential between the parent's Ba1 senior debt rating and Radian Guaranty's Baa1 insurance financial strength rating is Moody's standard notching for US insurance holding companies.

Methodology and scorecard

Exhibit 3

Radian Guaranty Inc.

Financial Strength Rating Scorecard [1][2]	Aa	A	Baa	Ba	<Ba	Score	Adjusted Score
Factor 1: Market Position (20%)						**A**	**A**
Avg. NIW as a % of Total Private & FHA NIW			11.1%				
Prime Loans (% of RIF)	97.4%						
Client Concentration		5.3%					
Geographic Concentration		28.2%					
Factor 2: Housing Market Attributes (25%)						**A**	**A**
Demand for Mortgage Insurance		x					
Generic Loan Attributes		x					
Housing Conditions		x					
Factor 3: Capital Adequacy (30%)						**A**	**Baa**
Adjusted Risk-to-Capital Ratio		14.4x					
Factor 4: Profitability (15%)						**A**	**Baa**
Return on Capital (after-tax) [3]		14.0%					
Combined Ratio		52.7%					
Factor 5: Financial Flexibility (10%)						**Ba**	**Baa**
Cash Flow Coverage [3]					0.0x		
Adjusted Financial Leverage [3]			24.2%				
Total Leverage [3]			25.6%				
Operating Environment						Aaa - A	Aaa - A
Aggregate Profile						**A3**	**Baa1**

[1] Information based on SAP financial statements as of Fiscal YE December 31
[2] The Scorecard rating is an important component of the company's published rating, reflecting the stand-alone financial strength before other considerations (discussed above) are incorporated into the analysis
[3] Information based on US GAAP financial statements of Radian Group Inc. as of Fiscal YE December 31
Source: Company Reports, Moody's Investors Service

Ratings

Exhibit 4

Category	Moody's Rating
RADIAN GUARANTY INC.	
Rating Outlook	STA
Insurance Financial Strength	Baa1
RADIAN GROUP INC.	
Rating Outlook	STA
Senior Unsecured	Ba1

Source: Moody's Investors Service

Moody's related publications

Sector Research

- » Mortgage Insurance – US: US housing finance reform plans have limited impact on private mortgage insurers (September 2019)
- » Mortgage Insurance - US: 2Q 2019 earnings rise on portfolio growth and low losses (August 2019)
- » Mortgage Insurance – US: 4Q 2018 earnings unscathed by market volatility (March 2019)
- » Mortgage Insurers – US: 2Q 2018: Strong performance in line with positive outlook (August 2018)
- » Reinsurance - Global: Growing momentum in reinsuring US mortgage credit risk (July 2018)
- » Mortgage Insurance - US: Premium rate cuts highlight competitive pressures, a credit negative (April 2018)
- » Mortgage Insurance - US: Arch, Freddie Mac pilot program targets private capital to grow risk transfer market (April 2018)

Industry Outlook

- » Mortgage Insurance - US: 2019 outlook positive on strong profitability, mortgage credit fundamentals (November 2018)

Rating Methodology

- » Mortgage Insurers (May 2018)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

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