



45
YEARS

OF ENSURING THE
AMERICAN DREAM

radian

ANNUAL REPORT 2022

OUR CORE VALUES

DELIVER THE BRAND **Promise**

We are a customer-centric enterprise striving to be the market leading brand as defined by our customers.

INNOVATE FOR THE **Future**

We embrace innovative technologies to strategically differentiate the delivery of our products and services.

CREATE SHAREHOLDER **Value**

We build long-term shareholder value through sustainable growth and profitability.

OUR PEOPLE ARE THE **Difference**

We recognize that our people make the difference in our franchise.

DO WHAT'S **Right**

We will always do the right thing, without compromise.

PARTNER TO **Win**

We recognize that we cannot reach our goals alone, so we will develop intelligent strategic alliances with best in class partners.

Chief Executive Officer's LETTER TO OUR STOCKHOLDERS

In 2022, Radian celebrated 45 years of helping families achieve their dream of homeownership in a responsible and sustainable way. Since the beginning, we have maintained an unwavering focus on products and services that support our customers, communities and mission. And in 2022 alone, despite headwinds in the macroeconomic environment and continued cooling across the mortgage and real estate markets, we helped more than 220,000 families buy a home or lower their monthly mortgage payments through refinance. I am incredibly proud of our team's accomplishments and of our success in serving such an important role in the housing industry.



We provide mortgage insurance and other products and services to the real estate and mortgage finance industries through our two business segments, *mortgage* and *homegenius*. While the operating environment is challenging today for the markets we serve, our outlook for housing remains positive over the long term. And our business is benefiting from higher persistency rates, which is the percentage of insurance that remains in force over a period of time, across our \$261 billion dollar insurance in force portfolio. This portfolio is expected to continue delivering significant future earnings for our company.

For 2023, recent industry mortgage origination forecasts call for a continued decline in the mortgage origination market followed by a return to growth in 2024 with increased mortgage purchase loans and expected strong participation by first-time homebuyers. And while the shortage of affordable housing combined with the strong market demand has created affordability challenges for first-time home buyers today, it continues to bolster home values, which is a positive for our mortgage insurance portfolio as it helps to mitigate downside risk. The supply shortage is also creating pent up demand, which is expected to drive purchase market growth in 2024 and beyond.

From a strategic perspective, our team remained focused throughout 2022 across three areas of value creation:

1. Growing the economic value and the future earnings of our mortgage insurance portfolio
2. Growing our homegenius business
3. Managing our capital resources

Growing the economic value of our mortgage insurance portfolio

By leveraging our proprietary analytics and RADAR® Rates platform, along with our deep customer relationships and dynamic pricing strategies, we wrote \$68 billion of high-quality mortgage insurance business in 2022. This contributed to more than 6% growth year-over-year in our \$261 billion insurance in-force portfolio, which is the primary driver of future earnings for our company. We continue to calibrate our dynamic risk-based pricing to address the risks and opportunities that we see in the market, including through price increases in 2022 that have continued in 2023.

While we believe the volume of new mortgage insurance business that we write will slow over the next year, we also expect to see continued opportunity to put our capital to work at attractive risk-adjusted returns. Importantly, as noted above, the higher mortgage interest rates that are impacting volume are also driving higher persistency across our mortgage insurance portfolio. The increase in interest rates has also resulted in higher yields across our \$5.8 billion investment portfolio. These higher yields support returns on our mortgage insurance business and generate incremental income that flows directly to our bottom line.

Growing our homegenius business

During 2022, we experienced a decline in homegenius revenues due to the rapid decrease in industry-wide mortgage and real estate transaction volume. In response, we made adjustments to our homegenius cost structure over the second half of 2022 to better align with this challenging market environment. We remain focused on building awareness of our homegenius suite of products and services and the growth opportunities for this business.

Managing our capital resources

We continue to maintain a strong capital position with significant excess resources above our required capital levels. Our primary mortgage insurance subsidiary, Radian Guaranty, held \$5.6 billion of Available Assets under PMIERS as of December 31, 2022, which was \$1.7 billion or 45% above our required level. In addition, our holding company, Radian Group, maintained nearly \$1.2 billion of total liquidity as of December 31, 2022. In 2022, we also entered into a new quota share reinsurance agreement as we continue to execute on our strategy to aggregate, manage and distribute mortgage credit risk. As of December 31, 2022, 70% of Radian Guaranty's primary mortgage insurance risk in force is subject to some form of risk distribution.

We have prudently and strategically managed our capital resources, while opportunistically repurchasing shares and paying the highest yielding dividend in the industry to stockholders. We returned significant capital to our stockholders in 2022, paying dividends of \$135 million and purchasing \$400 million of Radian Group common stock, which represented 11% of total shares outstanding. And in January 2023, our Board of Directors approved a new share repurchase program of \$300 million over two years. We also increased our quarterly dividend for the fourth consecutive year in 2023 to \$0.225 per share, representing a total increase of 80% over the past three years.

We took several steps in 2022 to further increase our financial flexibility and enhance our capital position. In the fourth quarter we completed a series of capital actions that resulted in a \$382 million distribution from Radian Guaranty to Radian Group. And for the first time since the beginning of the Global Financial Crisis more than 15 years ago, Radian Guaranty is positioned to resume paying recurring ordinary dividends to Radian Group this year, which we project to be between \$300 and \$400 million in 2023. Ordinary dividends in 2024 and beyond are expected to approximate Radian Guaranty's ongoing statutory earnings.

Based on the macroeconomic and market-driven headwinds I mentioned earlier, we continue to make the necessary adjustments to manage our expense structure across our businesses, with a focus on driving greater operational efficiency. While this effort has involved very difficult decisions related to our people, I am pleased with the team's focus on addressing the dramatic market shift and I believe the adjustments we have made will help position us as a stronger and more agile competitor, while continuing to deliver exceptional service to our customers.

Throughout the year we also made progress in expanding and strengthening our programs for Environmental, Social and Governance (ESG) and for Diversity, Equity and Inclusion (DEI). I am proud of our progress as well as the external recognition of our efforts:

- In addition to our annual Corporate Responsibility Report, we expanded our disclosure on Radian's environmental impact, including publishing a Task Force on Climate-Related Disclosures (TCFD) Report and disclosing our Greenhouse Gas emissions data.
- We made significant progress towards our multi-year DEI roadmap, developed key performance indicators measuring DEI and published our inaugural DEI Report. We also expanded our Employee Resource Groups by launching our fourth, *Radian Salutes*, which focuses on supporting veterans, military spouses and their families.
- We were recognized by the Bloomberg Gender Equality Index for the fifth consecutive year; increased our score for the fourth consecutive year for the Human Rights Campaign focused on equality for the LGBTQA+ community; were recognized for the gender balance of our Board of Directors by 50/50 Women on Boards and designated as a Champion of Board Diversity by The Forum of Executive Women for the second consecutive year.

While we are extremely proud of our success over the years in ensuring the American dream of homeownership, we know we are in a unique position to do even more. As a cornerstone partner of the Mortgage Bankers Association (MBA) CONVERGENCE Philadelphia initiative, we look forward to the launch this year and to working together with the MBA and other local partners to help address homeownership barriers for people and communities of color.

Finally, last month we announced the addition of Fawad Ahmad to our Board of Directors, the fifth director that we have added to our Board since 2019. Fawad brings an important perspective of the digital transformation occurring across the financial markets, and more broadly the consumer markets, that will benefit our mortgage and homegenius teams. We welcome the addition of his exceptional experience leading innovative digital, data and analytics organizations to Radian's experienced and talented Board.

I am pleased with our success in 2022. While we continue to navigate through the reality of lower industry volumes for the near term, we will remain nimble in this economic climate, leveraging our outstanding customer relationships, our diversified set of innovative products and services and our financial strength and flexibility, as well as our experienced and passionate team, to provide the solutions our customers need and to drive our future success. Our results in 2022 were driven by the hard work of our talented team, who continue to support our customers, launch new products and create new technologies to make doing business with us faster and easier. I would like to also thank our customers, business partners, investors and Board for their support in helping us deliver such excellent results in 2022.



Rick Thornberry
Chief Executive Officer
March 31, 2023

2022 HIGHLIGHTS

FINANCIAL HIGHLIGHTS



\$743 mm

Net Income



\$4.87

Adjusted Diluted Net Operating Income Per Share¹



\$24.95

Book Value Per Share



\$261.0 bn

Primary Insurance in Force



\$68.0 bn

New Insurance Written



\$1.7 bn

PMIERS Excess Available Assets²



\$1.2 bn

Total Holding Company Liquidity



\$400 mm

Shares Repurchased
(11% of Shares Outstanding)



\$137 mm

Declared Dividends & Dividend Equivalents

ESG AND DEI

Radian is committed to corporate responsibility and the **Environmental, Social and Governance (ESG)** initiatives that support our employees, customers, stockholders and communities. These initiatives, which include our **Diversity, Equity and Inclusion (DEI)** program, are integrated into our culture and our strategic priorities and we are committed to reporting on our progress in a clear and transparent manner.

In 2022 we made progress in strengthening our ESG and DEI programs:

- Expanded our disclosure of Radian's environmental impact, including publishing a Task Force on Climate-Related Disclosures (TCFD) Report and disclosing our Greenhouse Gas emissions data for Scopes 1 and 2 aligning to TCFD framework principles;
- Maintained an Executive Inclusion Council (EIC) making significant progress towards our multi-year DEI roadmap, developed key performance indicators (KPIs) measuring DEI, expanded our Employee Resource Groups (ERGs), published our inaugural DEI Report; and
- Held an ERG Summit for our DEI leaders and held Days of Understanding sessions based on our pledge with CEO Action for Diversity and Inclusion.

We were also recognized for our efforts:



Recognized as a champion of board diversity for having at least 30% women directors as of 2022

Selected five consecutive years for Bloomberg Gender-Equality Index, for commitment to advancing women's equality



CEO ACTION FOR DIVERSITY & INCLUSION

Signed pledge, committing to cultivating an environment where all ideas and employees are welcomed

Signed the MBA's Home for All Pledge to promote inclusion in housing



Recognized for addressing LGBTQ+ equality in the workplace

Awarded a 3+ to recognize our number of women directors as of 2022



¹Non-GAAP Financial Measures

On a consolidated basis, adjusted pretax operating income and adjusted diluted net operating income per share are non-GAAP financial measures. See pages 80 through 82 for our definitions of these and our other non-GAAP financial measures, including reconciliations of the most comparable GAAP measures of consolidated pretax income and diluted net income per share to our non-GAAP financial measures for the consolidated company of adjusted pretax operating income and adjusted diluted net operating income per share.

²Represents Radian Guaranty's excess or "cushion" of Available Assets over its Minimum Required Assets, calculated in accordance with the PMIERS financial requirements in effect as of December 31, 2022.

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2022

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission file number 1-11356



RADIAN GROUP INC.

(Exact name of registrant as specified in its charter)

Delaware

23-2691170

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

550 East Swedesford Road, Suite 350, Wayne, PA 19087

(Address of principal executive offices) (Zip Code)

(215) 231-1000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$.001 par value per share	RDN	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer Accelerated Filer Non-Accelerated Filer Smaller Reporting Company Emerging Growth Company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of June 30, 2022, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$3,243,257,456 based on the closing sale price as reported on the New York Stock Exchange. Excluded from this amount is the value of all shares beneficially owned by executive officers and directors of the registrant. These exclusions should not be deemed to constitute a representation or acknowledgment that any such individual is, in fact, an affiliate of the registrant or that there are not other persons or entities who may be deemed to be affiliates of the registrant.

The number of shares of common stock, \$0.001 par value per share, of the registrant outstanding on February 22, 2023, was 157,192,928 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Form 10-K Reference Document

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Glossary of Abbreviations and Acronyms

The following list defines various abbreviations and acronyms used throughout this report, including the Business Section, the Management’s Discussion and Analysis of Financial Condition and Results of Operations, the Consolidated Financial Statements, the Notes to Consolidated Financial Statements and the Financial Statement Schedules.

Term	Definition
1995 Equity Plan	The Radian Group Inc. 1995 Equity Compensation Plan, as amended
2008 Equity Plan	The Radian Group Inc. 2008 Equity Compensation Plan, as amended
2014 Equity Plan	The Radian Group Inc. 2014 Equity Compensation Plan
2017 Equity Plan	The Radian Group Inc. Equity Compensation Plan, which amended and restated the 2014 Equity Plan and was approved by our stockholders on May 10, 2017, as further amended on May 13, 2020
2021 Equity Plan	The Radian Group Inc. 2021 Equity Compensation Plan, as approved by our stockholders on May 12, 2021
2014 Master Policy	Radian Guaranty’s master insurance policy, setting forth the terms and conditions of our mortgage insurance coverage, which became effective October 1, 2014
2020 Master Policy	Radian Guaranty’s master insurance policy, setting forth the terms and conditions of our mortgage insurance coverage, which became effective March 1, 2020
2012 QSR Agreements	The quota share reinsurance agreements entered into with a third-party reinsurance provider in the second and fourth quarters of 2012, collectively
2022 QSR Agreement	Quota share reinsurance arrangement entered into with a panel of third-party reinsurance providers to cede, starting July 1, 2022, a portion of NIW, which includes both Recurring Premium Policies and Single Premium Policies, originated between January 1, 2022, and June 30, 2023
2016 Single Premium QSR Agreement	Quota share reinsurance agreement entered into with a panel of third-party reinsurance providers in the first quarter of 2016 and subsequently amended in the fourth quarter of 2017 to cede a portion of Single Premium NIW originated between January 1, 2012, and December 31, 2017
2018 Single Premium QSR Agreement	Quota share reinsurance agreement entered into with a panel of third-party reinsurance providers in October 2017 to cede a portion of Single Premium NIW originated between January 1, 2018, and December 31, 2019
2020 Single Premium QSR Agreement	Quota share reinsurance agreement entered into with a panel of third-party reinsurance providers in January 2020 to cede a portion of Single Premium NIW originated between January 1, 2020, and December 31, 2021
ABS	Asset-backed securities
All Other	Radian’s non-reportable operating segments and other business activities, including: (i) income (losses) from assets held by Radian Group; (ii) related general corporate operating expenses not attributable or allocated to our reportable segments; and (iii) certain investments in new business opportunities, including activities and investments associated with Radian Mortgage Capital, and other immaterial activities
ASU	Accounting Standards Update, issued by the FASB to communicate changes to GAAP
Available Assets	As defined in the PMIERS, assets primarily including the most liquid assets of a mortgage insurer, and reduced by, among other items, premiums received but not yet earned and reinsurance funds withheld
BMO	Bank of Montreal, a Canadian chartered bank acting through its Chicago branch
BMO Master Repurchase Agreement	Uncommitted \$300 million Master Repurchase Agreement, dated September 28, 2022, between Bank of Montreal, a Canadian Chartered bank acting through its Chicago Branch, and Radian Mortgage Capital LLC to finance Radian Mortgage Capital’s acquisition of mortgage loans and related mortgage loan assets
CARES Act	Coronavirus Aid, Relief, and Economic Security Act signed into law on March 27, 2020
CFPB	Consumer Financial Protection Bureau
Claim Curtailment	Our legal right, under certain conditions, to reduce the amount of a claim, including due to servicer negligence
Claim Denial	Our legal right, under certain conditions, to deny a claim

Term	Definition
Claim Severity	The total claim amount paid divided by the original coverage amount
CLO	Collateralized loan obligations
CMBS	Commercial mortgage-backed securities
COVID-19	The coronavirus disease declared a pandemic by the World Health Organization and the Centers for Disease Control and Prevention in March 2020
COVID-19 Amendment	Amendment to the PMIERS effective June 30, 2020, primarily to recognize the COVID-19 pandemic as a nationwide "FEMA Declared Major Disaster" and to set forth guidelines on the application of the Disaster Related Capital Charge to COVID-19 Defaulted Loans
COVID-19 Crisis Period	Time period extending from March 1, 2020, to March 31, 2021
COVID-19 Defaulted Loans	All non-performing loans that either: (i) had an Initial Missed Payment occurring during the COVID-19 Crisis Period (which expired as of March 31, 2021) or (ii) are subject to a forbearance plan granted in response to a financial hardship related to COVID-19
Cures	Loans that were in default as of the beginning of a period and are no longer in default because payments were received such that the loan is no longer 60 or more days past due
Default to Claim Rate	The percentage of defaulted loans that are assumed to result in a claim
Demotech	Demotech, Inc.
Disaster Related Capital Charge	Under the PMIERS, multiplier of 0.30 applied to the required asset amount factor for each non-performing loan: (i) backed by a property located in a FEMA Designated Area and (ii) either subject to a certain forbearance plan or with an initial default date occurring within a certain timeframe
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act, as amended
Eagle Re Issuer(s)	A group of unaffiliated special purpose insurers (VIEs) domiciled in Bermuda, comprising Eagle Re 2018-1 Ltd., Eagle Re 2019-1 Ltd., Eagle Re 2020-1 Ltd., Eagle Re 2021-1 Ltd. and/or Eagle Re 2021-2 Ltd., which provide reinsurance coverage under Radian Guaranty's Excess-of-Loss Program. The issuers also included Eagle Re 2020-2 Ltd. prior to its termination in September 2022.
Equity Plans	The 1995 Equity Plan, the 2008 Equity Plan, the 2017 Equity Plan and the 2021 Equity Plan, together
ERCF	Enterprise Regulatory Capital Framework, finalized in February 2022, which establishes a new regulatory capital framework for the GSEs
ERM	Enterprise Risk Management
ESPP	The Radian Group Inc. Employee Stock Purchase Plan, as amended and restated, which was approved by our stockholders on May 9, 2018
Excess-of-Loss Program	The credit risk protection obtained by Radian Guaranty in the form of excess-of-loss reinsurance, which indemnifies the ceding company against loss in excess of a specific agreed limit, up to a specified sum. The program includes reinsurance agreements with the Eagle Re Issuers in connection with various issuances of mortgage insurance-linked notes. The program also included a separate agreement with a third-party reinsurer, prior to its termination in December 2021, representing a pro rata share of the credit risk alongside the risk assumed by Eagle Re 2018-1 Ltd., an Eagle Re Issuer.
Exchange Act	Securities Exchange Act of 1934, as amended
Extraordinary Distribution	A dividend or distribution of capital that is required to be approved by an insurance company's primary regulator that is greater than would be permitted as an ordinary distribution (which does not require regulatory approval)
Fannie Mae	Federal National Mortgage Association
FASB	Financial Accounting Standards Board
FEMA	Federal Emergency Management Agency, an agency of the U.S. Department of Homeland Security
FEMA Designated Area	Generally, an area that has been subject to a disaster, designated by FEMA as an individual assistance disaster area for the purpose of determining eligibility for various forms of federal assistance
FHA	Federal Housing Administration

Term	Definition
FHFA	Federal Housing Finance Agency
FHLB	Federal Home Loan Bank of Pittsburgh
FICO	Fair Isaac Corporation (“FICO”) credit scores, for Radian’s portfolio statistics, represent the borrower’s credit score at origination and, in circumstances where there are multiple borrowers, the lowest of the borrowers’ FICO scores is utilized
Fitch	Fitch Ratings, Inc.
Foreclosure Stage Defaulted Loans	Loans in the stage of default in which a foreclosure sale has been scheduled or held
Freddie Mac	Federal Home Loan Mortgage Corporation
GAAP	Generally accepted accounting principles in the U.S., as amended from time to time
Goldman Sachs	Goldman Sachs Bank USA
Goldman Sachs Master Repurchase Agreement	Uncommitted \$300 million Master Repurchase Agreement, dated July 15, 2022, among Goldman Sachs Bank USA, a national banking institution, Radian Liberty Funding LLC, a Delaware limited liability company, and Radian Mortgage Capital LLC, a Delaware limited liability company to finance the acquisition of mortgage loans and related mortgage loan assets
GSE(s)	Government-Sponsored Enterprises (Fannie Mae and Freddie Mac)
HARP	Home Affordable Refinance Program
homegenius	Radian’s business segment that offers an array of title, real estate and technology products and services to consumers, mortgage lenders, mortgage and real estate investors, GSEs, real estate brokers and agents
homegenius Real Estate	homegenius Real Estate LLC, an indirect subsidiary of Radian Group, formerly known as Red Bell Real Estate, LLC, through which we provide real estate brokerage services and other related products and services
HPA	Homeowners Protection Act of 1998
HUD	U.S. Department of Housing and Urban Development
IBNR	Losses incurred but not reported
IIF	Insurance in force, equal to the aggregate unpaid principal balances of the underlying loans
Initial Missed Payment	The first missed monthly payment, which would be reported to us as delinquent as of the last day of the month for which it was due. (For example, for a loan first reported to the approved insurer in May as having missed its payments due on April 1 and May 1, the Initial Missed Payment shall be deemed to have occurred on April 30.)
LAE	Loss adjustment expenses, which include the cost of investigating and adjusting losses and paying claims
Liberty	Radian Liberty Funding LLC, a wholly owned subsidiary of Radian Mortgage Capital
LIBOR	London Inter-bank Offered Rate
Loss Mitigation Activity/Activities	Activities such as Rescissions, Claim Denials, Claim Curtailments and cancellations
LTV	Loan-to-value ratio, calculated as the ratio of the original loan amount to the original value of the property, expressed as a percentage
Master Policies	The Prior Master Policy, the 2014 Master Policy and the 2020 Master Policy, together
Master Repurchase Agreements	The Goldman Sachs Master Repurchase Agreement and the BMO Master Repurchase Agreement, collectively
Minimum Required Asset(s)	A risk-based minimum required asset amount, as defined in the PMIERS, calculated based on net RIF (RIF, net of credits permitted for reinsurance) and a variety of measures related to expected credit performance and other factors, including the impact of the Disaster Related Capital Charge
Model Act	Mortgage Guaranty Insurance Model Act, as issued by the NAIC to establish minimum capital and surplus requirements for mortgage insurers
Monthly and Other Recurring Premiums (or Recurring Premium Policies)	Insurance premiums or policies, respectively, where premiums are paid on a monthly or other installment basis, in contrast to Single Premium Policies

Term	Definition
Monthly Premium Policies	Insurance policies where premiums are paid on a monthly installment basis
Moody's	Moody's Investors Service
Mortgage	Radian's mortgage insurance and risk services business segment, which provides credit-related insurance coverage, principally through private mortgage insurance on residential first-lien mortgage loans, as well as contract underwriting and other credit risk management solutions, to mortgage lending institutions and mortgage credit investors
MPP Requirement	Certain states' statutory or regulatory risk-based capital requirement that the mortgage insurer must maintain a minimum policyholder position, which is calculated based on both risk and surplus levels
NAIC	National Association of Insurance Commissioners
NIW	New insurance written, representing the aggregate original principal amount of the mortgages underlying the Primary Mortgage Insurance
NOL	Net operating loss; for tax purposes, accumulated during years a company reported more tax deductions than taxable income. NOLs may be carried back or carried forward a certain number of years, depending on various factors which can reduce a company's tax liability.
NYDFS	New York State Department of Financial Services
Parent Guarantees	Two separate parent guaranty agreements, entered into by Radian Group in connection with its mortgage conduit business, to guaranty the obligations of certain of its subsidiaries in connection with the BMO Master Repurchase Agreement and the Goldman Master Repurchase Agreement
PDR	Premium deficiency reserve
Persistency Rate	The percentage of IIF that remains in force over a period of time
PMIERS	Private Mortgage Insurer Eligibility Requirements issued by the GSEs under oversight of the FHFA and updated by them from time to time to set forth requirements an approved insurer must meet and maintain to provide mortgage guaranty insurance on loans acquired by the GSEs
PMIERS Cushion	Under PMIERS, Radian Guaranty's excess of Available Assets over Minimum Required Assets
Pool Mortgage Insurance	Insurance that provides a lender or investor protection against default on a group or "pool" of mortgages, rather than on an individual mortgage loan basis, generally subject to an aggregate exposure limit, or "stop loss" (usually between 1% and 10%), and/or deductible applied to the initial aggregate loan balance of the entire pool, pursuant to the terms of the applicable insurance agreement
Primary Mortgage Insurance	Insurance that provides a lender or investor protection against default on an individual mortgage loan basis, at a specified coverage percentage for each loan, pursuant to the terms of the applicable Master Policy
Prior Master Policy	Radian Guaranty's master insurance policy, setting forth the terms and conditions of our mortgage insurance coverage, which was in effect prior to the effective date of the 2014 Master Policy
PSPAs	Senior preferred stock purchase agreements, pursuant to which the U.S. Department of the Treasury owns the preferred stock of the GSEs
QM	Qualified mortgage; a mortgage that possesses certain low-risk characteristics that enable it to qualify for lender protection under the ability to repay rule instituted by the Dodd-Frank Act
QSR Program	The Single Premium QSR Program, the 2012 QSR Agreements and the 2022 QSR Agreement, collectively
Radian	Radian Group Inc. together with its consolidated subsidiaries
Radian Group	Radian Group Inc., our insurance holding company
Radian Guaranty	Radian Guaranty Inc., a Pennsylvania domiciled insurance subsidiary of Radian Group and our approved insurer under the PMIERS, through which we provide mortgage insurance products and services
Radian Mortgage Capital	Radian Mortgage Capital LLC, a Delaware limited liability company, and an indirect wholly owned subsidiary of Radian Group, is a mortgage conduit formed to acquire residential mortgage loans which Radian Mortgage Capital expects to then distribute into the capital markets through private label securitizations or sell directly to mortgage investors

Term	Definition
Radian Reinsurance	Radian Reinsurance Inc., a former Pennsylvania domiciled insurance company and subsidiary of Radian Group that was merged into Radian Guaranty in December 2022, through which we previously provided mortgage credit risk insurance and reinsurance, including through participation in credit risk transactions issued by the GSEs
Radian Settlement Services	Radian Settlement Services Inc., an indirect subsidiary of Radian Group, through which we provide title services
Radian Title Insurance	Radian Title Insurance Inc., an Ohio domiciled insurance company and an indirect subsidiary of Radian Group, through which we offer title insurance and settlement services
RBC States	Risk-based capital states, which are those states that currently impose a statutory or regulatory risk-based capital requirement
Reinstatements	Reversals of previous Rescissions, Claim Denials and Claim Curtailments
REO	Real estate owned
Rescission	Our legal right, under certain conditions, to unilaterally rescind coverage on our mortgage insurance policies if we determine that a loan did not qualify for insurance
RESPA	Real Estate Settlement Procedures Act of 1974, as amended
RIF	Risk in force; for Primary Mortgage Insurance, RIF is equal to the underlying loan unpaid principal balance multiplied by the insurance coverage percentage, whereas for Pool Mortgage Insurance, it represents the remaining exposure under the agreements
Risk-to-capital	Under certain state regulations, a maximum ratio of net RIF calculated relative to the level of statutory capital
RMBS	Residential mortgage-backed securities
RSU	Restricted stock unit
S&P	Standard & Poor's Financial Services LLC
SaaS	Software-as-a-Service
SAFE Act	Secure and Fair Enforcement for Mortgage Licensing Act, as amended
SAP	Statutory accounting principles and practices, including those required or permitted, if applicable, by the insurance departments of the respective states of domicile of our insurance subsidiaries
SEC	United States Securities and Exchange Commission
Securities Act	Securities Act of 1933, as amended
Senior Notes due 2024	Our 4.500% unsecured senior notes due October 2024 (\$450 million original principal amount)
Senior Notes due 2025	Our 6.625% unsecured senior notes due March 2025 (\$525 million original principal amount)
Senior Notes due 2027	Our 4.875% unsecured senior notes due March 2027 (\$450 million original principal amount)
Single Premium NIW / IIF	NIW or IIF, respectively, on Single Premium Policies
Single Premium Policy / Policies	Insurance policies where premiums are paid in a single payment, which includes policies written on an individual basis (as each loan is originated) and on an aggregated basis (in which each individual loan in a group of loans is insured in a single transaction, typically shortly after the loans have been originated)
Single Premium QSR Program	The 2016 Single Premium QSR Agreement, the 2018 Single Premium QSR Agreement and the 2020 Single Premium QSR Agreement, collectively
SOFR	Secured Overnight Financing Rate
Stage of Default	The stage a loan is in relative to the foreclosure process, based on whether a foreclosure sale has been scheduled or held
Statutory RBC Requirement	Risk-based capital requirement imposed by the RBC States, requiring a minimum surplus level and, in certain states, a minimum ratio of statutory capital relative to the level of risk
Surplus Note due 2027	The \$100 million 0.0% intercompany surplus note issued by Radian Guaranty to Radian Group, originally due December 31, 2027, and fully repaid in December 2022
Time in Default	The time period from the point a loan reaches default status (based on the month the default occurred) to the current reporting date

Term	Definition
VA	U.S. Department of Veterans Affairs
VIE	Variable interest entity

Cautionary Note Regarding Forward-Looking Statements —Safe Harbor Provisions

All statements in this report that address events, developments or results that we expect or anticipate may occur in the future are “forward-looking statements” within the meaning of Section 27A of the Securities Act, Section 21E of the Exchange Act and the Private Securities Litigation Reform Act of 1995. In most cases, forward-looking statements may be identified by words such as “anticipate,” “may,” “will,” “could,” “should,” “would,” “expect,” “intend,” “plan,” “goal,” “contemplate,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “seek,” “strategy,” “future,” “likely” or the negative or other variations on these words and other similar expressions. These statements, which may include, without limitation, projections regarding our future performance and financial condition, are made on the basis of management’s current views and assumptions with respect to future events. These statements speak only as of the date they were made, and we undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. We operate in a changing environment where new risks emerge from time to time and it is not possible for us to predict all risks that may affect us. The forward-looking statements are not guarantees of future performance, and the forward-looking statements, as well as our prospects as a whole, are subject to risks and uncertainties that could cause actual results to differ materially from those set forth in the forward-looking statements. These risks and uncertainties include, without limitation:

- the health of the U.S. housing market generally and changes in economic conditions that impact the size of the insurable mortgage market, the credit performance of our insured mortgage portfolio and our business prospects, including more recently, changes resulting from inflationary pressures, the higher interest rate environment and the risks of a recession and higher unemployment rates, as well as other macroeconomic stresses such as those that may arise from the Russia-Ukraine conflict or other geopolitical events;
- changes in the way customers, investors, ratings agencies, regulators or legislators perceive our performance, financial strength and future prospects;
- Radian Guaranty’s ability to remain eligible under the PMIERS to insure loans purchased by the GSEs;
- our ability to maintain an adequate level of capital in our insurance subsidiaries to satisfy current and future regulatory requirements;
- changes in the charters or business practices of, or rules or regulations imposed by or applicable to, the GSEs or loans purchased by the GSEs, which may include changes in furtherance of housing policy objectives such as the accessibility and affordability of homeownership for low- and moderate-income borrowers and underrepresented communities, or changes in the requirements for Radian Guaranty to remain an approved insurer to the GSEs, such as changes in the PMIERS or the GSEs’ interpretation and application of the PMIERS or other applicable requirements;
- the effects of the ERCF, which establishes a new regulatory capital framework for the GSEs, and which, as finalized, increases the capital requirements for the GSEs, and among other things, could impact the GSEs’ operations and pricing as well as the size of the insurable mortgage market, and which may form the basis for future changes to the PMIERS to better align with the ERCF;
- changes in the current housing finance system in the United States, including the roles of the FHA, the GSEs and private mortgage insurers in this system;
- our ability to successfully execute and implement our capital plans, including our risk distribution strategy through the capital markets and traditional reinsurance markets, and to maintain sufficient holding company liquidity to meet our liquidity needs;
- our ability to successfully execute and implement our business plans and strategies, including plans and strategies that may require GSE and/or regulatory approvals and licenses, that are subject to complex compliance requirements that we may be unable to satisfy, or that may expose us to new risks, including those that could impact our capital and liquidity positions;
- uncertainty from the discontinuance of LIBOR and transition to one or more alternative benchmarks that could cause interest rate volatility and, among other things, impact our investment portfolio, cost of debt and cost of reinsurance through mortgage insurance-linked notes transactions;
- risks related to the quality of third-party mortgage underwriting and mortgage servicing;
- a decrease in the Persistency Rates of our mortgage insurance on Monthly Premium Policies;
- competition in the private mortgage insurance industry generally, and more specifically: price competition in our mortgage insurance business, including the prevalence of formulaic, granular risk-based pricing methodologies that are less transparent than historical rate-card-based pricing practices; and competition from the FHA and VA as well as from other forms of credit enhancement, such as GSE-sponsored alternatives to traditional mortgage insurance;

- U.S. political conditions and legislative and regulatory activity (or inactivity), including any failure to take action to increase the U.S.'s debt limit, adoption of (or failure to adopt) new laws and regulations, or changes in existing laws and regulations, or the way they are interpreted or applied;
- legal and regulatory claims, assertions, actions, reviews, audits, inquiries and investigations that could result in adverse judgments, settlements, fines, injunctions, restitutions or other relief that could require significant expenditures, new or increased reserves or have other effects on our business;
- the amount and timing of potential payments or adjustments associated with federal or other tax examinations;
- the possibility that we may fail to estimate accurately, especially in the event of an extended economic downturn or a period of extreme market volatility and economic uncertainty, the likelihood, magnitude and timing of losses in establishing loss reserves for our mortgage insurance business or to accurately calculate and/or project our Available Assets and Minimum Required Assets under the PMIERs, which will be impacted by, among other things, the size and mix of our IIF, the level of defaults in our portfolio, the reported status of defaults in our portfolio (including whether they are subject to mortgage forbearance, a repayment plan or a loan modification trial period), the level of cash flow generated by our insurance operations and our risk distribution strategies;
- volatility in our financial results caused by changes in the fair value of our assets and liabilities, including with respect to our use of derivatives and within our investment portfolio;
- changes in GAAP or SAP rules and guidance, or their interpretation;
- risks associated with investments to grow our existing businesses, or to pursue new lines of business or new products and services, including our ability and related costs to develop, launch and implement new and innovative technologies and digital products and services, whether these products and services receive broad customer acceptance or disrupt existing customer relationships, and additional financial risks related to these investments, including required changes in our investment, financing and hedging strategies, risks associated with our increased use of financial leverage, which could expose us to liquidity risks resulting from changes in the fair values of assets, and the risk that we may fail to achieve forecasted results which could result in lower or negative earnings contribution and/or impairment charges associated with intangible assets;
- the effectiveness and security of our information technology systems and digital products and services, including the risk that these systems, products or services fail to operate as expected or planned or expose us to cybersecurity or third-party risks, including due to malware, unauthorized access, cyberattack, ransomware or other similar events;
- our ability to attract and retain key employees; and
- legal and other limitations on amounts we may receive from our subsidiaries, including dividends or ordinary course distributions under our internal tax- and expense-sharing arrangements.

For more information regarding these risks and uncertainties as well as certain additional risks that we face, you should refer to the Summary of Risk Factors, to the more detailed discussion of our Risk Factors included in Item 1A, and to subsequent reports and registration statements filed from time to time with the SEC. We caution you not to place undue reliance on these forward-looking statements, which are current only as of the date on which we issued this report. We do not intend to, and we disclaim any duty or obligation to, update or revise any forward-looking statements to reflect new information or future events or for any other reason.

Summary of Risk Factors

Our business is subject to a number of risks, including risks that may prevent us from achieving our business objectives or may adversely affect our business, financial condition, results of operations, cash flows, and prospects. These risks are discussed more fully under “Item 1A. Risk Factors” of this Annual Report on Form 10-K and include, but are not limited to, the following material risks and uncertainties:

Risks Related to Regulatory Matters

- Radian Guaranty may fail to maintain its eligibility status with the GSEs, and the additional capital required to support Radian Guaranty’s eligibility could reduce our available liquidity.
- Our insurance subsidiaries are subject to comprehensive state insurance regulations and other requirements, which we may fail to satisfy.
- Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses.
- Legislation and administrative and regulatory changes and interpretations could impact our businesses.

Risks Related to our Business Operations

- Our success depends on our ability to assess and manage our mortgage insurance underwriting risks; the mortgage insurance premiums we charge may not be adequate to compensate us for our liability for losses and the amount of capital we are required to hold against our insured mortgage risks. We expect to incur losses for future mortgage defaults beyond what we have reserved for in our financial statements.
- If the estimates we use in establishing mortgage insurance loss reserves are incorrect, we may be required to take unexpected charges to income, which could adversely affect our results of operations.
- Our Loss Mitigation Activity could negatively impact our customer relationships.
- Reinsurance may not be available, affordable or adequate to protect us against losses.
- An extension in the period of time that a loan remains in our inventory of defaulted mortgage loans may increase the severity of claims that we ultimately are required to pay.
- If the length of time that our mortgage insurance policies remain in force declines, it could result in a decrease in our future revenues.
- Our delegated underwriting program may subject our mortgage insurance business to unanticipated claims.
- Our mortgage insurance business faces intense competition.
- Our NIW and franchise value could decline if we lose business from significant customers.
- The current financial strength ratings assigned to our mortgage insurance subsidiaries could weaken our competitive position and potential downgrades by rating agencies to these ratings and the ratings assigned to Radian Group could adversely affect the Company.
- Our business depends, in part, on effective and reliable loan servicing.
- We face risks associated with our contract underwriting business.
- A decrease in the volume of mortgage originations could result in fewer opportunities for us to write new mortgage insurance business and conduct our homegenius businesses.
- We are exposed to risks associated with our homegenius businesses that could negatively affect our results of operations and financial condition.
- We rely upon proprietary technology and information, and if we are unable to protect our intellectual property rights, it could have a material adverse effect on us.
- We face risks associated with our new mortgage conduit business.

Risks Related to the Economic Environment

- The credit performance of our mortgage insurance portfolio is impacted by macroeconomic conditions and specific events that affect the ability of borrowers to pay their mortgages.
- Our success depends, in part, on our ability to manage risks in our investment portfolio.

- Climate change and extreme weather events could adversely affect our businesses, results of operations and financial condition.
- Our reported earnings, stockholders' equity and book value per share are subject to fluctuations based on changes in our investments that require us to adjust their fair market value.
- The discontinuance of LIBOR may adversely affect us.

Risks Related to Liquidity and Financing

- Our sources of liquidity may be insufficient to fund our obligations.
- Our revolving credit facility and the Parent Guarantees we provide for the Master Repurchase Agreements to finance loan purchases in our mortgage conduit business contain restrictive covenants that could limit our operating flexibility. A default under our credit facility or these Parent Guarantees could trigger an event of default under the terms of our senior notes. We may not have access to funding under our credit facility when we require it.

Risks Related to Information Technology and Cybersecurity

- Our information technology systems may fail or become outmoded, be temporarily interrupted or otherwise cause us to be unable to meet our customers' demands.
- We could incur significant liability or reputational harm if the security of our information technology systems, or of our third-party vendors or service providers, is breached, including as result of a cyberattack, or we otherwise fail to protect confidential information, including personally identifiable information that we maintain.

Risks Related to Us and Our Subsidiaries Generally

- We may not continue to pay dividends at the same rate we are currently paying them, or at all, and any decrease in or suspension of payment of a dividend could cause our stock price to decline.
- We are subject to litigation and regulatory proceedings.
- We rely on our management team and our business could be harmed if we are unable to retain qualified personnel or successfully develop and/or recruit their replacements.
- Investments to grow our existing businesses, pursue new lines of business or new products and services within existing lines of business subject us to additional risks and uncertainties.

Risks Related to the COVID-19 Pandemic

- The COVID-19 pandemic adversely impacted us and, in the future, our business, results of operations or financial condition could again be impacted by COVID-19 or other epidemics, pandemics or public health developments.

PART I

Item 1. Business

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General

Overview

We are a diversified mortgage and real estate services business. We provide mortgage insurance and other products and services to the real estate and mortgage finance industries through our two business segments—Mortgage and homegenius. While we manage and report on these two segments separately, we take an enterprise approach under our “One Radian” strategy, which leverages the value of our employees across our diversified businesses to better serve our customers.

Our Mortgage segment aggregates, manages and distributes U.S. mortgage credit risk for the benefit of mortgage lending institutions and mortgage credit investors, principally through private mortgage insurance on residential first-lien mortgage loans, and also provides contract underwriting and other credit risk management solutions to our customers. Our homegenius segment offers an array of title, real estate and technology products and services to consumers, mortgage lenders, mortgage and real estate investors, GSEs and real estate brokers and agents. In addition to these business segments, as an extension of our strategy to aggregate, manage and distribute U.S. mortgage credit risk, in July 2022 we announced the launch of a mortgage conduit through Radian Mortgage Capital. Subject to market conditions, Radian Mortgage Capital acquires residential mortgage loans which it expects to then distribute into the capital markets through private label securitizations or sell directly to mortgage investors, with the option to retain and manage structured components of the underlying credit risk. See Notes 1 and 4 of Notes to Consolidated Financial Statements for further details of our businesses.

Radian Group serves as the holding company for our insurance and other subsidiaries, through which we offer our products and services, and does not have any operations of its own. Our principal executive offices are located at 550 East Swedesford Road, Suite 350, Wayne, PA 19087, and our telephone number is (215) 231-1000.

Available Information

Our website address is www.radian.com. Copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, as well as any amendments to those reports, are available free of charge through our website as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC.

In addition, our guidelines of corporate governance, code of business conduct and ethics (which includes the code of ethics applicable to our chief executive officer, principal financial officer and principal accounting officer) and the governing

charters for each standing committee of Radian Group's board of directors are available free of charge on our website, as well as in print, to any stockholder upon request.

The public may read materials we file with the SEC, including reports, proxy and information statements, and other information, on the Internet site maintained by the SEC. The address of that site is www.sec.gov.

The above references to our website and the SEC's website do not constitute incorporation by reference of the information contained on the websites and such information should not be considered part of this document.

Business Strategy

We are strategically focused on supporting the American dream of affordable, sustainable and equitable homeownership by delivering innovative solutions combined with superior levels of service to our customers across the residential mortgage and real estate spectrum through our two business segments. In pursuing these objectives, we expect to increase value creation for our stakeholders.

Consistent with these objectives, our business strategy, as highlighted below, is focused on growing our businesses, diversifying our revenue sources and seeking to optimize our capital and liquidity, while maintaining an emphasis on risk management, human capital management and long-term profitability. To help achieve these objectives, we seek to continuously improve and leverage our operational excellence and the strength of our "One Radian" brand.

Key elements of our business strategy are to expand and diversify our business and revenue streams by increasing our participation in multiple facets of the residential real estate and mortgage finance industries and to leverage data, analytics and technology as a strategic differentiator across our businesses. We continue to seek and develop new and innovative opportunities to build upon our core mortgage credit risk competencies by expanding our mortgage market presence and further diversifying our revenue streams, including our recently launched mortgage conduit business. We are also focused on building the homegenius brand and developing our homegenius products and services to meet increased market demand for digital products and services across our title, real estate and technology business platforms.

Radian's Long-Term Strategic Objectives

- Leverage innovative business models and operational excellence to drive increased stockholder value by developing and pursuing growth opportunities across the mortgage and real estate markets:
 - Leverage our market presence and brand recognition to expand distribution of our diversified products and services across existing and new customers
 - Continue to grow the economic value of our insured mortgage portfolio by writing high-value NIW leveraging risk-adjusted pricing and informed by data and analytics
 - Continue to drive improved operating performance, including through the use of data, analytics and technology as a strategic differentiator
 - Continue to build the homegenius brand and to position our title, real estate and technology products and services for long-term growth in revenues and value contribution
 - Leverage our industry knowledge, core competencies and market position to develop opportunities to expand our mortgage market presence by deploying a secondary-market mortgage conduit
- Maintain a well-defined risk culture with a strong comprehensive enterprise risk management framework and risk/return discipline
- Optimize our capital and liquidity position to ensure Radian Guaranty's ongoing compliance with PMIERS, increase our strategic financial flexibility and support our strategic growth and diversification plans
- Maximize the power of our Radian team and continue to broaden our Environmental, Social and Governance program by: maintaining our commitment to good corporate governance; enhancing our inclusiveness and diversity; fostering a values-based culture and enhancing reporting and disclosure with a particular focus on climate change, Diversity, Equity and Inclusion ("DEI"), future of work/human capital management, business continuity and resilience

2022 Highlights

Following are highlights of the key accomplishments that contributed to our financial and operating results during 2022 in support of our long-term strategic objectives.

Key Accomplishments for 2022

- Delivered strong financial results, driven by improved credit performance in our Mortgage segment, while executing upon our long-term strategy
 - Earned consolidated pretax income of \$953 million and net income of \$743 million, or \$4.35 net income per diluted share, in 2022, compared to consolidated pretax income of \$765 million and net income of \$601 million, or \$3.16 net income per diluted share, in 2021, aided by significant improvement in our provision for losses from \$21 million in 2021 to a benefit of \$338 million in 2022
 - Adjusted pretax operating income⁽¹⁾ was \$1.1 billion, or \$4.87 per diluted share, in 2022, compared to \$758 million, or \$3.15 per diluted share, in 2021
 - Wrote \$68.0 billion of NIW, contributing to an increase in our IIF from \$246.0 billion at December 31, 2021, to \$261.0 billion at December 31, 2022
- Continued to grow and diversify our mortgage and real estate businesses through innovative business models
 - Despite a challenging market environment, expanded our homegenius offerings through the development and launch of geniusprice (a SaaS property intelligence platform), homegeniusIQ (the real estate sector's first automated valuation model that uses artificial intelligence and computer vision technology) and homegenius connect (a lender, real estate agent and consumer real estate referral network)
 - Launched Radian Mortgage Capital, a mortgage conduit formed to provide residential mortgage lenders with an additional secondary-market option to sell eligible loans to us and ultimately to provide mortgage investors with another known sponsor of private label securitizations
- Maintained a strong risk culture, as demonstrated by ongoing risk distribution strategies, disciplined and granular risk-based pricing and expanded use of data and analytics to inform decision making
 - Entered into the 2022 QSR Agreement with a panel of third-party reinsurance providers to cede a portion of our NIW from January 2022 through June 2023
 - Continued to monitor and grow the economic value of our insured mortgage portfolio by leveraging granular, risk-adjusted pricing and new technologies to identify strategies to maximize the economic value of projected NIW
 - Continued to enhance our risk analytics, including customer and servicer segmentation, loss mitigation reporting, servicer dashboards and underwriting surveillance
- Further strengthened our capital and liquidity profile, while enhancing financial flexibility and returning value to stockholders
 - Completed the \$400 million share repurchase program that was approved in 2022, repurchasing 19.5 million shares in 2022 at an average share price of \$20.52, including commissions
 - Increased our quarterly cash dividend by 43% from \$0.14 to \$0.20 per share, beginning with the dividend declared in the first quarter of 2022
 - Completed a series of capital actions in the fourth quarter of 2022 focused on enhancing our financial flexibility and improving operational efficiency, which resulted in \$382 million being distributed from Radian Guaranty to Radian Group and restored Radian Guaranty's ability to pay ordinary dividends starting in the first quarter of 2023. See Note 16 of Notes to Consolidated Financial Statements for additional information
 - Held PMIERS Cushion of \$1.7 billion at December 31, 2022, or 45% more than the Minimum Required Assets under PMIERS
 - Increased available holding company liquidity from \$605 million at December 31, 2021, to \$903 million at December 31, 2022
- Continued to prioritize the well-being and development of our people by promoting initiatives to increase inclusiveness and diversity and fostering a workplace that ensures that our employees can work in an agile manner that attracts and retains top talent
 - Expanded on our people plan, including enhanced benefit programs and launching our "Employee Value Promise" to share our commitment and philosophy as an employer
 - Completed annual talent reviews and succession planning for leaders throughout the Company to ensure development of our people and resiliency in our bench talent
 - Continued to implement our DEI roadmap, adding an annual requirement for all employees to include a DEI goal in their individual goal plan, launching new employee resource groups and publishing our inaugural diversity report
 - Evolved to a hybrid work environment, allowing employees flexibility to work in-person in our offices or remotely, with active communications and strong support for remote working arrangements

(1) Adjusted pretax operating income is a non-GAAP measure. See "Item 7. Management's Discussion and Analysis of Financial Condition

and Results of Operations—Results of Operations—Consolidated—Use of Non-GAAP Financial Measures” for the definition and reconciliation of this measure to the most comparable GAAP measure, consolidated pretax income.

See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” for further information on our results of operations and other details related to our Mortgage and homegenius businesses.

Mortgage

Overview

Private mortgage insurance plays an important role in the U.S. housing finance system because it promotes affordable homeownership, while helping to protect mortgage lenders, investors and the GSEs, who are the primary beneficiaries of our mortgage insurance, by mitigating default-related losses on residential mortgage loans. Generally, the loans we insure are made to home buyers who make down payments of less than 20% of the purchase price for their home or, in the case of refinancings, have less than 20% equity in their home. Private mortgage insurance also facilitates the sale of these loans in the secondary mortgage market, most of which are currently sold to the GSEs.

The performance of our Mortgage business is particularly influenced by macroeconomic conditions and specific events that impact the housing finance and real estate markets, including seasonal fluctuations and other events that impact mortgage originations and the credit performance of our mortgage insurance portfolio, most of which are beyond our control, such as housing prices, inflationary pressures, unemployment levels, interest rate changes, the availability of credit and other national and regional economic conditions. In “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations,” see “—Overview—Current Operating Environment” and “—Key Factors Affecting Our Results—Mortgage.”

Our Mortgage business is subject to comprehensive regulation by state and federal regulatory authorities and the GSEs. As the largest purchasers of conventional mortgage loans, and therefore, the main beneficiaries of private mortgage insurance, the GSEs impose eligibility requirements, known as PMIERS, that private mortgage insurers must satisfy in order to be approved to insure loans purchased by the GSEs. These requirements and practices, as well as those of the federal regulators that oversee the GSEs and lenders, impact the operating results and financial performance of private mortgage insurers. See “Regulation” below for a comprehensive description of the significant state and federal regulations and other requirements of the GSEs that are applicable to our businesses.

Mortgage Insurance Products

Primary Mortgage Insurance

Primary Mortgage Insurance represents our most common form of mortgage insurance execution. We mainly provide Primary Mortgage Insurance on an individual loan basis as each mortgage is originated, but we also can provide Primary Mortgage Insurance on individual loans in an aggregate group of mortgages after they have been originated. We mainly write Primary Mortgage Insurance in a “first loss” position, where we are responsible for the first losses incurred on an insured loan subject to a policy limit. See “—Mortgage Insurance Portfolio Characteristics—Mortgage Loan Characteristics.”

The terms of our Primary Mortgage Insurance coverage are set forth in a Master Policy that we enter into with each of our customers. Among other things, our Master Policies set forth the applicable terms and conditions of our mortgage insurance coverage, including among others: loan eligibility requirements; premium payment requirements; coverage terms, including cancellation of coverage; provisions for policy administration; mortgage servicing standards and requirements; exclusions or reductions in coverage under certain circumstances; insurance rescission and rescission relief provisions; claims payment and settlement procedures; and dispute resolution procedures. Our Master Policy forms, which are updated periodically, including in response to requirements issued by the GSEs, are filed in each of the jurisdictions in which we conduct business. Our Master Policy form was last updated on a broad basis in 2020, when most private mortgage insurers adopted a uniform master policy. See “—Defaults and Claims—Claims Management—Rescissions.”

Primary Mortgage Insurance provides protection against mortgage defaults at a specified coverage percentage. When there is a valid claim under Primary Mortgage Insurance, our maximum liability is determined by multiplying the claim amount, which consists of the unpaid loan principal, plus past due interest and certain expenses associated with the default, by the coverage percentage. Claims may be settled for the maximum liability or for other amounts. See “—Defaults and Claims—Claims Management” below. Although the Primary Mortgage Insurance we write protects the insured parties from a portion of losses resulting from mortgage defaults, it generally does not provide protection against property loss or physical damage, including damage caused by hurricanes or other severe weather events or natural disasters.

We wrote \$68.0 billion and \$91.8 billion of first-lien Primary Mortgage Insurance in 2022 and 2021, respectively. After taking into consideration insurance cancellations and other adjustments within our existing portfolio, our 2022 NIW resulted in IIF of \$261.0 billion at December 31, 2022, compared to \$246.0 billion at December 31, 2021. Our total direct Primary Mortgage Insurance RIF was \$66.1 billion at December 31, 2022, compared to \$60.9 billion at December 31, 2021.

Other Mortgage Insurance Products

GSE Credit Risk Transfer. Our business strategy includes leveraging our core expertise in credit risk management to expand our presence in the mortgage finance industry, including by pursuing alternatives to traditional mortgage insurance execution to expand our insured portfolio of mortgage credit. In the past, we participated in credit risk transfer programs developed by the GSEs as part of their programs to further distribute mortgage credit risk and increase the role of private capital in the mortgage market. These programs transfer additional credit risk on an excess-of-loss basis to insurance and reinsurance providers on pools of mortgage loans, which may contain loans that are already covered by private mortgage insurance.

Based on our view of the projected returns on this business, including consideration of the collateral and capital required by the GSEs to support this RIF, we discontinued our participation in the GSEs' credit risk transfer transactions in 2021. This business was conducted through our subsidiary, Radian Reinsurance, which in December 2022 novated all of its RIF related to credit risk transfer transactions to an unaffiliated third-party reinsurer and merged with Radian Guaranty. As a result of the novation, we had no RIF under these credit risk transfer transactions as of December 31, 2022, compared to \$418 million as of December 31, 2021. See Note 16 of Notes to Consolidated Financial Statements for additional information about this novation.

Pool Mortgage Insurance. Prior to 2008, we wrote Pool Mortgage Insurance on a limited basis. At December 31, 2022, our total direct first-lien Pool Mortgage Insurance RIF was \$240 million, as compared to \$246 million at December 31, 2021, and represented less than 1% of our total direct first-lien insurance RIF. Our Pool Mortgage Insurance policies are privately negotiated and are separate from the Master Policies that we use for our Primary Mortgage Insurance.

Pricing

Primary Mortgage Insurance Premiums

We apply premium rates to our mortgage insurance products at the time coverage is requested by our customers, which is generally near the time of loan origination. Premiums for our mortgage insurance products are generally established based on performance models that consider a broad range of borrower, loan and property characteristics as well as current and projected market and economic conditions. Our premium rates are subject to regulation, and in most states where our insurance subsidiaries are licensed, the formulations by which we derive our premiums must be filed with the state insurance regulators, and in some cases approved by them, before their use. See "Regulation—State Regulation."

We have developed our pricing strategy to manage the risk/return profile and maximize the long-term economic value of our insured portfolio by balancing credit risk, profitability and volume considerations in light of the current and projected competitive environment. We evaluate the projected long-term economic value of our insured portfolio by using a measure that incorporates expected lifetime returns for our insurance policies, taking into consideration projected premiums, credit losses, investment income, operating expenses, taxes and an assumed cost of capital. This projected economic value is then discounted to arrive at an estimated present value of the long-term economic value of our insured portfolio. We use this economic value to assist us in evaluating various portfolio strategies and identifying opportunities to create stockholder value. Consistent with this strategy, our premium rates are based on a broad range of factors, including our expectations about competitive pricing levels and cost of capital, as well as other factors and risk attributes that we consider in developing our assumptions about loan and policy performance and expected returns on such insurance.

Premiums on our mortgage insurance products generally are written on either: (i) a recurring basis, which can be monthly or annual premiums, pursuant to our Monthly and Other Recurring Premium Policies or (ii) as a single premium generally paid at the time of loan origination pursuant to our Single Premium Policies. We also offer products where premiums are paid as a combination of an up-front premium at origination, plus a monthly installment. In addition, premiums may include a refundable component. While the majority of our policies terminate when certain criteria, such as prescribed LTV levels, are met, some of our products provide coverage for the life of the loan, subject to certain conditions. There are many factors that influence the types of premiums we receive, including, among others: (i) the preference of customers with whom we do business and (ii) the relative premium levels we and our competitors set for the various forms of premiums offered.

Mortgage insurance premiums can be funded through a number of methods, and while the coverage remains for the benefit of the insured lender or third-party beneficiary, the premiums may be paid by the borrower or by the lender. Borrower-paid Monthly and Other Recurring Premiums are generally paid to us as part of the borrower's monthly mortgage payment, while borrower-paid premiums under our Single Premium Policies are paid to us at the time of closing on the home purchase. Lender-paid mortgage insurance premiums are paid by the lender and are typically passed through to the borrower in the form of additional origination fees or a higher interest rate on the mortgage note.

The premium rates on a majority of the RIF covered under Monthly and Other Recurring Premium Policies were established as a fixed percentage of the initial loan balance for a set period of time (typically 10 years), after which the premium generally declines to a lower fixed percentage for the remaining life of the policy. The premium rates on the RIF covered under the remaining Monthly and Other Recurring Premium Policies within our insured portfolio were established as a fixed percentage of the loan's amortizing balance over the life of the policy.

Historically, premiums in the mortgage insurance industry were primarily established through standard rate-cards filed with state insurance regulatory authorities, with limited flexibility to deviate. Beginning on a broad basis in 2019, the mortgage insurance industry began to widely use various pricing methodologies with differing degrees of risk-based granularity. Although these more recent pricing frameworks are based upon the same general risk attributes that historically have been a part of mortgage insurance pricing, they also incorporate more granular risk-based pricing factors based on multiple loan, borrower and property attributes.

The shift away from a predominantly standard rate-card based pricing model and the increase in “black box” pricing frameworks throughout the mortgage insurance industry provides a more dynamic pricing capability that allows for more frequent pricing changes that can be implemented quickly and has contributed to a reduction in overall pricing transparency. Further, in addition to the growing proliferation of “black box” pricing, industry pricing practices in recent years have also included an increased use of customized rate plans for certain customers, pursuant to which rates may be awarded to certain customers based on a number of factors for only a limited period of time. With the increased prevalence of granular, “black box” pricing and the greater uniformity of master policy terms throughout the industry, pricing has become the predominant competitive market factor for private mortgage insurance, and an increasing number of customers are making their choice of mortgage insurance providers primarily based on the lowest price available for any particular loan.

We offer a spectrum of risk-based pricing solutions for our customers. This approach represents a continuation of our strategy to pursue multiple pricing delivery options that are best suited to a lender’s loan origination process and balanced with our own objectives for managing our volume of NIW and the economic value derived from our mortgage insurance portfolio. In “Item 1A. Risk Factors” see “—*Our mortgage insurance business faces intense competition.*”

Underwriting

Mortgage loan applications are underwritten to determine whether they are eligible for our mortgage insurance. We perform this function directly or, alternatively, we delegate to our insured lenders the ability to underwrite the mortgage loans on our behalf.

Delegated Underwriting. Through our delegated underwriting program, we approve insured lenders to underwrite mortgage loan insurance applications based on our mortgage insurance underwriting guidelines. Each lender participating in the delegated underwriting program must be approved by our risk management group. Utilization of our delegated underwriting program enables us to meet lenders’ demands for immediate decisions on mortgage insurance coverage and increases the efficiency of their underwriting process. We use quality control sampling and performance monitoring to manage the risks associated with delegated underwriting. Under the terms of the program, we have certain rights to rescind coverage if there has been a deviation from our underwriting guidelines. For a discussion of these limited Rescission rights, see “—Defaults and Claims—Claims Management—*Rescissions.*” As of December 31, 2022 and 2021, 70% and 69%, respectively, of our total first-lien IIF had been originated on a delegated basis.

Non-Delegated Underwriting. Approved insured lenders may submit mortgage loan applications to us so that we may perform the mortgage insurance underwriting. Some customers prefer our non-delegated underwriting program because we assume responsibility for underwriting the mortgage insurance and, subject to the terms of our Master Policies, generally have less ability to rescind coverage if there is an underwriting error. We leverage loan application data and analytics to categorize mortgage insurance applications based on credit risk and underwriting complexity to improve efficiency in our process and to ensure a heightened focus on the higher-risk, complex applications. We also use quality control sampling, loan performance monitoring and training to manage the risks associated with our non-delegated underwriting program. As of both December 31, 2022 and 2021, 26% of our total first-lien IIF had been originated on a non-delegated basis.

Contract Underwriting. We also provide third-party contract underwriting services to our mortgage insurance customers pursuant to which we underwrite the mortgage loan for compliance with investor guidelines which, if necessary, may be separate from or in addition to underwriting for our mortgage insurance eligibility. Generally, we offer limited indemnification to our contract underwriting customers. To manage the risks associated with contract underwriting, we train our underwriters, require them to complete continuing education and routinely audit performance to monitor the accuracy and consistency of underwriting practices. As of December 31, 2022 and 2021, 4% and 5%, respectively, of our total first-lien IIF had been underwritten through contract underwriting.

Mortgage Insurance Portfolio Characteristics

Direct Risk in Force

Exposure in our mortgage insurance business is measured by RIF, which for Primary Mortgage Insurance is equal to the unpaid principal balance of the loan multiplied by our insurance coverage percentage. See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Mortgage Insurance Portfolio—Insurance and Risk in Force” for additional information about the composition of our Primary RIF.

We analyze our mortgage insurance portfolio in a number of ways to identify potential concentrations or imbalances in risk dispersion. We believe that, among other factors, the credit performance of our mortgage insurance portfolio is affected significantly by:

- general economic conditions (in particular, interest rates, home prices and unemployment);
- the characteristics of the loans insured including, but not limited to, the amount of equity borrowers have in their properties, the borrowers' credit characteristics, the size of the loans and the age and performance history of the loans;
- the geographic dispersion and other characteristics of the properties securing the insured loans, such as the primary purpose of the properties and the condition of local housing markets, including whether the properties are increasing or decreasing in value over time;
- the quality of loan underwriting and servicing; and
- the number of borrowers and credit characteristics of the borrower(s).

Persistency Rate

The Persistency Rate measures the amount of time that our insurance is remaining in force, which has a significant impact on our revenues and our results of operations. Because premiums on our Recurring Premium Policies are earned over time, higher Persistency Rates on these policies increase the premiums we receive and generally result in increased profitability and returns. Conversely, assuming all other factors remain constant, higher Persistency Rates on Single Premium Policies lower the overall returns on these products, as the premium revenue for our Single Premium Policies is the same regardless of the actual life of the insurance policy.

As the primary measure of the length of time that our insurance remains in force, the Persistency Rate incorporates the impact that policy cancellations have on our IIF. Provided that all required premiums are paid, coverage for a loan under our Master Policy generally will be cancelled on the first of the following to occur: (i) the loan insured under the certificate is paid in full, including in the event of a refinance transaction; (ii) we settle a claim with respect to the certificate; (iii) we act upon the insured's or its servicer's instruction to cancel coverage under the certificate, including as may be required by the HPA or pursuant to GSE guidelines; (iv) the term of coverage expires under the premium plan or upon the terms specified in the certificate; or (v) we cancel, rescind or deny coverage under the certificate. For more information, in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations," see "—Key Factors Affecting Our Results—Mortgage—IIF and Related Drivers" and "—Mortgage Insurance Portfolio—Insurance and Risk in Force."

Historically, there has been a close correlation between interest rates and Persistency Rates. Higher interest rate environments generally decrease refinancings, which decrease the cancellation rate of our insurance and positively affect our Persistency Rates. See "Regulation—Federal Regulation—Mortgage Insurance Cancellation" for more information regarding cancellation and termination requirements for borrower-paid private mortgage insurance meeting certain criteria under the HPA.

Geographic Dispersion

Radian Guaranty is authorized to write mortgage insurance in all 50 states, the District of Columbia and Guam. We have a geographically diversified mortgage insurance portfolio, and we proactively monitor the portfolio for concentration risks at both the state level and metropolitan area level known as Core Based Statistical Areas ("CBSAs"). As of December 31, 2022, our largest state concentration was in Texas, which represented 9.4% of RIF, and our largest CSBAs concentration was the New York-Newark-Jersey City metropolitan area, which represented 5.5% of RIF. See "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Mortgage Insurance Portfolio—Insurance and Risk in Force—Geographic Dispersion" for additional information about the geographic dispersion of our direct Primary Mortgage Insurance.

In "Item 1A. Risk Factors," also see "*—The credit performance of our mortgage insurance portfolio is impacted by macroeconomic conditions and specific events that affect the ability of borrowers to pay their mortgages*" and "*—Climate change and extreme weather events could adversely affect our businesses, results of operations and financial condition.*"

Mortgage Loan Characteristics

Factors that contribute significantly to our overall risk diversification and the credit quality of our RIF include, among others, geographic dispersion, as discussed above, as well as our mix of mortgage insurance products, the quality of loan underwriting and our risk management practices. In evaluating the credit quality of our portfolio and developing our pricing and risk management strategies, we consider a number of borrower, loan and property characteristics in assessing our risk of loss, including LTV and FICO score, as well as a number of other loan and property characteristics, including, without limitation, debt-to-income ratio, average loan size, property type, occupancy type, loan type and term, loan purpose and number of borrowers. See "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Mortgage Insurance Portfolio" for additional information about the credit quality and characteristics of our direct Primary Mortgage Insurance.

Defaults and Claims

Defaults

In our mortgage insurance business, the default and claim cycle begins with the receipt of a default notice from the loan servicer. We consider a loan to be in default for financial statement and internal tracking purposes upon receipt of notification by servicers that a borrower has missed two monthly payments. Defaults can occur due to a variety of specific events affecting borrowers, including death or illness, divorce or other family problems, unemployment, factors impacting economic conditions (e.g., regional economic disruptions or disaster related events such as epidemics/pandemics, hurricanes, floods, tornadoes and wildfires) or other events. Regional economic disruptions derived from natural disasters may be exacerbated by climate change and related environmental factors, which could increase the frequency, scope and intensity of such disasters.

The default rate in our mortgage insurance business is subject to seasonality. Historically, our mortgage insurance business experiences a fourth quarter seasonal increase in the number of defaults and a first quarter seasonal decline in the number of defaults and increase in the number of Cures. While historically this has been the case, macroeconomic factors in any given period may influence the default rate in our mortgage insurance business more than seasonality.

Currently, a segment of U.S. residential mortgage loans may be subject to, or eligible for, certain types of relief as a result of the legislative response to the COVID-19 pandemic, including the CARES Act. Upon request by borrowers of federally or GSE-backed mortgage loans who attest to financial hardship related to the pandemic, the CARES Act requires mortgage servicers to provide these borrowers with up to 180 days forbearance on their mortgage payments, which may be extended for an additional 180 days upon request. According to the statute, the forbearance requirements of the CARES Act are available during a covered period, which may be interpreted to expire on, or shortly after, the declared COVID-19 national emergency ends, which is expected to occur on May 11, 2023. As of December 31, 2022, 34% of our primary loans in default remain in a forbearance program.

As COVID-19 forbearances end, federal law requires servicers to discuss forbearance and loss mitigation options with their borrowers and afford additional protections to borrowers before their loans are referred to foreclosure. Additionally, the CARES Act provided a temporary foreclosure and eviction moratorium for residential mortgagors with certain federally or GSE-backed mortgages that have now expired. However, the existence of these moratoriums has significantly impacted the claims process since 2020 by preventing the procedural steps necessary for a claim under our insurance policies to be filed, as discussed below under “—Claims.” While foreclosure filings have resumed, foreclosure activity remains lower than it was prior to the COVID-19 pandemic. See “Regulation—Federal Regulation—CARES Act.” While the CARES Act and related federally mandated borrower relief has provided critical support to the housing finance system throughout the pandemic, the ultimate performance of loans that remain in forbearance is not yet known. In “Item 1A. Risk Factors,” see “—*An extension in the period of time that a loan remains in our inventory of defaulted mortgage loans may increase the severity of claims that we ultimately are required to pay.*”

Claims

Defaulted loans that fail to become current, or “cure,” may result in a claim under our mortgage insurance policies. The rate at which defaults cure, or do not go to claim, depends in large part on a borrower’s financial resources and circumstances (including whether the borrower is eligible for a loan modification), local housing prices (i.e., whether borrowers are able to cure defaults by selling the property in full satisfaction of all amounts due under the mortgage), interest rates, unemployment, inflationary pressures and other factors impacting economic conditions.

In our first-lien Primary Mortgage Insurance business, in order to submit a claim, the insured must first either acquire title to the property (typically through a foreclosure proceeding) or we must approve a third-party sale of the property. The time for a lender to acquire title to a property through foreclosure varies depending on the state, and in particular whether a state requires a lender to proceed through the judicial system to complete the foreclosure. Claim activity is not spread evenly throughout the coverage period of a book of business. Historically, except for periods of economic distress, we have experienced relatively few claims during the first two years following issuance of a policy.

In recent years, the average time for us to receive a claim has increased as a result of COVID-19-related relief programs discussed above. For example, payment and foreclosure forbearance programs instituted at the federal and state levels in response to the COVID-19 pandemic have caused defaulted loans to remain in our defaulted loan inventory for a protracted period of time. While the impact, if any, currently is hard to predict, we also may see impacts on claims with respect to loans secured by New York properties due to the state’s passage of the Foreclosure Abuse Prevention Act, which places new limitations on servicers regarding the de-acceleration of mortgage loan debt as a mechanism to toll, or reset, the State of New York’s six-year statute of limitations for foreclosure actions. In “Item 1A. Risk Factors,” see “—*An extension in the period of time that a loan remains in our inventory of defaulted mortgage loans may increase the severity of claims that we ultimately are required to pay.*”

For Pool Mortgage Insurance, which represents less than 1% of our RIF at December 31, 2022, our policies typically require the insured to not only acquire title but also to actively market and ultimately liquidate the real estate asset before filing a claim, which generally lengthens the time between a default and a claim submission.

In addition to claim volume, Claim Severity is another significant factor affecting losses. We calculate the Claim Severity by dividing the claim paid amount by the original coverage amount. Factors that impact the severity of a claim include, but are not limited to, the size of the loan, the amount of mortgage insurance coverage placed on the loan, the amount of time between default and claim during which we are expected to cover certain interest (capped at two years under our Prior Master Policy and capped at three years under our 2014 and 2020 Master Policies) and expenses, and the impact of our Loss Mitigation and other loss management activities with respect to the loan.

Home price appreciation as well as pre-foreclosure sales, acquisitions and other early workout efforts help to reduce overall Claim Severity, as do actions we may take to reduce a claim payment due to servicer negligence, as discussed below in “—Claims Management.” See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations—Mortgage—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Expenses—*Provision for Losses.*”

Claims Management

Our claims management process is focused on analyzing and processing claims to ensure that we pay valid claims in accordance with our policies. Our mortgage insurance claims management department pursues opportunities to mitigate losses both before and after claims are received.

In our mortgage insurance business, upon receipt of a valid claim, we have a range of settlement options for calculating the claim amount (also referred to as calculated loss), as set forth in our Master Policies. Most frequently, we settle a valid claim with the “Percentage Option” by paying the maximum liability and allowing the insured lender to keep title to the property. For this purpose, the maximum liability is determined by multiplying (*x*) the claim amount (which consists of the unpaid loan principal, plus past due interest for a period of time specified in our Master Policies, plus certain expenses associated with the default, and minus certain deductions) by (*y*) the applicable coverage percentage. We also have the following alternative settlement options under our Master Policies:

- (i) **Approved Sale Option:** Subject to any reduction provided for in our Master Policies, we may pay the claim amount (not to exceed the lender’s entire loss or our maximum liability under the Percentage Option) by taking into account the net proceeds received by the lender following an approved sale such as a “short sale” or “deed-in-lieu” transaction;
- (ii) **Acquisition Option:** Subject to any reduction provided for elsewhere in our Master Policies, we may pay the entire claim amount (as described above but without application of the coverage percentage) upon the conveyance to us of good and marketable title to the property; or
- (iii) **Anticipated Loss Option:** In certain circumstances, as outlined in our Master Policies, this claim settlement option is primarily based on the claim amount minus the net proceeds we reasonably anticipate would be generated if the property, in its original condition on the effective insurance commitment date, reasonable wear and tear excepted, were sold to a third party for fair market value.

Approved sales in which the underlying property has been sold for less than the outstanding loan amount are commonly referred to as “short sales.” Although short sales may have the effect of reducing our ultimate claim obligation, in many cases, a short sale will result in the payment of a claim in an amount that is equal to the maximum liability amount under the Percentage Option.

Under our Master Policies, we retain the right to consent prior to consummation of any short sale. We have entered into agreements with each of the GSEs pursuant to which we delegate to the GSEs our prior consent rights with respect to short sales on loans owned by the GSEs, as long as the short sales meet applicable GSE guidelines and processes for short sales and subject to certain other factors set forth in these agreements.

We also provide for limited delegation authority to certain loan servicers for short sales under specific circumstances. For loans that are not owned by the GSEs and for which we have not granted specific delegation authority to the loan servicer, we perform an individual analysis of each proposed short sale and provide our consent to these sales when appropriate. Historically, we have consented to a short sale only after reviewing various factors, including among other items, the sale price relative to market and the ability of the borrower to contribute to any shortfall in the sale proceeds as compared to the outstanding loan amount.

After a claim is received, our loss management specialists may focus on:

- a review to determine compliance with applicable loan origination programs and our Master Policy requirements, including: (i) whether the loan qualified for insurance at the time the certificate of coverage (i.e., policy) was issued; (ii) whether the insured has satisfied its obligation in meeting all necessary conditions in order for us to pay a claim, including submitting all necessary documentation in connection with the claim (commonly referred to as “claim perfection”); and (iii) whether the loan was appropriately serviced in accordance with the standards set forth in our Master Policies;
- analysis and prompt processing to ensure that valid claims are paid in an accurate and timely manner;

- responses to loss mitigation opportunities presented by the insured; and
- management and disposal of acquired real estate.

Radian Guaranty has entered into a Factored Claim Administration Agreement with Fannie Mae that applies to certain loans owned by Fannie Mae that were insured under our Master Policies for which a claim is submitted on or after October 1, 2018. Pursuant to the agreement, for the loans subject to the agreement, Radian Guaranty will determine the amount of covered expenses forming part of a loss (other than unpaid principal balance and delinquent interest) using prenegotiated expense factors. The expense factors are based on certain characteristics of each covered loan, including the unpaid principal balance at the time of default, property type and location, and property disposition.

Claim Denials

We have the legal right under our Master Policies to deny a claim under certain conditions, such as when the loan servicer does not produce documents necessary to perfect a claim (e.g., evidence that the insured has acquired title to the property) within the time period specified in our Master Policies. Most often, a Claim Denial is the result of a servicer's failure to provide the loan origination file or other critical servicing documents for review.

If, after requests by us, the loan origination file or other servicing documents are not provided to us, we generally deny the claim. If we deny a claim, we may continue to allow the insured the ability to perfect the claim for a limited period of time, as specified in our Master Policies. If the insured successfully perfects the claim on a timely basis, we will process the claim, including, as appropriate, by conducting a review of the loan file to ensure that underwriting and loan servicing were conducted properly.

If, after completion of this process, we determine that the claim was not perfected, other conditions precedent to coverage have not been met, or any exclusions apply, the insurance claim is denied and we consider the Claim Denial to be final and resolved. Although we may make a final determination with respect to a Claim Denial, it is possible that after we have denied coverage a legal challenge to our decision may be brought within a period of time specified under the terms of our Master Policies.

Rescissions

Mortgage insurance master policies generally protect mortgage insurers from the risk of material misrepresentations and fraud in the origination of an insured loan by establishing the right, under certain conditions, to unilaterally rescind coverage. Under the terms of our Master Policies, typical events that may give rise to our right to rescind coverage include: (i) we insured a loan in reliance upon an application for insurance that contained a material misstatement, misrepresentation or omission, whether intentional or otherwise, or that was issued as a result of an act of fraud or (ii) we find that there was negligence in the origination of a loan that we insured. We also have rights of Rescission arising from a breach of the insured's representations and warranties that are contained in our Master Policies or endorsements thereto and are required with our delegated underwriting program.

If we rescind coverage based on a determination that a loan did not qualify for insurance, we provide the insured with a period of time to challenge or rebut our decision. If a rebuttal to our Rescission is received and the insured provides additional information supporting the continuation (i.e., non-rescission) of coverage, we have the claim re-examined internally by a separate independent investigator. If the additional information supports the continuation of coverage, the insurance is reinstated and if there is a claim, it proceeds to the next step in our claims review process. Otherwise, if we determine that the loan did not qualify for coverage, the insurance policy is rescinded (and we issue a premium refund under the terms of our Master Policies), and we consider the Rescission to be final and resolved. Although we may make a final determination internally with respect to a Rescission, it is possible that a legal challenge to our decision to rescind coverage may be brought after we have rescinded coverage during a period of time that is specified under the terms of our Master Policies.

We have incorporated provisions into our 2014 Master Policy and 2020 Master Policy that generally provide Rescission relief based on the number of months that borrowers remain current on their mortgage loans. As a consequence, our rights to conduct Loss Mitigation Activity involving Rescission as a remedy generally are more limited under these Master Policies as compared to our Prior Master Policy. Our more recent Master Policies continue to include certain life-of-loan reservation of Rescission rights specified in the Master Policy, including fraud and certain patterns of fraud. In "Item 1A. Risk Factors," see "*—Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses.*"

Claim Curtailments

We depend on third-party servicing of the loans that we insure. Servicers are responsible for being the primary contact with borrowers regarding their loans, and we generally do not have first-party contact with borrowers. Dependable loan servicing is necessary for, among other things, timely billing and premium payments to us and effective loss mitigation opportunities for delinquent or near-delinquent loans. As such, proper loan servicing is critical to the performance of our insured mortgage portfolio, especially when borrowers are experiencing difficulty paying their mortgages.

Our Master Policies require servicers to service our insured loans in a reasonable, prudent manner consistent with the highest standards of servicing in use in the residential mortgage industry, and we have rights under our Master Policies to curtail, and in some circumstances, deny claims due to servicer negligence. Examples of servicer negligence may include, without limitation:

- a failure to report information to us on a timely basis as required under our Master Policies;
- a failure to pursue loss mitigation opportunities presented by borrowers, realtors and/or any other interested parties;
- a failure to pursue loan modifications and/or refinancings through programs available to borrowers;
- an undue delay in presenting claims to us (including as a result of improper handling of foreclosure proceedings), which increases the interest or other components of a claim we are required to pay;
- a failure to initiate and diligently pursue foreclosure or other appropriate proceedings within the timeframe specified in our Master Policies; and
- a failure to follow applicable foreclosure bidding instructions.

Although we could seek post-claim recoveries from the beneficiaries of our Master Policies if we later determine that a claim was not valid, because our loss mitigation process is designed to ensure compliance with our Master Policies prior to payment of a claim, historically, we have not sought recoveries from the beneficiaries of our Master Policies once a claim payment has been made.

From time to time, claims management may result in disputes with our customers that ultimately produce litigation or other legal proceedings. See Note 13 of Notes to Consolidated Financial Statements.

homegenius

Overview

Our homegenius businesses are comprised of title, real estate and technology products and services. Through this business segment, we offer an array of products and services to market participants across the real estate value chain, including consumers, mortgage lenders, mortgage and real estate investors, GSEs and real estate brokers and agents. We believe that the combination of this broad set of diversified homegenius products and services, together with our mortgage credit products and solutions is unique, and positions us to satisfy the multiple needs of our customers, and as a result, to become a more valuable partner to our customers.

The macroeconomic conditions and specific events that impact the housing, mortgage finance and related real estate markets affect the demand for the products and services we offer through our homegenius businesses. Sales volume in our homegenius businesses varies based on the overall activity in the housing and mortgage finance markets and the health of related industries. See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Factors Affecting Our Results—homegenius” for additional information.

Services Offered

Title Services

We provide a comprehensive suite of insurance and non-insurance title, real estate closing and real estate settlement services for residential purchase, refinance, REO and home equity transactions to mortgage lenders, mortgage investors and GSEs as well as directly to consumers for residential mortgage loans.

Title insurance is a contract of indemnity for losses stemming from a covered defect in title to real property, such as adverse ownership interests, liens, or other encumbrances, that predates the policy and is not otherwise excluded or excepted from coverage. Our title policies are issued following a determination of the insurability of title, which is based on a title search that may include review of the public land records, court filings, maps, surveys, previously issued title policies, and any other documentation that may contain information concerning interests in real property.

There are two types of title insurance policies—lenders’ policies and owners’ policies. Lenders’ policies insure the validity and priority of the insured mortgage and typically provide coverage up to the outstanding mortgage loan balance, until the loan is paid off. Owners’ policies are issued directly to the real estate purchaser and provide coverage to the owner in an amount equal to the purchase price of the property. Both types of policies are issued for a one-time premium paid at closing of the home purchase. Premium amounts vary across jurisdictions and also depend on the amount of coverage given and the type of policy being issued.

Losses on policies occur in the form of claims payouts and/or the cost of defending or establishing title. Title claims may arise from a number of factors, such as title search and examination errors, fraud, forgery, incorrect legal descriptions, and

failure to identify existing liens. Title insurers are also responsible for the cost of defending the insured in litigation alleging covered title defects, regardless of the merits of the allegations.

In addition to title insurance, we offer a full complement of title services that include tax reports; recording services; document retrieval; default title services; deed reports and property reports. Our closing and settlement services include electronic execution of some or all mortgage loan closing documents (eClosing), as well as traditional signing services.

Real Estate Services

We provide our customers with real estate services, including real estate asset management and real estate valuation services. Our asset management solutions help real estate investors and lenders improve execution on their real estate properties. Through these asset management services, we manage properties owned primarily by financial institutions and mortgage investors by overseeing the REO disposition process. We conduct this work primarily by engaging third-party independent contractors to perform the eviction and redemption process, as well as property preservation and repairs on behalf of our customers.

We also offer a full range of services for the benefit of the single-family rental asset class. This asset class primarily involves the securitization of a single loan backed by multiple rental properties owned primarily by large institutional investors. Our comprehensive single-family rental services provide a centralized, single point of contact for facilitating the property valuation and diligence services needed to support single-family rental warehouse lending and securitization activity. Our warehouse lending valuation and diligence reviews also serve institutional iBuyers, entities who use technology to value, purchase and thereafter securitize, rent or sell homes.

Through our licensed real estate broker subsidiary, homegenius Real Estate, we also provide a suite of real estate valuation products and services to lenders, servicers, investors and GSEs, including broker price opinions (i.e., price estimates provided by real estate brokers familiar with the particular market) and various valuations that utilize technology, including hybrid appraisals (where licensed appraisers access technology-enabled valuation services to support their valuations), automated valuation services (enabling a qualified user to obtain an estimated value based on a technology-driven analysis of data and information about comparable transactions) and interactive valuation services (where a qualified user can utilize their knowledge and preferences as inputs to technology tools to obtain a valuation estimate).

Technology Services

In addition to the services described above, we are developing a growing suite of proprietary real estate technology products and services, offered primarily through our licensed real estate broker subsidiary, homegenius Real Estate, that are designed to facilitate real estate transactions and are provided as SaaS solutions.

These digital services and solutions include:

- geneuity, a SaaS smart workflow system that integrates features such as task management, pipeline tracking, contacts, document storage, e-signature and communication into a single platform enabling real estate brokers and agents to manage real estate transactions more efficiently;
- geniusprice technology, a SaaS property intelligence platform that combines predictive modeling, artificial intelligence, automation and imaging review capabilities with a real estate broker's access to local data to create price estimates and property condition reports; and
- homegenius connect, a service that helps match interested homebuyers with local real estate agents.

In addition, we offer a web-based asset management workflow solution to assist in managing REO assets, rental properties, due diligence for bulk acquisitions of multiple properties, loss mitigation efforts and short sales.

Revenue Drivers

Our homegenius segment is dependent upon overall activity in the mortgage finance and real estate markets, as well as the overall health of the related industries. Due, in part, to the transactional nature of the business, revenues for our homegenius segment are subject to fluctuations from period to period, including fluctuations that reflect the seasonal volume fluctuations in these markets. Sales volume is also affected by the number of competing companies and alternative products offered in the market.

We earn net premiums on title insurance written by Radian Title Insurance. For our other homegenius offerings, we primarily use fixed-price contracts, pursuant to which we agree to perform the specified services and deliverables for a pre-determined per-unit price. To a lesser extent, for a portion of our REO management services and our real estate brokerage services, we utilize percentage-of-sale contracts, under which we are paid a contractual percentage of the sale proceeds upon the sale of each property.

In most cases, our contracts with our clients do not include minimum volume commitments and can be terminated by them at any time. Although a portion of our contracts and assignments are recurring in nature and include recurring monthly

assignments, the majority of our current homegenius revenues are transactional in nature and are generated in connection with securitizations, real estate purchases and sales or other transactions.

To the extent that our technology products and services grow in future periods as a percentage of our total homegenius revenues, a higher percentage of these total revenues would become recurring in nature. Due to the transactional nature of our current business, our homegenius segment revenues fluctuate from period to period as transactions are commenced or completed. In addition, our segment revenues are impacted by the volume of real estate transactions in the marketplace, which may fluctuate from period to period. In “Item 1A. Risk Factors,” see *“—We are exposed to risks associated with our homegenius businesses that could negatively affect our results of operations and financial condition.”*

For additional information on the most significant factors affecting our homegenius businesses, see “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Factors Affecting Our Results—homegenius.”

All Other

Overview

All Other activities include: (i) income (losses) from assets held by Radian Group, our holding company; (ii) related general corporate operating expenses not attributable or allocated to our reportable segments; and (iii) certain investments in new business opportunities, including activities and investments associated with Radian Mortgage Capital, and other immaterial activities.

In July 2022, we announced the launch of Radian Mortgage Capital, a mortgage conduit formed to provide residential mortgage lenders with an additional secondary-market option to sell eligible loans to us and ultimately to provide mortgage investors with another known sponsor. Subject to market conditions, Radian Mortgage Capital acquires residential mortgage loans, which Radian Mortgage Capital expects to then distribute into the capital markets through private label securitizations or sell directly to mortgage investors, with the option to retain and manage structured components of the underlying credit risk. Consistent with our stated strategy, Radian Mortgage Capital expands our capabilities to participate in the mortgage market to aggregate, manage and distribute residential mortgage credit risk. As of December 31, 2022, in light of the challenging market conditions in the secondary mortgage market, Radian Mortgage Capital had purchased only a limited number of loans, which were acquired in the fourth quarter of 2022, and has not yet conducted any securitizations.

See Note 4 of Notes to Consolidated Financial Statements for additional information regarding the basis of our segment reporting, including the related allocations.

Competition

Mortgage

We operate in the highly competitive U.S. mortgage insurance industry. Our competitors primarily include other private mortgage insurers and federal and state governmental agencies, principally the FHA and VA.

Including us, there are currently six active participants in the private mortgage industry that are approved and eligible to write business for the GSEs. The other participants are:

- Arch Capital Group Ltd. (includes both Arch Mortgage Insurance Company and United Guaranty Residential Insurance Company);
- Enact Holdings, Inc. (formerly Genworth Mortgage Holdings, Inc.);
- Essent Group Ltd.;
- MGIC Investment Corporation; and
- NMI Holdings, Inc.

We compete directly with other private mortgage insurers primarily on the basis of price, underwriting guidelines, overall service, customer relationships, perceived financial strength (including comparative credit ratings) and reputation. Overall customer service competition in our mortgage insurance business is based on, among other things, effective and timely delivery of products, timeliness of claims payments, customer connectivity, timely and accurate administration of policies, training, loss mitigation efforts and management and field service expertise.

For Radian, customer service also includes our ability to offer products and services through our homegenius businesses that are relevant to our mortgage insurance customers and complement our mortgage insurance products.

Pricing has always been competitive in the mortgage insurance industry, but as discussed above under “Mortgage—Pricing,” with the increased prevalence of granular, “black box” pricing and custom rate cards throughout the industry and the

greater uniformity of master policy terms throughout the industry, pricing has become the predominant competitive market factor for private mortgage insurance. We monitor various competitive and economic factors while seeking to enhance the long-term value of our mortgage insurance portfolio by balancing credit risk, profitability, and volume and capital considerations in developing our pricing strategies.

We establish our premium rates and seek to write a mix of business to manage the risk/return profile and maximize the long-term economic value of our mortgage insurance portfolio, taking into consideration the competitive environment. See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Factors Affecting Our Results—Mortgage—Premiums.” Based on publicly available information, we estimate that our share of NIW within the private mortgage insurance market was approximately 17% for 2022.

Certain of our private mortgage insurance competitors currently have better financial strength ratings than we have and/or are subsidiaries of larger corporations, which may give them a competitive advantage.

Private mortgage insurance competes for a share of the insurable mortgage market with the single-family mortgage insurance programs of the FHA and VA. Private mortgage insurance execution competes with the programs offered by the FHA on the basis of loan limits, pricing, credit guidelines, terms of our insurance policies and loss mitigation practices.

We believe that better execution for borrowers with higher FICO scores and the inability to cancel FHA insurance for certain loans, in conjunction with the preference of certain lenders to execute through the GSEs, have served as competitive advantages for private mortgage insurance as compared to FHA insurance. The FHA’s share of the total insured mortgage market (which includes FHA, VA and private mortgage insurers) was reported to be 27% in 2022, compared to 25% in 2021. See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Factors Affecting Our Results—Mortgage—NIW and Related Drivers.”

On February 22, 2022, the FHA announced that it is reducing its annual mortgage insurance premium by 0.30 percentage points for most new borrowers. While we do not expect this pricing change to have a material impact on our NIW volumes, the FHA could institute further pricing changes in the future, including additional changes to its annual premiums, a reduction in its upfront premiums and/or the elimination of the life-of-loan premium requirement for most FHA insured loans. It is uncertain if and when the FHA may pursue any additional pricing or other actions and what form they may take; however, any change that would improve FHA execution compared to execution through the GSEs with private mortgage insurance could negatively impact our NIW volume.

If the competitive position of the FHA is enhanced, it could have a negative effect on our ability to compete with the FHA. See “Regulation—Federal Regulation—Housing Finance Reform and the GSEs’ Business Practices” for a discussion of factors that could enhance the FHA’s competitive position relative to private mortgage insurance.

We also have faced increasing competition from the VA. Based on publicly available information, the VA’s share of the total insured mortgage market was 25% in 2022, compared to 31% in 2021. We believe that the VA remains a strong participant in the overall market because the VA insures 100% LTV loans, which is unavailable through private mortgage insurance and the FHA, charges a one-time funding fee that can be included in the loan amount with no separate monthly payment, and because of an increase in the number of borrowers that are eligible for the VA’s program.

In addition, as market conditions change, alternatives to traditional private mortgage insurance may become more prevalent, which could reduce the demand for private mortgage insurance. These alternatives have included structures commonly referred to as “investor paid mortgage insurance” in which affiliates of traditional mortgage insurers that are not subject to the PMIERS directly insure the GSEs against loss. For additional information about these structures, see “Regulation—Federal Regulation—Housing Finance Reform and the GSEs’ Business Practices.”

It is difficult to predict what other types of credit risk transfer transactions and structures or other forms of credit enhancement, including GSE-sponsored alternatives to traditional mortgage insurance, might be used in the future. If any of these alternatives were to displace standard primary loan level private mortgage insurance, the amount of insurance we write may be reduced and our future prospects could be negatively impacted.

In “Item 1A. Risk Factors,” see “—*Our mortgage insurance business faces intense competition.*”

homegenius

We believe that through our homegenius segment we are positioned as a unique provider of an array of products and services to participants across the real estate value chain. While we are not aware of any other single company that provides a comparable range of services to the residential mortgage and real estate industries, our homegenius businesses have multiple significant competitors within each of its individual lines of business.

Significant competitors for our homegenius businesses include:

Title Services – The market for traditional title services is highly concentrated among four large companies with national scope: Fidelity National Financial, Inc.; First American Financial Corporation; Old Republic International Corporation; and Stewart Information Services Corporation. In addition, we compete with smaller title service providers such as Boston National Title Agency; Mortgage Connect LP; ServiceLink IP Holding Company, LLC; and a host of additional regional providers. In

addition, the introduction of alternatives to traditional title insurance into the market such as the recent offering of attorney opinion letters in lieu of traditional title policies, which is being accepted by the GSEs, subject to certain conditions, could provide additional competition. See “Regulation—Federal Regulation—Housing Finance Reform and the GSEs’ Business Practices” for additional information.

Real Estate Services – Real estate technology companies such as Black Knight, Inc.; ClearCapital.com, Inc.; CoreLogic, Inc.; HouseCanary, Inc.; and Xome Inc.

Technology Services – We believe that our more recent technology services and products will compete with offerings from various real estate SaaS companies.

Across all business lines in our homegenius segment, we believe we compete on the basis of technology, data access, industry expertise, price, service levels and relationships.

Customers

Mortgage

The principal customers of our mortgage insurance business are mortgage originators such as mortgage banks, commercial banks, savings institutions, credit unions and community banks.

We actively monitor our customer concentration and regularly engage in efforts to diversify our customer base; however, the increasing use of custom rate cards for individual lenders in the mortgage insurance marketplace has increased the likelihood that a significant portion of NIW volume generated in any given period may be attributable to one or more customers. Our largest single mortgage insurance customer (including branches and affiliates) measured by NIW, accounted for 8% of NIW during 2022, compared to 14% and 13% in 2021 and 2020, respectively. The percentage of NIW generated by our top 10 customers was 34% in 2022. No single customer contributed earned premiums that accounted for more than 10% of our consolidated revenues in 2022, 2021 or 2020. In “Item 1A. Risk Factors,” see “—Our NIW and franchise value could decline if we lose business from significant customers.”

homegenius

We have a broad range of customers in our homegenius segment, including many of our Mortgage customers, due to the products and services we offer across the mortgage and real estate value chain. Our principal customers (non-affiliated) are:

- Mortgage originators such as mortgage banks, commercial banks, savings institutions, credit unions and community banks;
- Aggregators, issuers and investors in RMBS, whole loans and other mortgage-related debt instruments, including the GSEs, private equity and hedge funds, real estate investment trusts and investment banks;
- Single-family rental warehouse lenders, owner/operators, builders, capital markets institutional investors and securitization issuers;
- Mortgage servicers;
- Real estate brokers and agents; and
- Consumers.

Our customers include many of the largest financial institutions and participants in the mortgage sector and, as such, our services revenue is concentrated among our largest customers. For the year ended December 31, 2022, the top 10 homegenius customers generated approximately 57% of the homegenius segment’s services revenue.

Sales and Marketing

Our sales and marketing efforts are focused on establishing, maintaining and growing valuable customer relationships. Given the range of solutions we offer across our businesses, we believe we have opportunity to expand our sales to our existing customer base as well as to new customers. We have a core team of account managers who sell all products and solutions across our businesses, as well as sales teams with subject matter expertise in particular services and the related needs of the customers we serve.

Marketing and communications activities include direct marketing; print and digital advertising; digital marketing including email, web, content and social media; public relations and thought leadership; brand strategy and expression; event marketing including customer meetings, conferences and trade shows and other targeted initiatives designed to generate new sales opportunities, drive customer adoption of our services and retain our existing customers. We continue to adapt our sales and marketing efforts based on the current environment to offer tools and techniques to connect virtually and engage with current and potential customers.

All sales and marketing efforts are supported by functional areas that provide additional touch points for our customers. For example, our *Inside Sales Team* is responsible for managing and growing customer relationships and promoting increased customer adoption and our *Client Success, Customer Service and Training Teams* provide customized service as well as educational sessions to our customers.

We expect that our approach to selling our products across our mortgage and real estate services businesses will strengthen our relationships with customers, attract new customers and enhance our ability to compete.

Investment Policy and Portfolio

Our investment portfolio is our primary source of claims paying resources and also impacts our earnings. We seek to manage our investment portfolio within our targeted risk and return tolerances based on our current liability projections and business and economic outlook to maintain sufficient liquidity levels to satisfy our current and future operating requirements and other financial needs.

Our investment strategy uses an asset allocation methodology that takes into consideration regulatory constraints, our business environment and consolidated risks as well as current investment conditions. With respect to our fixed income investments, the following internal investment policy guidelines, among others, are applied at the time of investment and continually monitored.

Internal investment policy guidelines

NAIC Designation	Ratings Equivalent	Internal Policy
1	"A-" and above	At least 75% of the portfolio Fair Value
2	"BBB+" to "BBB-"	Not more than 25% of portfolio Fair Value
3 to 6	"BB+" and below	Not more than 10% of portfolio Fair Value

Our portfolio has been constructed to maximize long-term expected returns while maintaining an acceptable risk level. Our investment objectives are to utilize appropriate risk management oversight to optimize after-tax returns, while preserving capital. We calibrate the level of our short-term investments based on our overall investment portfolio duration, risk appetite and expected short-term cash requirements.

Our investment policies and strategies are subject to change, depending on business needs and regulatory, economic and market conditions and our then-existing or anticipated financial condition and operating requirements, including our current and future tax positions. The investments held at our insurance subsidiaries are also subject to insurance regulatory requirements applicable to such insurance subsidiaries. For example, regulatory requirements address the types of assets that may be reported as admitted assets for statutory reporting purposes and limit how a mortgage insurer may invest its contingency reserve.

Oversight responsibility of our investment portfolio rests with management, and allocations are set by periodic asset allocation studies, calibrated by risk and after-tax return considerations. The risks we consider include, among others, duration, convexity, liquidity, market, sector, structural, interest rate and credit risks. As of December 31, 2022, we internally managed 10% of the investment portfolio (the portion of the portfolio largely consisting of U.S. Treasury securities, money market funds, equities, mortgage insurance-linked notes and other mortgage related assets, and certain exchange-traded funds), with the remainder primarily managed by three external managers. External managers are selected by management based primarily upon their ability to meet our investment goals and objectives, based upon factors such as historical returns and the stability of their management teams. Management's selections of external managers are presented to, approved and monitored by the Finance and Investment Committee of our board of directors.

At December 31, 2022, our investment portfolio, including securities loaned to third-party borrowers under securities lending agreements, had a cost basis of \$6.4 billion and a carrying value of \$5.8 billion. At December 31, 2022, 95% of our investment portfolio was rated investment grade. The weighted-average duration of the assets in our investment portfolio as of December 31, 2022, was 4.4 years. For additional information about our investment portfolio, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Investment Portfolio," as well as Notes 5 and 6 of Notes to Consolidated Financial Statements.

Although managed separately from the investment portfolio discussed above, beginning in 2022, we also purchase mortgage loans for resale in our new mortgage conduit. See "All Other—Overview" for additional information on this business. In "Item 1A. Risk Factors," see—We face risks associated with our new mortgage conduit business."

Enterprise Risk Management

Risk Philosophy, Vision and Appetite

As a financial services organization, risk management is a critical part of our business. The following goals guide our strategy and actions as a risk management organization:

- Embed and continually reinforce a disciplined, corporate-wide risk culture that utilizes an understanding of risk/return trade-offs to drive quality decisions and achieve long-term, through-the-cycle profitability;
- Maintain credit, underwriting, pricing and risk/return disciplines based on sound data and analytics and continuous feedback throughout the organization;
- Proactively monitor business, counterparty, economic, housing and regulatory trends to identify and mitigate emerging risks;
- Continually refine analytical and technological capabilities, processes and systems to effectively identify, assess and manage risks; and
- Develop and leverage tools and capabilities to inform and optimize capital allocation within our risk appetite in support of our corporate strategy.

Risk Categories

Our risk appetite, or the amount of risk we are willing to take on in pursuit of value, is driven by our business strategy, which is established by executive management and overseen by our board of directors. We define our risk appetite qualitatively through the following key risk categories where strategic execution occurs: credit; financial; strategic; operational and regulatory and compliance. We do not treat reputational risk as a distinct category of risk; rather, we view reputational risk as pervasive throughout our entire risk portfolio, as each risk on its own can impact our reputation if not mitigated or managed properly.

Risk Governance

Board of Directors

Our board of directors is responsible for the general oversight of risks. Our board of directors seeks to understand and oversee the most critical risks relating to our business, allocates responsibilities for the oversight of risks among the full board and its committees, and reviews the systems and processes that management has in place to manage identified risks, as well as those that could arise in the future.

The board regularly meets with management to receive reports derived from: (i) our ERM function regarding the most significant risks we are facing, and the steps being taken to assess, manage and mitigate those risks; (ii) our information security function regarding cybersecurity risks and our efforts to mitigate such risks; and (iii) our compliance programs and our efforts to embed a culture of compliance throughout the organization to encourage ethical behavior and mitigate risks of regulatory non-compliance. The full board further considers current and potential future strategic risks as part of its annual strategic planning session with management.

Executive Management

Our senior executive management team regularly monitors and discusses risks related to our businesses through various management committees. Our Pricing and Risk Committee, Capital and Liquidity Review Committee and Model Governance Committee (these committees collectively comprise our Asset Liability Committee) focus on identifying risks and decision making related to pricing, credit, capital, liquidity and model risk management, including risk/return analysis associated with different business opportunities. Other management committees focused on risk management include, but are not limited to, our ERM Council, Executive Information Security Committee, Resilience Executive Committee and Enterprise Information Governance Committee.

Integrated ERM Framework

We have adopted an integrated approach to risk management, which includes, among other things: (i) a centralized ERM function that is responsible for overseeing the process for risk identification, assessment, management and mitigation across the organization; (ii) risk management functions embedded in our businesses; (iii) specialized risk committees with a focus on specific risks; and (iv) an internal audit function that performs periodic, independent reviews and tests compliance with risk management policies, procedures and standards across the Company.

Our ERM framework is designed to provide executive management with the ability to identify and evaluate the most significant risks we face and to calibrate risk mitigation strategies to account for challenges in the current business environment, as well as external factors that may negatively impact our operations. In practice, our ERM function represents a cross-functional and enterprise-wide effort, consisting of subject matter experts and experienced managers, that utilizes a

systematic method to identify, evaluate and monitor both known and emerging risks. Risk assessments and mitigation plans are developed to address these risks. Risk scoring and validation of the effectiveness of risk management plans through management reporting facilitate program sustainability and promote accountability for risk management activities throughout the Company.

As part of our ERM program, our businesses employ comprehensive risk management functions, which, in conjunction with the oversight of the Risk Committee of our board of directors, are responsible for monitoring compliance with our risk-related policies, managing our insured portfolios and the mortgage loans we purchase through our mortgage conduit and communicating credit-related issues to management, our board of directors and our customers.

Mortgage Insurance Risk Management

Risk Origination and Servicing. We believe that understanding our business partners and customers is a key component of managing risk. Accordingly, we have a counterparty risk management team that leverages our customer and servicer segmentation framework so that we can more effectively perform ongoing monitoring of loan performance, underwriting quality and the risk profile and mix of business of a customer's mortgage insurance applications. The counterparty risk management team monitors trends at the customer level, identifies customers who may exceed certain risk tolerances and shares meaningful performance data with our customers to help them improve. The team is also responsible for lender corrective action in the event we discover credit performance issues, such as high early payment default levels.

Portfolio Management. We have developed risk and capital allocation models to support our mortgage insurance business. These models provide comprehensive analytics that help us establish portfolio limits for product type, loan attributes, geographic concentrations and counterparties. We proactively monitor market concentrations across these and other attributes. We also identify, evaluate and negotiate potential transactions for terminating insurance risk and for distributing risk to third parties, including through reinsurance arrangements. See "*Risk Distribution*" below for more information about the use of reinsurance as a risk management tool in our mortgage insurance business. As part of our portfolio management function, we monitor and analyze the performance of various risks in our mortgage insurance portfolio. We use this information to develop our mortgage credit risk and counterparty risk policies, and as a component of our default and prepayment analytics.

Credit Policy. We maintain mortgage-related credit risk policies that reflect our tolerance levels regarding counterparty, portfolio and operational risks involving mortgage collateral. Based on our policies and risk tolerances, our credit policy function develops and updates our mortgage insurance eligibility requirements and guidelines through regular monitoring of competitor offerings, customer input regarding lending needs, analysis of historical performance and portfolio trends, quality assurance results and underwriter experience and observations. The credit policy function works closely with our mortgage insurance underwriters to ensure that underwriting decisions align with risk tolerances and principles.

Quality Assurance. Our quality assurance function supports our credit analytics function by auditing individual loan files to examine underwriting decisions for compliance with agreed-upon underwriting guidelines. These audits are conducted across loans submitted through our delegated and non-delegated underwriting channels. Our quality assurance team also audits our customers and our underwriters to monitor quality in our NIW. We conduct independent re-verification of key mortgage insurance application data to protect against misrepresentation. Our quality assurance team also conducts audits of our key operational functions, including claims, premium processing and customer care to ensure that our operational transactions are in compliance with our policies and procedures.

Loss Mitigation. We have a dedicated loss mitigation group that works with servicers to identify and pursue loss mitigation opportunities for loans in both our performing and non-performing (defaulted) portfolios. This includes regular surveillance and benchmarking of servicer performance with respect to default reporting, borrower retention efforts, foreclosure alternatives and foreclosure processing. Through this process, we seek to hold servicers accountable for their performance and communicate to servicers identified best practices for servicer performance. See "Mortgage—Defaults and Claims—Claims Management" above for more information.

Risk Modeling. Our risk modeling team uses analytical techniques to develop and maintain economic scenario generation models and loan level default and prepayment models for a wide range of risk management applications, including portfolio analysis, credit decision making, forecasting and loss reserving.

Risk Distribution. In our mortgage insurance business, we use reinsurance as a capital and risk management tool to lower the risk profile and financial volatility of our mortgage insurance portfolio through economic cycles. We have distributed risk through third-party quota share and excess-of-loss reinsurance arrangements, including through the capital markets using mortgage insurance-linked notes transactions. In recent years, we have expanded our risk distribution strategy in an effort to optimize the amounts and types of capital and risk distribution deployed against insured risk. The objectives of our risk distribution strategy include: (i) supporting our overall capital plan by reducing our cost of capital, increasing capital efficiency and enhancing our projected returns on capital and (ii) reducing portfolio risk and financial volatility through economic cycles. For additional information regarding our reinsurance programs, see Note 8 of Notes to Consolidated Financial Statements.

Title Insurance Risk Management

We take a prudent approach to assessing and managing risk in our title insurance business through the use of well-trained underwriters, stringent underwriting guidelines and the imposition of per file risk limits and third-party reinsurance on a per policy basis, over certain policy limits.

Underwriting and Quality Assurance. Our agents, underwriters and title examiners receive training and feedback in the examining and underwriting of residential and commercial title insurance for both refinance and purchase transactions. Specific title commitments are selected for further review to ensure that underwriting decisions comply with agreed-upon underwriting guidelines and that the policies are within single risk limits.

Credit Policy. We have developed and maintain policies for our title insurance business, which reflect our risk tolerance levels. Risk limits are imposed on selected loan types and reinsurance is currently required on all policies with loan amounts above a specified amount.

Ceded Reinsurance. In our title insurance business, we use reinsurance as part of our capital and risk management activities, including a loss portfolio transfer reinsurance agreement that transfers a portion of the risk associated with the legacy title insurance in our portfolio (insurance written prior to the acquisition of our title insurance subsidiary) to a third party. We also currently maintain an excess-of-loss policy with a third-party reinsurer that covers losses on our entire title insurance legacy portfolio above a specified limit.

Mortgage Conduit Risk Management

Credit Policy. Our risk management team reviews and approves new mortgage conduit loan programs, underwriting guideline changes and mortgage seller underwriting programs. Mortgage conduit loan programs are reviewed frequently and updated as needed to address changing market conditions and other factors.

Counterparty Risk. We maintain mortgage seller approval and recertification policies to evaluate and monitor, among other things, seller creditworthiness, capacity, and quality. Mortgage seller financial and other trends are also monitored, and appropriate mitigation actions are taken as warranted. Our counterparty risk management team has also developed risk thresholds for our mortgage conduit business that align with the Company's overall risk and return tolerances.

Quality Assurance. Our quality assurance function audits individual loan files purchased by Radian Mortgage Capital to assess compliance with the applicable underwriting guidelines and regulatory compliance requirements. We conduct independent re-verification of key credit file data to protect against misrepresentation.

Secondary Marketing. We have a control framework with established standards, parameters and practices that apply to the purchase and sale of mortgage loan products by Radian Mortgage Capital. The controls are aligned with the Company's risk and return tolerances through established authority levels, escalation triggers and governance over target pricing, margin limits, risk position limits and trade size limits. This framework governs Radian Mortgage Capital's day-to-day management of market risk within profitability targets of its residential mortgage loan pipeline and ensures that Radian Mortgage Capital maintains a hedge coverage that is within the Company's approved parameters.

Cybersecurity Risk Management

Information security is a significant operational risk for financial institutions such as Radian and includes the risk of loss resulting from cyberattacks. In an effort to mitigate this risk, we have an Information Security Program that is dedicated to protecting our corporate data as well as data entrusted to us by our customers and partners. At the core of our program is a defense-in-depth strategy, which utilizes multiple layers of security controls to protect data and solutions.

We use the National Institute of Standards and Technology Cybersecurity Framework (the "NIST CSF"), as a guideline to manage our cybersecurity-related risk. The NIST CSF outlines information security measures and controls over five functions: Identify, Protect, Detect, Respond and Recover. We have developed key security services, including Enterprise Data Protection, Vulnerability Management and Application Security, Managed Threat Detection and Incident Response. We test our incident response readiness and reporting through tabletop exercises, external and internal penetration testing and continuous internal security testing in our efforts to ensure that risks and incidents are identified, escalated and communicated for appropriate remediation activities to reduce risk to an acceptable level.

Our commitment to our Information Security Program extends across all business lines. We have an Information Security Committee comprised of Company executives, cross-functional Incident Response teams and strong governance mechanisms designed to ensure compliance with our security policies and protocols. In "Item 1A. Risk Factors," see "*—We could incur significant liability or reputational harm if the security of our information technology systems, or of our third-party vendors or service providers, is breached, including as result of a cyberattack, or we otherwise fail to protect confidential information, including personally identifiable information that we maintain.*"

Human Capital Management

For 45 years at Radian, our products and services have responsibly helped millions of families achieve their dream of homeownership. This company-wide commitment to affordable, sustainable and equitable homeownership, along with our support of our customers, our employees and the communities where we live and work, defines who we are as an enterprise and aligns with our core organizational values: Deliver the Brand Promise, Innovate for the Future, Create Shareholder Value, Our People are the Difference, Do What's Right and Partner to Win.

We value our employees by supporting a healthy work-life balance and a team-oriented, One Radian environment. We strive to offer competitive compensation and benefits programs as well as career development opportunities, while fostering a community where everyone feels included and empowered to do their best work and is encouraged to give back to their communities to make a social impact. As of December 31, 2022, we had approximately 1,400 employees of Radian Group and its subsidiaries. See "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Overview—Current Operating Environment" for steps taken in 2022 to align our workforce to the needs of the business.

Compensation and Benefits Program

Our compensation programs are designed to attract, retain and reward talented individuals from diverse backgrounds who possess the skills and qualities necessary to support our business objectives, demonstrate our values, assist in the achievement of our strategic goals and create long-term value for our stockholders. Our compensation programs include base salary, annual incentive bonuses and for certain employees, other performance-related cash incentives, such as commissions, and long-term equity incentive awards.

Our annual short-term incentive or bonus program is designed and approved by the Compensation and Human Capital Management Committee of our board of directors to incent achievement of our financial objectives and execution of our strategic plan in alignment with our organizational values. Living our values and advancing our human capital management capabilities are considered as part of our employees' performance evaluations and are taken into consideration in determining each employee's annual short-term incentive award.

In addition to our cash and equity compensation programs, we offer eligible employees a comprehensive benefits package, including, among others, life and health (medical, dental and vision) insurance, paid time off, fertility assistance, paid parental leave and caregiver leave, a 401(k) plan with an employer matching contribution and tuition reimbursement. In addition, in order to support our employees and advance our mission to promote affordable, sustainable and equitable homeownership, we offer all eligible employees benefit reimbursements in our Radian mortgage insurance, title and agent referrals programs via our homebuyer perks benefits program.

Diversity, Equity and Inclusion

At Radian, we are committed to an inclusive and diverse workplace, as represented by our *Employee Value Promise—We See You at Radian*. We believe that an equitable and inclusive environment with diverse teams produces more creative solutions, results in more innovative products and services and is crucial to our efforts to attract and retain key talent.

We have an established Diversity, Equity and Inclusion ("DEI") Council that is sponsored by our CEO, led by senior management and comprised of leaders and employees from across the Company to advance the program and its efforts. In 2020, we created a framework for and launched Radian's Employee Resource Group ("ERG") program, which is an important aspect of Radian's DEI efforts because it not only creates inclusive communities where employees feel support, but it enriches our overall company culture. Radian currently has four active ERGs: TrueColors, which brings together our LGBTQIA+ employees and allies; Women Heard as our women's group; Vibrant Crossroads, which highlights intersectionality and multiculturalism; and Radian Salutes, supporting veterans, military service members, and military dependents.

In January 2022, we began working with Neurodiverse Solutions ("NDS," formerly Autism2Work). Through the NDS program, 48 of our team members have been certified in Neurodiversity Sensory Awareness Training and we currently employ 11 neurodivergent resources within our quality assurance, risk governance and user acceptance review teams within our mortgage insurance business.

We are committed to providing equal employment opportunities and promoting inclusive hiring practices, developing targeted recruitment strategies and improving internal reporting capabilities. In 2020, we trained all managers on unconscious bias and, in 2021, we hired a recruiter dedicated to DEI. We annually deploy mandatory DEI training for all employees. We also annually complete pay equity analyses in partnership with an external expert to ensure an objective review of our pay practices.

We are committed to enhancing our DEI maturity and have developed a DEI roadmap to execute our multi-year DEI strategy. We report on our progress against the roadmap to our workforce on a quarterly basis.

We know that advancing a culture of inclusion takes every single employee. In 2022, we instituted an annual requirement for all employees to include a DEI objective as part of their annual performance goals, which serve as a basis for their short-

term incentive award. By focusing all employees on the importance of our DEI efforts, we can continue to advance a culture of inclusion and respect.

Radian's DEI efforts have received recognition from a variety of third-party organizations. Radian was recently designated as a Champion of Board Diversity by The Forum of Executive Women for the second consecutive year and was included on Bloomberg's Gender Equality Index for the fifth consecutive year. Our actions to address LGBTQIA+ equality in the workplace have been recognized by the Human Rights Campaign, and our focus on board diversity has been recognized by 50/50 Women on Boards. We also signed the Mortgage Bankers Association's Home for All Pledge to promote inclusion in housing and the CEO Action for Diversity & Inclusion™ pledge to cultivate an environment where all ideas and employees are welcomed.

At December 31, 2022, women represented 56% of our workforce, 21% of the direct reports to our Chief Executive Officer and 38% of our senior management team comprising officers at the Assistant Vice President level and above.

Talent Development and Employee Engagement

We invest in our people to provide opportunities for career growth. Talent development, annual performance reviews that are focused in part on living our company values and succession planning are all important aspects of this investment. These processes help management identify and nurture top talent for leadership opportunities and support the growth and development of knowledge and skills of our employees, managers and leaders.

In order to measure engagement and culture across the organization, we use employee experience surveys. Our most recent employee experience survey was conducted in 2022. Our results included an 83% employee participation rate and an engagement score of 84, both higher than the benchmark 75% participation rate and 79 engagement score provided by our third-party employee engagement provider. In addition to our experience surveys, we frequently use employee pulse surveys to gather employee feedback.

Performance reviews are completed annually to ensure a focus on development of employees along with an assessment of performance and potential, which supports succession planning and informs development efforts across the company to ensure we have a deep bench of talent within Radian.

Community Involvement

Our financial strength and growth depend on the well-being of our employees, and therefore, the communities in which they live and we operate. Our Corporate Citizenship Program was developed to encourage and support the generosity and community involvement of our employees. Since its inception, the program – through both company and employee contributions – has provided significant financial support to charities across the country. The program consists of three pillars: charitable contributions, matching gifts and community connection.

Charitable contributions include donations made by Radian to non-profit organizations, including direct corporate contributions and sponsorship of charitable events. In 2022, we provided financial support to community organizations through direct giving, sponsorships and fundraisers. This includes a multi-year commitment to support the Mortgage Bankers Association's Opens Doors Foundation and the formation of an alliance with the Children's Hospital of Philadelphia. Our matching gifts program includes a charitable contribution made by Radian to non-profit organizations that mirrors a donation made by an employee. During 2021 and 2022, based on the struggles of many organizations during the COVID-19 pandemic, we raised the individual cap and doubled our matching gift program for employees to maximize their personal donations. Our community-based program, Radian Connected, provides opportunities for employee engagement and community involvement, including volunteerism and opportunities for learning and skill development, as well as social opportunities to network and build stronger working relationships. We believe that this commitment to our communities helps in our efforts to attract and retain employees.

Regulation

We are subject to comprehensive regulation by both federal and state regulatory authorities. Set forth below is a description of significant state and federal regulations and other requirements of the GSEs that are applicable to our businesses. The descriptions below are qualified in their entirety by reference to the full text of the laws and regulations discussed. In "Item 1A. Risk Factors," see "*—Our insurance subsidiaries are subject to comprehensive state insurance regulations and other requirements, which we may fail to satisfy*" and "*—Legislation and administrative and regulatory changes and interpretations could impact our businesses.*"

State Regulation

Overview of State Insurance Regulation and Our Insurance Subsidiaries

We and our insurance subsidiaries are subject to comprehensive regulation by the insurance departments in the various states where they are licensed to transact business. Insurance laws vary from state to state, but generally grant broad supervisory powers to agencies or officials to examine insurance companies and enforce rules or exercise discretion affecting almost every significant aspect of the insurance business. These regulations principally are designed for the protection of policyholders, rather than for the benefit of investors.

Insurance regulations address, among other things, the licensing of companies to transact business, claims handling, credit for reinsurance, premium rates and policy forms, financial statements, periodic reporting, permissible investments and adherence to financial standards relating to surplus, dividends and other measures of solvency intended to assure the satisfaction of obligations to policyholders.

Our insurance subsidiaries' premium rates and policy forms are generally subject to regulation in every state in which they are licensed to transact business. These regulations are intended to protect policyholders against excessive, inadequate or unfairly discriminatory rates and to encourage competition in the insurance marketplace. In most states where our insurance subsidiaries are licensed, premium rates and policy forms must be filed with the state insurance regulatory authority and, in some states, must also be approved before their use.

With respect to mortgage insurance, premium rates may be subject to actuarial justification, generally on the basis of the mortgage insurer's loss experience, expenses and future projections. In addition, state regulators may assess how rates are being charged to various customers based on whether they are "similarly situated" to other customers being charged various rates, and state regulators also may evaluate general default experience in the mortgage insurance industry in assessing the premium rates charged by mortgage insurers. In many states, the filed forms allow for a deviation from the filed rates within a certain range to take into consideration various factors linked to the credit being insured.

As to title insurance, premium rates and policy forms must be filed with state insurance regulatory authorities and, in some states, must also be approved before their use. Policy forms require approval to ensure that the coverage and exceptions conform to state insurance regulations. Premium rates subject to approval often must be supported by actuarial data or a study of financial impact of the premium rate on the insurer. In September 2017, NYDFS issued 11 NYCRR 228 ("Regulation 208") which regulates title insurance marketing practices, expenses and transaction related charges in the state of New York. Regulation 208 limits or bans title underwriters and agents from charging consumers certain title- and closing-related fees, and Regulation 208 contains strict rules around marketing expenses aimed at restricting or stopping certain marketing practices in the title industry. While Regulation 208 currently is one of the most strict title marketing regulations, a number of other states impose similar restrictions on such activity, either through regulations that are specific to title marketing or through broader state insurance anti-inducement and anti-rebating laws. Radian Settlement Services and Radian Title Insurance have adjusted their transaction fees and marketing practices and expenses to comply with Regulation 208 and other similar state laws.

Each insurance subsidiary is required by the insurance regulatory authority of its state of domicile, and the insurance regulatory authority of each other jurisdiction in which it is licensed to transact business, to make various filings with those insurance regulatory authorities and with the NAIC, including quarterly and annual financial statements prepared in accordance with SAP. In addition, our insurance subsidiaries are subject to examination by the insurance regulatory authority of their state of domicile, as well as each of the states in which they are licensed to transact business.

Radian Group is an insurance holding company, and Radian Group's subsidiaries, including our mortgage insurance subsidiaries and title insurance company, belong to an insurance holding company system. We are subject to the insurance holding company laws of Pennsylvania and Ohio because all of our mortgage insurance subsidiaries are domiciled in Pennsylvania and Radian Title Insurance is domiciled in Ohio. These insurance holding company laws regulate, among other things, certain transactions between Radian Group, our insurance subsidiaries and affiliates. The holding company laws of Pennsylvania and Ohio also govern certain transactions involving Radian Group's common stock, including transactions that constitute a "change of control" of Radian Group and, consequently, a "change of control" of its insurance subsidiaries. Specifically, no person may, directly or indirectly, seek to acquire "control" of Radian Group or any of its mortgage insurance subsidiaries unless that person received prior approval after filing a statement and other documents with the Pennsylvania Insurance Department and, in the case of a change of control involving Radian Group or Radian Title Insurance, the Ohio Department of Insurance. Under Pennsylvania's and Ohio's insurance statutes, "control" is defined broadly and is "presumed to exist if any person, directly or indirectly, owns, controls, holds with power to vote or holds proxies representing 10% or more of the voting securities" of a holding company of a Pennsylvania or Ohio domiciled insurer. The statute further defines "control" as the "possession, direct or indirect, of the power to direct or cause the direction of the management and policies of" an insurer.

In addition, transactions between any one of our insurance subsidiaries and any Radian-affiliated entity are subject to certain conditions, including that they be "fair and reasonable." These conditions generally apply to all persons controlling, or who are under common control with, Radian Group and its insurance subsidiaries. Certain transactions between our insurance

subsidiaries and a Radian-affiliated entity may not be entered into unless the Pennsylvania Insurance Department or Ohio Department of Insurance, as applicable, is given 30 days' prior notice and does not disapprove the transaction during that 30-day period.

Radian Guaranty is authorized to write insurance in all 50 states, the District of Columbia and Guam as a monoline insurer, restricted by the laws of certain states to writing first-lien residential mortgage guaranty insurance (or in states where there is no specific authorization for mortgage guaranty insurance, the applicable line of insurance under which mortgage guaranty insurance is regulated). Radian Guaranty is our only mortgage insurance company that is currently eligible to provide first-loss mortgage insurance on GSE loans.

We also have the following mortgage insurance subsidiaries: Radian Insurance, a direct wholly owned subsidiary of Radian Group that insures a small amount of second-lien mortgage loan risk written prior to the financial crisis; and Radian Mortgage Assurance, a direct wholly owned subsidiary of Radian Group, which had no RIF as of December 31, 2022.

As part of our title services business, we offer title insurance through Radian Title Insurance, which we acquired in March 2018. Radian Title Insurance is an Ohio domiciled title insurance underwriter and settlement services company that is licensed to issue title insurance policies in 41 states and the District of Columbia. Radian Title Insurance is an indirect subsidiary of Radian Group and is wholly owned by Radian Title Services Inc.

Mortgage Insurance Capital Requirements and Dividends

Under state insurance regulations, Radian Guaranty is required to maintain minimum surplus levels and, in certain states, a Statutory RBC Requirement that is based on a maximum ratio of net RIF relative to statutory capital, or Risk-to-capital. The most common Statutory RBC Requirement is that a mortgage insurer's Risk-to-capital may not exceed 25 to 1, while in certain other RBC States, Radian Guaranty must satisfy a MPP Requirement. As of December 31, 2022, Radian Guaranty's Risk-to-capital was 10.7 to 1, and Radian Guaranty was in compliance with all applicable Statutory RBC Requirements. See Note 16 of Notes to Consolidated Financial Statements for more information on statutory capital requirements, including the NAIC's ongoing development of a revised Model Act for mortgage insurers. The ultimate outcome of the Model Act remains uncertain. In "Item 1A. Risk Factors," see "*—Our insurance subsidiaries are subject to comprehensive state insurance regulations and other requirements, which we may fail to satisfy.*"

For statutory reporting, mortgage insurance companies are required annually to set aside contingency reserves in an amount equal to 50% of earned premiums. The contingency reserve, which is designed to be a reserve against catastrophic losses, essentially restricts dividends and other ordinary distributions by mortgage insurance companies as such amounts cannot be released into surplus for a period of 10 years, except when loss ratios exceed 35%, in which case the amount above 35% can be released under certain circumstances.

Under Pennsylvania's insurance laws, dividends and other ordinary distributions may only be paid out of an insurer's positive unassigned surplus unless the Pennsylvania Insurance Department approves the payment of dividends or other distributions from another source. As a result of Radian Guaranty's negative unassigned surplus position in recent years, any distributions to Radian Group required the prior approval of the Pennsylvania Insurance Department. Radian Guaranty sought and received such approval during 2022 to return capital by paying Extraordinary Distributions to Radian Group, including a \$500 million distribution in February 2022 and a \$282 million distribution in December 2022.

In December 2022, Radian Guaranty merged with Radian Reinsurance, another wholly owned insurer of Radian Group that we previously used to participate in the credit risk transfer programs of the GSEs. As a result of this merger, Radian Guaranty went from having negative unassigned surplus to having positive unassigned surplus of \$258 million as of December 31, 2022. As a result, Radian Guaranty now has the ability to pay ordinary dividends beginning in the first quarter of 2023. See Note 16 of Notes to Consolidated Financial Statements for additional information on contingency reserve requirements and statutory dividend restrictions, as well as additional information about Radian Guaranty's merger with Radian Reinsurance.

Title Insurance Capital Requirements and Dividends

Radian Title Insurance is required to maintain Statutory Premium Reserves ("SPR"), calculated as a percentage of gross premiums collected. The SPR requirements are set by each state, with the most common being 7% of gross premiums collected. The SPR is then recovered based on a release schedule, amortized over 20 years. In addition to the SPR, Radian Title Insurance is subject to periodic reviews of certain financial performance ratios by the regulators in the states in which it is licensed, and these regulators can impose capital requirements on Radian Title Insurance based on the results of those ratios.

Under Ohio's insurance laws, dividends and other ordinary distributions may only be paid out of an insurer's positive unassigned surplus unless the Ohio Department of Insurance approves the payment of dividends or other ordinary distributions from another source. While all proposed dividends and distributions to stockholders must be filed with the Ohio Department of Insurance prior to payment, if an Ohio domiciled insurer had positive unassigned surplus, such insurer can pay dividends or other distributions during any 12-month period in an aggregate amount less than or equal to the greater of: (i) 10% of the preceding year-end statutory policyholders' surplus or (ii) the preceding year's statutory net income, in each case without the prior approval of the Ohio Department of Insurance. Radian Title Insurance had negative unassigned surplus at

December 31, 2022, of \$11 million, therefore it is currently unable to pay dividends or other ordinary distributions without prior approval from the Ohio Department of Insurance.

Other Services

In addition to our insurance subsidiaries, certain of our other subsidiaries are subject to regulation and oversight by the states in which they conduct their businesses, including requirements to be licensed and/or registered in these states.

Our real estate brokerage business conducted through homegenius Real Estate provides services in all 50 states and the District of Columbia. This entity, together with its agents, is required to hold licenses and conduct the brokerage business in conformity with the applicable license laws and administrative regulations of the states in which they are conducting their business. As a licensed real estate brokerage, homegenius Real Estate receives residential real estate data from various multiple listing services (“MLS”) through agreements with these MLS providers, which it uses to broker real estate transactions and provide valuation products and services, pursuant to the terms of these agreements. These MLS agreements include restrictions on the permitted use of the MLS data obtained through these agreements and impose requirements on the business of real estate brokerages in order to maintain eligibility to continue to receive the MLS data. If these agreements were to be terminated or homegenius Real Estate otherwise were to lose access to this data, it could negatively impact homegenius Real Estate’s ability to conduct its business.

Radian Mortgage Capital is a mortgage conduit formed to provide residential mortgage lenders with an additional secondary-market option to sell eligible loans to and ultimately to provide mortgage investors with another known sponsor of private label securitizations. Subject to market conditions, Radian Mortgage Capital acquires residential mortgage loans, which Radian Mortgage Capital expects to then distribute into the capital markets through private label securitizations or sell directly to mortgage investors, with the option to retain and manage structured components of the underlying credit risk. As of December 31, 2022, Radian Mortgage Capital had purchased an immaterial amount of loans and has not yet conducted any securitizations. Radian Mortgage Capital is licensed in 48 states and the District of Columbia and positioned to purchase and hold residential mortgages and servicing rights on a nationwide basis. In “Item 1A. Risk Factors,” see “—Investments to grow our existing businesses, pursue new lines of business or new products and services within existing lines of business subject us to additional risks and uncertainties.”

Radian Lender Services LLC provides third-party mortgage underwriting and mortgage processing services to lenders. This entity and its employees who provide these services are required to comply with the SAFE Act in all jurisdictions where they provide these services. Both the entity and the employees are currently compliant under the SAFE Act for underwriting in all 50 states and the District of Columbia and for loan processing requirements in 45 states and the District of Columbia. See “—Federal Regulation—The SAFE Act.”

Radian Settlement Services and its subsidiaries provide title and escrow services, and these entities are required to hold licenses in the jurisdictions where they operate their business. Title insurance agency and escrow licensing is primarily regulated by states in which the services are being offered, with licensing and registration typically within the jurisdiction of each state’s department of insurance. Radian Settlement Services is domiciled and licensed in Pennsylvania as a resident title insurance agency and, together with its subsidiaries, is licensed in 42 states and the District of Columbia.

Radian Valuation Services LLC is an appraisal management company, licensed in all 50 states and the District of Columbia, that supports certain valuation services provided by homegenius Real Estate. Real estate appraisal management statutes and regulations vary from state to state, but generally grant broad supervisory powers to agencies or officials to examine companies and enforce rules. While these businesses are generally state regulated, the Dodd-Frank Act established minimum requirements to be implemented by states regarding the registration and supervision of appraisal management companies. Most states have based their legislation on model legislation developed by the Appraisal Institute for the registration and oversight of appraisal management companies.

Information Security

The NYDFS has adopted cybersecurity regulations known as “Part 500” that apply to all financial institutions and insurance companies licensed under the New York Banking, Insurance, and Financial Services Laws, including Radian Guaranty and certain of our other subsidiaries. The regulations require covered entities to, among other things: establish a cybersecurity program; adopt a written cybersecurity policy; designate a Chief Information Security Officer responsible for implementing, overseeing and enforcing the cybersecurity program and policy; and have policies and procedures designed to ensure the security of information systems and nonpublic information accessible to, or held by, third parties, along with a variety of other requirements to protect the confidentiality, integrity and availability of information systems. On November 9, 2022, NYDFS announced proposed updates to Part 500 that include enhanced governance requirements, stricter access controls, and additional notification, reporting and other requirements. In 2017, the NAIC issued an Insurance Data Security Model Law, which was modelled after Part 500, and which several states have adopted. The stated intention of that model law is that if a covered insurance company is compliant with Part 500, it also would be in compliance with the NAIC Insurance Data Security Model Law.

Privacy

The State of California enacted the California Consumer Privacy Act (“CCPA”) that applies to any company that does business in California and meets certain threshold requirements. We believe Radian Group and certain of its affiliates may be deemed covered businesses under the CCPA.

The CCPA imposes a privacy framework for covered businesses that collect, sell or disclose personal information of California consumers. Companies subject to the CCPA are required to establish procedures to enable them to comply with a California consumer’s data privacy rights, including by disclosing the privacy practices of the entity and responding to consumer requests within prescribed timeframes. The CCPA provides a private right of action for data breaches, including statutory or actual damages, and public enforcement by the California Attorney General for other violations.

On January 1, 2023, California adopted the California Privacy Rights Act (“CPRA”), which amended the CCPA to enhance certain of the privacy protections for California consumers that were created by the CCPA. The enhancements include imposing additional compliance obligations for covered entities and removing certain exemptions previously available under the CCPA. While the California Attorney General retains civil enforcement authority, the CPRA also created the California Privacy Protection Agency to implement and enforce the law.

Other states, including Virginia, Colorado, Connecticut and Utah, have recently passed consumer privacy laws which are similar to the CCPA as they afford residents of those states a number of data privacy rights. Additionally, many states have enacted privacy and information practices laws that apply to insurance companies.

We have policies and procedures in place to comply with the CCPA and other currently applicable state privacy laws. In addition, several other states have also proposed new privacy laws, and federal regulators have proposed draft federal privacy legislation, all of which, to the extent they are adopted, could impose additional compliance obligations on covered entities beyond those currently in effect and could impact our businesses or those of our customers.

Federal Regulation

CARES Act

Following the outbreak of the pandemic, there have been a number of governmental efforts to implement programs designed to assist individuals and businesses impacted by the COVID-19 virus, including the CARES Act that was enacted on March 27, 2020.

Under the CARES Act, upon request by borrowers of federally backed mortgage loans who attest to financial hardship related to the pandemic, mortgage servicers are required to provide these borrowers with up to 180 days forbearance on their mortgage payments, which may be extended for an additional 180 days upon request, without requiring validation by the borrowers of their hardship. The permissible forbearance period of 12 months under the CARES Act has been extended by various federal agencies and the length of the currently available forbearance period may vary depending on the agency and type of mortgage at issue. The CARES Act provides no explicit end date for when the 180 days forbearance must initially be offered; however, it is possible that the requirements under the CARES Act may be interpreted to expire on, or shortly after, the declared COVID-19 national emergency ends, which is currently expected to occur on May 11, 2023.

The GSEs have announced that, at the end of a forbearance plan, the homeowner may not be required to pay back their reduced or suspended mortgage payments in one lump sum, but may be eligible for a number of different options offered by their mortgage servicer, including repayment plans, resuming normal payments or lowering the monthly loan payment through a modification. For additional information on the potential impacts of the CARES Act on the GSEs, loan servicers and our PMIERS financial requirements, in “Item 1A. Risk Factors,” see “—*Radian Guaranty may fail to maintain its eligibility status with the GSEs, and the additional capital required to support Radian Guaranty’s eligibility could reduce our available liquidity,*” “—*Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses,*” and “—*Our business depends, in part, on effective and reliable loan servicing.*”

GSE Requirements for Mortgage Insurance Eligibility

As the largest purchasers of conventional mortgage loans, and therefore the main beneficiaries of private mortgage insurance, the GSEs impose eligibility requirements that private mortgage insurers must satisfy in order to be approved to insure loans purchased by the GSEs. The PMIERS aim to ensure that approved insurers will possess the financial and operational capacity to serve as strong counterparties to the GSEs throughout various market conditions. The PMIERS are comprehensive, covering virtually all aspects of the business and operations of a private mortgage insurer of GSE loans, including internal risk management and quality controls, the relationship between the GSEs and the approved insurer and the approved insurer’s financial condition. The PMIERS contain extensive requirements related to the conduct and operations of our mortgage insurance business, including operational requirements in areas such as claim processing, loss mitigation, document retention, underwriting, quality control, reporting and monitoring, among others. Radian Guaranty currently is an approved mortgage insurer under the PMIERS.

The PMIERS' financial requirements require that a mortgage insurer's Available Assets meet or exceed its Minimum Required Assets. The PMIERS' financial requirements include increased financial requirements for defaulted loans (as further discussed below), as well as for performing loans with a higher likelihood of default and/or certain credit characteristics, such as higher LTVs and lower FICO credit scores. In addition, the PMIERS financial requirements also impose limitations on the credit that is granted for certain Available Assets. For example, the PMIERS limit the amount of credit given to surplus notes issued by a mortgage insurer to 9% of Minimum Required Assets. The PMIERS also prohibit Radian Guaranty from engaging in certain activities such as insuring loans originated or serviced by an affiliate (except under certain circumstances) and require Radian Guaranty to obtain the prior consent of the GSEs before taking many actions, which may include, among other things, entering into various intercompany agreements, settling loss mitigation disputes with customers and commuting risk.

With respect to defaulted loans, the PMIERS recognize that loans that have become non-performing as a result of a FEMA Declared Major Disaster eligible for individual assistance (e.g., due to a natural disaster) generally have a higher likelihood of curing following the conclusion of the event, and therefore applies a Disaster Related Capital Charge for a period of time and subject to certain limitations, to reduce the Minimum Required Asset factor for these loans. Under the PMIERS, for defaulted loans located in a FEMA Declared Major Disaster area that either (1) are subject to a forbearance plan granted in response to the disaster (with terms consistent with forbearance plans offered by the GSEs) or (2) have an initial missed monthly payment occurring 30 days prior to the first day of the incident period specified in the Major Disaster Declaration or 90 days following the last day of the incident period specified in the Major Disaster Declaration (not to exceed 180 days from the first day of the incident period), the Disaster Related Capital Charge will be applied for the longer of three calendar months beginning with the month when the loan became a defaulted loan or the period of time that the defaulted loan remains subject to a forbearance plan granted in response to the disaster.

In addition, in 2020, in response to the COVID-19 pandemic, the GSEs issued guidelines ("National Emergency Guidelines") that became effective June 30, 2020, and, among other things, adopted the COVID-19 Amendment to the PMIERS to apply the Disaster Related Capital Charge nationwide to certain non-performing loans that we refer to as COVID-19 Defaulted Loans, which comprise non-performing loans that either: (i) had an Initial Missed Payment occurring during the COVID-19 Crisis Period (which expired as of March 31, 2021) or (ii) are subject to a forbearance plan granted in response to a financial hardship related to COVID-19. Under the COVID-19 Amendment, the Disaster Related Capital Charge currently is applied to COVID-19 Defaulted Loans for the period of time that the loan is subject to a forbearance plan, repayment plan or loan modification trial period granted in response to a financial hardship related to COVID-19. Further, when the National Emergency Guidelines and the COVID-19 Amendment are terminated, the Disaster Related Capital Charge would then be applied to defaulted loans in accordance with the PMIERS' provision pertaining to loans that have become non-performing as a result of a FEMA Declared Major Disaster, to the extent the state where the property is located is continuing to consider COVID-19 a FEMA Declared Major Disaster eligible for Individual Assistance. See "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Mortgage."

The GSEs have significant discretion under the PMIERS and may amend the PMIERS at any time, although the GSEs have communicated that for material changes, including large-scale material changes affecting Minimum Required Assets, they will generally provide written notice 180 days prior to the effective date and engage in a discussion and comment process with the private mortgage insurers regarding the proposed changes prior to finalizing them. The most recent large-scale revisions to PMIERS became effective on March 31, 2019, and the PMIERS have been further updated on occasion since then to address various specific matters, including the COVID-19 pandemic and more recently to amend certain provisions of the PMIERS relating to corporate governance, the foreclosure bidding process and certain calculations included in each mortgage insurer's operational scorecard.

It is possible that the GSEs may seek to amend the PMIERS in the future to better align the financial requirements of the PMIERS with the capital requirements for the GSEs set forth in the ERCF. See "—Housing Finance Reform and the GSEs' Business Practices" below for additional information on the ERCF.

As part of our capital and risk management activities, including to manage Radian Guaranty's capital position under the PMIERS financial requirements, we have distributed risk through third-party quota share and excess-of-loss reinsurance arrangements, including through the capital markets using insurance-linked-notes transactions. The initial and ongoing credit that we receive under the PMIERS financial requirements for these risk distribution transactions is subject to the periodic review of the GSEs and could be influenced by the ERCF, which provides the GSEs with a reduced amount of credit for their own credit risk transfer activities.

In "Item 1A. Risk Factors," see "*—Radian Guaranty may fail to maintain its eligibility status with the GSEs, and the additional capital required to support Radian Guaranty's eligibility could reduce our available liquidity.*"

Housing Finance Reform and the GSEs' Business Practices

Legislative Reform

The federal government plays a significant role in the U.S. housing finance system through, among other things, the involvement of the FHFA and GSEs, the FHA and the VA. The GSEs' charters, which cannot be altered outside of federal legislation, generally prohibit them from buying low down payment mortgage loans without certain forms of credit enhancement, the most common form of which has been private mortgage insurance.

Since FHFA was appointed as conservator of the GSEs in September 2008, there has been a wide range of legislative proposals to reform the U.S. housing finance market, including proposals for GSE reform ranging from some that advocate nearly complete privatization and elimination of the role of the GSEs to others that support a system that combines a federal role with private capital. While many legislative proposals have been debated and occasionally advanced through various legislative procedures, no reform proposal has reached an advanced legislative stage. As a consequence, most reform-related actions with respect to the housing finance system have occurred administratively through regulatory actions.

Administrative Reform

The executive branch of the government (the “Administration”), typically through its departments and regulatory agencies, offers perspectives on the future of housing finance in the U.S., including objectives for future strategic direction and areas of focus. As a result, a change in Administration can significantly alter the strategic direction of housing finance in the U.S.

Although many departments or agencies impact housing finance in some manner, the most prominent and directly impactful are the FHFA, HUD, the U.S. Department of the Treasury (“Treasury”) and the CFPB. In June 2021, following a Supreme Court decision that determined that the FHFA director may be removed by the President other than for cause, President Biden removed the FHFA director appointed by President Trump and appointed Sandra Thompson, who has since been confirmed as director of the FHFA. Director Thompson has taken a number of actions that represent a change in focus from the previous FHFA leadership’s primary focus on preparing the GSEs to exit from conservatorship by increasing the GSEs’ overall capital levels and reducing their credit risk profile. In contrast, under Director Thompson, the FHFA has been focused on increasing the equitable accessibility and affordability of mortgage credit, in particular to low- and moderate-income borrowers and underserved communities, while also continuing to ensure the safety and soundness of the GSEs. The Supreme Court’s decision providing that the FHFA director may be removed by the President without cause creates a higher likelihood that the direction of the FHFA and its oversight over the GSEs may be impacted by elections and the political leanings of the Administration in office at the time than previously was the case.

Senior Preferred Stock Purchase Agreements. The Treasury currently owns the preferred stock of the GSEs pursuant to the terms of PSPAs, and therefore, has significant influence over the fate and direction of the GSEs. In January 2021, the PSPAs were amended to allow the GSEs to continue to retain capital up to the amounts prescribed in the newly revised GSE capital requirements set forth in the ERCF, as discussed below.

The January 2021 amendment to the PSPAs restricted the GSEs’ acquisition of higher-risk single-family mortgage loans, including in particular the acquisition of investor loans and single-family mortgage loans with two or more higher risk characteristics (i.e., LTVs greater than 90%, debt-to-income ratios greater than 45% and FICO credit scores less than 680), to their then current levels. The January 2021 PSPA amendment further restricted the quality of loans that may be purchased by the GSEs by limiting the GSEs’ purchases to, among other enumerated types, loans that meet the QM definition. In September 2021, Treasury and the FHFA agreed to temporarily suspend the limitations on GSE purchases of loans deemed higher risk that were set forth in the January 2021 amendments to the PSPAs.

Enterprise Regulatory Capital Framework. Between 2020 and 2022, the FHFA advanced certain initiatives to develop new capital and liquidity requirements for the GSEs, and in February 2022, the FHFA announced a final ERCF, which, as compared to the capital requirements for the GSEs in place prior to the ERCF: (i) significantly increased such capital requirements and (ii) decreased the capital credit provided to the GSEs for credit risk transfer transactions. In addition, the FHFA has proposed new minimum liquidity requirements for the GSEs, which have not been finalized.

The ERCF and the proposed new liquidity requirements could significantly alter the business practices and operations of the GSEs and potentially have a material effect on the conventional mortgage market and our business with the GSEs. In “Item 1A. Risk Factors,” see “—*Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses.*”

Access and Affordability. The Biden Administration has proposed a housing plan focused on: (i) increasing access to sustainable homeownership and making housing more affordable for low- and moderate-income borrowers; (ii) ensuring the housing finance system is equitable by identifying and eliminating discriminatory or unfair practices in the housing system; (iii) increasing the supply, lowering the cost and improving the quality of housing, including through investments in resilience, energy efficiency, and accessibility of homes; and (iv) providing financial assistance to help Americans buy or rent safe, quality housing, including down payment assistance.

Since assuming leadership over the FHFA in June 2021, in addition to amending the PSPAs and finalizing the ERCF, the Biden-appointed FHFA leadership team has instituted changes to further advance mortgage access and affordability. In June 2022, the FHFA announced the release of the GSEs’ Equitable Housing Finance Plans, providing a framework for planned initiatives to address equity in housing finance. These plans note various initiatives through 2024 that aim to address barriers to homeownership for minority and underserved communities. Both Fannie Mae and Freddie Mac’s plans include a particular focus on Special Purpose Credit Programs (“SPCPs”), with both GSEs expected to launch programs. While details on any future changes remain uncertain, both Fannie Mae’s and Freddie Mac’s plans note that these programs could consider modifications to mortgage insurance requirements. Specifically relating to mortgage insurance, (1) Fannie Mae’s plan contemplates the creation of SPCPs targeted to historically underserved borrowers with a goal of lowering costs for such

borrowers through lower than standard mortgage insurance requirements; and (2) Freddie Mac's plan contemplates the creation of SPCPs targeted to historically underserved borrowers with the goals of (a) working with mortgage insurers to reduce costs for high LTV borrowers, and (b) updating mortgage insurance cancellation requirements. The plans also include expected activity to address credit and alternative data in underwriting, valuations and appraisals, and title insurance, among others. The GSEs are expected to update these plans annually.

Radian Guaranty and other private mortgage insurance companies have been engaged in discussions with the GSEs regarding how the industry may support the GSEs to advance these objectives. Depending on the outcome of such dialogue, one or both of the GSEs, together or in conjunction with one or more private mortgage insurers, could implement further initiatives in pursuit of housing policy objectives that could require changes to the GSEs' business practices and impact our businesses. In "Item 1A. Risk Factors," see "*—Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses.*"

In October 2022, the FHFA announced that the GSEs will replace their use of Classic FICO credit scores with FICO 10T and VantageScore 4.0 credit scores, which are intended to improve accuracy by capturing additional payment histories for borrowers when available, such as rent, utilities, and telecom payments. The GSEs will require both of the new credit scores, along with credit reports from two, rather than three, of the credit reporting agencies. The implementation timeline for the transition to the new credit scores is expected to be a multi-year effort and the timeline for ultimate implementation is uncertain.

Also in October 2022, the FHFA announced, among other pricing changes, an elimination of GSE loan-level pricing adjustments (upfront fees) for some first-time and low- and moderate-income borrowers, including first-time homebuyers at or below 100% of area median income ("AMI") in most of the United States and below 120% of AMI in high-cost areas. In January 2023, the FHFA announced additional pricing changes for the GSEs, with both increases and decreases in loan-level pricing adjustments, depending on certain loan characteristics. These most recent pricing changes will be effective May 1, 2023.

New Products. In December 2022, the FHFA released a final rule regarding the process for how it will consider and approve new GSE activities and products. Among other things, the rule redefines the criteria for determining what constitutes a new activity that requires prior notice to the FHFA and for determining whether the activity constitutes a "new product" that requires public notice and comment. Given the size and market influence of the GSEs, this new rule is generally viewed as important to ensure that the GSEs are not otherwise encroaching on areas that may be more appropriately served by private capital.

It is difficult to predict what types of new products and activities may be proposed in the future and, if applicable, whether they may be approved by the FHFA, including programs that may provide an alternative to traditional private mortgage insurance. For example, if any existing or future credit risk transfer transactions and structures were to displace primary loan level or standard levels of mortgage insurance, the amount of mortgage insurance we write may be reduced, which could negatively impact our franchise value, results of operations and financial condition.

In 2018, Freddie Mac and Fannie Mae announced pilot programs, IMAGIN and EPMI, respectively, as alternative ways for lenders to obtain credit enhancement and sell loans with LTVs greater than 80% to the GSEs. These investor-paid mortgage insurance programs, in which insurance was acquired directly by each GSE through entities that were not subject to compliance with the PMIERS, have many of the same features as private mortgage insurance and represent an alternative to traditional private mortgage insurance products that are provided to individual lenders. These programs experienced limited volumes and in June 2021 were discontinued for new business, although they could be relaunched in the future.

HUD/FHA

Private mortgage insurance competes for a share of the insurable mortgage market with the single-family mortgage insurance programs of the FHA, including on the basis of loan limits, pricing, credit guidelines, terms of insurance policies and loss mitigation practices.

While the FHA continues to insure a significant portion of the total low down-payment mortgage market, with respect to the portion of the market where private mortgage insurance and FHA's products compete, the private mortgage insurance industry has been competing effectively with FHA execution, primarily due to: (i) the financial strength of private mortgage insurers; (ii) the development of new products, pricing delivery tools and marketing efforts directed at competing with FHA programs and execution; (iii) previous increases in the FHA's pricing; (iv) the U.S. government's pursuit of legal remedies against FHA-approved lenders related to loans insured by the FHA; and (v) various policy changes at the FHA, including the general elimination of the premium cancellation provision that still exists for borrower-paid private mortgage insurance.

As last reported in November 2022, the FHA's Mutual Mortgage Insurance (MMI) Fund had a combined capital ratio for fiscal year 2022 of 11%, above the 2% ratio that the FHA is required to maintain. As discussed above, the Biden Administration has been pursuing actions that will further its stated objective of increasing access to affordable mortgages for low- and moderate-income borrowers. In this regard, on February 22, 2022, the FHA announced that it is reducing its annual mortgage insurance premium by 0.30 percentage points for most new borrowers. While we do not expect this pricing change to have a material impact on our business volumes, the FHA could institute further pricing changes in the future, including additional changes to its annual premiums, a reduction in its upfront premiums and/or the elimination of the life-of-loan premium

requirement for FHA insured loans. It is uncertain if and when the FHA may pursue any additional pricing or other actions and what form they may take; however, any change that would improve FHA execution compared to execution through the GSEs with private mortgage insurance could negatively impact our NIW volume.

The Dodd-Frank Act

The Dodd-Frank Act mandates significant rulemaking by several regulatory agencies to implement its provisions. The Dodd-Frank Act established the CFPB to regulate the offering and provision of consumer financial products and services under federal law, including residential mortgages, and transferred authority to the CFPB to enforce many existing consumer-related federal laws, including the Truth in Lending Act and RESPA.

Among the most significant provisions for private mortgage insurers under the Dodd-Frank Act are the ability to repay mortgage provisions (“Ability to Repay Rule”), including a related safe harbor set forth in the QM Rule (defined below), the securitization risk retention provisions and the expanded mortgage servicing requirements under the Truth in Lending Act and RESPA.

Qualified Mortgage Requirements—Ability to Repay Requirements

The Ability to Repay Rule requires mortgage lenders to make a reasonable and good faith determination that, at the time a loan is consummated, the consumer has a reasonable ability to repay the loan. The Dodd-Frank Act provides that a creditor may presume that a borrower will be able to repay a loan if the loan has certain low-risk characteristics that meet the definition of a qualified mortgage, or QM (“QM Rule”). This QM presumption is generally rebuttable, however, loans that are deemed to have the lowest risk profiles are granted a safe harbor from liability (“QM Safe Harbor”) related to the borrower’s ability to repay the loan.

In December 2020, the CFPB finalized two new definitions of QM. One of these new QM definitions (the “New General QM Definition”) adopts a pricing-based approach to QM. Under the New General QM Definition, certain underwriting considerations are retained, but QM status generally is achieved if the loan is priced at no greater than 2.25% above the Average Prime Offer Rate (“APOR”). Loans priced at or less than 1.5% above APOR are subject to the QM Safe Harbor, while all other QM loans would receive the general rebuttable presumption that the loans met the ability to repay standard.

Separately, the CFPB created another new QM definition (“Seasoned QM”) for first-lien, fixed-rate loans that meet certain performance requirements over a 36-month seasoning period and are held in the lender’s portfolio until the end of the seasoning period. After a transition period in which both the original and new QM definitions were applicable, both new QM definitions replaced the original QM definition on October 1, 2022.

The QM Rule requires that points and fees paid at or prior to closing cannot exceed 3% of the total loan amount, with higher points and fees thresholds provided for loan amounts below \$114,847. Any mortgage insurance premiums paid by the borrower at or before the time of loan closing must be applied toward the 3% points and fee calculation, unless such premiums are in excess of the FHA upfront premium amount and are automatically refundable on a pro-rata basis. There are no similar restrictions on the points and fees associated with FHA premiums, and thus FHA has a market advantage for smaller balance loans where the 3% cap is more easily reached.

The Dodd-Frank Act also granted the FHA, VA and USDA flexibility to establish their own QM definitions for their insurance guaranty programs. Both the FHA and VA have created their own definitions of qualified mortgages that differ from both the CFPB’s original QM Definition and New General QM Definition. For example, the FHA’s QM Safe Harbor definition currently applies to loans priced at or less than APOR plus the sum of 115 basis points and the FHA’s annual mortgage insurance premium rate, which is effectively broader than the QM Safe Harbor adopted under the New General QM Definition. These alternate definitions of qualified mortgages are more favorable to lenders and mortgage holders than the CFPB’s New General QM Definition that apply to loans purchased by the GSEs, which could drive business to these agencies and have a negative impact on our mortgage insurance business.

For more information regarding the CFPB’s proposed New General QM Definition and the risks it may present for us, in “Item 1A. Risk Factors,” see “—A decrease in the volume of mortgage originations could result in fewer opportunities for us to write new mortgage insurance business and conduct our homegenius businesses.”

Qualified Residential Mortgage Regulations—Securitization Risk Retention Requirements

The Dodd-Frank Act requires securitizers to retain at least 5% of the credit risk associated with mortgage loans that they transfer, sell or convey, unless the mortgage loans are qualified residential mortgages (“QRMs”) or are insured by the FHA or another federal agency (the “QRM Rule”). Under applicable federal regulations, a QRM is generally defined as a mortgage meeting the requirements of a qualified mortgage under the CFPB’s QM Rule described above. Because Radian Mortgage Capital intends to conduct securitizations that include mortgage loans which are not QRMs, its securitizations will be subject to risk retention requirements. As such, for each securitization transaction, we will be required to retain at least a 5% first-loss position, or a 5% pro rata share of all securities issued or a combination of a first-loss position and pro rata share. We will be required to retain such risk for up to seven years.

Other

The Dodd-Frank Act establishes a Federal Insurance Office within the U.S. Department of the Treasury (the “FIO”). While the FIO does not have a general supervisory or regulatory authority over the business of insurance, the director of this office performs various functions with respect to insurance, such as serving as a non-voting member of the Financial Stability Oversight Council. It is difficult to predict whether legislators or other executive agencies will pursue the development and implementation of federal standards for the mortgage insurance industry outside of the FHFA. Any divergence from the current system of state regulation could significantly change compliance burdens and possibly impact our financial condition.

In addition, Section 1473 of the Dodd-Frank Act establishes minimum requirements to be implemented by states regarding the registration and supervision of appraisal management companies, including Radian Valuation Services.

RESPA

Settlement service providers in connection with the origination or refinancing of a federally regulated mortgage loan are subject to RESPA and Regulation X. RESPA authorizes the CFPB, the U.S. Department of Justice, state attorneys general and state insurance commissioners to bring civil enforcement actions, and also provides for criminal penalties and private rights of action.

Mortgage insurance, title insurance and other products and services provided by Radian’s affiliates are considered settlement services for purposes of RESPA. The anti-referral fee and anti-kickback provisions of Section 8 of RESPA generally provide, among other things, that settlement service providers are prohibited from paying or accepting anything of value in connection with the referral of a settlement service or sharing in fees for those services. RESPA also prohibits requiring the use of an affiliate for settlement services and requires certain information to be disclosed if an affiliate is used to provide the settlement services. In addition to mortgage insurance provided by Radian Guaranty, our homegenius businesses offer an array of services to our customers, including real estate brokerage, valuation, hybrid appraisal, title and closing services, many of which may be considered settlement services for purposes of RESPA, and therefore, may be subject to the anti-referral fee, anti-kickback and required use provisions of RESPA. RESPA also establishes a number of mortgage loan servicing requirements that apply to our mortgage conduit in connection with it acting as a master servicer with respect to the sub-servicing arrangement that has been implemented for the day-to-day servicing of loans acquired by the conduit. The mortgage loan servicing requirements relate to servicing transfers, responding to consumer information requests, resolution of notices of error, force-placed insurance, early intervention and continuity of contact with delinquent borrowers, loss mitigation, general servicing policies and procedures, escrow account maintenance and service provider oversight.

In the past, Radian Guaranty and other mortgage insurers have faced lawsuits alleging, among other things, that their captive reinsurance arrangements constituted unlawful payments to mortgage lenders under RESPA. We also have been subject to lawsuits alleging that our Pool Mortgage Insurance and contract underwriting services violated RESPA. In addition, we and other mortgage insurers have been subject to inquiries and investigative demands from, and we have agreed to settlements without findings of wrongdoing with, state and federal governmental agencies, including the CFPB relating to captive reinsurance.

Homeowner Assistance Programs

The American Rescue Plan Act of 2021 authorizes approximately \$9.9 billion to fund a Homeowner Assistance Fund for “the purpose of preventing homeowner mortgage delinquencies, defaults, foreclosures, loss of utilities or home energy services, and displacements of homeowners experiencing financial hardship after January 21, 2020.” Since the enactment of this legislation, Treasury has issued guidance on this program and announced allocations by state, with a statutory minimum requirement of \$50 million for each state, the District of Columbia and Puerto Rico. According to the guidance issued by Treasury, eligible use of these funds may include mortgage payment assistance, assistance for housing-related costs related to a period of forbearance, delinquency, or default, facilitating mortgage interest reductions, and assistance with insurance payments, including mortgage insurance, utility and tax payments, among others.

The SAFE Act

The SAFE Act and its state law equivalents require mortgage loan originators to be licensed with state agencies in the states in which they operate and/or registered with the Nationwide Mortgage Licensing System and Registry (the “Registry”). The Registry is a database established by the Conference of State Bank Supervisors and the American Association of Residential Mortgage Regulators that tracks the licensing and eligibility requirements of loan originators. Among other things, the database was established to support the licensing of mortgage loan originators by each state.

As part of this licensing and registration process, loan originators who are employees of institutions other than depository institutions or certain of their subsidiaries that, in each case, are regulated by a federal banking agency, must generally be licensed under the SAFE Act guidelines enacted by each state in which they engage in loan origination activities and registered with the Registry. Additionally, most states define underwriting and loan processing as a clerical and administrative duty, performed under the supervision of a licensed mortgage loan originator.

Mortgage Insurance Cancellation

The HPA imposes certain cancellation and termination requirements for borrower-paid private mortgage insurance with respect to “residential mortgage transactions” as defined in the HPA, and requires certain disclosures to borrowers regarding their rights under the law. Specifically, provided that certain conditions are satisfied, the HPA provides that private mortgage insurance on most loans may be cancelled at the request of the borrower once the principal balance of the mortgage is first scheduled to reach 80% of the home’s original value based on the loan’s initial amortization schedule, or reaches 80% of the home’s original value based on actual payments.

In addition, provided that certain conditions are satisfied, the HPA provides that private mortgage insurance on most loans is subject to servicer-initiated automatic termination once the principal balance of the mortgage is first scheduled to reach 78% of the home’s original value based on the loan’s initial amortization schedule (or, if the loan is not current on that date, on the date that the loan becomes current). The HPA further provides that private mortgage insurance on most loans is subject to final termination following the date that is the midpoint of the loan’s amortization period (or, if the loan is not current on that date, on the date that the loan becomes current).

The HPA also provides that, in general, within 45 days after termination or cancellation of a private mortgage insurance policy in accordance with the requirements of the relevant section of the HPA, all unearned premiums for private mortgage insurance must be returned to the borrower by the servicer, and that within 30 days after notification by the servicer, a mortgage insurer that is in possession of any unearned premiums of the borrower must transfer to the servicer an amount equal to the amount of unearned premiums for repayment.

The HPA also establishes special rules for the termination of private mortgage insurance in connection with loans that are “high risk.” The HPA does not define “high risk” loans, but leaves that determination to the GSEs for loans up to the GSE conforming loan limits and to lenders for any other loan. For “high risk” loans originated in excess of conforming loan limits, provided that certain conditions are satisfied, the servicer is required to initiate termination once the principal balance of the mortgage is first scheduled to reach 77% of the home’s original value based on the loan’s initial amortization schedule. It is the servicer’s obligation to verify the date when a loan meets all HPA requirements for termination of borrower-paid private mortgage insurance and to promptly instruct the private mortgage insurer to terminate coverage.

Although not provided in the HPA, the GSEs’ guidelines also currently provide that when certain conditions are satisfied, borrowers can request cancellation of borrower-paid mortgage insurance for most loans when the LTV, based upon the current value of the home, is: either 75% or less or 80% or less, depending on the seasoning of the loan and other factors. The GSEs may change these guidelines in the future, including by expanding their mortgage insurance cancellation requirements, which could negatively impact our businesses. In “Item 1A. Risk Factors,” see “—Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses” and “—Our mortgage insurance business faces intense competition.”

The Fair Credit Reporting Act (the “FCRA”)

The FCRA imposes restrictions on the permissible use of credit report information and disclosures that must be made to consumers when information from their credit reports is used. The FCRA has been interpreted by the Federal Trade Commission to require mortgage insurance companies to provide “adverse action” notices to consumers under the “insurance prong” of FCRA in the event an application for mortgage insurance is declined or a higher premium is charged based on the use, wholly or partly, of information contained in the consumer’s credit report.

Privacy and Information Security—Gramm-Leach-Bliley Act of 1999 (the “GLBA”) and Other Regulatory Requirements

As part of our business, we, and certain of our subsidiaries, maintain large amounts of confidential information, including non-public personal information on consumers and our employees. We and our customers are subject to a variety of privacy and information security laws and regulations. The GLBA, which consists of both a Privacy Rule and a Safeguards Rule, imposes privacy and security requirements on financial institutions, including obligations to protect and safeguard consumers’ nonpublic personal information and records, and limitations on the use, re-use and sharing of such information. The GLBA is enforced by state regulators and by federal regulatory agencies.

In December 2021, the Federal Trade Commission updated the GLBA Safeguards Rule. The updated Safeguards Rule includes, among other things, specific requirements for risk assessments and other safeguards, such as multifactor authentication, enhanced access controls, and data inventory, classification and disposal practices. These changes go into effect on June 9, 2023.

In addition, many states have enacted privacy and data security laws that impose compliance obligations beyond the GLBA, such as: requiring notification in the event that a security breach results in a reasonable belief that unauthorized persons may have obtained access to consumer nonpublic personal information; imposing additional restrictions on the sharing and use of consumers’ personal information; affording consumers new rights of access, correction and deletion of their

personal information and rights to appeal; imposing affirmative consent and/or opt out requirements for targeted advertising and other activities; and creating new private rights of action for data breaches. See “—State Regulation—Privacy.”

Federal and state agencies have increased their focus on compliance obligations related to privacy, data security and cybersecurity. The CFPB, NYDFS, Federal Trade Commission, Office of the Comptroller of the Currency and non-governmental regulatory agencies, such as the Financial Industry Regulatory Authority (FINRA), have announced new compliance measures and enforcement efforts designed to monitor and regulate the protection of personal consumer data, including with respect to: the development and delivery of financial products and services; underwriting; mortgage servicing; credit reporting; digital payment systems; and vendor management. For information regarding the NYDFS’ cybersecurity regulations and the California Consumer Privacy Act, under “—State Regulation” above, see “—Information Security” and “—Privacy.”

Fair Lending and Fair Servicing

The federal Fair Housing Act, part of the Civil Rights Act of 1968, makes it unlawful for any person whose business includes engaging in residential real estate-related transactions to: (i) discriminate in housing-related lending activities against any person on a prohibited basis or (ii) for any person to discriminate in the sale or rental of housing “or in the provision of services or facilities in connection therewith,” to any person because of a prohibited basis.

Similarly, the Equal Credit Opportunity Act and Regulation B make it unlawful for a creditor to discriminate in any aspect of a credit transaction against an applicant on a prohibited basis during any aspect of a consumer or business credit transaction or make any oral or written statement to applicants or prospective applicants that would discourage on a prohibited basis a reasonable person from making or pursuing an application.

These laws seek to address discrimination in lending and other housing-related activity by prohibiting discrimination that is intentional or where a facially neutral policy or practice has a “disparate impact,” that is, that it disproportionately excludes or burdens persons on a prohibited basis without a need to demonstrate intentional discrimination.

In September 2020, HUD issued a Final Rule (the “2020 Rule”) that modified the requirements for demonstrating disparate impact claims. Implementation of the 2020 Rule was enjoined, and it never went into effect. In June 2021, HUD published a notice of proposed rulemaking proposing to rescind its 2020 Rule, which was criticized as making it more difficult to bring disparate impact claims, and restore HUD’s prior interpretation of the disparate impact rule. To this end, the Biden Administration has focused heavily on discriminatory and unfair housing practices.

As a provider of products and services that support residential real estate transactions and the mortgage production and financing process, fair lending and servicing laws may impact the way we deliver or conduct our products and services, including in response to customer requirements.

Federal Consumer Protection Laws

As certain of our current and potential future business activities are directed at consumers or affect the provision of real estate and mortgage-related services provided to consumers by others, we may be subject to a number of federal consumer protection laws, including, laws that could apply to us more directly. In addition to the laws and regulations discussed elsewhere in this Regulation section, these laws may include:

- The Truth in Lending Act and Regulation Z, requiring disclosures of mortgage loan costs and other notices to consumers, prohibiting certain compensation to loan originators, steering and other loan origination practices, establishing a number of requirements for mortgage servicers and imposing requirements on loan owners for loan ownership transfers;
- The Fair Debt Collection Practices Act, regulating debt collection communications and other activities;
- Prohibition on Unfair, Deceptive or Abusive Acts or Practices, prohibiting unfair, deceptive or abusive acts or practices in connection with any transaction with a consumer for a consumer financial product or service, or the offering of a consumer financial product or service;
- CAN-SPAM Act, regulating commercial and marketing email, including the right of recipients to have the sender stop sending emails;
- The Telephone Consumer Protection Act and Do Not Call regulations, regulating and restricts certain marketing-related phone calls, text messages and facsimiles; and
- Electronic Signatures in Global and National Commerce Act (E-Sign Act), allowing the use of electronic records to satisfy requirements that must be provided in writing if the consumer has affirmatively consented.

We may also be required to comply with state laws similar to these federal consumer protection laws to the extent applicable to our businesses.

Basel III

Over the past few decades, the Basel Committee on Banking Supervision (the “Basel Committee”) has established international benchmarks for assessing banks’ capital adequacy requirements (“Basel III”). Included within those benchmarks are capital standards related to residential lending and securitization activity and, importantly for private mortgage insurers, the capital treatment of mortgage insurance on those loans. These benchmarks are then interpreted and implemented via rulemaking by U.S. banking regulators.

In July 2013, the U.S. banking regulators promulgated regulations, referred to as the “U.S. Basel III Rules,” to implement significant elements of the Basel framework. The U.S. Basel III Rules, among other things, revise and enhance the U.S. banking agencies’ general risk-based capital rules. Today, the U.S. Basel III Rules assign a risk weight to loans secured by one-to-four-family residential properties. Generally, under the U.S. Basel III Rules in place today, the explicit government guarantees (FHA/VA/USDA) receive a 0% risk weight, and Fannie Mae and Freddie Mac related loans receive a 20% risk weight. Non-government-related mortgage exposures secured by a first lien on a one-to-four family residential property that are prudently underwritten and that are performing according to their original terms receive a 50% risk weighting. All other one-to-four family residential mortgage loans are assigned a 100% risk weight.

In December 2014, the Basel Committee issued a proposal for further revisions to Basel III. It proposed adjustments to the risk weights for residential mortgage exposures that take into account LTV ratio and the borrower’s ability to service a mortgage, which were not previously addressed by Basel III. The proposed LTV ratio did not take into consideration any credit enhancement, including private mortgage insurance, but in March 2015, the U.S. banking regulators clarified that for purposes of the U.S. Basel III Rules, calculation of LTV ratios can account for credit enhancement such as private mortgage insurance in determining whether a loan is made in accordance with prudent underwriting standards for purposes of receiving the preferred 50% risk weight. The comment period for this proposal closed in March 2015, and in December 2015, the Basel Committee released a second proposal which retained the LTV provisions of the initial draft, but not the provisions pertaining to a borrower’s ability to service a mortgage (the “2015 Basel Committee Proposal”). The comment period for the 2015 Basel Committee Proposal closed in March 2016. To date, federal regulators have not adopted or implemented any new regulations, including based on these proposals, that update or modify the U.S. Basel III Rules.

The revised and final recommendations from the Basel Committee with respect to Basel III were published in December 2017 (the “2017 Basel Committee III Recommendations”) and included finalized risk weighting guidelines for residential mortgage exposures. These rules recognize guarantees provided by sovereign governments (such as FHA, VA, USDA and Ginnie Mae) as offsetting the capital requirements, resulting in a 0% risk weight. While the 2017 Basel Committee III Recommendations include consideration of LTV ratios, including the impact of credit enhancement provided by third-party private mortgage insurance and the GSEs on LTV ratios, the credit enhancement provided by third-party private mortgage insurance and the GSEs would have higher risk weightings than the explicitly government guaranteed products, putting loans insured by private mortgage insurance at a disadvantage. It remains unclear whether new guidelines will be proposed or finalized in the U.S. in response to the most recent 2017 Basel III Committee Recommendations.

Item 1A. Risk Factors

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Risks Related to Regulatory Matters

Radian Guaranty may fail to maintain its eligibility status with the GSEs, and the additional capital required to support Radian Guaranty's eligibility could reduce our available liquidity.

In order to be eligible to insure loans purchased by the GSEs, mortgage insurers such as Radian Guaranty must meet the GSEs' eligibility requirements, or PMIERS. The PMIERS are comprehensive, covering virtually all aspects of the business of a private mortgage insurer, including extensive risk management and operational requirements and the financial requirements discussed below. See "Item 1. Business—Regulation—Federal Regulation—GSE Requirements for Mortgage Insurance Eligibility." If Radian Guaranty is unable to satisfy the requirements set forth in the PMIERS, including the financial requirements discussed below, the GSEs could restrict it from conducting certain types of business with them or take actions that may include not purchasing loans insured by Radian Guaranty.

The PMIERS include financial requirements incorporating a risk-based framework that requires a mortgage insurer's Available Assets to meet or exceed its Minimum Required Assets. The PMIERS financial requirements include increased financial requirements for defaulted loans, as well as for performing loans with a higher likelihood of default and/or certain credit characteristics, such as higher LTVs and lower FICO credit scores. Radian Guaranty's ability to continue to comply with the PMIERS financial requirements could be impacted by, among other factors: (i) the volume and product mix of our NIW; (ii) factors affecting the performance of our mortgage insurance portfolio, including the level of new defaults and prepayments; (iii) for existing defaults, the aging of these existing defaults and whether they are subject to, and remain in, mortgage forbearance programs, and the ultimate losses we incur on new or existing defaults; (iv) the amount of credit that we receive under the PMIERS financial requirements for our third-party reinsurance transactions; and (v) potential amendments or updates to the PMIERS. If our mix of business includes more loans that are subject to the increased financial requirements under the PMIERS, we may limit the type and volume of business we are willing to write for certain of our products based on the increased financial requirements associated with certain loans. This could reduce the amount of NIW we write, which could reduce our future revenues.

As a result of the COVID-19 pandemic and its impact on the economy, we experienced a material increase in new defaults in 2020, substantially all of which related to defaults of loans subject to mortgage forbearance programs implemented in response to the COVID-19 pandemic.

Under National Emergency Guidelines issued by the GSEs, the PMIERS apply a 0.30 multiplier to the Minimum Required Asset factor to all non-performing loans that are subject to a COVID-19 forbearance plan. This effectively reduces the Minimum Required Asset amount for these loans by 70%. The application of the Disaster Related Capital Charge has materially reduced Radian Guaranty's Minimum Required Assets for loans subject to a COVID-19 forbearance plan; however, the benefit that Radian Guaranty is receiving as a result of the Disaster Related Capital Charge has diminished and is expected to continue to diminish over time. The reduction of this benefit could be accelerated if the GSEs were to terminate the COVID-19 Amendment to the PMIERS issued under their National Emergency Guidelines.

For more information about the application of the Disaster Related Capital Charge, see "Item 1. Business—Regulation—Federal Regulation—GSE Requirements for Mortgage Insurance Eligibility."

If existing and future new defaults once again materially increase Radian Guaranty's Minimum Required Assets, we may be required or otherwise choose to: (i) contribute capital to Radian Guaranty; (ii) alter our strategy with respect to our NIW; or (iii) seek additional capital relief through reinsurance or otherwise, which may not be available on acceptable terms or on terms that would be approved by the GSEs.

The GSEs may amend the PMIERS at any time and also have broad discretion to interpret the PMIERS, which could impact the calculation of Radian Guaranty's Available Assets and/or Minimum Required Assets. The most recent large-scale revisions to PMIERS became effective in 2019, and the PMIERS have been further updated since then to address specific matters, including as part of the COVID-19 Amendment under the National Emergency Guidelines. We expect the GSEs to continue to update the PMIERS in the future, including potentially to better align the PMIERS financial requirements with the increased capital requirements for the GSEs under the ERCF and/or the proposed new liquidity requirements for the GSEs. In "Item 1. Business—Regulation—Federal Regulation," see "—GSE Requirements for Mortgage Insurance Eligibility" and "—Housing Finance Reform and the GSEs' Business Practices" for additional information on the ERCF and proposed GSE liquidity requirements.

Compliance with the PMIERS financial requirements could impact our holding company liquidity if additional capital support for Radian Guaranty is required for Radian Guaranty to maintain compliance. The amount of capital that Radian Group could be required to contribute to Radian Guaranty for this purpose is uncertain, but could be significant. See "*—Our sources of liquidity may be insufficient to fund our obligations.*" Further, if Radian Guaranty becomes capital constrained, as was the case in the past, it may be more difficult for Radian Guaranty to return capital to Radian Group, which would compound the negative liquidity impact to Radian Group of the contributions it may be required to make to Radian Guaranty and leave less liquidity to satisfy Radian Group's other obligations. Depending on the amount of liquidity that is utilized from Radian Group, we may be required (or may decide) to seek additional capital by incurring additional debt, issuing additional equity or selling assets, which we may not be able to do on favorable terms, if at all.

The PMIERS prohibit Radian Guaranty from engaging in certain activities such as insuring loans originated or serviced by an affiliate (except under certain circumstances) and require Radian Guaranty to obtain the prior consent of the GSEs before taking many actions, which may include, among other things, entering into certain intercompany agreements, settling loss mitigation disputes with customers and commuting risk. These restrictions could prohibit or delay Radian Guaranty from taking certain actions that would be advantageous to it or to Radian Group.

Loss of Radian Guaranty's eligibility status with the GSEs would have an immediate and material adverse impact on the franchise value of our Mortgage business and our future prospects, as well as a material negative impact on our future results of operations and financial condition.

Our insurance subsidiaries are subject to comprehensive state insurance regulations and other requirements, which we may fail to satisfy.

We and our insurance subsidiaries are subject to comprehensive, detailed regulation by the insurance regulators in the states where they are domiciled or licensed to transact business. These regulations are principally designed for the protection of our insurance policyholders rather than for the benefit of Radian Group's investors. Insurance laws vary from state to state, but generally grant broad supervisory powers to examine insurance companies and enforce rules or exercise discretion affecting almost every significant aspect of the insurance business, including the power to revoke or restrict an insurance company's ability to write new business.

Among other matters, the state insurance regulators impose various capital requirements on our insurance subsidiaries. State insurance capital requirements for our mortgage insurance subsidiaries include Risk-to-capital ratios, other risk-based capital measures and surplus requirements that may limit the amount of insurance that our mortgage insurance subsidiaries write or the ability of our insurance subsidiaries to distribute capital to Radian Group. Similarly, our title insurance subsidiary is required to maintain statutory premium reserves that vary by state and are subject to periodic reviews of certain financial performance ratios, the results of which could result in additional capital requirements in states where it is licensed. See "Item 1. Business—Regulation—State Regulation" for more information on existing regulatory requirements and Note 16 of Notes to Consolidated Financial Statements for information on the NAIC's ongoing development of a revised Model Act for mortgage insurers.

Among other things, our failure to maintain adequate levels of capital in our mortgage insurance and title insurance subsidiaries could lead to intervention by the various insurance regulatory authorities, which could materially and adversely affect our business, business prospects and financial condition. In addition, the GSEs and our mortgage insurance customers may decide not to conduct new business with Radian Guaranty (or may reduce current business levels) or impose restrictions on Radian Guaranty if it is not in compliance with applicable state insurance requirements. The franchise value of our mortgage insurance business likely would be significantly diminished if we were prohibited from writing new business or restricted in the amount of new business we could write in one or more states. For additional information about statutory surplus and other state insurance requirements, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Mortgage," as well as Note 16 of Notes to Consolidated Financial Statements.

The mortgage insurance industry has always been highly competitive with respect to pricing. Our mortgage insurance subsidiaries' premium rates and policy forms are generally subject to regulation in every state in which they are licensed to transact business. These regulations are intended to protect policyholders against the adverse effects of excessive, inadequate or unfairly discriminatory rates and to encourage fair competition in the insurance marketplace. We may be subject to regulatory inquiries or examinations with respect to our mortgage insurance premium rates and policy forms. Similarly, our title insurance business is subject to extensive rate regulation by the applicable state agencies in the states in which it operates. Given that the premium rates for our insurance subsidiaries are highly regulated, we could lose business opportunities and fail to successfully implement our business strategies if our rates are deemed non-compliant or are subject to investigation, if new rates and policy forms are not approved as may be required, or if we are otherwise unable to respond to competitor pricing actions and our customers' demands in a timely and compliant manner.

Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses.

Our current business structure is highly dependent on the GSEs, as the GSEs are the primary beneficiaries of most of our mortgage insurance policies. Changes in the business practices of the GSEs, which can be implemented by the GSEs acting independently or through their conservator, the FHFA, could negatively impact our businesses and financial performance. Examples of potential changes that could impact our business, may include, without limitation:

- eligibility requirements for a mortgage insurer to become and remain an approved eligible insurer for the GSEs;
- underwriting standards on mortgages they purchase;
- policies or requirements that may result in a reduction in the number of mortgages they acquire;
- the national conforming loan limit for mortgages they acquire;
- the level of mortgage insurance they require;

- the terms on which mortgage insurance coverage may be canceled before reaching the cancellation thresholds established by law;
- the terms required to be included in master mortgage insurance policies that cover the loans they acquire, including limitations on the ability of mortgage insurers to mitigate losses on insured mortgages that are in default;
- the amount of loan level price adjustments or guarantee fees, which may result in a higher cost to borrowers, that the GSEs charge on loans that require mortgage insurance; and
- the degree of influence that the GSEs have over a mortgage lender's selection of the mortgage insurer providing coverage.

In addition, the GSEs' business practices have changed in response to the COVID-19 pandemic and to support equitable access to, and affordability of, mortgage credit, in particular to low- and moderate-income borrowers and underserved communities. See "Item 1. Business—Regulation—Federal Regulation—Housing Finance Reform and the GSEs' Business Practices." These changes and other potential actions or inactions of the FHFA and GSEs in the future may continue to have a significant impact on the overall functioning of the housing finance system. Because traditional mortgage insurance is an important component of this system and because our businesses depend on the health of the housing finance system and housing markets in particular, these actions have impacted, and may continue to impact, our business operations and performance.

The structure of the residential housing finance system could be altered in the future, including as a result of comprehensive housing reform legislation. Since the FHFA was appointed as conservator of the GSEs, there has been a wide range of legislative proposals to reform the U.S. housing finance market. In conjunction with these proposals, there has been ongoing debate about the roles that the federal government and private capital should play in the housing finance system. To the extent new legislative action alters the existing GSE charters without explicit preservation of the role of private mortgage insurance for high-LTV loans, our business could be adversely affected. See "Item 1. Business—Regulation—Federal Regulation—Housing Finance Reform and the GSEs' Business Practices" for a discussion of the future of housing finance in the U.S., including potential objectives for future reform.

In February 2022, the FHFA finalized the ERCF, which establishes new increased capital requirements for the GSEs, and the FHFA also has proposed new liquidity requirements for the GSEs. See "Item 1. Business—Regulation—Federal Regulation—Housing Finance Reform and the GSEs' Business Practices" for further information. Taken together, compliance with the increased capital requirements imposed by the ERCF and the proposed new GSE liquidity requirements could significantly alter the business practices and operations of the GSEs, including potentially resulting in an increase in GSE pricing and a decrease in their use of credit risk transfer. An increase in GSE pricing could make alternatives to the GSEs such as FHA insured loans or the private securitization market more attractive, which could reduce the GSEs' market position and reduce the number of loans available for private mortgage insurance. Further, the GSEs may seek to amend the PMIERS financial requirements in the future, including potentially to better align with the ERCF and the proposed GSE liquidity requirements, once finalized. It remains uncertain if, when and how the PMIERS ultimately may be amended; however, changes to the PMIERS to better align with the ERCF could include: (i) an increase in the level of Radian Guaranty's required capital and (ii) a decrease in the amount of PMIERS' capital relief that Radian Guaranty receives for existing or future credit risk transfer, including reinsurance or insurance-linked notes transactions.

The GSEs have in the past and may in the future offer new products and activities in pursuit of their business strategies, including credit risk transfer transactions and structures that compete with private mortgage insurance. In 2018, Freddie Mac and Fannie Mae launched pilot programs as alternatives for lenders to obtain credit enhancement and sell loans with LTVs greater than 80% to the GSEs. These programs were discontinued in 2021, but could be relaunched in the future. If these programs or any future credit risk transfer transactions and structures were to materially displace primary loan level or standard levels of mortgage insurance, the amount of mortgage insurance we write may be reduced, which could negatively impact our franchise value, results of operations and financial condition. See "Item 1. Business—Regulation—Federal Regulation—Housing Finance Reform and the GSEs' Business Practices" for further discussion, including with respect to the recent release by the FHFA of a final rule regarding the process for how it will consider and approve new GSE activities and products.

Since assuming leadership over the FHFA in June 2021, the Biden Administration appointed FHFA leadership has instituted changes to further advance mortgage access and affordability, in particular to low- and moderate-income borrowers and underserved communities. Radian Guaranty and other private mortgage insurance companies have been engaged in discussions with the GSEs regarding how the industry may support the GSEs to advance their objectives. In addition, in furtherance of these policy objectives, Radian Guaranty and/or one or more of the mortgage insurers may pursue initiatives outside of their customary business activities, the success of which may be measured based on how well the initiative was able to advance accessibility and affordability of mortgage credit rather than by traditional profitability and return measures. In addition, as required by the FHFA, each of the GSEs has prepared and filed three-year Equitable Housing Finance Plans that describe each GSE's planned efforts to advance equity in housing finance, including proposals to reduce mortgage costs for historically underserved borrowers. These plans note various initiatives through 2024 that aim to address barriers to homeownership for minority and underserved communities. Both Fannie Mae and Freddie Mac's plans include a particular focus on SPCPs, with both GSEs expected to launch programs. While details on any future changes remain uncertain, both

Fannie Mae's and Freddie Mac's plans note that these programs could consider modifications to mortgage insurance requirements. See "Item 1. Business—Regulation—Federal Regulation—Housing Finance Reform and the GSEs' Business Practices—Administrative Reform—Access and Affordability" for further discussion of the GSEs' SPCPs. The plans also include expected activity to address credit and alternative data in underwriting, valuations and appraisals, and title insurance, among others. The GSEs are expected to update these plans annually. To implement these plans or to otherwise support the FHFA's mandate regarding increasing the accessibility and affordability of mortgage credit, the GSEs may pursue new products and activities, or alter existing policies and practices in ways that could require changes to the GSEs' business practices, including in ways that could negatively impact Radian Guaranty's IIF, results of operations or financial condition.

Although we believe that traditional private mortgage insurance will continue to play an important role in any future housing finance structure, developments in the practices of the GSEs, including potentially new federal legislation, changes to existing statutes, rules or regulations, or changes in the GSEs' business practices that reduce the level of private mortgage insurance coverage used by the GSEs as credit enhancement, or even eliminate the requirement, may diminish the franchise value of our mortgage insurance business and materially and adversely affect our business prospects, results of operations and financial condition.

Legislation and administrative and regulatory changes and interpretations could impact our businesses.

Our businesses are subject to and may be impacted by many federal and state lending, insurance and consumer laws and regulations. See "Item 1. Business—Regulation" for a discussion of significant state and federal regulations and other requirements of the GSEs that are applicable to our businesses. Changes in these laws and regulations or the way they are interpreted or applied, as well as changes in other laws and regulations that may affect corporations more generally, could adversely affect our results of operations, financial condition and business prospects. In addition, our businesses could be impacted by new legislation or regulations, including changes that are not currently contemplated and which could occur at any time. While we have established policies and procedures to comply with applicable laws and regulations, many such laws and regulations are complex, and it is not possible to predict the eventual scope, duration or outcome of any reviews or investigations nor is it possible to predict their effect on us or the industries in which we participate.

Risks Related to our Business Operations

Our success depends on our ability to assess and manage our mortgage insurance underwriting risks; the mortgage insurance premiums we charge may not be adequate to compensate us for our liability for losses and the amount of capital we are required to hold against our insured mortgage risks. We expect to incur losses for future mortgage defaults beyond what we have reserved for in our financial statements.

The estimates and expectations we use to establish premium rates in our mortgage insurance business are based on assumptions made at the time our insurance is written. Our mortgage insurance premium rates are based on, among other items, our expectations about competitive and economic conditions and our cost of capital, as well as a broad range of other factors and risk attributes that we consider in developing our assumptions about the credit performance of the loans we insure and the economic benefits we expect to receive from our insurance policies. Our assumptions may ultimately prove to be inaccurate, especially in a period of high market volatility and economic uncertainty, or if there is a change in law or the GSEs' business practices that alter the performance of the loans we have insured in ways that are inconsistent with our assumptions, including the amount of premium we expect to receive from such insurance. The premium structure we apply is subject to approval by state regulatory agencies, which can delay or limit our ability to increase our premiums if further filings or approvals are necessary to institute pricing adjustments.

If the risk underlying a mortgage loan that we have insured develops more adversely than we anticipated, we generally cannot increase the premium rates on this in-force business, cancel coverage or elect not to renew coverage to mitigate the effects of such adverse developments. Similarly, we cannot adjust our premiums if the amount of capital we are required to hold against our insured risks increases from the amount we were required to hold at the time a policy was written or if the premiums we expected to receive from such insurance are less than anticipated, whether due to a change in the GSEs' business practices or otherwise. As a result, if we are unable to compensate for or offset the increased capital requirements in other ways, the returns on our business may be lower than we assumed or expected. Our premiums earned and the associated investment income on those premiums may ultimately prove to be inadequate to compensate for the losses that we may incur and may not provide an adequate return on capital that may be required. As a result, our results of operations and financial condition could be negatively impacted.

From time to time, we change the processes we use to underwrite loans, including by automating certain underwriting processes and relying on information and processes of the GSEs. For example: we rely on information provided to us by lenders that was obtained from certain of the GSEs' automated appraisal and income verification tools, which may produce results that differ from the results that would have been determined using different methods; we accept GSE appraisal waivers for certain refinance loans, the numbers of which have increased beginning in 2020; and we accept GSE appraisal flexibilities that allow property valuations in certain transactions to be based on appraisals that do not involve an onsite or interior inspection of the property. Our acceptance of automated GSE appraisal and income verification tools, GSE appraisal waivers and GSE appraisal flexibilities may affect our pricing and risk assessment. We also continue to further automate our

underwriting processes to incorporate risk-informed decision making and it is possible that our automated processes result in our insuring loans that we would not otherwise have insured under our prior processes.

Additionally, in accordance with industry practice, we do not establish reserves in our mortgage insurance business until we are notified that a borrower has failed to make at least two monthly payments when due. Because our mortgage insurance reserving does not account for the impact of future losses that we expect to incur with respect to performing (non-defaulted) loans, our obligation for ultimate losses that we expect to incur at any period end is not reflected in our financial statements, except if a premium deficiency exists. A premium deficiency reserve would be recorded if the present value of expected future losses and expenses exceeds the present value of expected future premiums and already established loss reserves on the applicable loans. As future defaults are not currently reflected in our mortgage insurance loss reserves, our loss reserves could increase significantly in future periods if we experience a high volume of new defaults in future periods, which would negatively impact our results of operations and financial condition.

If the estimates we use in establishing mortgage insurance loss reserves are incorrect, we may be required to take unexpected charges to income, which could adversely affect our results of operations.

We establish loss reserves in our mortgage insurance business to provide for the estimated cost of future claims on defaulted loans. Setting our loss reserves requires significant judgment by management with respect to the likelihood, magnitude and timing of each potential loss. The models, assumptions and estimates we use to establish loss reserves may not prove to be accurate, especially in the event of an extended economic downturn or a period of market volatility and economic uncertainty, such as we are currently experiencing. Because of this, claims paid may be substantially different than our loss reserves and these reserves may be insufficient to satisfy the full amount of claims that we ultimately have to pay. In the past, changes to our loss reserve estimates have, and could again in the future, adversely impact our results of operations and financial condition.

Although the rate of new defaults has largely returned to pre-pandemic levels and many pandemic-related defaulted loans have cured, a portion of the defaulted loans in our insured portfolio remain in COVID-19 mortgage forbearance programs. It is difficult to predict whether these loans will cure, including through modification, when forbearance ends or how many of these loans will result in a claim.

In addition, a portion of the defaulted loans in our insured portfolio were originated in the years prior to the financial crisis and have been in default for an extended period of time. While these loans are generally assigned a higher loss reserve based on our belief that they are more likely to result in a claim, we also assume, based on historical trends, that a significant portion of these loans will cure or otherwise not result in a claim. Given the significant period of time that these loans have been in default, it is possible that the ultimate cure rate for these defaulted loans will be less than our current estimates of Cures for this inventory of defaults.

If our loss reserve estimates are inadequate, we may be required to increase our reserves, which could have a material adverse effect on our results of operations and financial condition.

Our Loss Mitigation Activity could negatively impact our customer relationships.

As part of our claims management process, we pursue opportunities to mitigate losses both before and after we receive claims, including processes to ensure claims are valid.

Our Loss Mitigation Activities and claims paying practices have in the past resulted in disputes with certain of our customers and in some cases, damaged our relationships with customers, resulting in a loss of business. While we have resolved all material disputes, a risk remains that our Loss Mitigation Activities or claims paying practices could in the future have a negative impact on our relationships with customers or potential customers. Further, disputes with our customers that are not resolved could result in additional arbitration or judicial proceedings, requiring significant legal expenses. To the extent that past or future Loss Mitigation Activities or claims paying practices impact our customer relationships, our competitive position could be adversely affected, resulting in the potential loss of business and impacting our results of operations.

Reinsurance may not be available, affordable or adequate to protect us against losses.

We use reinsurance as a capital and risk management tool. We have distributed risk through third-party quota share and excess-of-loss reinsurance arrangements, as well as through the capital markets using mortgage insurance-linked notes transactions.

The availability and cost of reinsurance are subject to market conditions beyond our control, including factors that impact the demand of investors for mortgage credit. No assurance can be given that reinsurance will remain available to us in amounts that we consider sufficient and at rates and upon terms that we consider acceptable. Accordingly, we may be forced to incur additional expenses for reinsurance or may not be able to obtain sufficient reinsurance on acceptable terms, which could cause us to increase the amount of risk we retain, negatively affect the returns we are able to achieve on the business we write and adversely affect our ability to write future business. Further, reinsurance does not relieve us of our direct liability to policyholders; therefore, if the reinsurer is unable or unwilling to meet its obligations to us, we remain liable to make claims payments to our policyholders. As a result, our reinsurance arrangements do not fully eliminate our obligation to pay claims, and we have assumed counterparty credit risk with respect to our inability to recover amounts due from reinsurers.

We use reinsurance to manage Radian Guaranty's capital position under the PMIERS financial requirements. Among other benefits, our risk distribution transactions reduce our required capital, including by significantly reducing our Required Minimum Assets under the PMIERS. The initial and ongoing credit that we receive under the PMIERS financial requirements for these risk distribution transactions is subject to the periodic review of the GSEs and could be influenced by the ERCF, which, in the form finalized in February 2022, significantly increases the capital requirements for the GSEs and provides the GSEs with a reduced amount of credit for their own credit risk transfer activities. See "*—Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses.*" If the GSEs revise the PMIERS in the future to align with the final form of the ERCF, such alignment could reduce the credit that Radian Guaranty receives for reinsurance under the PMIERS, which could negatively impact our strategic approach to risk management and risk distribution.

In January 2023, the SEC issued a proposed rule for comment prohibiting conflicts of interest in certain securitization transactions. The proposed rule would restrict securitization participants from engaging in certain transactions with respect to an asset-backed security for a period ending one year after the initial sale of that security and also specifies certain prohibited transaction types. While we believe mortgage insurance-linked notes transactions similar to those we have used for reinsurance in the past are distinguishable from synthetic asset-backed securities contemplated by the SEC proposed rule, if the rule is adopted as proposed and is determined to apply to mortgage insurance-linked notes transactions, the rule could limit or prohibit our ability to obtain reinsurance through these transactions.

If we are unable to obtain sufficient reinsurance on acceptable terms or to collect amounts due from our reinsurers, or if we receive less PMIERS capital relief for our reinsurance transactions, it could have a material adverse effect on our business, financial condition and results of operations.

An extension in the period of time that a loan remains in our inventory of defaulted mortgage loans may increase the severity of claims that we ultimately are required to pay.

High levels of defaults and corresponding delays in foreclosures could delay our receipt of claims, resulting in an increase in the period of time that a loan remains in our inventory of defaulted mortgage loans, and as a result, the Claim Severity. Generally, foreclosure delays do not stop the accrual of interest or affect other expenses on a loan, and unless a loan is cured during such delay, once title to the property ultimately is obtained and a claim is filed, our paid claim amount may include additional interest and expenses, increasing the Claim Severity.

In response to the COVID-19 pandemic, numerous federal and state regulatory agencies instituted borrower relief programs with the objective of supporting borrowers through the economic hardship resulting from the pandemic and allowing borrowers to remain in their homes, including mortgage payment forbearance and foreclosure and eviction moratoriums. Although the foreclosure and eviction moratoriums have since expired and foreclosure filings have resumed, the existence of these moratoriums significantly impacted the claims process in 2020 and 2021 by preventing the procedural steps necessary for the filing of a claim under our insurance policies. Further, when loans subject to COVID-19 mortgage forbearance programs reach the end of their forbearance period, federal law requires servicers to discuss forbearance and loss mitigation options with their borrowers and afford additional protections to borrowers before their loans are referred to foreclosure, which further extends the period in which these loans remain in defaulted status. As a result of COVID-19-related relief programs, defaults related to the pandemic, if not cured, may remain in our defaulted loan inventory for a protracted period of time, which could result in higher levels of Claim Severity for those loans that ultimately result in a claim. Higher levels of Claim Severity would increase our incurred losses and could negatively impact our results of operations and financial condition.

If the length of time that our mortgage insurance policies remain in force declines, it could result in a decrease in our future revenues.

Most of our primary IIF consists of policies for which we expect to receive premiums in the future, typically through Monthly Premium Policies, and as a result, a significant portion of our earned premiums are derived from insurance that was written in prior years. The length of time that this insurance remains in force, which we refer to as the Persistency Rate, is a significant driver of our future revenues, with a lower overall Persistency Rate generally reducing our future revenues. As a result, the ultimate profitability of our mortgage insurance business is affected by the impact of mortgage prepayment speeds on the mix of business we write.

Factors affecting the length of time that our insurance remains in force include:

- prevailing mortgage interest rates compared to the mortgage rates on our IIF, which affects the incentive for borrowers to refinance (i.e., lower current interest rates make it more attractive for borrowers to refinance and receive a lower interest rate);
- the HPA requirement that servicers cancel mortgage insurance when a borrower's LTV ratio meets or is scheduled to meet certain levels, generally based on the original value of the home and subject to various conditions;
- the GSEs' mortgage insurance cancellation guidelines, which apply more broadly than the HPA, and also consider a home's current value. For example, borrowers may request cancellation of mortgage insurance based on the home's current value if certain LTV and seasoning requirements are met and the borrowers have an acceptable payment history. For loans seasoned between two and five years, the LTV ratio must be 75% or less, and for loans seasoned more than

five years, the LTV ratio must be 80% or less. For more information about the GSEs' guidelines and business practices and how they may change, see "*—Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses.*"

- the credit policies of certain lenders, which impact the ability of homeowners to refinance loans; and
- economic conditions that can affect a borrower's decision to pay off a mortgage earlier than required, including the strength of the housing market, which impacts a borrower's prospects for selling their existing home and finding a suitable and affordable new home.

If these or other factors cause a decrease in the length of time that our Recurring Premium Policies, for which we expect to receive premiums in the future, remain in force, our future revenues could be negatively impacted, which could negatively impact our results of operations and financial condition.

Our delegated underwriting program may subject our mortgage insurance business to unanticipated claims.

In our mortgage insurance business, we permit lenders to obtain mortgage insurance for residential mortgage loans originated and underwritten by them using Radian's pre-established underwriting guidelines. Once we accept a lender into our delegated underwriting program, we generally insure a mortgage loan originated by that lender based on our expectation that the lender has followed our specified underwriting guidelines. Under this program, a lender could commit us to insure a material number of loans with unacceptable risk profiles before we discover the problem and are able to terminate that lender's delegated underwriting authority or pursue other rights that may be available to us, such as our rights to rescind coverage or deny claims.

Our mortgage insurance business faces intense competition.

The U.S. mortgage insurance industry is highly competitive. Our competitors primarily include other private mortgage insurers and governmental agencies, principally the FHA and VA.

We currently compete with other private mortgage insurers that are eligible to write business for the GSEs primarily on the basis of price, underwriting guidelines, overall service, customer relationships, perceived financial strength (including comparative credit ratings) and reputation. For more information about our competitive environment, including pricing competition, see "Item 1. Business—Competition."

Pricing strategies continue to evolve in the mortgage insurance industry. In recent years, mortgage insurers generally have migrated away from a predominantly standard rate-card-based pricing model and toward the use of proprietary, "black box" pricing frameworks that use a spectrum of filed rates to allow for formulaic, risk-based pricing based on multiple loan, borrower and property attributes that may be quickly adjusted within certain parameters. The use of these granular risk-based pricing methodologies has contributed to a pricing environment that is more dynamic with more frequent pricing changes that can be implemented quickly, as well as an overall reduction in pricing transparency. As a result, we may not be aware of rate changes in the industry until we observe that our volume of NIW has changed. Further, in addition to "black box" pricing, industry pricing practices in recent years have also included an increased use of customized rate plans for certain customers, pursuant to which rates may be awarded to customers for only a limited period of time. The evolution of pricing strategies throughout the industry has resulted in greater volatility in our NIW and a reduction in industry pricing, including our pricing, due to the heightened competition inherent in the use of these pricing tools as compared to prior periods when standard rate cards were most prevalent.

Pricing has become the predominant competitive market factor for private mortgage insurance and an increasing number of customers are making their choice of mortgage insurance providers primarily based on the lowest price available for any particular loan. Our approach to pricing is customer-centric and flexible, as we offer a spectrum of risk-based pricing solutions for our customers that are designed to be balanced with our objectives for managing our volume of NIW and the risk/return profile of our insured portfolio. Although we believe we are well-positioned to compete effectively, our pricing strategy may not be successful and we may lose business to other competitors.

Increased pricing competition has lowered the premium yield of our insured portfolio over time as older vintage insured loans with higher premium rates run-off and have been replaced with insured loans with premium rates that generally have been lower in recent years. It is possible that pricing competition could further intensify, which could result in a decrease in our projected returns. Despite our pricing actions, we may experience returns below our targeted returns. Our increased use of reinsurance over the past several years has helped to mitigate the negative effect of declining premium rates on our expected returns. However, reinsurance may not always be available or available on terms attractive to us. See "*—Reinsurance may not be available, affordable or adequate to protect us against losses.*"

We also compete with governmental entities, such as the FHA and VA, primarily on the basis of loan limits, pricing, credit guidelines, terms of our insurance policies and loss mitigation practices. These governmental entities typically do not have the same capital requirements or business objectives that we and other private mortgage insurance companies have, and therefore, may have greater financial flexibility or different motivations with respect to pricing that could put us at a competitive disadvantage. On February 22, 2022, the FHA announced that it is reducing its annual mortgage insurance premium by 0.30 percentage points for most new borrowers. This pricing change and other potential future changes in pricing by these

governmental entities, or to the terms and conditions of their mortgage insurance or other credit enhancement products, could negatively impact our ability to compete in that market effectively, which could have an adverse effect on our business, financial condition and operating results. See “Item 1. Business—Regulation—Federal Regulation—Housing Finance Reform and the GSEs’ Business Practices” for further discussion of factors that could impact the FHA’s competitive position relative to private mortgage insurance.

In addition, as market conditions change, alternatives to private mortgage insurance may become more prevalent, which could reduce the demand for private mortgage insurance in its traditional form. For example, alternatives to private mortgage insurance could include: investors using risk mitigation and credit risk transfer techniques other than private mortgage insurance (or accepting credit risk without credit enhancement); lenders and other investors holding mortgages in portfolio and self-insuring; and/or lenders originating mortgages using “piggyback” structures to avoid private mortgage insurance. See “—*Changes in the charters, business practices or role of the GSEs in the U.S. housing finance market generally, could significantly impact our businesses*” for risks related to changes in the GSEs’ business practices that could impact our competitive position, including the use of alternatives to traditional mortgage insurance to satisfy their charter requirements related to credit risk.

The competitive environment is extremely challenging given the multitude of factors discussed above. This environment, as well as potential further changes to this evolving environment, could negatively impact our franchise value, business prospects, results of operations and financial condition.

Our NIW and franchise value could decline if we lose business from significant customers.

Our mortgage insurance business depends on our relationships with our customers. Our customers place insurance with us directly on mortgage loans they originate and they also do business with us indirectly through purchases of mortgage loans that already have our mortgage insurance coverage. Our relationships with our customers may influence both the amount of business they conduct with us directly and their willingness to continue to approve us as a mortgage insurance provider for loans that they purchase. The loss of business from significant customers could have an adverse effect on the amount of new business we are able to write, and consequently, our franchise value.

If we were to lose a significant customer, including as a result of customer consolidation, it is unlikely that the loss could be completely offset by other customers in the near-term, if at all. Lending customers may decide to write business only with a limited number of mortgage insurers or only with certain mortgage insurers, based on their views with respect to an insurer’s pricing levels and pricing delivery methods, service levels, underwriting guidelines, loss mitigation practices, information security and other compliance programs, financial strength or other factors. With respect to pricing, industry pricing practices in recent years have resulted in greater volatility in our customer relationships as we may retain, gain or lose customers based on the competitiveness of our proposed pricing levels, regardless of the other factors cited above that may influence a lender’s decision whether to continue or commence doing business with us. See “—*Our mortgage insurance business faces intense competition.*”

Our lending customers also may choose for risk management purposes to diversify the mortgage insurers with which they do business. Given that many of our customers currently give us a significant portion of their total mortgage insurance business, it is possible that further diversification could have a negative impact on our NIW if we are unable to mitigate the market share loss through new customers or increases in business with other customers. Further, we actively engage with our customers to ensure that we are receiving an appropriate mix of business at acceptable projected returns, and depending on the circumstances, we could take action with respect to customers (e.g., limiting the type of business we accept from them or instituting pricing changes that impact them) that could result in customers reducing the amount of business they do with us or deciding not to do business with us altogether. Finally, although we develop our product offerings and strategies to be complementary to our customers, we currently offer and may offer in the future, products that could be viewed as competitive to products offered by certain of our customers, which could influence a customer’s decision as to whether to do business with us. Any significant loss in our market share could negatively impact our mortgage insurance franchise, results of operations and financial condition.

The current financial strength ratings assigned to our mortgage insurance subsidiaries could weaken our competitive position and potential downgrades by rating agencies to these ratings and the ratings assigned to Radian Group could adversely affect the Company.

Radian Guaranty has been assigned a rating of A3 by Moody’s, a rating of BBB+ by S&P and a rating of A- by Fitch. While Radian Guaranty’s financial strength ratings currently are investment grade, certain of these ratings are below the ratings assigned to some of our competitors. We do not believe our ratings have had a material adverse effect on our relationships with existing customers. However, if financial strength ratings become a more prominent consideration for lenders, we may be competitively disadvantaged by customers choosing to do business with private mortgage insurers that have higher financial strength ratings. In addition, while the current PMIERS do not include a specific ratings requirement with respect to eligibility, if this were to change in the future, we may become subject to a ratings requirement in order to retain our eligibility status under the PMIERS. Further, a downgrade in our financial strength ratings could result in increased scrutiny of our financial condition by the GSEs and/or our customers, potentially resulting in a decrease in the amount of our NIW.

We believe that financial strength ratings would represent a significant consideration for participants should they seek to secure credit enhancement in the non-GSE mortgage market, which includes most non-QM loans. If the non-GSE market once again becomes receptive to the benefits of private mortgage insurance, our ability to successfully insure loans in this market could depend on our ability to secure higher ratings for our mortgage insurance subsidiaries. In addition, if legislative or regulatory changes were to alter the current state of the housing finance industry such that the GSEs no longer operate in their current capacity, we may be forced to compete in a new marketplace in which financial strength ratings may play a greater role.

The rating agencies continually review the financial strength ratings assigned to Radian Group and its mortgage insurance subsidiaries, and the ratings are subject to change. Downgrades to the ratings of our mortgage insurance subsidiaries and Radian Group could adversely affect our cost of funds, liquidity, access to capital markets and competitive position. S&P is currently reviewing its rating methodologies for insurers, including mortgage insurers. It is not possible to predict whether changes will be implemented or in what form, or what impact any potential change would have on us and on the way external parties evaluate the different rating levels. If we are unable to compete effectively in the current or any future markets as a result of the financial strength ratings assigned to our mortgage insurance subsidiaries, the franchise value and future prospects for our mortgage insurance business could be negatively affected.

Our business depends, in part, on effective and reliable loan servicing.

We depend on third-party servicing of the loans that we insure. Dependable servicing is necessary for timely billing and premium payments to us and effective loss mitigation opportunities for delinquent or near-delinquent mortgage loans. Servicers are required to comply with a multitude of legal and regulatory requirements, procedures and standards for servicing residential mortgages, such as the CFPB's mortgage servicing rules. While these requirements are intended to ensure a high level of servicing performance, they also impose a high cost of compliance on servicers that may impact their financial condition and their operating effectiveness. For example, the various servicing-related requirements imposed by the CARES Act, the GSEs, the FHA, CFPB and other federal and state governmental and regulatory bodies and agencies to address the impact of the COVID-19 pandemic on mortgage borrowers heightened the burdens placed on servicers. Challenging economic and market conditions or periods of economic stress and high mortgage defaults make it more difficult for servicers to effectively service the mortgage loans that we insure and could influence their approach to the loans they are servicing, including by reducing their abilities or willingness to undertake mitigation efforts that could help limit our losses.

Information with respect to the mortgage loans we insure is based in large part on information reported to us by third parties, including the servicers and originators of the mortgage loans, and information provided may be subject to lapses or inaccuracies in reporting from such third parties. In many cases, we may not be aware that information reported to us is incorrect until such time as a claim is made against us under the relevant insurance policy. We do not receive monthly information from servicers for single premium policies, and may not be aware that the mortgage loans insured by such policies have been repaid. We periodically attempt to determine if coverage is still in force on such policies by asking the last servicer of record or through the periodic reconciliation of loan information with certain servicers. It may be possible that our reports continue to reflect, as active, policies on mortgage loans that have been repaid. If we experience a disruption in the servicing of mortgage loans covered by our insurance policies or a failure by servicers to appropriately report the status of a loan, this could impact the amount of assets Radian Guaranty is required to hold under the PMIERS or ultimately contribute to a rise in claims among those loans, which could have a material adverse effect on our business, financial condition and operating results.

Under the terms of our 2014 Master Policy and 2020 Master Policy, mortgage insurance premiums are not required to be paid following an event of default. However, if a defaulted loan then cures, all mortgage insurance premiums must be brought current for our insurance coverage to continue, including all premiums that were not paid during the period following the event of default and through the date of cure. Because premiums must be brought current upon a cure, mortgage servicers typically continue to pay mortgage insurance premiums while loans remain in default, understanding that Radian Guaranty will refund these premiums if the loans fail to cure and ultimately go to claim. If we fail to receive mortgage insurance premiums following mortgage defaults, Radian Guaranty's cash flow could be materially reduced, potentially requiring Radian Guaranty to liquidate investments at a loss to pay future claims or otherwise requiring us to alter our investment strategy.

We face risks associated with our contract underwriting business.

We provide third-party contract underwriting services for our mortgage insurance customers. Generally, we offer limited indemnification to our contract underwriting customers. In addition to indemnification, we typically have limited loss mitigation defenses available to us for loans that we have underwritten through our contract underwriting services. As a consequence, our results of operations could be negatively impacted if we are required to indemnify our customers for material underwriting errors in our contract underwriting services.

A decrease in the volume of mortgage originations could result in fewer opportunities for us to write new mortgage insurance business and conduct our homegenius businesses.

The amount of new mortgage insurance business we write and real estate transactions we support through our homegenius title, real estate and technology products and services depends, among other things, on a steady flow of low

down payment mortgages that require private mortgage insurance and on the volume of real estate transactions that benefit from our services or products. The volume of mortgage originations is impacted by macroeconomic conditions and specific events that impact the housing finance and real estate markets, most of which are beyond our control, including housing prices, inflationary pressures, unemployment levels, interest rate changes, the availability of credit and other national and regional economic conditions. In “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations,” see “—Overview—Current Operating Environment” and “—Key Factors Affecting Our Results—Mortgage.” Factors affecting the volume of low down payment mortgages include:

- restrictions on mortgage credit due to changes in lender underwriting standards, capital requirements affecting lenders, regulatory requirements and the health of the private securitization market;
- mortgage interest rates;
- the health of the domestic economy generally, including in particular unemployment levels and the degree of consumer confidence, as well as specific conditions in regional and local economies;
- housing supply and affordability;
- tax laws and policies and their impact on, among other things, deductions for mortgage insurance premiums, mortgage interest payments and real estate taxes;
- demographic trends, including the rate of household formation;
- the rate of home price appreciation;
- government housing policy encouraging affordability and accessibility of mortgage loans, in particular to first-time homebuyers; and
- the practices of the GSEs, including the extent to which the guaranty fees, loan level price adjustments, credit underwriting guidelines and other business terms provided by the GSEs affect the cost of mortgages and lenders’ willingness to extend credit for low down payment mortgages.

As the overall volume of new mortgage originations declines, we are subject to increased competition and we could experience a reduced opportunity to write new insurance business and provide our homegenius products and services, which could negatively affect our business prospects, results of operations and financial condition.

We are exposed to risks associated with our homegenius businesses that could negatively affect our results of operations and financial condition.

Our homegenius businesses expose us to certain risks that may negatively affect our results of operations and financial condition, including, among others, the following:

- Our homegenius businesses are heavily focused on digital products and services, including software as a service solutions and proprietary technology platforms that depend on our ability to develop, launch and implement new and innovative technologies and digital solutions. As a result, this business is particularly exposed to challenges associated with new and rapidly evolving technologies and business environments, customer acceptance of our digital product and service offerings, the costs associated with the development and launch of these technologies and products, our failure to successfully integrate new technologies into our existing systems and the risk that our digital product and services offerings fail to operate as expected or planned or that expose us to additional cybersecurity or third-party risks;
- Our homegenius businesses depend on our relationships with our customers. Our homegenius revenue is dependent on a limited number of large customers that represent a significant proportion of our homegenius total revenues. The loss or reduction of business from one or more of these significant customers could adversely affect the level of our homegenius revenues. In addition, Radian Guaranty does business with many of these significant customers. In the event of a dispute between a significant customer and either of our business segments, the overall customer relationship for Radian could be negatively impacted;
- Due to the transactional nature of our business, our homegenius segment revenues are subject to fluctuation from period to period and are difficult to predict;
- The services we offer through our homegenius businesses are influenced by the level of overall activity in the mortgage, real estate and mortgage finance markets generally. If real estate transaction volumes decline, we could experience less demand for our real estate and title services;
- homegenius Real Estate is a licensed real estate brokerage and provides real estate brokerage services in all 50 states and the District of Columbia. As a licensed real estate brokerage, homegenius Real Estate receives residential real estate information from various multiple listing services. homegenius Real Estate receives this information, which it uses in its business to broker real estate transactions and provide valuation products and services that comprise many of our homegenius product offerings, pursuant to the terms of agreements with the MLS providers. If these agreements were to terminate or homegenius Real Estate otherwise were to lose access to this information, it could negatively impact homegenius Real Estate’s ability to conduct its business and our future real estate strategies. In addition to MLS data, we

depend on access to data from a variety of other external sources to maintain our databases and grow our businesses. If we were to lose access to one or more of these data sources, the quality, pricing and availability of our homegenius products and services may be negatively impacted;

- By their nature, title claims are often complex, vary greatly in dollar amounts and are affected by economic and market conditions and the legal environment existing at the time of settlement of the claims. Estimating future title loss payments is difficult because of the complex nature of title claims, the long periods of time over which claims are administered and paid, significantly varying dollar amounts of individual claims and other factors. From time to time, we could experience large losses or an overall worsening of our loss payment experience in regard to the frequency or severity of claims that require us to record additional charges to our claims loss reserve. These loss events are unpredictable and may require us to increase our title loss reserves and could adversely affect the financial performance of our homegenius segment; and
- Our homegenius businesses operate in a highly competitive environment. Our competitors vary in size and in the scope and breadth of the services they offer, and many have substantial resources. We expect that the markets in which we compete will continue to attract new competitors, technologies and products that are designed to disrupt traditional business models. There can be no assurance that our homegenius businesses will be able to compete successfully.

Any of these factors could negatively affect our homegenius businesses and could have a material adverse effect on our results of operations and financial condition.

We rely upon proprietary technology and information, and if we are unable to protect our intellectual property rights, it could have a material adverse effect on us.

Our success depends, in part, upon our intellectual property rights. We rely primarily on a combination of patents, copyrights, trade secrets, trademarks, nondisclosure and other contractual restrictions on copying, distributing and creating derivative products to protect our proprietary technology and information. This protection is limited, and our intellectual property could be used by others without our consent. In addition, patents may not be issued with respect to our pending or future patent applications, and our patents may not be upheld as valid or may not prevent the development of competitive products. Any infringement, disclosure, loss, invalidity of or failure to protect our intellectual property could have a material adverse effect on our business, financial condition and results of operations. Moreover, litigation may be necessary to enforce or protect our intellectual property rights, to protect our trade secrets or to determine the validity and scope of the proprietary rights of others. Such litigation could be time-consuming, result in substantial costs and diversion of resources and could have a material adverse effect on our business, financial condition and results of operations.

We face risks associated with our new mortgage conduit business.

In July 2022 we launched our mortgage conduit business in Radian Mortgage Capital. Subject to market conditions, Radian Mortgage Capital acquires residential mortgage loans, including by utilizing short-term uncommitted debt under the Master Repurchase Agreements, which loans Radian Mortgage Capital then expects to distribute into the capital markets through private label securitizations or by selling them directly to mortgage investors, with the option to retain and manage structured components of the underlying credit risk. As a result of our entry into this business, we are exposed to certain risks that may negatively affect our results of operations and financial condition, including, among others, the following:

- Potential breaches of the financial and other covenants under our Master Repurchase Agreements could result in our being required to immediately repay all outstanding amounts borrowed under these facilities and these facilities being unavailable to use for future financing needs, as well as potentially triggering cross-defaults under other debt agreements.
- Interest rate fluctuations can negatively impact our mortgage conduit business.
 - Changes in interest rates and other factors could cause the cost of financing a mortgage asset to exceed the income generated by that mortgage asset. An increase in interest rates generally increases the overall cost to finance our acquisitions of mortgage loans and reduces the fair value of mortgage loans pledged as collateral for our payment obligations.
 - We have an interest rate risk hedging program and seek to hedge interest rate risks associated with our acquisition of mortgage assets; however, changes in interest rates, securities spreads and other factors could cause net losses on the mortgage assets and our hedge position. There can be no assurance that our hedging activity will be effective, or that future market conditions or our financial condition in the future will enable us to maintain an effective interest rate risk hedging program.
- Under our Master Repurchase Agreements we pledge mortgage assets as security for our payment obligations and the agreements contain margin requirements which require us to pledge additional collateral if the value of previously pledged collateral declines below certain levels. Therefore, if the value of the collateral decreases below certain levels, we could be required to satisfy a margin call under the Master Repurchase Agreements. In addition, certain of our hedges are also subject to margin calls. As this business grows, any of these margin calls could have a material adverse effect on Radian Mortgage Capital's liquidity position and could require Radian Group to satisfy the margin requirements through capital contributions to Radian Mortgage Capital, which could impact Radian Group's available liquidity. See "*—Our sources of liquidity may be insufficient to fund our obligations.*"

- If the secondary markets for mortgages or for residential mortgage-backed securities experiences any significant disruption or illiquidity, we might be unable to sell our mortgage assets in a timely manner or at favorable prices and we may be forced to hold and finance a larger inventory of mortgage assets, which could have a material adverse effect on our business, financial condition, liquidity and results of operations.
- Because we do not originate residential loans, the growth of our mortgage conduit business may be limited if mortgage loans are not available for purchase at attractive prices. Mortgage loan originations may fluctuate from period to period, and a reduced volume of loan originations that satisfy our acquisition guidelines may make it difficult for us to acquire loans.
- When we purchase mortgage loans, representations and warranties are made to us by sellers regarding, among other things, certain characteristics of those mortgage loans, which we seek to verify through underwriting and due diligence. When we sell mortgage loans, we make similar representations and warranties to purchasers. Losses could result if representations or warranties we make to purchasers are inaccurate, including representations or warranties made in reliance on inaccurate representations or warranties that are made to us.
- The business of Radian Mortgage Capital subjects us to additional legal and regulatory requirements that we may fail to satisfy. Failure to comply with applicable laws or regulations or to have appropriate authorizations, exemptions or state licenses could limit our ability to conduct our business in one or more jurisdictions in which we operate and could subject us to fines, injunctions or other relief, which could require significant expenditures or have a material adverse effect on our business prospects, results of operations and financial condition. In addition, the nature and extent of applicable laws and regulations could materially change, which may result in additional costs or changes to our operations associated with compliance.
- We rely on third-party service providers to service the mortgage loans for which we hold the right to service and serve as the master servicer. Our reliance on third-party servicers exposes us to certain risks, including the risk that the subservicer may not properly service the loan in compliance with applicable laws and regulations or the contractual provisions governing their subservicing role, in which case we may be held liable for the subservicer's improper acts or omissions. Failure to take steps to ensure that third-party servicers are servicing the loans we acquire appropriately could expose us to penalties or other claims or enforcement actions that could negatively impact our business prospects, results of operations and financial condition.
- Under the Investment Company Act of 1940, an investment company is required to register with the SEC and is subject to extensive restrictive regulations relating to, among other things, operating methods, management, capital structure, dividends, and transactions with affiliates. We intend to conduct our businesses and operations so Radian Mortgage Capital is not required to register as an investment company under the Investment Company Act of 1940. Failure to continue to qualify for exemption from the Investment Company Act of 1940 could result in significant restrictions on our business activities, prohibitions from engaging in certain business activities and subject us to burdensome compliance requirements and have a material adverse effect on our business prospects, results of operations and financial condition.

Risks Related to the Economic Environment

The credit performance of our mortgage insurance portfolio is impacted by macroeconomic conditions and specific events that affect the ability of borrowers to pay their mortgages.

Mortgage defaults occur due to a variety of specific events affecting individual borrowers, including death or illness, divorce or other family-related factors and unemployment, among other events. While mortgage defaults can and do occur in any economic environment, there is a high correlation between the overall health of the economy and the performance of our mortgage insurance portfolio. As a result, our results are particularly influenced by macroeconomic conditions and specific events that impact the housing finance and real estate markets, including events that impact mortgage originations and the credit performance of our mortgage insurance portfolio, most of which are beyond our control, including housing prices, inflationary pressures, unemployment levels, interest rate changes, the availability of credit and other national and regional economic conditions. These conditions may be created or exacerbated by: acts of terrorism, war or other geopolitical conditions and conflicts; event-specific economic depressions; U.S. debt ceiling and budget deficit concerns; severe weather events and natural disasters, which may continue to increase in severity and frequency due to climate change; and other catastrophic events such as the COVID-19 pandemic or other future epidemics or pandemics. In general, challenging economic conditions increase the likelihood that borrowers will not have sufficient income to satisfy their mortgage obligations.

In addition, a deteriorating economy also can adversely affect housing values, which in turn can influence the willingness of borrowers to continue to make mortgage payments despite having the financial resources to do so. A decline in home values typically makes it more difficult for borrowers to sell or refinance their homes, increasing the likelihood that a default will result in a claim. Declining housing values also may impact the effectiveness of our loss mitigation actions. The amount of the loss we could suffer depends in part on whether the home of a borrower who defaults on a mortgage can be sold for an amount that will cover the unpaid principal balance, interest and the expenses of the sale. Any of these events may have a material adverse effect on our business, results of operations and financial condition.

Currently, the U.S. economy is experiencing a high rate of inflation, slower economic growth and the risk of a recession. Future volatility may occur due to, among other things, declining home prices, the risk of higher unemployment rates and political conditions, including debate over raising the U.S. debt limit, among other factors. The unfavorable macroeconomic developments and other factors cited above may again have a material negative impact on our results of operations and financial condition.

Our success depends, in part, on our ability to manage risks in our investment portfolio.

Our investment portfolio is an important source of revenue and is our primary source of claims paying resources. Although our investment portfolio consists primarily of highly-rated fixed income investments, our investment strategy is affected by general economic conditions and tax policies, which may adversely affect the markets for credit and interest-rate-sensitive securities, including the extent and timing of investor participation in these markets, the level and volatility of interest rates and credit spreads and, consequently, the value of our fixed income securities and the level of our net investment income, and as such, we may not achieve our investment objectives.

Volatility or lack of liquidity in the markets in which we invest has at times reduced the market value of some of our investments, including as a result of the disruption in the financial markets following the onset of the COVID-19 pandemic and more recently, inflationary and interest rate trends. The value of our investment portfolio is subject to market risk and may be adversely affected by other factors outside of our control, such as ratings downgrades, bankruptcies and credit spreads widening, any of which may cause unrealized or realized losses. When the credit environment deteriorates, the risk of impairments of our investments increases. Disruption and volatility in the financial markets, including sharp increases in market interest rates as we have recently experienced, could also have a material adverse effect on our liquidity, financial condition and results of operations. See “—Our reported earnings, stockholders’ equity and book value per share are subject to fluctuations based on changes in our investments that require us to adjust their fair market value.”

Currently, federal budget deficit concerns and the potential for political conflict over legislation to raise the U.S. government’s debt limit may increase the possibility of a default by the U.S. government on its debt obligations, related credit-rating downgrades, or an economic recession in the United States. Many of our investment securities are issued by the U.S. government and government agencies and sponsored entities. As a result of uncertain domestic political conditions, including potential future federal government shutdowns, the possibility of the federal government defaulting on its obligations for a short period of time due to debt ceiling limitations or other unresolved political issues, investments in financial instruments issued or guaranteed by the federal government pose liquidity risks. Any potential downgrades by rating agencies in long-term sovereign credit ratings, as well as sovereign debt issues facing the governments of other countries, could have a material adverse impact on financial markets and economic conditions worldwide.

For the significant portion of our investment portfolio held by our insurance subsidiaries, to receive favorable treatment under insurance regulatory requirements and full credit as Available Assets under the PMIERs, we generally are limited to investing in investment grade fixed income investments with yields that reflect their lower credit risk profile. Because we depend on our investments as a source of revenue, a prolonged period of lower than expected investment yields would have an adverse impact on our revenues and could adversely affect our results of operations. Further, future updates to the Model Act or PMIERs, including potentially to better align with the ERCF and the proposed liquidity requirements for the GSEs, could restrict our investment choices, which could negatively impact our investment strategy.

In addition, we structure our investment portfolio to satisfy our expected liabilities, including claim payments in our mortgage insurance business. If we underestimate our future claim payments or other liabilities or improperly structure our investments to meet these liabilities, we could have unexpected losses resulting from the forced liquidation of investments before their maturity, which could adversely affect our results of operations.

Climate change and extreme weather events could adversely affect our businesses, results of operations and financial condition.

Our businesses, results of operations and financial performance could be adversely impacted by climate change and extreme weather events, especially if these occurrences negatively impact the overall real estate market and the broader economy. Climate change may increase the frequency and severity of natural disasters such as hurricanes, tornadoes, floods and forest fires and drive other ecologically related changes such as rising sea waters, which in turn could negatively affect regional economies in ways that impact home values or unemployment, and therefore, the credit performance of the mortgages we insure in affected areas. In addition, the inability of a borrower to obtain hazard and/or flood insurance, or the increased cost of such insurance, could lead to an increase in delinquencies or a decrease in home prices in the affected areas. If we were to attempt to limit our new insurance written in affected areas, lenders may choose not to do business with us anywhere. Natural disasters could also lead to increased reinsurance rates or reduced availability of reinsurance. This may cause us to retain more risk than we otherwise would retain and could negatively affect our compliance with financial requirements. In January 2021, the FHFA issued a Request for Input regarding Climate and Natural Disaster Risk Management at the GSEs and the Federal Home Loan Banks. The FHFA has instructed the GSEs to designate climate change as a priority concern and actively consider its effects in their decision making. It is possible that efforts to manage this risk by the FHFA, GSEs (including through GSE guideline or mortgage insurance policy changes) or others could materially impact the volume and characteristics of our NIW (including the terms of our master policy), home prices in certain areas and

defaults by borrowers in certain areas. Further, climate change and natural disasters may impact the value of and cause volatility in our investment portfolio, and we might not achieve our investment objectives. Climate change and the frequency, severity, duration, and geography of severe weather events and other ecological-related changes are inherently uncertain, and we cannot predict the ultimate impact these events may have on our business and financial condition.

Our reported earnings, stockholders' equity and book value per share are subject to fluctuations based on changes in our investments that require us to adjust their fair market value.

We have significant holdings of trading securities, equity securities and short-term investments that we carry at fair value. Because the changes in fair value of these financial instruments are reflected on our statements of operations each period, they affect our reported earnings and can create earnings volatility. In addition, we increase or decrease our stockholders' equity by the amount of change in the unrealized gain or loss (the difference between the fair value and the amortized cost) of our available for sale securities portfolio, net of related tax, under the category of accumulated other comprehensive income (loss). As a result, a decline in the fair value of our available for sale portfolio may result in a decline in reported stockholders' equity, as well as book value per common share. Among other factors, interest rate changes, market volatility and declines in the value of underlying collateral will impact the value of our investments, potentially resulting in unrealized losses that could negatively impact our results of operations and stockholders' equity. These negative impacts will occur even though the securities are not sold. Also, in the event there are credit loss related impairments, the credit loss component and subsequent recoveries, if any, are recognized in earnings.

The discontinuance of LIBOR may adversely affect us.

In 2017, the United Kingdom's Financial Conduct Authority (the "FCA"), which regulates LIBOR, announced that after 2021, it would no longer compel banks to submit rate quotations required to calculate LIBOR. The FCA no longer publishes one-week and two-month U.S. dollar LIBOR rates and plans to cease publishing all other LIBOR tenors (overnight, one-month, three-month, six-month and 12-month) on June 30, 2023. In addition, the U.S. Federal Reserve, in conjunction with the Alternative Reference Rates Committee, a committee consisting of representatives of large U.S. financial institutions, has recommended replacing U.S. dollar LIBOR with a rate based on the Secured Overnight Financing Rate, or SOFR. SOFR is the rate charged on overnight repurchase obligations collateralized by Treasury securities, and is compiled by the New York Federal Reserve Bank. There remains uncertainty as to how the financial services industry will address the discontinuance of LIBOR in financial instruments that are currently indexed to LIBOR. Further, various financial instruments indexed to LIBOR could experience different outcomes based on their contractual terms, ability to amend those terms, market or product type, legal or regulatory jurisdiction, and other factors. SOFR, or any other alternative reference rates that replace LIBOR, may not yield the same or similar economic results over the lives of the financial instruments, which could adversely affect the value of and return on these instruments.

Although our insurance-linked notes transactions and our credit facility provide for a transition from LIBOR upon the occurrence of specified events, the discontinuance of LIBOR may have an adverse effect on the premium rates we are required to pay in connection with certain of our excess-of-loss reinsurance agreements associated with our existing insurance-linked notes transactions as well as the cost of borrowings under our credit facility, which are tied to LIBOR. Further, the discontinuance of LIBOR may negatively impact the value of other assets or liabilities with values tied to LIBOR or to a LIBOR alternative, including floating rate bonds that we hold in our investment portfolio. Furthermore, in addition to potential impacts on our investment portfolio and our cost of debt, the discontinuance of LIBOR may impact other aspects of our business, such as our insurance products, the pricing we charge and the models we use to support our business decisions. It is possible that the discontinuance of LIBOR, including the implementation of alternative benchmark rates to LIBOR, could have an adverse effect on our business, results of operations or financial condition.

Risks Related to Liquidity and Financing

Our sources of liquidity may be insufficient to fund our obligations.

Radian Group serves as the holding company for our operating subsidiaries and does not have any operations of its own. See "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Liquidity Analysis—Holding Company" for more information on our available liquidity and short-term and long-term liquidity demands.

As discussed above under "*—Radian Guaranty may fail to maintain its eligibility status with the GSEs, and the additional capital required to support Radian Guaranty's eligibility could reduce our available liquidity,*" compliance with the PMIERS financial requirements could impact our holding company liquidity if additional capital support for Radian Guaranty is required for it to maintain this compliance. The amount of capital that Radian Group could be required to contribute to Radian Guaranty for this purpose is uncertain, but could be significant.

In addition, Radian Mortgage Capital has entered into the Master Repurchase Agreements to finance its acquisition of residential mortgage loans, and Radian Group has guaranteed the obligations of certain of its subsidiaries under these loan repurchase facilities. As discussed above under "*—We face risks associated with our new mortgage conduit business,*" a decline in the value of collateral pledged under these agreements and our hedging agreements could trigger a margin call and

require Radian Mortgage Capital to pledge additional collateral under these arrangements, which Radian Mortgage Capital may be unable to satisfy without a capital contribution from Radian Group. Any capital contribution could be significant in amount as this business grows.

In addition to available cash and marketable securities, Radian Group's most significant near-term sources of cash to fund future liquidity needs include: (i) payments made to Radian Group by its subsidiaries under expense- and tax-sharing arrangements; (ii) net investment income earned on its cash and marketable securities; and (iii) to the extent available, dividends or other distributions from its subsidiaries. See Note 16 of Notes to Consolidated Financial Statements for additional information on Radian Guaranty's ability to pay dividends.

Radian Group's expense-sharing arrangements with its principal operating subsidiaries require those subsidiaries to pay their allocated share of certain holding-company-level expenses, including interest payments on Radian Group's outstanding senior notes. The expense-sharing arrangements between Radian Group and our mortgage insurance subsidiaries, as amended, have been approved by the Pennsylvania Insurance Department, but such approval may be modified or revoked at any time.

In light of Radian Group's short- and long-term needs, it is possible that our sources of liquidity could be insufficient to fund its obligations. If this were to occur, we may choose not to pursue certain actions, such as issuing dividends or repurchasing shares of our common stock, or we may elect to reduce the levels of these activities to preserve our available liquidity. In addition, we may seek to increase our available liquidity, including by seeking additional capital, incurring additional debt, issuing additional equity, or selling assets, which we may be unable to do on favorable terms, if at all.

Our revolving credit facility and the Parent Guarantees we provide for the Master Repurchase Agreements to finance loan purchases in our mortgage conduit business contain restrictive covenants that could limit our operating flexibility. A default under our credit facility or these Parent Guarantees could trigger an event of default under the terms of our senior notes. We may not have access to funding under our credit facility when we require it.

Radian Group is a party to a \$275 million unsecured revolving credit facility with a syndicate of bank lenders. As of December 31, 2022, no borrowings were outstanding under the credit facility.

The credit facility contains customary representations, warranties, covenants, terms and conditions. Our ability to borrow under the credit facility is conditioned on the satisfaction of certain financial and other restrictive covenants, including covenants related to minimum net worth and statutory capital, a maximum debt-to-capitalization level, repayment or refinancing of a portion of our senior debt maturities prior to their maturity, and limitations on our ability to incur additional indebtedness, make investments, create liens, transfer or dispose of assets and merge with or acquire other companies. The credit facility also requires that Radian Guaranty remain eligible under the PMIERS to insure loans purchased by the GSEs. A failure to comply with these covenants or the other terms of the credit facility could result in an event of default, which could: (i) result in the termination of the commitments by the lenders to make loans to Radian Group under the credit facility and (ii) enable the lenders to declare, subject to the terms and conditions of the credit facility, any outstanding obligations under the credit facility to be immediately due and payable.

Further, the occurrence of an event of default under the terms of our credit facility may trigger an event of default under the terms of our senior notes. An event of default would occur under the terms of our senior notes if a default: (i) in any scheduled payment of principal of other indebtedness by Radian Group or its subsidiaries of more than \$100 million principal amount occurs, after giving effect to any applicable grace period or (ii) in the performance of any term or provision of any indebtedness of Radian Group or its subsidiaries in excess of \$100 million principal amount occurs that results in the acceleration of the date such indebtedness is due and payable, subject to certain limited exceptions. See Note 12 of Notes to Consolidated Financial Statements for more information on the carrying value of our senior notes.

In connection with our new mortgage conduit, Radian Group has entered into the Parent Guarantees that guarantee the obligations of certain of its subsidiaries pursuant to the Master Repurchase Agreements. Under these Parent Guarantees, Radian Group is subject to negative and affirmative covenants customary for this type of financing transaction, including compliance with financial covenants that are generally consistent with the comparable covenants in the Company's revolving credit facility, as discussed above.

If we are unable to satisfy certain covenants or representations or experience an event of default under the credit facility or the Parent Guarantees, we may not have access to funding in a timely manner, or at all, when we require it. If funding is not available when we require it, our ability to continue our business practices and operations, or pursue our current strategy, could be limited. If the indebtedness under the credit facility, the guarantees or our senior notes is accelerated, we may not be able to repay our debt or borrow sufficient funds to refinance it.

Risks Related to Information Technology and Cybersecurity

Our information technology systems may fail or become outmoded, be temporarily interrupted or otherwise cause us to be unable to meet our customers' demands.

Our business is highly dependent on the effective operation of our information technology systems, which are vulnerable to damage or interruption from power outages, computer and telecommunications failures, computer viruses, cyberattacks and security incidents or breaches, catastrophic events and errors in usage. Although we have disaster recovery and business continuity plans in place, we may not be able to adequately execute these plans in a timely fashion.

Additionally, our ability to meet the needs of our customers depends on our ability to keep pace with technological advances and to invest in new technology as it becomes available or to otherwise upgrade our technological capabilities. We rely on e-commerce and other technologies to provide our products and services to our customers, and they generally require that we provide an increasing number of our products and services electronically. Accordingly, we may not satisfy our customers' requirements if we fail to invest sufficient resources or are otherwise unable to maintain and upgrade our technological capabilities. Further, customers may choose to do business only with business partners with which they are technologically compatible and may choose to retain existing relationships with mortgage insurance or mortgage and real estate services providers rather than invest the time and resources to on-board new providers. As a result, technology can represent a potential barrier to signing new customers. We are also dependent on our ongoing relationships with key technology providers, including their products and technologies, and their ability to support those products and technologies. The inability of these providers to successfully provide and support those products could have an adverse impact on our business and results of operations.

Because we rely on our information technology systems for many critical functions, including connecting with our customers, if such systems were to fail, experience a prolonged interruption or become outmoded, we may experience a significant disruption in our operations and in the business we receive, which could have a material adverse effect on our business, financial condition and operating results.

We could incur significant liability or reputational harm if the security of our information technology systems, or of our third-party vendors or service providers, is breached, including as result of a cyberattack, or we otherwise fail to protect confidential information, including personally identifiable information that we maintain.

We rely on information technology systems to process, transmit, store and protect the electronic information, financial data and proprietary models that are critical to our business. Furthermore, a significant portion of the communications between us and our employees, customers, business partners and service providers depends on information technology and electronic information exchange.

Our reliance on information technology has been further accelerated by our transition to a hybrid work environment, which has increased our exposure to the risk of cybersecurity threats and data security incidents.

Our information technology systems may be vulnerable to physical or electronic intrusions. We experience cyber activity directed at our computer systems, software, networks and network users on a daily basis. This malicious activity includes attempts at unauthorized access, implantation of computer viruses or malware and denial-of-service attacks. In addition, on a global scale, other forms of social engineering and insider threats designed to obtain confidential information, destroy data, disrupt or degrade service, sabotage systems or to cause other damage have also grown in volume and level of sophistication. Such attacks may also increase in response to actions taken by the U.S. and other countries in connection with Russia's military invasion of Ukraine. Security incidents have from time to time occurred and may occur in the future. Although to date security incidents have not had a material impact on us, the risks of cyberattacks and information security incidents and breaches continue to increase in businesses such as ours due to, among other things, the proliferation of new technologies and the use of digital channels to conduct our business, including connectivity with customer devices that are beyond our security control systems and the use of portable computers or mobile devices which can be stolen, lost or damaged. We expect attacks to continue accelerating in both frequency and sophistication with increasing use by actors of tools and techniques that could hinder our ability to identify, investigate and recover from incidents.

We also rely on numerous third-party service providers to conduct important aspects of our business operations, and we face similar risks relating to them. While we regularly conduct security assessments on these third-party vendors, we cannot be certain that their information security protocols are sufficient to withstand a cyberattack or other security breach. We also cannot be certain that we will receive timely notification of such cyberattacks or other security breaches. In addition, in order to access our products and services, our clients may use computers and other devices that are beyond our security control systems.

As part of our business, we, and certain subsidiaries, affiliates, and third-party vendors maintain large amounts of confidential information, including personally identifiable information on borrowers, consumers and our employees. As a result, we are subject to numerous laws and regulations designed to protect this information, such as U.S. federal and state laws governing the protection of personally identifiable information. These laws and regulations are increasing in complexity and number. If the security of our information technology or the technology of our third-party vendors is breached, including as a result of a cyberattack, it could result in the loss or misuse of this information, which could, in turn, result in potential regulatory

actions or litigation, including material claims for damages, as well as interruption to our operations and damage to our customer relationships and reputation. While we have information security policies, controls and systems in place in order to attempt to prevent, detect and respond to unauthorized use or disclosure of confidential information, including personally identifiable information, there can be no assurance that such unauthorized use or disclosure will not occur. Any cybersecurity event or other compromise of the security of our information technology systems, or unauthorized use or disclosure of confidential information, could subject us to liability, regulatory scrutiny and action, damage our reputation and negatively affect our ability to attract and maintain customers, and could have a material adverse effect on our business prospects, financial condition and results of operations.

Risks Related to Us and Our Subsidiaries Generally

We may not continue to pay dividends at the same rate we are currently paying them, or at all, and any decrease in or suspension of payment of a dividend could cause our stock price to decline.

The payment of future cash dividends is subject to the determination each quarter by our board of directors that the dividend remains in the best interests of the Company and our stockholders, which determination will be based on a number of factors, including, among others, economic conditions, our earnings, financial condition, actual and forecasted cash flows, capital resources, capital requirements and alternative uses of capital, including potential investments to support our business strategy and possible acquisitions or investments in new businesses. Any decrease in the amount of the dividend, or suspension or discontinuance of payment of a dividend, could cause our stock price to decline.

We are subject to litigation and regulatory proceedings.

We operate in highly regulated industries that are subject to a heightened risk of litigation and regulatory proceedings. From time to time we are a party to material litigation and also are subject to legal and regulatory claims, assertions, actions, reviews, audits, inquiries and investigations. Additional lawsuits, legal and regulatory proceedings and inquiries and other matters may arise in the future. The outcome of existing and future legal and regulatory proceedings and inquiries and other matters could result in adverse judgments, settlements, fines, injunctions, restitutions or other relief which could require significant expenditures or have a material adverse effect on our business prospects, results of operations and financial condition. See "Item 3. Legal Proceedings" and Note 13 of Notes to Consolidated Financial Statements.

We rely on our management team and our business could be harmed if we are unable to retain qualified personnel or successfully develop and/or recruit their replacements.

Our success depends, in part, on the skills, working relationships and continued services of our management team and other key personnel, any of whom could terminate his or her relationship with us at any time. Competition for personnel is intense and has further increased in light of evolving labor and employment trends, including but not limited to the increase in remote, hybrid or other alternative flexible work arrangements. Following the COVID-19 pandemic and the resulting increase in work from home arrangements within many industries, including ours, there is a higher likelihood that highly skilled individuals may seek to change employers in pursuit of greater opportunities or greater benefits. In the current labor and employment environment, it may be more difficult to retain key personnel or to attract new resources who now may have greater optionality among potential employers given the ability to work from home.

The unexpected departure of key personnel could adversely affect the conduct of our business. In such event, we would be required to obtain other personnel to manage and operate our business. In addition, we will be required to replace the knowledge and expertise of our workforce as our workers retire. In either case, there can be no assurance that we will be able to develop or recruit suitable replacements for the departing individuals, that replacements could be hired, if necessary, on terms that are favorable to us, or that we can successfully transition such replacements in a timely manner. Failure to effectively implement our succession planning efforts and to ensure effective transfers of knowledge and smooth transitions involving members of our management team and other key personnel could adversely affect our business and results of operations. Without a properly skilled and experienced workforce, our costs, including costs associated with a loss of productivity and costs to replace employees, may increase, and this could negatively impact our earnings.

Investments to grow our existing businesses, pursue new lines of business or new products and services within existing lines of business subject us to additional risks and uncertainties.

In support of our growth and diversification strategy, we may make investments to grow our existing businesses, pursue new lines of business or new products and services within existing lines of business. We may do this through strategic transactions, including investments and acquisitions, or pursue other transformative actions and initiatives. These activities expose us to additional risks and uncertainties that include, without limitation:

- the use of capital and potential diversion of other resources, such as the diversion of management's attention from our core businesses and potential disruption of those businesses;
- the assumption of liabilities in connection with any strategic transaction, including any acquired business;
- our ability to comply with additional regulatory requirements associated with new products, services, lines of business or other business or strategic initiatives;

- our ability to successfully integrate or develop the operations of any new business initiative or acquisition;
- new or existing business initiatives may be disruptive to, or competitive with, our existing customers;
- we may fail to realize the anticipated benefits of a strategic transaction or initiative, including expected synergies, cost savings or sales or growth opportunities, within the anticipated timeframe or at all;
- new business initiatives may expose us to liquidity risk, risks associated with the use of financial leverage, and market risks, including risk resulting from changes in the fair values of assets in which we invest. Further, new business initiatives may increase our exposure to interest rate risk and may involve changes in our investment, financing and hedging strategies;
- we may fail to achieve forecasted results for a strategic transaction or initiative that could result in lower or negative earnings contribution and/or impairment charges associated with intangible assets acquired; and
- the risk of reputational harm if the strategic transaction or initiative fails to increase our market value.

Risks Related to the COVID-19 Pandemic

The COVID-19 pandemic adversely impacted us and, in the future, our business, results of operations or financial condition could again be impacted by COVID-19 or other epidemics, pandemics or public health developments.

The onset of the COVID-19 pandemic in March 2020 created periods of significant economic uncertainty, high unemployment, and volatility and disruption in financial markets and in the U.S. housing finance system and real estate markets. These impacts, together with the implementation of governmental and GSE programs designed to assist borrowers experiencing hardship as a result of the COVID-19 pandemic, negatively impacted our results of operations and financial condition in the periods immediately following the onset of the pandemic by driving an increase in new mortgage defaults (primarily related to borrowers deciding to take advantage of mortgage forbearance programs that allowed them to suspend mortgage payments), requiring an increase in our mortgage insurance loss reserves and resulting in an increase in the length of time that mortgage defaults, if not cured, have remained in our defaulted loan inventory; disrupting our access to the reinsurance and capital markets; and impacting the performance of our investment portfolio.

The magnitude or duration of any further business and economic impacts of the COVID-19 pandemic or other epidemics, pandemics and public health developments and their long-term effect on our businesses will depend on a number of factors and future developments which are highly uncertain, including: the extent, evolution and duration of any reemergence of the COVID-19 virus or any new epidemics, pandemics or other public health developments; the availability of anti-viral treatments and vaccines; the wider economic effects of any epidemics, pandemics, or other public health developments, including the scope and duration of governmental and other third-party measures restricting day-to-day life and business operations; the impact of economic stimulus efforts to support the economy; and governmental and GSE programs implemented to assist borrowers experiencing hardship as a result of any pandemics, epidemics or other public health developments. Due to the significant uncertainty regarding the future impact of COVID-19 or any other epidemics, pandemics or public health developments, it is not possible to predict their overall impact on our business, business prospects, operating results and financial condition, which could be significant.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

In addition to leases of other properties and facilities to support our business operations, we currently lease approximately 65,000 square feet of office and storage space for our corporate headquarters, located at 550 East Swedesford Road, Suite 350, in Wayne, Pennsylvania. This property is used by both our reportable segments and our corporate functions.

We believe our existing properties are suitable and adequate for their intended use. See Note 13 of Notes to Consolidated Financial Statements for additional information regarding our lease commitments.

Item 3. Legal Proceedings

We are routinely involved in a number of legal actions and proceedings, including reviews, audits, inquiries, information-gathering requests and investigations by various regulatory entities, as well as litigation and other disputes arising in the ordinary course of our business. Legal actions and proceedings could result in adverse judgments, settlements, fines, injunctions, restitutions or other relief that could require significant expenditures or have other effects on our business.

Management believes, based on current knowledge and after consultation with counsel, that the outcome of currently pending or threatened actions will not have a material adverse effect on our consolidated financial condition. The outcome of legal actions and proceedings is inherently uncertain, and it is possible that any one or more matters could have an adverse effect on our liquidity, financial condition or results of operations for any particular period. See Note 13 of Notes to Consolidated Financial Statements for additional information regarding legal proceedings and regulatory matters.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is listed on the New York Stock Exchange (“NYSE”) under the symbol “RDN.” At February 22, 2023, there were 157,192,928 shares of our common stock outstanding and 61 holders of record.

During 2022, we declared and paid a quarterly cash dividend of \$0.20 per share. In February 2023, Radian Group’s board of directors authorized an increase to our quarterly cash dividend from \$0.20 to \$0.225 per share. We presently expect to continue to declare a regular quarterly dividend on our common stock. For information on Radian Group’s ability to pay dividends, see “—Limitations on Payments of Dividends” below and “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Liquidity Analysis—Holding Company—Dividends and Dividend Equivalents.”

Information in Item 12 of this report under the caption “Equity Compensation Plans” is incorporated herein by reference.

Issuance of Unregistered Securities

In the last three years, no equity securities of the Company were sold that were not registered under the Securities Act.

Issuer Purchases of Equity Securities

The following table provides information about purchases of Radian Group common stock by us (and our affiliated purchasers) during the three months ended December 31, 2022.

Share repurchase program

(\$ in thousands, except per-share amounts)	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽²⁾	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs ⁽²⁾
Period				
10/1/2022 to 10/31/2022	49,540	\$ 19.81	49,228	\$ —
11/1/2022 to 11/30/2022	1,927	20.67	—	—
12/1/2022 to 12/31/2022	11,044	18.20	—	—
Total	62,511		49,228	

- (1) Includes 13,283 shares tendered by employees as payment of taxes withheld on the vesting of certain RSUs granted under the Company’s equity compensation plans.
- (2) In February 2022, Radian Group’s board of directors approved a share repurchase program authorizing the Company to spend up to \$400 million, excluding commissions, to repurchase Radian Group common stock in the open market or in privately negotiated transactions, based on market and business conditions, stock price and other factors. During the three months ended December 31, 2022, the Company purchased 49 thousand shares at an average price of \$19.81, including commissions. No purchase authority remains available under this program. In January 2023, Radian Group’s board of directors approved a share repurchase program authorizing the Company to spend up to \$300 million, excluding commissions, to repurchase Radian Group common stock. This share repurchase program expires in January 2025. As of February 22, 2023, the full purchase authority remains available under this program. See Note 14 of Notes to Consolidated Financial Statements for additional information.

Limitations on Payment of Dividends

Radian Group is not subject to any legal or contractual limitations on its ability to pay dividends except as described below. The Company is subject to dividend limitations generally applicable to corporations that are incorporated in Delaware. In addition, pursuant to Radian Group’s revolving credit facility and the Parent Guarantees, Radian Group is permitted to pay dividends so long as no event of default exists and the Company is in pro forma compliance with the applicable financial covenants in the agreements on the date a dividend is declared. See Note 12 of Notes to Consolidated Financial Statements.

Item 6. [Reserved]

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following analysis of our financial condition and results of operations should be read in conjunction with our Consolidated Financial Statements and Notes thereto included in Item 8 of this Annual Report on Form 10-K. Certain terms and acronyms used throughout this report are defined in the Glossary of Abbreviations and Acronyms included as part of this report.

Some of the information in this discussion and analysis or included elsewhere in this report, including information with respect to our projections, plans and strategy for our business, are forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and the timing of events could differ materially from those anticipated by these forward-looking statements as a result of many factors, including those discussed under “Cautionary Note Regarding Forward-Looking Statements—Safe Harbor Provisions” and in the Risk Factors detailed in Item 1A of this Annual Report on Form 10-K.

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Overview

We are a diversified mortgage and real estate business with two reportable business segments—Mortgage and homegenius.

Our Mortgage segment aggregates, manages and distributes U.S. mortgage credit risk for the benefit of mortgage lending institutions and mortgage credit investors, principally through private mortgage insurance on residential first-lien mortgage loans, and also provides contract underwriting and other credit risk management solutions to our customers. Our homegenius segment offers an array of title, real estate and technology products and services to consumers, mortgage lenders, mortgage and real estate investors, GSEs, real estate brokers and agents.

See Note 4 of Notes to Consolidated Financial Statements for additional information about our reportable segments. See “Key Factors Affecting Our Results” below for information about current business conditions and other factors that affect the performance of our Mortgage and homegenius businesses.

Current Operating Environment

As a seller of mortgage credit protection and other mortgage and credit risk management solutions and real estate products and services, our business results are subject to macroeconomic conditions and specific events that impact the housing, housing finance and related real estate markets, the credit performance of our mortgage insurance portfolio and our future business opportunities, as well as seasonal fluctuations that specifically affect the mortgage origination and real estate environments. The performance of our Mortgage business is particularly influenced by housing prices, inflationary pressures, interest rate changes, unemployment levels, mortgage originations and the availability of credit, national and regional economic conditions and other events that impact housing and real estate markets and the ability of borrowers to remain current on their mortgages, most of which are beyond our control.

The U.S. economy is currently experiencing a high rate of inflation, with annual inflation reaching a 40-year high in 2022, as well as slower economic growth, declining home prices and the risks of a recession and of higher unemployment rates.

Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Recent actions taken by the U.S. Federal Reserve to increase interest rates in response to the inflationary trends that started in 2021 resulted in a sharp and significant increase in mortgage interest rates during 2022, with mortgage rates more than doubling to nearly 7% at the end of 2022. The U.S. Federal Reserve raised rates further in the first quarter of 2023 and has signaled that it expects to continue to increase rates in future periods. These economic conditions have negatively impacted the U.S. housing market, broadly reducing refinance activity and new purchase transactions and resulting in decreasing home prices in recent months in many markets. As further discussed below, we expect that the current economic environment will continue to negatively impact certain aspects of our results, including lower NIW, lower homegenius revenues, higher mortgage insurance defaults and lower investment fair values. At the same time, we also expect to benefit from the higher interest rate environment through higher Persistency Rates that will favorably impact our IIF, as well as through the recognition of higher net investment income, as further discussed below.

In light of the current economic and operating environments, throughout 2022 we have taken steps to align our workforce to the current and expected needs of the business. As such, as of February 22, 2023, we had approximately 30% fewer employees than we had at year end 2021. See "Results of Operations—Consolidated—Expenses—*Other Operating Expenses*" for additional information.

The cooling effect of current economic conditions on U.S. housing markets throughout 2022 has resulted in a smaller insurable market compared to 2021, reducing our NIW. We wrote NIW of \$68.0 billion in 2022, a decrease of 26% compared to our NIW in 2021. We expect these conditions to continue to negatively impact our NIW volumes in future periods. Longer-term, however, we continue to believe that the housing market fundamentals and outlook remain favorable, including demographics supporting growth in the population of first-time homebuyers and a constrained supply of homes available for sale. While the recent increases in mortgage interest rates have significantly reduced refinance demand, they have also resulted in a decrease in policy cancellations, which has increased our Persistency Rate, and in turn contributed to growth in our IIF. See "Mortgage Insurance Portfolio" below for additional details on our NIW and IIF.

The same inflationary pressures and higher interest rate environment that are impacting mortgage refinance demand and our NIW are also impacting our homegenius businesses, including a significant decrease in our title revenues beginning in the second quarter of 2022, due to the rapid decline in industry-wide refinance volumes. The current macroeconomic trends, and the corresponding softening in demand for home sales and mortgage refinancings, have also impacted the market demand for our new proprietary real estate technology products and services, which in some cases have been delayed by longer than anticipated launch timelines.

The recent sharp increases in interest rates also materially affected the fair value of our investment portfolio in 2022, resulting in significant unrealized losses on investments. Given our intent and ability as of December 31, 2022, to hold these securities until recovery of their amortized cost basis, we do not expect to realize a loss on any of our investments in an unrealized loss position. The decrease in the fair value of our investments due to higher market interest rates negatively affected our net income and stockholders' equity during 2022. Conversely, this higher interest rate environment resulted in the recognition of higher net investment income in 2022, which is expected to continue in future periods. See Note 6 of Notes to Consolidated Financial Statements for additional information about our investments.

The onset of the COVID-19 pandemic resulted in a significant increase in unemployment, which had a negative impact on the economy. As a result, we experienced a material increase in new defaults in 2020, substantially all of which related to defaults of loans subject to mortgage forbearance programs implemented in response to the COVID-19 pandemic. Beginning in the second quarter of 2020, the increase in the number of new mortgage defaults resulting from the COVID-19 pandemic had a negative effect on our results of operations and our reserve for losses for that year. However, subsequent trends in Cures have been more favorable than original expectations, resulting in favorable loss reserve development on prior period defaults in 2021 and in 2022. See Note 11 of Notes to Consolidated Financial Statements for additional information on our reserve for losses.

As noted above, at the start of the pandemic, we experienced a material increase in new defaults and our primary default rate increased sharply to 6.5% at June 30, 2020. Since then, favorable trends in the number of new defaults and Cures have led to a decline in our default inventory and default rate, resulting in a primary default rate of 2.2% at December 31, 2022. However, deteriorating economic conditions, including declining home prices and the risks of a recession and of higher unemployment rates, have increased the likelihood that we will experience higher levels of new default activity and lower levels of Cures in our mortgage insurance portfolio. The number, timing and duration of new defaults and, in turn, the number of defaults that ultimately result in claims will depend on a variety of factors, including the overall economic environment and on the number and timing of Cures and the net impact on IIF from our Persistency Rate and future NIW. See "Item 1A. Risk Factors" for additional discussion of these factors and other risks and uncertainties.

Despite risks and uncertainties, we believe that the steps we have taken in recent years, including by improving our capital and liquidity positions, enhancing our financial flexibility, implementing greater risk-based granularity into our pricing methodologies and increasing our use of risk distribution strategies to lower the risk profile and financial volatility of our mortgage insurance portfolio, have helped position the Company to better withstand the negative effects from the macroeconomic stresses discussed above, including those resulting from the high rate of inflation and higher interest rates, as well as the other risks described in "Item 1A. Risk Factors."

In particular, we believe that the range of risk distribution transactions and strategies that we utilize have increased our financial strength and flexibility by mitigating credit risk and financial volatility through varying economic cycles. As of December 31, 2022, 70% of our primary RIF is subject to a form of risk distribution and our estimated reinsurance recoverable related to our mortgage insurance portfolio was \$25 million. Our use of risk distribution structures has reduced our required capital and enhanced our projected return on capital, and we expect these structures to provide a level of credit protection in periods of economic stress. See "Mortgage Insurance Portfolio—Risk Distribution" for additional information.

Key Factors Affecting Our Results

The following sections discuss certain key drivers affecting our Mortgage and homegenius businesses, as well as other key factors affecting our results.

Mortgage

IIF and Related Drivers

Our IIF is one of the primary drivers of our future premiums that we expect to earn over time. Although not reflected in the current period financial statements, nor in our reported book value, we expect our IIF to generate substantial earnings in future periods due to the high credit quality of our current mortgage insurance portfolio and our expectations for future Persistency Rates.

The ultimate profitability of our mortgage insurance business is affected by the impact of mortgage prepayment speeds on the mix of business we write. The measure for assessing the impact of policy cancellations on our IIF is our Persistency Rate, defined as the percentage of IIF that remains in force over a period of time. Assuming all other factors remain constant, over the life of the policies, prepayment speeds have an inverse impact on IIF and the expected revenue from our Monthly Premium Policies. Slower loan prepayment speeds, demonstrated by a higher Persistency Rate, result in more IIF remaining in place, providing increased revenue from Monthly Premium Policies over time as premium payments continue. Earlier than anticipated loan prepayments, demonstrated by a lower Persistency Rate, reduce IIF and the revenue from our Monthly Premium Policies. Among other factors, prepayment speeds may be affected by changes in interest rates and other macroeconomic factors. A rising interest rate environment generally will reduce refinancing activity and result in lower prepayments, whereas a declining interest rate environment generally will increase the level of refinancing activity and therefore increase prepayments.

In contrast to Monthly Premium Policies, when Single Premium Policies are cancelled by the insured because the loan has been paid off or otherwise, we accelerate the recognition of any remaining unearned premiums, net of any refunds that may be owed to the borrower. Although these cancellations reduce IIF, assuming all other factors remain constant, the profitability of our Single Premium business increases when Persistency Rates are lower. As a result, we believe that writing a mix of Single Premium Policies and Monthly Premium Policies has the potential to moderate the overall impact on our results if actual prepayment speeds are significantly different from expectations. However, the impact of this moderating effect may be affected by the amount of reinsurance we obtain on portions of our portfolio, with the Single Premium QSR Program currently reducing the proportion of retained Single Premium Policies in our portfolio.

Based on the current composition of our mortgage insurance portfolio, with Monthly Premium Policies comprising a larger proportion of our total portfolio than Single Premium Policies, an increase or decrease in IIF generally has a corresponding positive (increase in IIF) or negative (decrease in IIF) impact on premiums earned. Cancellations of our insurance policies as a result of prepayments and other reductions of IIF, such as Rescissions of coverage and claims paid, generally have a negative effect on premiums earned over time. See "Mortgage Insurance Portfolio—Insurance and Risk in Force" for more information about the levels and characteristics of our IIF.

NIW and Related Drivers

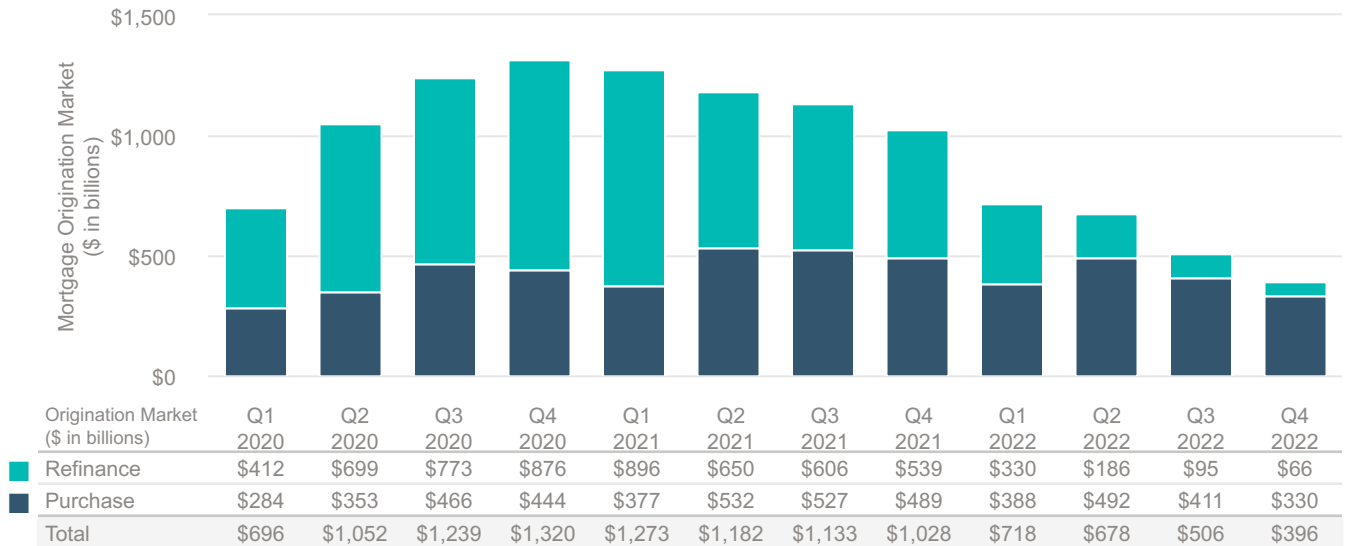
NIW increases our IIF and our premiums written and earned. NIW is affected by the overall size of the mortgage origination market, the penetration percentage of private mortgage insurance into the overall mortgage origination market and our market share of the private mortgage insurance market. The overall mortgage origination market is influenced by macroeconomic factors such as household formation, household composition, home affordability, interest rates, housing markets in general, which are subject to seasonality, credit availability and the impact of various legislative and regulatory actions that may influence the housing and mortgage finance industries. The penetration percentage of private mortgage insurance is mainly influenced by: (i) the competitiveness of private mortgage insurance for GSE conforming loans compared to FHA and VA insured loans and (ii) the relative percentage of mortgage originations that are for purchased homes versus refinances. We believe, for example, that given current pricing levels, which are subject to change, the generally better execution available through the GSEs for borrowers with higher FICO scores, lender preferences and the inability to cancel FHA insurance for certain loans are factors that currently provide a competitive advantage for private mortgage insurers. See "Mortgage Insurance Portfolio—New Insurance Written."

Private mortgage insurance penetration in the insurable market has generally been higher on new mortgages for purchased homes than on the refinance of existing mortgages, because average LTVs are typically higher on home purchases, and therefore, these lower down payment loans are more likely to require mortgage insurance. Radian Guaranty’s share of the private mortgage insurance market is influenced by competition in that market. See “Item 1. Business—Competition.”

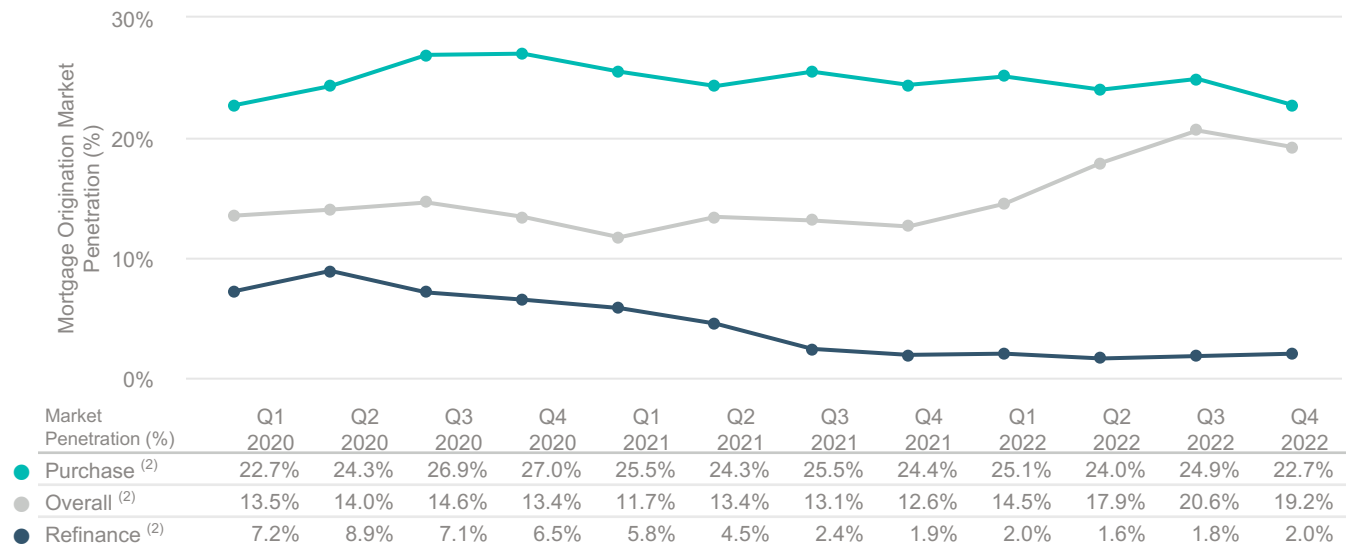
The following charts provide a historical perspective on certain key market drivers, including:

- the mortgage origination volume from home purchases and refinancings; and
- private mortgage insurance penetration as a percentage of the mortgage origination market.

Mortgage origination market ⁽¹⁾



Private mortgage insurance penetration of mortgage origination market ⁽¹⁾



(1) Based on actual dollars generated in the credit enhanced market as reported by HUD and publicly reported industry information. Mortgage originations are based upon the average of originations reported by the Mortgage Bankers Association, Freddie Mac and Fannie Mae in their most recent published industry reports.

(2) Excluding originations under HARP.

Premiums

The premium rates we charge for our insurance are based on a number of borrower, loan and property characteristics. The mortgage insurance industry is highly competitive and private mortgage insurers compete with each other and with the FHA and VA with respect to price and other factors.

Our pricing is risk-based and is intended to generally align with the capital requirements under the PMIERS, while also considering pricing trends within the private mortgage insurance industry among other factors. As a result, our pricing is expected to generate relatively consistent returns across the credit spectrum. In developing our pricing strategies, we monitor various competitive and economic factors while seeking to maximize the long-term economic value of our portfolio by balancing credit risk, lender and geographic concentration risk, profitability and volume considerations, and aim to achieve an overall risk-adjusted rate of return on capital given our modeled performance expectations. Our actual portfolio returns will depend on a number of factors, including economic conditions, the mix of NIW that we are able to write, our pricing, the amount of reinsurance we use and the level of capital required under the PMIERS financial requirements.

Our pricing actions gradually affect our results over time, as existing IIF cancels and is replaced with NIW at current pricing. See "Mortgage Insurance Portfolio—New Insurance Written" and "Liquidity and Capital Resources—Mortgage" below for additional information.

As described above, premiums on our mortgage insurance products are generally paid either on an installment basis, pursuant to Monthly Premium Policies, or in a single payment at the time of loan origination, pursuant to Single Premium Policies. See "Item 1. Business—Mortgage—Pricing—Primary Mortgage Insurance Premiums." Our expected premium yield on our Single Premium Policies is lower than on our Monthly Premium Policies because our premium rates for the life of the policy are generally lower for our Single Premium Policies. However, as discussed above, the ultimate profitability of Single Premium Policies may be higher or lower than expected due to the impact of prepayment speeds. See "—IIF and Related Drivers" above.

Approximately 82% of the loans in our total Primary Mortgage Insurance portfolio at December 31, 2022, are Monthly Premium Policies that provide a level monthly premium for the first 10 years of the policy, followed by a lower level monthly premium thereafter. For loans that have been refinanced under HARP, the initial 10-year period is reset. Generally, a borrower is able to cancel the policy when the LTV reaches 80% of the original value, and the servicer is required to review the policy for automatic cancellation on the date the LTV is scheduled to reach 78% of the original value. As a result, the volume of loans that remain insured after 10 years and would be subject to the premium reset is generally not material in relation to the total loans originated. However, to the extent the volume of loans resetting from year to year varies significantly, the trend in earned premiums may also vary.

Losses

Incurred losses represent the estimated future claim payments on newly defaulted insured loans as well as any change in our claim estimates for existing defaults, including changes in our estimates with respect to the frequency, magnitude and timing of anticipated losses on defaulted loans. Other factors influencing incurred losses include:

- The mix of credit characteristics in our total direct RIF (e.g., loans with higher risk characteristics, or loans with layered risk that combine multiple higher-risk attributes within the same loan, generally result in more delinquencies and claims). See "Mortgage Insurance Portfolio—Insurance and Risk in Force;"
- The average loan size (relatively higher priced properties with larger average loan amounts may result in higher incurred losses);
- The percentage of coverage on insured loans (higher percentages of insurance coverage generally correlate with higher incurred losses) and the presence of structural mitigants such as deductibles or stop losses;
- Changes in housing values (declines in housing values generally make it more difficult for borrowers to sell a home to avoid default or for the property to be sold to mitigate a claim, and also may negatively affect a borrower's willingness to continue to make mortgage payments when the home value is less than the mortgage balance; conversely, increases in housing values tend to reduce the level of defaults as well as make it more likely that foreclosures will result in the loan being satisfied);
- The distribution of claims over the life cycle of a portfolio (historically, claims are relatively low during the first two years after a loan is originated and then increase over a period of several years before declining; however, several factors can impact and change this cycle, including the economic environment, the quality of the underwriting of the loan, characteristics of the mortgage loan, the credit profile of the borrower, housing prices and unemployment rates); and
- Our ability to mitigate potential losses through Rescissions, Claim Denials, cancellations and Claim Curtailments on claims submitted to us. In "Item 1A. Risk Factors," see "*—Our Loss Mitigation Activity could negatively impact our customer relationships.*"

Risk Distribution

We use third-party reinsurance in our mortgage insurance business to manage capital and risk in an effort to optimize the amounts and types of capital and risk distribution deployed against insured risk. See “—IIF and Related Drivers” above. Currently, we distribute risk in our mortgage insurance portfolio through quota share and excess-of-loss reinsurance programs.

When we enter into a quota share reinsurance agreement, the reinsurer receives a premium and, in exchange, agrees to insure an agreed upon portion of incurred losses. These arrangements reduce our earned premiums but also reduce our net RIF, which provides capital relief, including under the PMIERS financial requirements. Our incurred losses are reduced by any incurred losses ceded in accordance with the reinsurance agreement, and we often receive ceding commissions from the reinsurer as part of the transaction, which, in turn, reduce our reported operating expenses and policy acquisition costs.

Our Excess-of-Loss Program primarily accesses the capital markets through the Eagle Re Issuers' issuance of mortgage insurance-linked notes. Our Excess-of-Loss Program reduces our earned premiums, but also reduces our net RIF and PMIERS financial requirements, and potentially our incurred losses, which are allocated in accordance with the structure of the transaction. The Eagle Re Issuers are special purpose VIEs that are not consolidated in our consolidated financial statements because we do not have the unilateral power to direct those activities that are significant to their economic performance.

See Note 8 of Notes to Consolidated Financial Statements for more information about our reinsurance arrangements, including the total assets and liabilities of the Eagle Re Issuers.

Investment Income

Investment income is determined primarily by the investment balances held and the average yield on our overall investment portfolio.

Other Operating Expenses

Our other operating expenses include salaries and other base employee costs, variable and share-based incentive compensation and other general operating expenses, such as fees for professional and consulting services, software, rent and depreciation, among other costs. Employee related expenses are driven by our headcount, which can fluctuate due to the amount of our NIW and IIF, as well as our plans for other business initiatives. Our other operating expenses may also fluctuate due to the impact of performance on our incentive compensation programs, as a result of our pay-for-performance approach to compensation that is based on the level of achievement of both short-term and long-term goals.

These operating expenses are reported net of ceding commissions associated with our QSR Program. As a result, changes to our QSR Program and the amount of our ceded premiums earned also can impact our other operating expenses.

homegenius

Premiums

We earn net premiums on title insurance through Radian Title Insurance. Demand for title insurance may be impacted by general marketplace competition in the real estate title industry, coupled with housing market related conditions such as new home sales, the sizes of the real estate purchase and refinance markets and interest rate fluctuations.

Services Revenue

Our homegenius segment is dependent upon overall activity in the mortgage finance and real estate markets, as well as market receptivity to the products we offer. Due, in part, to the transactional nature of the business, revenues for our homegenius segment are subject to fluctuations from period to period, including seasonal fluctuations that reflect the activities in these markets. Sales volume is also affected by the number of competing companies and alternative products offered in the market. We believe the diversity of services we offer has the potential to produce fee income from the homegenius segment throughout various mortgage finance environments and economic cycles, although market conditions can significantly impact the mix and amount of fee income we generate in any particular period. See “Item 1. Business—homegenius—Overview” for more information on our homegenius services.

The homegenius segment is dependent on a limited number of large customers that represent a significant portion of its revenues. Generally, our contracts do not contain volume commitments and may be terminated by clients at any time. While access to Radian Guaranty's mortgage insurance customer base provides additional opportunities to expand the homegenius segment's existing customers, an unexpected loss of a major customer could significantly impact the level of homegenius revenue.

Our homegenius revenue is primarily generated under fixed-price contracts. Under fixed-price contracts, we agree to perform the specified services and deliverables for a predetermined per-unit price. To the extent our actual direct and allocated indirect costs decrease or increase from the estimates upon which the price was negotiated, we will generate more or less

profit, respectively, or could incur a loss. See Note 2 of Notes to Consolidated Financial Statements for more information on revenue recognition policies for our homegenius segment.

Cost of Services

Our cost of services is primarily affected by our level of services revenue and the number of employees providing products and services for our homegenius businesses. Our cost of services primarily consists of employee compensation and related payroll benefits, and to a lesser extent, other costs of providing services such as travel and related expenses incurred in providing client services, costs paid to outside vendors, data acquisition costs and other compensation-related expenses to maintain software application platforms that directly support our businesses. The level of these costs may fluctuate as market rates of compensation change, or if there is decreased availability or a loss of qualified employees.

Operating Expenses

Our operating expenses primarily consist of salaries and benefits not classified as cost of services because they are related to employees, such as sales and corporate employees, who are not directly involved in providing client services. Operating expenses also include other selling, general and administrative expenses, depreciation and allocations of corporate general and administrative expenses.

See “Item 1. Business—homegenius—Overview” and Note 1 of Notes to Consolidated Financial Statements for additional information regarding the homegenius segment.

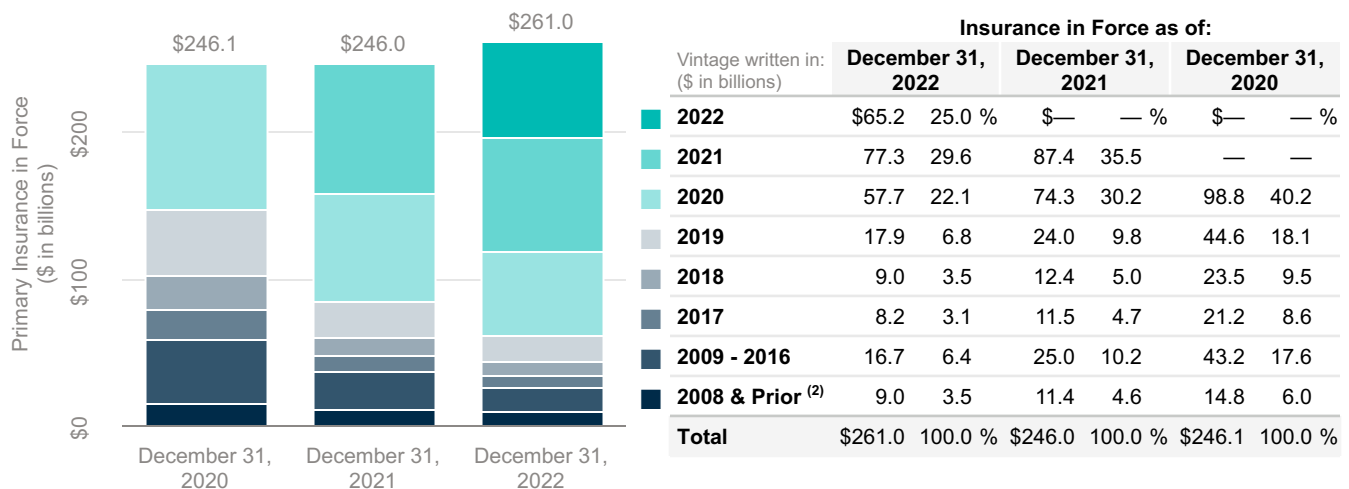
Net Gains (Losses) on Investments and Other Financial Instruments

In addition, net gains (losses) on investments and other financial instruments also may impact our consolidated results in the ordinary course. The recognition of realized investment gains or losses can vary significantly across periods, as the activity is highly discretionary based on the timing of individual securities sales due to such factors as market opportunities, our tax and capital profile and overall market cycles. Unrealized gains and losses arise primarily from changes in the market value of our investments that are classified as trading or equity securities. These valuation adjustments may not necessarily result in realized economic gains or losses.

Mortgage Insurance Portfolio

Insurance in Force

IIF by origination vintage ⁽¹⁾



(1) Policy years represent the original policy years and have not been adjusted to reflect subsequent refinancing activity under HARP.

(2) Includes loans that were subsequently refinanced under HARP.

New Insurance Written

A key component of our current business strategy is to write NIW that we believe will generate future earnings and economic value while effectively maintaining the portfolio's health, balance and profitability. Consistent with this objective, we wrote \$68.0 billion of primary new mortgage insurance in 2022, compared to \$91.8 billion of NIW in 2021.

Our 2022 NIW, offset by policy cancellations and amortization within our existing portfolio, resulted in IIF of \$261.0 billion at December 31, 2022, compared to \$246.0 billion at December 31, 2021, as shown in the chart above. Our NIW decreased by 26% in 2022 as compared to 2021, due primarily to lower refinance originations and a reduction in the size of the overall insurable market, partially offset by an increase in our market share in 2022.

Among other factors, private mortgage insurance industry volumes are impacted by total mortgage origination volumes and the mix between mortgage originations that are for home purchases versus refinancings of existing mortgages. Historically, the penetration rate for private mortgage insurance generally has been three to five times higher for purchase transactions than for refinancings. However, with significant home price appreciation in recent years, penetration on purchase transactions has increased while penetration on refinancings has decreased, and the penetration rate for private mortgage insurance has shifted to 12 to 16 times higher for purchase transactions than for refinancings.

According to industry estimates, total mortgage origination volume was significantly lower in 2022 as compared to 2021 due to a significant decline in refinance activity and a smaller decline in home purchases. Although it is difficult to project future volumes, recent industry projections for 2023 estimate total mortgage originations of approximately \$1.8 trillion, which would represent a decline in the total annual mortgage origination market of approximately 23% as compared to 2022. Factoring in our projections of private mortgage insurance penetration in the overall insurable mortgage market, we estimate that the private mortgage insurance market will be between \$275 billion and \$325 billion in 2023. This outlook anticipates a further decrease in refinance originations in 2023 resulting from increased interest rates. While expectations for refinance volume vary, there is an industry-wide consensus that we should expect a healthy purchase market in 2023 driven by ongoing homebuyer demand, which is a positive for mortgage insurers given the higher likelihood that purchase loans will utilize private mortgage insurance as compared to refinance loans. If refinance volume declines, we would expect the Persistency Rate for our portfolio to increase, benefiting the size of our IIF portfolio. See "Item 1A. Risk Factors" for more information.

Our total mix of Single Premium Policies decreased to 5% of our NIW for 2022, compared to 7% for 2021. Borrower-paid Single Premium Policies were 96% of our total direct Single Premium NIW for both 2022 and 2021. We expect our production level for Single Premium Policies to fluctuate over time based on various factors, which include risk/return considerations and market conditions.

The following table provides selected information as of and for the periods indicated related to our mortgage insurance NIW. For direct Single Premium Policies, NIW includes policies written on an individual basis (as each loan is originated) and on an aggregated basis (in which each individual loan in a group of loans is insured in a single transaction, typically after the loans have been originated).

NIW

(\$ in millions)	Years Ended December 31,		
	2022	2021	2020
NIW	\$ 67,954	\$ 91,830	\$ 105,024
Primary risk written	\$ 17,368	\$ 22,591	\$ 24,540
Average coverage percentage	25.6 %	24.6 %	23.4 %
NIW by loan purpose			
Purchases	96.1 %	80.5 %	64.8 %
Refinances	3.9 %	19.5 %	35.2 %
Total borrower-paid NIW	99.2 %	99.2 %	98.2 %
NIW by premium type			
Direct Monthly and Other Recurring Premiums	95.1 %	92.8 %	87.7 %
Direct single premiums ⁽¹⁾	4.9 %	7.2 %	12.3 %
NIW by FICO score ⁽²⁾			
>=740	59.8 %	58.6 %	66.0 %
680-739	32.4 %	34.2 %	30.8 %
620-679	7.8 %	7.2 %	3.2 %
NIW by LTV			
95.01% and above	16.6 %	12.0 %	9.2 %
90.01% to 95.00%	39.9 %	40.7 %	37.1 %
85.01% to 90.00%	28.4 %	28.3 %	29.4 %
85.00% and below	15.1 %	19.0 %	24.3 %

(1) Borrower-paid Single Premium Policies were 4.7%, 6.9% and 11.1% of NIW for the periods indicated, respectively. See "Item 1. Business—Regulation—Federal Regulation—GSE Requirements for Mortgage Insurance Eligibility" for additional information.

(2) For loans with multiple borrowers, the percentage of NIW by FICO score represents the lowest of the borrowers' FICO scores.

Insurance and Risk in Force

Our IIF is the primary driver of the future premiums that we expect to earn over time.

IIF at December 31, 2022, increased as compared to the same period last year, due to the positive impact from our NIW in 2022 and higher Persistency Rates, as further discussed below. Historically, there has been a close correlation between interest rates and Persistency Rates. Higher interest rate environments generally decrease refinancings, which decrease the cancellation rate of our insurance and positively affect our Persistency Rates. As shown in the table below, our 12-month Persistency Rate at December 31, 2022, increased as compared to the same period in 2021. The increase in our Persistency Rate in 2022 was primarily attributable to the decline in refinance activity due to increases in mortgage interest rates, as compared to the prior year. As of December 31, 2022, 5% of our IIF had a mortgage note interest rate greater than 6.0%. Excluding the 2022 vintage, less than 1% of our IIF had a mortgage note interest rate greater than 6.0%. Given the recent increase in market mortgage interest rates, which, based on reported industry averages, now exceed that level, we would expect a continued positive impact on our Persistency Rates.

As discussed above, our earnings in future periods are subject to elevated risks and uncertainties related to macroeconomic conditions and specific events that impact the housing finance and real estate markets, including housing prices, inflationary pressures, unemployment levels, interest rate changes and the availability of credit. For additional information, in "Item 1A. Risk Factors," see "*—The credit performance of our mortgage insurance portfolio is impacted by macroeconomic conditions and specific events that affect the ability of borrowers to pay their mortgages.*"

While these risks and uncertainties are elevated in the near-term, we continue to believe that the long-term housing market fundamentals and outlook remain positive, including demographics supporting growth in the population of first-time

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homebuyers and a relatively constrained supply of homes available for sale. In addition, historical loan performance data indicates that credit scores and underwriting quality are key drivers of credit performance, and loan originations after 2008 have consisted primarily of high credit quality loans with significantly better credit performance than loans originated during 2008 and prior periods.

The following table illustrates the trends of our cumulative incurred loss ratios by year of origination and development year.

Cumulative incurred loss ratio by vintage ⁽¹⁾

Vintage	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020 ⁽²⁾	Dec 2021 ⁽²⁾	Dec 2022
2013	2.5%	4.0%	3.4%	3.7%	3.5%	3.4%	3.3%	4.2%	4.1%	2.9%
2014		2.7%	4.1%	4.9%	5.0%	5.1%	5.2%	6.9%	6.8%	4.5%
2015			2.1%	4.8%	5.2%	5.0%	4.7%	7.4%	6.8%	3.8%
2016				2.9%	5.0%	4.8%	4.7%	9.7%	8.0%	3.7%
2017					4.7%	5.1%	6.1%	14.3%	11.9%	5.1%
2018						3.0%	6.4%	22.8%	19.0%	7.2%
2019							2.8%	35.6%	23.5%	6.8%
2020								25.6%	14.9%	6.0%
2021									7.9%	10.9%
2022										9.4%

(1) Represents inception-to-date losses incurred as a percentage of net premiums earned.

(2) Losses incurred in 2021 and 2020 across all vintages were elevated due to the impact of the COVID-19 pandemic.

Throughout this report, unless otherwise noted, RIF is presented on a gross basis and includes the amount ceded under reinsurance. RIF and IIF for direct Single Premium Policies include policies written on an individual basis (as each loan is originated) and on an aggregated basis (in which each individual loan in a group of loans is insured in a single transaction, typically after the loans have been originated).

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The following tables provide selected information as of and for the periods indicated related to mortgage insurance IIF and RIF.

IIF and RIF

(\$ in millions)	Years Ended December 31,		
	2022	2021	2020
Primary IIF	\$ 260,994	\$ 245,972	\$ 246,144
Primary RIF	\$ 66,094	\$ 60,913	\$ 60,656
Average coverage percentage	25.3 %	24.8 %	24.6 %
Persistency Rate (12 months ended)	79.6 %	64.3 %	61.2 %
Persistency Rate (quarterly, annualized) ⁽¹⁾	84.1 %	71.7 %	60.4 %
Total borrower-paid RIF	93.3 %	90.6 %	86.3 %
Primary RIF by Premium Type			
Direct Monthly and Other Recurring Premiums	87.1 %	83.9 %	79.1 %
Direct single premiums ⁽²⁾	12.9 %	16.1 %	20.9 %
Primary RIF by FICO score ⁽³⁾			
>=740	57.4 %	56.9 %	57.5 %
680-739	34.6 %	35.0 %	34.6 %
620-679	7.6 %	7.6 %	7.3 %
<=619	0.4 %	0.5 %	0.6 %
Primary RIF by LTV			
95.01% and above	17.1 %	15.1 %	14.4 %
90.01% to 95.00%	48.4 %	48.9 %	49.3 %
85.01% to 90.00%	27.2 %	27.7 %	28.0 %
85.00% and below	7.3 %	8.3 %	8.3 %

(1) The Persistency Rate on a quarterly, annualized basis is calculated based on loan-level detail for the quarter ending as of the date shown. It may be impacted by seasonality or other factors, including the level of refinance activity during the applicable periods and may not be indicative of full-year trends.

(2) Borrower-paid Single Premium Policies were 7.7%, 8.5% and 9.4% of primary RIF for the periods indicated, respectively.

(3) For loans with multiple borrowers, the percentage of primary RIF by FICO score represents the lowest of the borrowers' FICO scores.

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The following table shows our direct Primary Mortgage Insurance RIF by year of origination and selected information related to that risk as of December 31, 2022 and 2021.

Year of origination - RIF

(\$ in millions)	December 31,							
	2022				2021			
	RIF	Number of Defaults	Delinquency Rate	Percentage of Reserve for Losses	RIF	Number of Defaults	Delinquency Rate	Percentage of Reserve for Losses
2008 and prior	\$ 2,277	5,692	9.0 %	29.2 %	\$ 2,865	7,385	9.3 %	24.5 %
2009-2016	4,406	3,342	3.5	16.9	6,588	5,974	4.4	22.2
2017	2,173	1,966	4.4	8.6	2,998	3,399	5.7	12.2
2018	2,319	2,512	5.2	11.7	3,158	4,342	6.8	16.4
2019	4,439	2,279	2.7	9.7	5,892	4,078	3.7	15.0
2020	14,255	2,292	1.1	10.1	17,789	2,938	1.1	8.3
2021	19,528	2,865	1.1	11.3	21,623	945	0.3	1.4
2022	16,697	965	0.5	2.5	—	—	—	—
Total	\$ 66,094	21,913		100.0 %	\$ 60,913	29,061		100.0 %

Geographic Dispersion

The following table shows, as of December 31, 2022 and 2021, the percentage of our direct Primary Mortgage Insurance RIF and the associated percentage of our mortgage insurance reserve for losses (by location of property) for the top 10 states in the U.S. (as measured by our direct Primary Mortgage Insurance RIF as of December 31, 2022).

Top 10 U.S. states - RIF

Top 10 States	December 31,			
	2022		2021	
	RIF	Reserve for Losses	RIF	Reserve for Losses
Texas	9.4 %	8.4 %	8.5 %	9.7 %
California	8.7	9.3	9.3	11.0
Florida	6.3	9.1	6.9	10.8
Illinois	4.7	6.0	4.6	5.3
New York	4.5	10.0	4.4	7.7
Virginia	3.9	2.3	3.8	2.7
New Jersey	3.8	5.3	3.8	5.1
Pennsylvania	3.8	3.3	3.6	2.6
Washington	3.6	1.7	3.5	2.0
Maryland	3.5	3.6	3.3	3.9
Total	52.2 %	59.0 %	51.7 %	60.8 %

The following table shows, as of December 31, 2022 and 2021, the percentage of our direct Primary Mortgage Insurance RIF and the associated percentage of our mortgage insurance reserve for losses (by location of property) for the top 10 Core Based Statistical Areas, referred to as “CBSAs,” in the U.S. (as measured by our direct Primary Mortgage Insurance RIF as of December 31, 2022).

Top 10 Core Based Statistical Areas - RIF

Top 10 CBSAs ⁽¹⁾	December 31,			
	2022		2021	
	RIF	Reserve for Losses	RIF	Reserve for Losses
New York-Newark-Jersey City, NY-NJ-PA	5.5 %	12.2 %	5.4 %	10.0 %
Chicago-Naperville-Elgin, IL-IN-WI	4.3	5.7	4.2	5.2
Washington-Arlington-Alexandria, DC-VA-MD-WV	4.0	3.4	4.0	4.1
Dallas-Fort Worth-Arlington, TX	3.1	2.7	2.9	3.4
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	2.7	2.5	2.6	2.3
Houston-The Woodlands-Sugar Land, TX	2.7	3.0	2.5	3.3
Los Angeles-Long Beach-Anaheim, CA	2.4	2.6	2.6	3.3
Minneapolis-St. Paul-Bloomington, MN-WI	2.3	1.5	2.3	1.3
Seattle-Tacoma-Bellevue, WA	2.1	0.9	2.1	1.3
Miami-Fort Lauderdale-Pompano Beach, FL	2.0	3.3	2.2	4.4
Total	31.1 %	37.8 %	30.8 %	38.6 %

(1) CBSAs are metropolitan areas and may include a portion of adjoining states as noted above.

Risk Distribution

We use third-party reinsurance in our mortgage insurance business as part of our risk distribution strategy, including to manage our capital position and risk profile. When we enter into a reinsurance agreement, the reinsurer receives a premium and, in exchange, insures an agreed upon portion of incurred losses. While these arrangements have the impact of reducing our earned premiums, they also reduce our required capital, potentially mitigate losses, and are expected to increase our return on required capital for the related policies.

The impact of these programs on our financial results will vary depending on the level of ceded RIF, as well as the levels of prepayments and incurred losses on the reinsured portfolios, among other factors. See “Key Factors Affecting Our Results—Mortgage—Risk Distribution” above and Note 8 of Notes to Consolidated Financial Statements for more information about our reinsurance transactions.

The table below provides information about the amounts by which Radian Guaranty’s reinsurance programs reduced its Minimum Required Assets as of the dates indicated.

PMIERS benefit from risk distribution

(\$ in thousands)	December 31,		
	2022	2021	2020
PMIERS impact - reduction in Minimum Required Assets			
Excess-of-Loss Program	\$ 665,617	\$ 995,171	\$ 912,734
Single Premium QSR Program	231,339	314,183	423,712
2022 QSR Agreement	233,532	—	—
2012 QSR Agreements	8,357	12,541	22,712
Total PMIERS impact	\$ 1,138,845	\$ 1,321,895	\$ 1,359,158
Percentage of gross Minimum Required Assets	22.9 %	28.4 %	28.8 %

Results of Operations—Consolidated

Radian Group serves as the holding company for our operating subsidiaries and does not have any operations of its own. Our consolidated operating results for 2022 primarily reflect the financial results and performance of our two business segments—Mortgage and homegenius. See “Results of Operations—Mortgage,” and “Results of Operations—homegenius” for the operating results of these business segments.

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In addition to the results of our operating segments, pretax income (loss) is also affected by other factors. See “Key Factors Affecting Our Results—Net Gains (Losses) on Investments and Other Financial Instruments” above and “—Use of Non-GAAP Financial Measures” below for more information regarding items that are excluded from the operating results of our operating segments.

The following table highlights selected information related to our consolidated results of operations for the years ended December 31, 2022, 2021 and 2020.

Summary results of operations - Consolidated

(\$ in thousands, except per-share amounts)	Years Ended December 31,			Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Revenues					
Net premiums earned	\$ 981,131	\$ 1,037,183	\$ 1,115,321	\$ (56,052)	\$ (78,138)
Services revenue	92,216	125,825	105,385	(33,609)	20,440
Net investment income	195,658	147,909	154,037	47,749	(6,128)
Net gains (losses) on investments and other financial instruments	(80,733)	15,603	60,277	(96,336)	(44,674)
Other income	2,454	3,412	3,597	(958)	(185)
Total revenues	1,190,726	1,329,932	1,438,617	(139,206)	(108,685)
Expenses					
Provision for losses	(338,239)	20,877	485,117	359,116	464,240
Policy acquisition costs	23,918	29,029	30,989	5,111	1,960
Cost of services	82,358	103,714	86,066	21,356	(17,648)
Other operating expenses	381,148	323,686	280,710	(57,462)	(42,976)
Interest expense	84,454	84,344	71,150	(110)	(13,194)
Amortization of other acquired intangible assets	4,308	3,450	5,144	(858)	1,694
Total expenses	237,947	565,100	959,176	327,153	394,076
Pretax income	952,779	764,832	479,441	187,947	285,391
Income tax provision	209,845	164,161	85,815	(45,684)	(78,346)
Net income	\$ 742,934	\$ 600,671	\$ 393,626	\$ 142,263	\$ 207,045
Diluted net income per share	\$ 4.35	\$ 3.16	\$ 2.00	\$ 1.19	\$ 1.16
Return on equity	18.2 %	14.1 %	9.4 %	4.1 %	4.7 %
Non-GAAP Financial Measures ⁽¹⁾					
Adjusted pretax operating income	\$1,052,717	\$ 757,749	\$ 432,067	\$ 294,968	\$ 325,682
Adjusted diluted net operating income per share	\$ 4.87	\$ 3.15	\$ 1.74	\$ 1.72	\$ 1.41
Adjusted net operating return on equity	20.3 %	14.0 %	8.2 %	6.3 %	5.8 %

(1) See “—Use of Non-GAAP Financial Measures” below.

This section of our Annual Report on Form 10-K generally discusses our consolidated results of operations for the years ended December 31, 2022 and 2021, and a year-over-year comparison between 2022 and 2021. Detailed discussions of our consolidated results of operations for the year ended December 31, 2021, including the year-over-year comparisons between 2021 and 2020, that are not included in this Annual Report on Form 10-K can be found in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on February 25, 2022.

Revenues

Net Premiums Earned. The decrease in net premiums earned for 2022 compared to 2021 is primarily driven by a decrease in net premiums earned in both our mortgage insurance and title insurance businesses in 2022. See "Results of Operations—Mortgage—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Revenues—*Net Premiums Earned*" and "Results of Operations—homegenius—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Revenues—*Net Premiums Earned*" for more information.

Services Revenue. Services revenue for 2022 decreased compared to 2021, primarily driven by the general market decline in mortgage origination volume as well as other market and macroeconomic conditions, as further described above in "Overview—Current Operating Environment." See "Results of Operations—Mortgage—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—*Services Revenue*" and "Results of Operations—homegenius—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Revenues—*Services Revenue*" for more information.

Net Investment Income. The increase in net investment income for 2022 compared to 2021 is primarily attributable to higher market interest rates in 2022. See "Overview—Current Operating Environment" and "Results of Operations—Mortgage—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Revenues—*Net Investment Income*" for more information.

Net Gains (Losses) on Investments and Other Financial Instruments. The net losses on investments and other financial instruments for 2022, as compared to net gains in 2021, is primarily due to the impact of higher interest rates in 2022, as well as other market and macroeconomic conditions, as further discussed above in "Overview—Current Operating Environment." See Note 6 of Notes to Consolidated Financial Statements for additional information about net gains (losses) on investments and other financial instruments by investment category.

Expenses

Provision for Losses. The change in provision for losses for 2022 compared to 2021 is primarily driven by favorable development on prior year defaults, which impacted our mortgage insurance reserves. See "Results of Operations—Mortgage—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Expenses—*Provision for Losses*" for more information.

Cost of Services. Cost of services for 2022 decreased as compared to 2021, primarily driven by the decrease in services revenue as discussed above in "Overview—Current Operating Environment." See "Results of Operations—Mortgage—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Expenses—*Cost of Services*" and "Results of Operations—homegenius—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Expenses—*Cost of Services*" for more information.

Other Operating Expenses. The increase in other operating expenses for 2022 compared to 2021 is primarily due to: (i) an increase in salaries and other base employee expenses, including \$14.7 million of severance and related expenses in 2022; (ii) an increase in other general operating expenses; (iii) an increase in impairment of other long-lived assets and other non-operating items including \$14.9 million in 2022, primarily related to our lease agreements; and (iv) a decrease in ceding commissions. These increases in other operating expenses were partially offset by a net decrease in variable and share-based incentive compensation expense. See "Results of Operations—Mortgage—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Expenses—*Other Operating Expenses*" and "Results of Operations—homegenius—Year Ended December 31, 2022, Compared to Year Ended December 31, 2021—Expenses—*Other Operating Expenses*" for more information.

Income Tax Provision

Our 2022 effective tax rate was 22%, higher than the statutory rate of 21% primarily due to the impact of state income taxes and certain permanent book-to-tax adjustments. See Note 10 of Notes to Consolidated Financial Statements for a reconciliation of our provision for income taxes.

Use of Non-GAAP Financial Measures

In addition to the traditional GAAP financial measures, we have presented "adjusted pretax operating income (loss)," "adjusted diluted net operating income (loss) per share" and "adjusted net operating return on equity," which are non-GAAP financial measures for the consolidated company, among our key performance indicators to evaluate our fundamental financial performance. These non-GAAP financial measures align with the way our business performance is evaluated by both management and by our board of directors. These measures have been established in order to increase transparency for the purposes of evaluating our operating trends and enabling more meaningful comparisons with our peers. Although on a consolidated basis, adjusted pretax operating income (loss), adjusted diluted net operating income (loss) per share and adjusted net operating return on equity are non-GAAP financial measures, for the reasons discussed above we believe these measures aid in understanding the underlying performance of our operations.

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Total adjusted pretax operating income (loss), adjusted diluted net operating income (loss) per share and adjusted net operating return on equity are not measures of overall profitability, and therefore should not be considered in isolation or viewed as substitutes for GAAP pretax income (loss), diluted net income (loss) per share or return on equity. Our definitions of adjusted pretax operating income (loss), adjusted diluted net operating income (loss) per share and adjusted net operating return on equity, as discussed and reconciled below to the most comparable respective GAAP measures, may not be comparable to similarly named measures reported by other companies.

Our senior management, including our Chief Executive Officer (Radian's chief operating decision maker), uses adjusted pretax operating income (loss) as our primary measure to evaluate the fundamental financial performance of our business segments and to allocate resources to the segments.

Adjusted pretax operating income (loss) is defined as GAAP consolidated pretax income (loss) excluding the effects of: (i) net gains (losses) on investments and other financial instruments, except for certain investments attributable to our reportable segments and All Other activities; (ii) gains (losses) on extinguishment of debt; (iii) amortization and impairment of goodwill and other acquired intangible assets; and (iv) impairment of other long-lived assets and other non-operating items, such as impairment of internal-use software, gains (losses) from the sale of lines of business and acquisition-related income and expenses.

Although adjusted pretax operating income (loss) excludes certain items that have occurred in the past and are expected to occur in the future, the excluded items represent those that are: (i) not viewed as part of the operating performance of our primary activities or (ii) not expected to result in an economic impact equal to the amount reflected in pretax income (loss). These adjustments, along with the reasons for their treatment, are described in Note 4 of Notes to Consolidated Financial Statements.

The following table provides a reconciliation of consolidated pretax income to our non-GAAP financial measure for the consolidated Company of adjusted pretax operating income.

Reconciliation of consolidated pretax income to adjusted pretax operating income

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Consolidated pretax income	\$ 952,779	\$ 764,832	\$ 479,441
Less income (expense) items:			
Net gains (losses) on investments and other financial instruments ⁽¹⁾	(80,780)	14,094	60,277
Amortization of other acquired intangible assets	(4,308)	(3,450)	(5,144)
Impairment of other long-lived assets and other non-operating items ⁽²⁾	(14,850)	(3,561)	(7,759)
Total adjusted pretax operating income ⁽³⁾	\$ 1,052,717	\$ 757,749	\$ 432,067

(1) For 2022 and 2021, excludes certain net gains (losses) on investments that are attributable to specific operating segments and therefore included in adjusted pretax operating income (loss).

(2) Amounts primarily relate to impairment of other long-lived assets and are included in other operating expenses on the consolidated statements of operations. See Note 9 of Notes to Consolidated Financial Statements.

(3) Total adjusted pretax operating income on a consolidated basis consists of adjusted pretax operating income (loss) for our Mortgage segment, homegenius segment and All Other activities, as further detailed in Note 4 of Notes to Consolidated Financial Statements.

Adjusted diluted net operating income (loss) per share is calculated by dividing (i) adjusted pretax operating income (loss) attributable to common stockholders, net of taxes computed using the Company's statutory tax rate, by (ii) the sum of the weighted average number of common shares outstanding and all dilutive potential common shares outstanding. The following table provides a reconciliation of diluted net income (loss) per share to our non-GAAP financial measure for the consolidated Company of adjusted diluted net operating income (loss) per share.

Reconciliation of diluted net income per share to adjusted diluted net operating income per share

	Years Ended December 31,		
	2022	2021	2020
Diluted net income per share	\$ 4.35	\$ 3.16	\$ 2.00
Less per-share impact of reconciling income (expense) items:			
Net gains (losses) on investments and other financial instruments	(0.47)	0.08	0.31
Amortization of other acquired intangible assets	(0.03)	(0.02)	(0.03)
Impairment of other long-lived assets and other non-operating items	(0.09)	(0.02)	(0.04)
Income tax (provision) benefit on other income (expense) items ⁽¹⁾	0.12	(0.01)	(0.05)
Difference between statutory and effective tax rate	(0.05)	(0.02)	0.07
Per-share impact of other income (expense) items	(0.52)	0.01	0.26
Adjusted diluted net operating income per share ⁽¹⁾	<u>\$ 4.87</u>	<u>\$ 3.15</u>	<u>\$ 1.74</u>

(1) Calculated using the Company's federal statutory tax rate of 21%. Any permanent tax adjustments and state income taxes on these items have been deemed immaterial and are not included.

Adjusted net operating return on equity is calculated by dividing annualized adjusted pretax operating income (loss), net of taxes computed using the Company's statutory tax rate, by average stockholders' equity, based on the average of the beginning and ending balances for each period presented. The following table provides a reconciliation of return on equity to our non-GAAP financial measure for the consolidated Company of adjusted net operating return on equity.

Reconciliation of return on equity to adjusted net operating return on equity

	Years Ended December 31,		
	2022	2021	2020
Return on equity ⁽¹⁾	18.2 %	14.1 %	9.4 %
Less impact of reconciling income (expense) items: ⁽²⁾			
Net gains (losses) on investments and other financial instruments	(2.0)	0.4	1.4
Amortization of other acquired intangible assets	(0.1)	(0.1)	(0.1)
Impairment of other long-lived assets and other non-operating items	(0.4)	(0.1)	(0.2)
Income tax (provision) benefit on reconciling income (expense) items ⁽³⁾	0.5	—	(0.2)
Difference between statutory and effective tax rate	(0.1)	(0.1)	0.3
Impact of reconciling income (expense) items	(2.1)	0.1	1.2
Adjusted net operating return on equity ⁽³⁾	<u>20.3 %</u>	<u>14.0 %</u>	<u>8.2 %</u>

(1) Calculated by dividing net income by average stockholders' equity.

(2) As a percentage of average stockholders' equity.

(3) Calculated using the Company's federal statutory tax rates of 21%. Any permanent tax adjustments and state income taxes on these items have been deemed immaterial and are not included.

Results of Operations—Mortgage

The following table summarizes our Mortgage segment's results of operations for the years ended December 31, 2022, 2021 and 2020.

Summary results of operations - Mortgage

(In thousands)	Years Ended December 31,			Change Favorable (Unfavorable)	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Revenues					
Net premiums written	\$ 959,872	\$ 944,546	\$ 1,010,954	\$ 15,326	\$ (66,408)
(Increase) decrease in unearned premiums	(2,659)	53,736	81,813	(56,395)	(28,077)
Net premiums earned	957,213	998,282	1,092,767	(41,069)	(94,485)
Services revenue	7,390	17,670	14,765	(10,280)	2,905
Net investment income	171,221	132,929	137,195	38,292	(4,266)
Other income	2,376	2,678	2,816	(302)	(138)
Total revenues	1,138,200	1,151,559	1,247,543	(13,359)	(95,984)
Expenses					
Provision for losses	(339,374)	19,437	483,332	358,811	463,895
Policy acquisition costs	23,918	29,029	30,989	5,111	1,960
Cost of services	5,951	13,928	10,043	7,977	(3,885)
Other operating expenses	231,322	223,275	198,735	(8,047)	(24,540)
Interest expense	84,440	84,344	71,150	(96)	(13,194)
Total expenses	6,257	370,013	794,249	363,756	424,236
Adjusted pretax operating income ⁽¹⁾	\$ 1,131,943	\$ 781,546	\$ 453,294	\$ 350,397	\$ 328,252

(1) Our senior management uses adjusted pretax operating income as our primary measure to evaluate the fundamental financial performance of our business segments. See Note 4 of Notes to Consolidated Financial Statements for more information.

Year Ended December 31, 2022, Compared to Year Ended December 31, 2021

Revenues

Net Premiums Earned. Net premiums earned decreased for 2022 compared to 2021, primarily due to: (i) a decrease in the impact, net of reinsurance, from Single Premium Policy cancellations due to lower refinance activity and (ii) a decrease in premiums earned on our Monthly Premium Policies due to lower average premium yields. These items were partially offset by an increase in the profit commission retained by the Company under our reinsurance programs, due to favorable reserve development in 2022.

The table below provides additional information about the components of mortgage insurance net premiums earned for the periods indicated, including the effects of our reinsurance programs.

Net premiums earned

	Years Ended December 31,			Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
(\$ in thousands, except as otherwise indicated)					
Direct					
Premiums earned, excluding revenue from cancellations	\$ 991,556	\$ 988,472	\$ 1,070,335	\$ 3,084	\$ (81,863)
Single Premium Policy cancellations	34,051	116,224	193,349	(82,173)	(77,125)
Direct	1,025,607	1,104,696	1,263,684	(79,089)	(158,988)
Assumed ⁽¹⁾	4,025	7,066	12,214	(3,041)	(5,148)
Ceded					
Premiums earned, excluding revenue from cancellations	(130,556)	(108,692)	(107,451)	(21,864)	(1,241)
Single Premium Policy cancellations ⁽²⁾	(9,677)	(33,388)	(55,483)	23,711	22,095
Profit commission—other ⁽³⁾	67,814	28,600	(20,197)	39,214	48,797
Ceded premiums, net of profit commission	(72,419)	(113,480)	(183,131)	41,061	69,651
Total net premiums earned	\$ 957,213	\$ 998,282	\$ 1,092,767	\$ (41,069)	\$ (94,485)
In force portfolio premium yield (in basis points) ⁽⁴⁾	39.3	40.5	44.5	(1.2)	(4.0)
Direct premium yield (in basis points) ⁽⁵⁾	40.6	45.2	52.4	(4.6)	(7.2)
Net premium yield (in basis points) ⁽⁶⁾	37.8	40.6	44.9	(2.8)	(4.3)
Average primary IIF (in billions) ⁽⁷⁾	\$ 253.5	\$ 246.1	\$ 243.4	\$ 7.4	\$ 2.7

- (1) Includes premiums earned primarily from our participation in certain credit risk transfer programs. In December 2022, we novated this insured risk to an unrelated third-party reinsurer, which assumed all rights, interests, liabilities and obligations related to our participation in these programs on a prospective basis. See Note 16 of Notes to Consolidated Financial Statements for more information about this novation.
- (2) Includes the impact of related profit commissions.
- (3) Represents the profit commission on the Single Premium QSR Program and 2022 QSR Agreement, excluding the impact of Single Premium Policy cancellations.
- (4) Calculated by dividing direct premiums earned, including assumed revenue and excluding revenue from cancellations, by average primary IIF.
- (5) Calculated by dividing direct premiums earned, including assumed revenue, by average primary IIF.
- (6) Calculated by dividing net premiums earned by average primary IIF. The calculation for all periods presented incorporates the impact of profit commission adjustments related to our reinsurance programs. For the year ended December 31, 2020, these profit commission adjustments were significantly impacted by the increased ceded losses in 2020. See Note 8 of Notes to Consolidated Financial Statements for further information.
- (7) The average of beginning and ending balances of primary IIF, for each period presented.

Over the past several years, we have experienced a decline in our in force portfolio premium yield due to a number of factors, including the pricing and credit mix of recent NIW compared to the policies that have been cancelled. Based on current NIW pricing and the impact of higher Persistency Rates we have been experiencing, we currently expect our in force portfolio premium yield in 2023 to be relatively stable; however, due to the potential impacts of Single Premium Policy cancellations and reinsurance, among other things, the net premium yield may continue to fluctuate from period to period.

The level of mortgage prepayments affects the revenue ultimately produced by our mortgage insurance business and is influenced by the mix of business we write. See "Key Factors Affecting Our Results—Mortgage—IIF and Related Drivers" above for more information.

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The following table provides information related to the impact of our reinsurance transactions on premiums earned. See Note 8 of Notes to Consolidated Financial Statements for more information about our reinsurance programs.

Ceded premiums earned

(\$ in thousands)	Years Ended December 31,		
	2022	2021	2020
Excess-of-Loss Program	\$ 76,988	\$ 62,153	\$ 37,053
Single Premium QSR Program	(15,379) ⁽¹⁾	47,226	137,198
2022 QSR Agreement	8,947	—	—
Other	1,863	4,101	8,880
Total ceded premiums earned ⁽²⁾	\$ 72,419	\$ 113,480	\$ 183,131
Percentage of total direct and assumed premiums earned	6.8 %	9.9 %	14.2 %

- (1) Includes the impact of changes in the profit commission retained by the Company due to changes in loss reserves. See “—Expenses—Provision for Losses” below for additional information on the favorable reserve development.
- (2) Does not include the benefit from ceding commissions from the reinsurance agreements in our QSR Program, which is primarily included in other operating expenses on the consolidated statements of operations. See Note 8 of Notes to Consolidated Financial Statements for additional information.

Services Revenue. Services revenue for 2022 decreased as compared to 2021, primarily driven by the termination of a large mortgage fulfillment services contract with a customer as well as a decrease in demand for our contract underwriting services as a result of the general market decline in mortgage origination volume.

Net Investment Income. Increasing yields from higher interest rates were the primary driver of the increases in net investment income for 2022 compared to 2021.

The following table provides information related to our Mortgage subsidiaries' investment balances and investment yields.

Investment balances and yields

(\$ in thousands)	Years Ended December 31,			Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Investment income	\$ 177,478	\$ 139,208	\$ 142,910	\$ 38,270	\$ (3,702)
Investment expenses	(6,257)	(6,279)	(5,715)	22	(564)
Net investment income	\$ 171,221	\$ 132,929	\$ 137,195	\$ 38,292	\$ (4,266)
Average investments ⁽¹⁾	\$ 5,546,198	\$ 5,595,270	\$ 5,148,896	\$ (49,072)	\$ 446,374
Average investment yield ⁽²⁾	3.1 %	2.4 %	2.7 %	0.7 %	(0.3)%

- (1) The average of the beginning and ending amortized cost, for each period presented, of investments held by our Mortgage subsidiaries.
- (2) Calculated by dividing net investment income by average investments balance.

Expenses

Provision for Losses. The following table details the financial impact of the significant components of our provision for losses for the periods indicated.

Provision for losses

(\$ in thousands, except reserve per new default)	Years Ended December 31,			Change Favorable (Unfavorable)	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Current year defaults ⁽¹⁾	\$ 160,049	\$ 160,565	\$ 517,807	\$ 516	\$ 357,242
Prior year defaults ⁽²⁾	(499,423)	(141,128)	(34,475)	358,295	106,653
Provision for losses	\$ (339,374)	\$ 19,437	\$ 483,332	\$ 358,811	\$ 463,895
Loss ratio ⁽³⁾	(35.5)%	1.9 %	44.2 %	37.4 %	42.3 %
Reserve per new default ⁽⁴⁾	\$ 4,241	\$ 4,285	\$ 4,793	\$ 44	\$ 508

- (1) Related to defaulted loans with a most recent default notice dated in the year indicated. For example, if a loan had defaulted in a prior year, but then subsequently cured and later re-defaulted in the current year, that default would be considered a current year default.
- (2) Related to defaulted loans with a default notice dated in a year earlier than the year indicated, which have been continuously in default since that time.
- (3) Provision for losses as a percentage of net premiums earned. See “—Revenues—*Net Premiums Earned*” above for additional information on the changes in net premiums earned.
- (4) Calculated by dividing provision for losses for new defaults, net of reinsurance, by the number of new primary defaults for each period.

Our mortgage insurance provision for losses improved by \$358.8 million during 2022 compared to 2021, resulting in a benefit of \$339.4 million for the year ended December 31, 2022. Current year new primary defaults were relatively flat for 2022, as compared to 2021, as shown below. Our gross Default to Claim Rate assumption for new primary defaults was 8.0% at both December 31, 2022 and 2021, as we continue to closely monitor the trends in Cures and claims paid for our default inventory, while also weighing the risks and uncertainties associated with the current economic environment.

Our provision for losses during 2022 and 2021 was positively impacted by favorable reserve development on prior year defaults, primarily as a result of more favorable trends in Cures than originally estimated due to favorable outcomes resulting from mortgage forbearance programs implemented in response to the COVID-19 pandemic as well as positive trends in home price appreciation. These favorable observed trends resulted in reductions in our Default to Claim Rate assumptions for prior year default notices, particularly for those defaults first reported in 2020 following the start of the COVID-19 pandemic. See Notes 1 and 11 of Notes to Consolidated Financial Statements and “Item 1A. Risk Factors” for additional information.

Our primary default rate at December 31, 2022, was 2.2% compared to 2.9% at December 31, 2021. The following table shows a rollforward of the number of our primary loans in default.

Rollforward of primary loans in default

	Years Ended December 31,		
	2022	2021	2020
Beginning default inventory	29,061	55,537	21,266
New defaults	37,738	37,470	108,025
Cures	(44,136)	(62,970)	(72,404)
Claims paid	(659)	(937)	(1,330)
Rescissions and Claim Denials, net of (Reinstatements) ⁽¹⁾	(91)	(39)	(20)
Ending default inventory	21,913	29,061	55,537

- (1) Net of any previous Rescission and Claim Denials that were reinstated during the period. Such reinstated Rescissions and Claim Denials may ultimately result in a paid claim.

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The following tables show additional information about our primary loans in default as of the dates indicated.

Primary loans in default - additional information

(\$ in thousands)	December 31, 2022					
	Total		Foreclosure Stage Defaulted Loans	Cure % During the 4th Quarter	Reserve for Losses	% of Reserve
	#	%	#	%	\$	%
Missed payments						
Three payments or less	9,584	43.7 %	8	35.5 %	\$ 77,987	19.5 %
Four to eleven payments	6,842	31.2	189	27.4	114,537	28.7
Twelve payments or more	5,158	23.6	750	22.9	190,148	47.7
Pending claims	329	1.5	N/A	23.5	16,202	4.1
Total	21,913	100.0 %	947		398,874	100.0 %
LAE					10,041	
IBNR					2,128	
Total primary reserve ⁽¹⁾					\$ 411,043	

(\$ in thousands)	December 31, 2021					
	Total		Foreclosure Stage Defaulted Loans	Cure % During the 4th Quarter	Reserve for Losses	% of Reserve
	#	%	#	%	\$	%
Missed payments						
Three payments or less	7,267	25.0 %	47	39.4 %	\$ 62,103	7.9 %
Four to eleven payments	8,088	27.8	84	27.6	146,872	18.6
Twelve payments or more	13,389	46.1	784	29.0	565,192	71.5
Pending claims	317	1.1	N/A	10.4	16,213	2.0
Total	29,061	100.0 %	915		790,380	100.0 %
LAE					19,859	
IBNR					2,886	
Total primary reserve ⁽¹⁾					\$ 813,125	

N/A – Not applicable

(1) Excludes pool and other reserves. See Note 11 of Notes to Consolidated Financial Statements for additional information.

We develop our Default to Claim Rate estimates on defaulted loans based on models that use a variety of loan characteristics to determine the likelihood that a default will reach claim status. See Note 11 of Notes to Consolidated Financial Statements for additional details about our Default to Claim Rate assumptions.

Our aggregate weighted-average net Default to Claim Rate assumption for our primary defaulted loans used in estimating our reserve for losses, which is net of estimated Claim Denials and Rescissions, was approximately 30% and 46%, at December 31, 2022 and 2021, respectively. This decrease was primarily due to a shift in the mix of defaults as of December 31, 2022, given the larger proportion of loans with fewer missed payments. See Note 11 of Notes to Consolidated Financial Statements for information regarding our reserve for losses and a reconciliation of our Mortgage segment’s beginning and ending reserves for losses and LAE.

Although expected claims are included in our reserve for losses, the timing of claims paid is subject to fluctuation from quarter to quarter, based on the rate that defaults cure and other factors, including the impact of foreclosure moratoriums (as further described in “Item 1. Business—Mortgage—Defaults and Claims”), which make the timing of paid claims difficult to predict.

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The following table shows net claims paid by product and the average claim paid by product for the periods indicated.

Claims paid

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Net claims paid ⁽¹⁾			
Primary	\$ 16,239	\$ 21,111	\$ 66,186
Pool and other	(1,280)	(258)	(432)
Subtotal	14,959	20,853	65,754
Impact of commutations and settlements ⁽²⁾	5,899	14,464	31,847
Total net claims paid	\$ 20,858	\$ 35,317	\$ 97,601
Total average net primary claim paid ^{(1) (3)}	\$ 44.4	\$ 44.8	\$ 46.7
Average direct primary claim paid ^{(3) (4)}	\$ 44.9	\$ 46.3	\$ 49.4

(1) Net of reinsurance recoveries.

(2) Includes payments to commute mortgage insurance coverage on certain performing and non-performing loans. For the year ended December 31, 2020, primarily includes payments made to settle certain previously disclosed legal proceedings.

(3) Calculated without giving effect to the impact of commutations and settlements.

(4) Before reinsurance recoveries.

Cost of Services. Cost of services for 2022 decreased compared to 2021, primarily due to the decrease in services revenue, as discussed above. Our cost of services is primarily affected by our level of services revenue.

Other Operating Expenses. The increase in other operating expenses for 2022, as compared to 2021, is primarily due to: (i) a decrease in ceding commissions, due primarily to a decline in Single Premium Policy cancellations covered by our Single Premium QSR Program and (ii) an increase in salaries and other base employee expenses primarily driven by \$8.2 million in severance-related expenses in 2022, most notably in the fourth quarter. These items were partially offset by a decrease in performance-based variable and share-based compensation expense in 2022.

The following tables show additional information about Mortgage other operating expenses.

Other operating expenses

(\$ in thousands)	Years Ended December 31,			Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Direct					
Salaries and other base employee expenses	\$ 51,537	\$ 50,076	\$ 56,712	\$ (1,461)	\$ 6,636
Variable and share-based incentive compensation	16,937	19,672	14,652	2,735	(5,020)
Other general operating expenses	40,446	50,752	53,715	10,306	2,963
Ceding commissions	(16,164)	(24,707)	(41,146)	(8,543)	(16,439)
Total direct	92,756	95,793	83,933	3,037	(11,860)
Allocated ⁽¹⁾					
Salaries and other base employee expenses	\$ 46,955	\$ 42,081	\$ 37,396	\$ (4,874)	\$ (4,685)
Variable and share-based incentive compensation	31,889	34,303	23,819	2,414	(10,484)
Other general operating expenses	59,722	51,098	53,587	(8,624)	2,489
Total allocated	138,566	127,482	114,802	(11,084)	(12,680)
Total Mortgage	\$231,322	\$223,275	\$198,735	\$ (8,047)	\$ (24,540)
Expense ratio ⁽²⁾	26.7 %	25.3 %	21.0 %	(1.4)%	(4.3)%

(1) See Note 4 of Notes to Consolidated Financial Statements for more information about our allocation of corporate operating expenses.

- (2) Operating expenses (which include policy acquisition costs and other operating expenses, as well as allocated corporate operating expenses), expressed as a percentage of net premiums earned. See "—Revenues—*Net Premiums Earned*" above for additional information on the changes in net premiums earned.

Results of Operations—homegenius

The following table summarizes our homegenius segment's results of operations for the years ended December 31, 2022, 2021 and 2020. As discussed in "Overview—Current Operating Environment," the macroeconomic stresses beginning in the second quarter of 2022 impacted our homegenius businesses, including in particular a decrease in our title revenues due to the rapid decline in industrywide refinance volumes. We expect this trend to continue to impact the results of our homegenius segment in at least the near-term based on current market conditions and our expectation that overall refinance volumes will remain low.

Summary results of operations - homegenius

(In thousands)	Years Ended December 31,			\$ Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Revenues					
Net premiums earned	\$ 23,918	\$ 38,901	\$ 22,554	\$ (14,983)	\$ 16,347
Services revenue	85,158	108,282	79,524	(23,124)	28,758
Net investment income	729	358	361	371	(3)
Net gains (losses) on investments	—	1,509	—	(1,509)	1,509
Other income	170	—	—	170	—
Total revenues	109,975	149,050	102,439	(39,075)	46,611
Expenses					
Provision for losses	1,135	1,540	1,931	405	391
Cost of services	76,407	89,722	61,461	13,315	(28,261)
Other operating expenses	120,631	85,112	62,287	(35,519)	(22,825)
Total expenses	198,173	176,374	125,679	(21,799)	(50,695)
Adjusted pretax operating income (loss) ⁽¹⁾	\$ (88,198)	\$ (27,324)	\$ (23,240)	\$ (60,874)	\$ (4,084)

- (1) Our senior management uses adjusted pretax operating income (loss) as our primary measure to evaluate the fundamental financial performance of each of our business segments. See Note 4 of Notes to Consolidated Financial Statements.

Year Ended December 31, 2022, Compared to Year Ended December 31, 2021

Revenues

Net Premiums Earned. Net premiums earned for 2022 decreased compared to 2021, primarily due to a decrease in new title policies written in our title insurance business.

Services Revenue. Services revenue for 2022 decreased compared to 2021, primarily due to a decrease in title services revenues resulting from the recent macroeconomic stresses, as described above.

Expenses

Cost of Services. Cost of services for 2022 decreased compared to 2021, primarily due to the decrease in services revenue. Our cost of services is primarily affected by our level of services revenue and the number of employees providing those services.

Other Operating Expenses. The increase in other operating expenses for 2022 as compared to 2021 reflects an increase in salaries and other base employee expenses, driven primarily: (i) through the first half of the year by higher staffing levels and (ii) beginning in the second half of the year, and in light of the current economic and operating environments, by steps taken to align our workforce to the current and expected needs of this business, which resulted in \$6.4 million of

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severance-related expenses in 2022, most notably in the fourth quarter of 2022. In addition, other general operating expenses were also higher in 2022 as compared to 2021 as a result of additional strategic investments in 2022 focused on title and real estate technology businesses.

The following tables show additional information about homegenius other operating expenses.

Other operating expenses

(In thousands)	Years Ended December 31,			Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Direct					
Salaries and other base employee expenses	\$ 45,504	\$ 23,783	\$ 20,893	\$ (21,721)	\$ (2,890)
Variable and share-based incentive compensation	13,727	14,790	7,364	1,063	(7,426)
Other general operating expenses	32,717	21,301	16,043	(11,416)	(5,258)
Title agent commissions	5,827	6,756	5,180	929	(1,576)
Total direct	97,775	66,630	49,480	(31,145)	(17,150)
Allocated ⁽¹⁾					
Salaries and other base employee expenses	\$ 7,864	\$ 6,176	\$ 3,750	\$ (1,688)	\$ (2,426)
Variable and share-based incentive compensation	5,148	4,996	3,125	(152)	(1,871)
Other general operating expenses	9,844	7,310	5,932	(2,534)	(1,378)
Total allocated	22,856	18,482	12,807	(4,374)	(5,675)
Total homegenius	\$ 120,631	\$ 85,112	\$ 62,287	\$ (35,519)	\$ (22,825)

(1) See Note 4 of Notes to Consolidated Financial Statements for more information about our allocation of corporate operating expenses.

Results of Operations—All Other

The following table summarizes our results of operations for our All Other activities for the years ended December 31, 2022, 2021 and 2020.

Summary results of operations - All Other

(In thousands)	Years Ended December 31,			\$ Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Revenues					
Services revenue	\$ —	\$ 154	\$ 12,535	\$ (154)	\$ (12,381)
Net investment income	23,708	14,622	16,481	9,086	(1,859)
Net gains (losses) on investments and other financial instruments	47	—	—	47	—
Other income	78	734	534	(656)	200
Total revenues	23,833	15,510	29,550	8,323	(14,040)
Expenses					
Cost of services	—	64	15,639	64	15,575
Other operating expenses	14,847	11,919	11,898	(2,928)	(21)
Interest expense	14	—	—	(14)	—
Total expenses	14,861	11,983	27,537	(2,878)	15,554
Adjusted pretax operating income ⁽¹⁾	\$ 8,972	\$ 3,527	\$ 2,013	\$ 5,445	\$ 1,514

(1) Our senior management uses adjusted pretax operating income (loss) as our primary measure to evaluate the fundamental financial performance of each of the Company's business segments. See Note 4 of Notes to Consolidated Financial Statements.

Liquidity and Capital Resources

Consolidated Cash Flows

The following table summarizes our consolidated cash flows from operating, investing and financing activities.

Summary cash flows - Consolidated

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Net cash provided by (used in):			
Operating activities	\$ 388,298	\$ 557,112	\$ 658,434
Investing activities	(5,175)	(1,862)	(883,180)
Financing activities	(479,183)	(496,776)	222,618
Increase (decrease) in cash and restricted cash	\$ (96,060)	\$ 58,474	\$ (2,128)

Operating Activities. Our most significant source of operating cash flows is from premiums received from our mortgage insurance policies, while our most significant uses of operating cash flows are typically for our operating expenses, claims paid on our mortgage insurance policies and taxes. The \$169 million decline in cash provided by operating activities for 2022, as compared to the same period in 2021, was principally due to higher purchases of U.S. Mortgage Guaranty Tax and Loss Bonds and higher other operating expenses.

Investing Activities. Net cash used in investing activities increased in 2022, compared to 2021, primarily as a result of a decrease in sales and redemptions, net of purchases, on fixed-maturity investments available for sale, partially offset by: (i) an

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increase in sales and redemptions of trading securities; (ii) an increase in sales and redemptions, net of purchases, of short-term investments; and (iii) a decrease in purchases of equity securities.

Financing Activities. For 2022, our primary financing activities included: (i) repurchases of our common shares; (ii) payment of dividends; and (iii) net changes in secured borrowings. See Notes 12 and 14 of Notes to Consolidated Financial Statements for additional information regarding our borrowings and share repurchases, respectively.

See “Item 8. Financial Statements and Supplementary Data—Consolidated Statements of Cash Flows” for additional information.

Investment Portfolio

At December 31, 2022 and 2021, the following tables include \$112.1 million and \$104.0 million, respectively, of securities loaned to third-party borrowers under securities lending agreements, which are classified as other assets in our consolidated balance sheets. See Note 6 of Notes to Consolidated Financial Statements for more information about our investment portfolio, including our securities lending agreements.

The composition of our investment portfolio, presented as a percentage of overall fair value at December 31, 2022, and December 31, 2021, was as follows.

Investment portfolio diversification

(\$ in millions)	December 31,			
	2022		2021	
	Fair Value	Percent	Fair Value	Percent
Corporate bonds and commercial paper	\$ 2,727.8	47.0 %	\$ 3,261.4	49.3 %
RMBS	935.2	16.1	714.5	10.8
CMBS	598.9	10.3	745.5	11.3
CLO	498.2	8.6	530.0	8.0
Money market instruments and certificates of deposit	242.5	4.1	275.6	4.2
State and municipal obligations ⁽¹⁾	215.7	3.7	284.2	4.3
Equity securities	213.5	3.7	222.2	3.3
Other ABS	161.4	2.8	211.2	3.2
U.S. government and agency securities	145.4	2.5	316.4	4.8
Mortgage insurance-linked notes ⁽²⁾	53.0	0.9	47.0	0.7
Mortgage loans held for sale	3.5	0.1	—	—
Other investments	10.5	0.2	9.5	0.1
Total	\$ 5,805.6	100.0 %	\$ 6,617.5	100.0 %

(1) Primarily consists of taxable state and municipal investments.

(2) Includes mortgage insurance-linked notes purchased by Radian Group in connection with the Excess-of-Loss Program. See Note 8 of Notes to Consolidated Financial Statements for more information.

The following table shows the scheduled maturities of the securities held in our investment portfolio at December 31, 2022, and December 31, 2021.

Investment portfolio scheduled maturity

(\$ in millions)	December 31,			
	2022		2021	
	Fair Value	Percent	Fair Value	Percent
Short-term investments	\$ 402.5	6.9 %	\$ 551.5	8.3 %
Due in one year or less ⁽¹⁾	110.4	1.9	254.3	3.8
Due after one year through five years ⁽¹⁾	1,210.7	20.8	1,176.9	17.8
Due after five years through 10 years ⁽¹⁾	871.5	15.0	1,246.6	18.8
Due after 10 years ⁽¹⁾	741.3	12.8	916.5	13.9
Asset-backed securities and mortgage-related assets ⁽²⁾	2,250.2	38.8	2,245.3	33.9
Equity securities ⁽³⁾	213.5	3.7	222.2	3.4
Other invested assets ⁽³⁾	5.5	0.1	4.2	0.1
Total	\$ 5,805.6	100.0 %	\$ 6,617.5	100.0 %

(1) Actual maturities may differ as a result of calls before scheduled maturity.

(2) Includes RMBS, CMBS, CLO, Other ABS, mortgage insurance-linked notes and mortgage loans, which are not due at a single maturity date.

(3) No stated maturity date.

The following table provides the ratings of our investment portfolio, from a nationally recognized statistical ratings organization, presented as a percentage of overall fair value, as of December 31, 2022, and December 31, 2021.

Investment portfolio by rating

(\$ in millions)	December 31,			
	2022		2021	
	Fair Value	Percent	Fair Value	Percent
U.S. government / AAA	\$ 2,208.5	38.0 %	\$ 2,476.4	37.4 %
AA	885.0	15.2	1,016.0	15.3
A	1,609.5	27.7	1,940.2	29.3
BBB	806.8	13.9	894.6	13.5
BB and below	64.7	1.1	63.9	1.0
Not rated ⁽¹⁾	231.1	4.1	226.4	3.5
Total	\$ 5,805.6	100.0 %	\$ 6,617.5	100.0 %

(1) Primarily consists of equity securities.

Liquidity Analysis—Holding Company

Radian Group serves as the holding company for our operating subsidiaries and does not have any operations of its own. At December 31, 2022, Radian Group had available, either directly or through unregulated subsidiaries, unrestricted cash and liquid investments of \$903 million. Available liquidity at December 31, 2022, excludes certain additional cash and liquid investments that have been advanced to Radian Group from our subsidiaries to pay for corporate expenses and interest payments. Total liquidity, which includes our undrawn \$275 million unsecured revolving credit facility, as described below, was \$1.2 billion as of December 31, 2022.

During 2022, Radian Group's available liquidity increased by \$298 million, due primarily to: (i) the return of capital from Radian Guaranty to Radian Group of \$500 million and \$282 million paid in February 2022 and December 2022, respectively, and (ii) the \$100 million repayment in December 2022 by Radian Guaranty to Radian Group of the Surplus Note due 2027. These increases were partially offset by payments for share repurchases and dividends. See Notes 14 and 16 of Notes to Consolidated Financial Statements for additional information.

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In addition to available cash and marketable securities, Radian Group's principal sources of cash to fund future liquidity needs include: (i) payments made to Radian Group by its subsidiaries under expense- and tax-sharing arrangements; (ii) net investment income earned on its cash and marketable securities; and (iii) to the extent available, dividends or other distributions from its subsidiaries.

Radian Group has in place a \$275 million unsecured revolving credit facility with a syndicate of bank lenders. The revolving credit facility matures in December 2026, although under certain conditions Radian Group may need to offer to repay any outstanding amounts and terminate lender commitments earlier than the maturity date. Subject to certain limitations, borrowings under the credit facility may be used for working capital and general corporate purposes, including, without limitation, capital contributions to our insurance subsidiaries as well as growth initiatives. At December 31, 2022, the full \$275 million remains undrawn and available under the facility. See Note 12 of Notes to Consolidated Financial Statements for additional information on the unsecured revolving credit facility.

In connection with our new mortgage conduit, Radian Mortgage Capital has entered into the Master Repurchase Agreements, each of which is an uncommitted \$300 million mortgage loan repurchase facility to finance the acquisition of residential mortgage loans and related mortgage loan assets. Radian Group has entered into separate Parent Guarantees to guaranty the obligations under the Master Repurchase Agreements. Under these Parent Guarantees, Radian Group is subject to negative and affirmative covenants customary for this type of financing transaction, including compliance with financial covenants that are generally consistent with the comparable covenants in the Company's revolving credit facility. See Note 12 of Notes to Consolidated Financial Statements for additional information. In addition to financing the acquisition of mortgage loan assets under the Master Repurchase Agreements, Radian Mortgage Capital may fund such purchases directly using capital contributed from Radian Group.

We expect Radian Group's principal liquidity demands for the next 12 months to be: (i) the payment of corporate expenses, including taxes; (ii) interest payments on our outstanding debt obligations; (iii) the payment of quarterly dividends on our common stock, which were \$0.20 per share in 2022 and subsequently increased to \$0.225 per share for the first quarterly dividend in 2023, and which remain subject to approval by our board of directors and our ongoing assessment of our financial condition and potential needs related to the execution and implementation of our business plans and strategies; (iv) the potential continued repurchases of shares of our common stock pursuant to share repurchase authorizations, as described below; (v) investments to support our business strategy, including capital contributions to our subsidiaries; and (vi) potential payments pursuant to the Parent Guarantees.

In addition to our ongoing short-term liquidity needs discussed above, our most significant need for liquidity beyond the next 12 months is the repayment of \$1.4 billion aggregate principal amount of our senior debt due in future years. See "*Capitalization—Holding Company*" below for details of our debt maturity profile. Radian Group's liquidity demands for the next 12 months or in future periods could also include: (i) early repurchases or redemptions of portions of our debt obligations and (ii) additional investments to support our business strategy, including additional capital contributions to its subsidiaries. For additional information about related risks and uncertainties, see "Item 1A. Risk Factors," including "*Our sources of liquidity may be insufficient to fund our obligations.*" and "*Radian Guaranty may fail to maintain its eligibility status with the GSEs, and the additional capital required to support Radian Guaranty's eligibility could reduce our available liquidity.*" See also "Overview" above and Note 1 of Notes to Consolidated Financial Statements for further information.

We believe that Radian Group has sufficient current sources of liquidity to fund its obligations. If we otherwise decide to increase our liquidity position, Radian Group may seek additional capital, including by incurring additional debt, issuing additional equity, or selling assets, which we may not be able to do on favorable terms, if at all.

Share Repurchases. During 2022 and 2021, the Company repurchased 19.5 million shares and 17.8 million shares of Radian Group common stock, respectively, under programs authorized by Radian Group's board of directors, at a total cost of \$400 million and \$399 million, respectively, including commissions. No purchase authority remains available under these programs. In January 2023, Radian Group's board of directors approved a new share repurchase program authorizing the Company to spend up to \$300 million, excluding commissions, to repurchase Radian Group common stock through January 2025. See Note 14 of Notes to Consolidated Financial Statements for additional details on our share repurchase programs.

Dividends and Dividend Equivalents. Throughout 2022, our quarterly common stock dividend was \$0.20 per share. On February 15, 2023, Radian Group's board of directors authorized an increase to our quarterly dividend from \$0.20 to \$0.225 per share. Based on our current outstanding shares of common stock and RSUs, we expect to require approximately \$141 million in the aggregate to pay dividends and dividend equivalents for the next 12 months. So long as no default or event of default exists under our revolving credit facility or the Parent Guarantees, Radian Group is not subject to any legal or contractual limitations on its ability to pay dividends except those generally applicable to corporations that are incorporated in Delaware. Delaware corporation law provides that dividends are only payable out of a corporation's capital surplus or (subject to certain limitations) recent net profits. As of December 31, 2022, our capital surplus was \$3.8 billion, representing our dividend limitation under Delaware law. The declaration and payment of future quarterly dividends remains subject to the board of directors' discretion and determination.

Corporate Expenses and Interest Expense. Radian Group has expense-sharing arrangements in place with its principal operating subsidiaries that require those subsidiaries to pay their allocated share of certain holding-company-level expenses, including interest payments on Radian Group's outstanding debt obligations. Corporate expenses and interest

expense on Radian Group's debt obligations allocated under these arrangements during 2022 of \$163 million and \$83 million, respectively, were substantially all reimbursed by its subsidiaries. We expect substantially all of our holding company expenses to continue to be reimbursed by our subsidiaries under our expense-sharing arrangements. The expense-sharing arrangements between Radian Group and its mortgage insurance subsidiaries, as amended, have been approved by the Pennsylvania Insurance Department, but such approval may be modified or revoked at any time.

Taxes. Pursuant to our tax-sharing agreements, our operating subsidiaries pay Radian Group an amount equal to any federal income tax the subsidiary would have paid on a standalone basis if they were not part of our consolidated tax return. As a result, from time to time, under the provisions of our tax-sharing agreements, Radian Group may pay to or receive from its operating subsidiaries amounts that differ from Radian Group's consolidated federal tax payment obligation. During 2022, Radian Group received \$15 million of tax-sharing agreement payments from its operating subsidiaries.

Capitalization—Holding Company

The following table presents our holding company capital structure.

Capital structure

(In thousands, except per-share amounts and ratios)	December 31,	
	2022	2021
Debt		
Senior Notes due 2024	\$ 450,000	\$ 450,000
Senior Notes due 2025	525,000	525,000
Senior Notes due 2027	450,000	450,000
Deferred debt costs on senior notes	(11,496)	(15,527)
Revolving credit facility	—	—
Total	1,413,504	1,409,473
Stockholders' equity	3,919,327	4,258,796
Total capitalization	<u>\$ 5,332,831</u>	<u>\$ 5,668,269</u>
Debt-to-capital ratio	26.5 %	24.9 %
Shares outstanding	157,056	175,421
Book value per share	\$ 24.95	\$ 24.28

Stockholders' equity decreased by \$339 million from December 31, 2021, to December 31, 2022. The net decrease in stockholders' equity resulted primarily from net unrealized losses on investments of \$577 million, primarily as a result of an increase in market interest rates during the year, share repurchases of \$400 million, and dividends of \$137 million, partially offset by our net income of \$743 million. Given our intent and ability as of December 31, 2022, to hold these investments until recovery of their amortized cost basis, we do not expect to realize a loss on any of our investments in an unrealized loss position.

We regularly evaluate opportunities, based on market conditions, to finance our operations by accessing the capital markets or entering into other types of financing arrangements with institutional and other lenders. We also regularly consider various measures to improve our capital and liquidity positions, as well as to strengthen our balance sheet, improve Radian Group's debt maturity profile and maintain adequate liquidity for our operations. Among other things, these measures may include borrowing agreements or arrangements, such as securities or other master repurchase agreements and revolving credit facilities. In the past we have repurchased and exchanged, prior to maturity, some of our outstanding debt, and in the future, we may from time to time seek to redeem, repurchase or exchange for other securities, or otherwise restructure or refinance some or all of our outstanding debt prior to maturity in the open market through other public or private transactions, including pursuant to one or more tender offers or through any combination of the foregoing, as circumstances may allow. The timing or amount of any potential transactions will depend on a number of factors, including market opportunities and our views regarding our capital and liquidity positions and potential future needs. There can be no assurance that any such transactions will be completed on favorable terms, or at all.

Mortgage

Historically, one of the primary demands for liquidity in our Mortgage business is the payment of claims, net of reinsurance, including from commutations and settlements. See Note 11 of Notes to Consolidated Financial Statements for information on our mortgage insurance reserve for losses and LAE, which represents our best estimate for the costs of settling

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future claims on currently defaulted mortgage loans. Other principal demands for liquidity in our Mortgage business include: (i) expenses (including those allocated from Radian Group); (ii) repayments of FHLB advances; and (iii) taxes, including potential additional purchases of U.S. Mortgage Guaranty Tax and Loss Bonds. See Notes 10 and 16 of Notes to Consolidated Financial Statements for additional information related to these non-interest-bearing instruments. In addition to the foregoing liquidity demands, other payments have included and, in the future could include, distributions from Radian Guaranty to Radian Group, including returns of capital or recurring ordinary dividends, as discussed below.

The principal sources of liquidity in our Mortgage business currently include insurance premiums, net investment income and cash flows from: (i) investment sales and maturities; (ii) FHLB advances; and (iii) if necessary, capital contributions from Radian Group. We believe that the operating cash flows generated by each of our mortgage subsidiaries will provide these subsidiaries with the funds necessary to satisfy their needs for the foreseeable future.

As of December 31, 2022, our mortgage insurance subsidiaries maintained claims paying resources of \$5.7 billion on a statutory basis, which consist of contingency reserves, statutory policyholders' surplus, premiums received but not yet earned and loss reserves. In addition, our reinsurance programs are designed to provide additional claims-paying resources during times of economic stress and elevated losses. See Note 8 of Notes to Consolidated Financial Statements for additional information.

Radian Guaranty's Risk-to-capital as of December 31, 2022, was 10.7 to 1. Radian Guaranty is not expected to need additional capital to satisfy state insurance regulatory requirements in their current form. At December 31, 2022, Radian Guaranty had statutory policyholders' surplus of \$758 million. This balance includes a \$596 million benefit from U.S. Mortgage Guaranty Tax and Loss Bonds issued by the U.S. Department of the Treasury, which mortgage guaranty insurers such as Radian Guaranty may purchase in order to be eligible for a tax deduction, subject to certain limitations, related to amounts required to be set aside in statutory contingency reserves. See Note 16 of Notes to Consolidated Financial Statements and "Item 1A. Risk Factors" for more information.

Radian Guaranty currently is an approved mortgage insurer under the PMIERS. Private mortgage insurers, including Radian Guaranty, are required to comply with the PMIERS to remain approved insurers of loans purchased by the GSEs. At December 31, 2022, Radian Guaranty's Available Assets under the PMIERS financial requirements totaled approximately \$5.6 billion, resulting in a PMIERS Cushion of \$1.7 billion, or 45%, over its Minimum Required Assets. Those amounts compare to Available Assets and a PMIERS cushion of \$5.4 billion and \$2.1 billion, respectively, at December 31, 2021.

The primary driver of the decrease in Radian Guaranty's PMIERS Cushion during 2022 is the increase in Minimum Required Assets, partially offset by the increase in Available Assets, reflecting positive cash flows from operating activities. During 2022, Radian Guaranty's Minimum Required Assets increased primarily as a result of an increase in primary RIF.

Our PMIERS Cushion at December 31, 2022, also includes a benefit from the current broad-based application of the Disaster Related Capital Charge that has reduced the total amount of Minimum Required Assets that Radian Guaranty otherwise would have been required to hold against pandemic-related defaults by approximately \$200 million and \$300 million as of December 31, 2022 and 2021, respectively, taking into consideration our risk distribution structures in effect as of those dates. The application of the Disaster Related Capital Charge has reduced Radian Guaranty's PMIERS Minimum Required Assets, but we expect this impact will diminish over time.

See "Item 1. Business—Regulation—Federal Regulation—GSE Requirements for Mortgage Insurance Eligibility" for more information about the Disaster Related Capital Charge.

Despite holding assets above the minimum statutory capital thresholds and PMIERS financial requirements, the ability of Radian's mortgage insurance subsidiaries to pay dividends on their common stock is restricted by certain provisions of the insurance laws of Pennsylvania, their state of domicile. As a result of Radian Guaranty's negative unassigned surplus position in recent years, any distributions to Radian Group required the prior approval of the Pennsylvania Insurance Department. Radian Guaranty sought and received such approval during 2022 to return capital by paying Extraordinary Distributions to Radian Group, including a \$500 million distribution in February 2022 and a \$282 million distribution in December 2022, which were paid in cash and marketable securities in the form of returns of paid-in capital.

Aided by the positive impacts of its merger with Radian Reinsurance in December 2022, Radian Guaranty had positive unassigned surplus of \$258 million as of December 31, 2022. As a result, Radian Guaranty now has the ability to pay ordinary dividends beginning in the first quarter of 2023, subject to the preceding year's statutory net income and other limitations under Pennsylvania's insurance laws. See Note 16 of Notes to Consolidated Financial Statements for additional information on Radian Guaranty's merger with Radian Reinsurance and statutory dividend restrictions.

Radian Guaranty is a member of the FHLB. As a member, it may borrow from the FHLB, subject to certain conditions, which include requirements to post collateral and to maintain a minimum investment in FHLB stock. Advances from the FHLB may be used to provide low-cost, supplemental liquidity for various purposes, including to fund incremental investments. Radian's current strategy includes using FHLB advances as financing for general cash management and liquidity purposes. As of December 31, 2022, there were \$154 million of FHLB advances outstanding. See Note 12 of Notes to Consolidated Financial Statements for additional information.

homegenius

As of December 31, 2022, our homegenius segment maintained cash and liquid investments totaling \$63 million, including \$44 million held by Radian Title Insurance.

Title insurance companies, including Radian Title Insurance, are subject to comprehensive state regulations, including minimum net worth requirements. Radian Title Insurance was in compliance with all of its minimum net worth requirements at December 31, 2022. In the event the cash flows from operations of the homegenius segment are not adequate to fund all of its needs, including the regulatory capital needs of Radian Title Insurance, Radian Group may provide additional funds to the homegenius segment in the form of an intercompany note or other capital contribution, and if needed for Radian Title Insurance, subject to the approval of the Ohio Department of Insurance. Additional capital support may also be required for potential investments in new business initiatives to support our strategy of growing our businesses.

Liquidity levels may fluctuate depending on the levels and contractual timing of our invoicing and the payment practices of our homegenius clients, in combination with the timing of our homegenius segment’s payments for employee compensation and to external vendors. The amount, if any, and timing of the homegenius segment’s dividend paying capacity will depend primarily on the amount of excess cash flow generated by the segment.

Ratings

Radian Group, Radian Guaranty and Radian Title Insurance have been assigned the financial strength ratings set forth in the chart below. We believe that ratings often are considered by others in assessing our credit strength and the financial strength of our primary insurance subsidiaries. The following ratings have been independently assigned by third-party statistical rating organizations, are for informational purposes only and are subject to change. In “Item 1A. Risk Factors,” see *“—The current financial strength ratings assigned to our mortgage insurance subsidiaries could weaken our competitive position and potential downgrades by rating agencies to these ratings and the ratings assigned to Radian Group could adversely affect the Company.”*

Ratings

Subsidiary	Moody’s ⁽¹⁾	S&P ⁽²⁾	Fitch ⁽³⁾	Demotech ⁽⁴⁾
Radian Group	Baa3	BB+	BBB-	N/A
Radian Guaranty	A3	BBB+	A-	N/A
Radian Title Insurance	N/A	N/A	N/A	A

(1) Based on the July 2022 report, Moody’s outlook for Radian Group and Radian Guaranty currently is Stable.

(2) Based on the November 2022 report, S&P’s outlook for Radian Group and Radian Guaranty is currently Stable.

(3) Based on the May 2022 report, Fitch’s outlook for Radian Group and Radian Guaranty is currently Stable.

(4) Based on the December 2022 report.

Critical Accounting Estimates

SEC guidance defines Critical Accounting Estimates as those estimates made in accordance with GAAP that involve a significant level of estimation uncertainty and have had or are reasonably likely to have a material impact on the financial condition or results of operation of the registrant. These items require the application of management’s most difficult, subjective or complex judgments, often because of the need to make estimates about the effect of matters that are inherently uncertain and that may change in subsequent periods. In preparing our consolidated financial statements in accordance with GAAP, management has made estimates, assumptions and judgments that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods.

In preparing these financial statements, management has utilized available information, including our past history, industry standards and the current and projected economic and housing environments, among other factors, in forming its estimates, assumptions and judgments, giving due consideration to materiality. Because the use of estimates is inherent in GAAP, actual results could differ from those estimates. In addition, other companies may utilize different estimates, which may impact comparability of our results of operations to those of companies in similar businesses. A summary of the accounting estimates that management believes are critical to the preparation of our consolidated financial statements is set forth below. See Note 2 of Notes to Consolidated Financial Statements for additional disclosures regarding our significant accounting policies.

Mortgage Insurance Portfolio

Reserve for Losses and LAE

We establish reserves to provide for losses and LAE, which include the estimated costs of settling claims in our mortgage insurance portfolio, in accordance with the accounting standard regarding accounting and reporting by insurance enterprises. In our mortgage insurance business, the default and claim cycle begins with the receipt of a default notice from the loan servicer that a borrower has missed two consecutive monthly mortgage payments. We maintain an extensive database of default and claim payment history, and use models based on a variety of loan characteristics to determine the likelihood that a default will reach claim status.

With respect to loans that are in default, considerable judgment is exercised as to the adequacy of reserve levels. We use an actuarial projection methodology referred to as a "roll rate" analysis that uses historical claim frequency information to determine the projected ultimate Default to Claim Rates based on the Stage of Default and Time in Default as well as the date that a loan goes into default. The Default to Claim Rate also includes our estimates with respect to expected Rescissions and Claim Denials, which have the effect of reducing our Default to Claim Rates. See Note 11 of Notes to Consolidated Financial Statements for the table detailing our Default to Claim Rate assumptions.

After estimating the Default to Claim Rate, we estimate Claim Severity based on recently observed severity rates within product type, type of insurance and Time in Default cohorts, as adjusted to account for anticipated differences in future results compared to recent trends. These severity estimates are then applied to individual loan coverage amounts to determine reserves. Similar to the Default to Claim Rate, Claim Severity also is impacted by the length of time that loans are in default and by our Loss Mitigation Activity. For claims under our Primary Mortgage Insurance, the coverage percentage is applied to the claim amount, which consists of the unpaid loan principal, plus past due interest (for which our liability is contractually capped in accordance with the terms of our Master Policies) and certain expenses associated with the default, to determine our maximum liability. Therefore, Claim Severity generally increases the longer that a loan is in default.

We considered the sensitivity of first-lien loss reserve estimates at December 31, 2022, by assessing the potential changes resulting from a parallel shift in Claim Severity and Default to Claim Rate estimates for primary loans, excluding any potential benefits from reinsurance. For example, assuming all other factors remain constant, for every one percentage point change in primary Claim Severity (which we estimate to be 98% of defaulted risk exposure at December 31, 2022), we estimated that our loss reserves would change by approximately \$4 million at December 31, 2022. Assuming all other factors remain constant, for every one percentage point change in our overall primary net Default to Claim Rate (which we estimate to be 30% at December 31, 2022, including our assumptions related to Loss Mitigation Activities), we estimated a \$13 million change in our loss reserves at December 31, 2022.

Senior management regularly reviews the modeled frequency, Claim Severity and Loss Mitigation Activity estimates, which are based on historical trends, as described above. If recent emerging or projected trends, including related to current and future macroeconomic conditions, differ significantly from the historical trends used to develop the modeled estimates, management evaluates these trends and determines how they should be considered in its reserve estimates.

Estimating our case reserve for losses involves significant reliance upon assumptions and estimates with regard to the likelihood, magnitude and timing of each potential loss. The models, assumptions and estimates we use to establish loss reserves may prove to be inaccurate, especially during an extended economic downturn or a period of market volatility and economic uncertainty. These assumptions require management to use considerable judgment in estimating the rate at which these loans will result in claims and the amount of such claims. As such, there is uncertainty around our reserve estimate.

Premium Revenue Recognition

Premiums on mortgage insurance products are written on a recurring basis, either as monthly or annual premiums, or on a multi-year basis as a single premium. Monthly premiums written are earned as coverage is provided each month. For certain monthly policies where the billing is deferred for the first month's coverage period, currently to the end of the policy, we record a net premium receivable representing the present value of such deferred premiums that we estimate will be collected at that future date. We recognize changes in this receivable based on changes in the estimated amount and timing of such collections, including as a result of changes in observed trends as well as our periodic review of our servicing guide and our operations and collections practices.

Key assumptions supporting our estimate of this receivable include a collection rate and average life. During 2022, we made no changes to these assumptions. During 2021, we adjusted our assumptions for collectability and average life, which had an impact of increasing each of the net premium receivable and net premiums earned by \$2 million. If the collection rate assumption increased or decreased by 500 basis points, it would result in a \$4 million increase or decrease, respectively, in the net premium receivable and net premiums earned. If the average life assumption increased or decreased by one year, it would result in an approximate \$3 million decrease or increase, respectively, in the net premium receivable and net premiums earned.

Single premiums written are initially recorded as unearned premiums and earned over time based on the anticipated loss pattern and the estimated period of risk exposure, which is primarily derived from historical experience and other factors such as projected losses, premium type and projected contractual periods of risk based on original LTV. Our estimate for the single premium earnings pattern is updated periodically and subject to change given uncertainty as to the underlying loss development and duration of risk. There were no changes to our single premium earnings pattern estimate in 2022 or 2021.

Actual future experience that is different than expected loss development or policy cancellations could result in further material increases or decreases in the recognition of net premiums earned. Based on historical experience, losses are relatively low during the first two years after a loan is originated and then increase over a period of several years before declining; however, several factors can impact and change this cycle, including the economic environment, the quality of the underwriting of the loan, characteristics of the mortgage loan, the credit profile of the borrower, housing prices and unemployment rates. If the timing of losses were to shift, it could accelerate or decelerate our recognition of net premiums earned and could have a material impact on our results of operations.

Credit Losses and Other Impairments

Investments

We perform an evaluation of fixed-maturity securities available for sale each quarter to assess whether any decline in their fair value below cost is deemed to be a credit impairment recognized in earnings. Factors considered in our assessment for impairment include the extent to which the amortized cost basis is greater than fair value and the reasons for the decline in value. As of December 31, 2022, our gross unrealized losses on available for sale securities were \$581 million, which can fluctuate materially over time based on changes in market conditions. See Note 6 of Notes to Consolidated Financial Statements for additional information regarding impairments related to investments.

Fair Value of Financial Instruments

Our estimated fair value measurements are intended to reflect the assumptions market participants would use in pricing an asset or liability based on the best information available. Assumptions include the risks inherent in a particular valuation technique (such as a pricing model) and the risks inherent in the inputs to the model. Changes in economic conditions and capital market conditions, including but not limited to, benchmark interest rate changes, credit spread changes, market volatility and changes in the value of underlying collateral, could cause actual results to differ materially from our estimated fair value measurements.

Nearly all of our financial instruments recorded at fair value relate to our investment portfolio which, including securities loaned to third-party borrowers under securities lending agreements, totaled \$5.8 billion as of December 31, 2022. The primary risks in our investment portfolio are interest-rate risk and credit-spread risk, namely the fair value sensitivity of our fixed income securities to changes in interest rates and credit spreads, respectively. We regularly analyze our exposure to interest-rate risk and credit-spread risk and have determined that the fair value of our investments is materially exposed to changes in both interest rates and credit spreads. For additional information regarding the sensitivity of our investment portfolio to these inputs, see "Item 7A. Quantitative and Qualitative Disclosures About Market Risk."

See also Note 5 of Notes to Consolidated Financial Statements for additional information pertaining to financial instruments at fair value and our valuation methodologies.

Income Taxes

We are required to establish a valuation allowance against our deferred tax assets when it is more likely than not that all or some portion of our deferred tax assets will not be realized. At each balance sheet date, we assess our need for a valuation allowance and this assessment is based on all available evidence, both positive and negative, and requires management to exercise judgment and make assumptions regarding whether such deferred tax assets will be realized in future periods. Future realization of our deferred tax assets will ultimately depend on the existence of sufficient taxable income of the appropriate character (ordinary income or capital gains) within the applicable carryback and carryforward periods provided under the tax law. In making our assessment of the more likely than not standard, the weight assigned to the effect of both positive and negative evidence is commensurate with the extent to which such evidence can be objectively verified.

We have determined that certain non-insurance entities within Radian may continue to generate taxable losses on a separate company basis in the near term and may not be able to fully utilize certain state and local NOLs on their state and local tax returns. Therefore, with respect to deferred tax assets relating to these state and local NOLs and other state timing adjustments, we retained a valuation allowance of \$70 million and \$83 million at December 31, 2022 and 2021, respectively.

Estimated factors in this assessment include, but are not limited to, forecasts of future income and actual and planned business and operational changes. An amount up to the total valuation allowance currently recorded could be recognized if our assessment of realizability changes. Our assumptions around these items and the weight assigned to them have remained consistent in recent periods. See Note 10 of Notes to Consolidated Financial Statements for additional information.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk represents the potential for loss due to adverse changes in the value of financial instruments as a result of changes in market conditions. Examples of market risk include changes in interest rates, credit spreads, foreign currency exchange rates and equity prices. We perform sensitivity analyses to determine the effects of market risk exposures on our investment securities by determining the potential loss in future earnings, fair values or cash flows of market-risk-sensitive instruments resulting from one or more selected hypothetical changes in the above-mentioned market risks.

Interest-Rate Risk and Credit-Spread Risk

The primary market risks in our investment portfolio are interest-rate risk and credit-spread risk, namely the fair value sensitivity of our fixed income securities to changes in interest rates and credit spreads, respectively. We regularly analyze our exposure to interest-rate risk and credit-spread risk and have determined that the fair value of our investments is materially exposed to changes in both interest rates and credit spreads. As of December 31, 2022, we held \$116 million of investment securities for trading purposes, representing less than 3% of our total investment portfolio. Accordingly, in presenting this discussion, we have not distinguished between trading and non-trading instruments.

We calculate the duration of our fixed income securities, expressed in years, in order to estimate the interest-rate sensitivity of these securities. The average duration of our total fixed income portfolio was 4.4 years and 4.5 years at December 31, 2022 and 2021, respectively. To assist us in setting duration targets for the investment portfolio, we analyze: (i) the interest-rate sensitivities of our liabilities, including prepayment risk associated with premium cash flows and credit losses; (ii) entity specific cash flows under various economic scenarios; (iii) return, volatility and correlation of specific asset classes and the interconnection with our liabilities; and (iv) our current risk appetite.

Our stress analysis for interest rates is based on the change in fair value of our fixed income securities, assuming a hypothetical instantaneous and parallel 100-basis point increase in the U.S. Treasury yield curve, with all other factors remaining constant. The carrying value of our fixed income securities has a balance of \$5.6 billion and \$6.5 billion as of December 31, 2022 and 2021, respectively. If interest rates experienced an increase of 100 basis points, our fixed income portfolio would decrease by \$236 million and \$282 million of the market value of the related fixed income portfolio for 2022 and 2021, respectively.

Credit spread represents the additional yield on a fixed income security, above the risk-free rate, that is paid by an issuer to compensate investors for assuming the credit risk of the issuer and market liquidity of the fixed income security. We manage credit-spread risk on both an entity and group level, across issuer, maturity, sector and asset class. Our stress analysis for credit-spread risk is based on the change in fair value of our fixed income securities, assuming a hypothetical 100-basis point increase in all credit spreads, with the exception of U.S. Treasury and agency RMBS obligations for which we have assumed no change in credit spreads, and assuming all other factors remain constant. If credit spreads experienced an increase of 100 basis points, our fixed income portfolio would decrease by \$201 million and \$263 million of the market value of the related fixed income portfolio for 2022 and 2021, respectively.

Actual shifts in credit spreads generally vary by issuer and security, based on issuer-specific and security-specific factors such as credit quality, maturity, sector and asset class. Within a given asset class, investment grade securities generally exhibit less credit-spread volatility than securities with lower credit ratings. At December 31, 2022, 95% of our investment portfolio was rated investment grade.

Our sensitivity analyses for interest-rate risk and credit-spread risk provide an indication of our investment portfolio's sensitivity to shifts in interest rates and credit spreads. However, the timing and magnitude of actual market changes may differ from the hypothetical assumptions used in our sensitivity calculations.

See "Item 1. Business—Investment Policy and Portfolio" for a discussion of portfolio strategy and risk exposure.

Securities Lending Agreements. Radian Group and Radian Guaranty from time to time enter into short-term securities lending agreements with third-party borrowers for the purpose of increasing the income on our investment securities portfolio with limited incremental risk. Market factors, including changes in interest rates, credit spreads and equity prices, may impact the timing or magnitude of cash outflows for the return of cash collateral. As of December 31, 2022 and 2021, the carrying value of these securities included in the sensitivity analyses above was \$85 million and \$86 million, respectively.

We also have the right to request the return of the loaned securities at any time. For additional information on our securities lending agreements, see Note 6 of Notes to Consolidated Financial Statements.

Item 8. Financial Statements and Supplementary Data

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Radian Group Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Radian Group Inc. and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of operations, comprehensive income, changes in common stockholders’ equity and cash flows for each of the three years in the period ended December 31, 2022, including the related notes and financial statement schedules listed in the index appearing under Item 15(a)3 (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of First-Lien Primary Case Reserves for Mortgage Insurance Policies

As described in Notes 2 and 11 to the consolidated financial statements, the Company establishes case reserves for losses on mortgage insurance policies for loans that are considered to be in default, as well as reserves for loss adjustment expenses and other reserves. As of December 31, 2022, first-lien primary case reserves were \$398.9 million of the total \$421.0 million of mortgage insurance loss reserves. Management's estimate of the case reserves for losses involves significant reliance upon assumptions and estimates with regard to the likelihood, magnitude and timing of each potential loss. Management uses an actuarial projection methodology referred to as a "roll rate" analysis that uses historical claim frequency information to determine the projected ultimate Default to Claim Rates based on the Stage of Default and Time in Default as well as the date that a loan goes into default. After estimating the Default to Claim Rate, management estimates Claim Severity based on the average of recently observed severity rates within product type, type of insurance, and Time in Default cohorts.

The principal considerations for our determination that performing procedures relating to the valuation of first-lien primary case reserves for mortgage insurance policies is a critical audit matter are (i) the significant judgment by management when developing their estimates of the Default to Claim Rates and Claim Severity, which in turn led to a high degree of auditor subjectivity and judgment in performing procedures relating to such estimates; (ii) the significant audit effort and subjectivity in evaluating the audit evidence related to the Default to Claim Rates and Claim Severity; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's valuation of first-lien primary case reserves for mortgage insurance policies, including controls over the development of the Default to Claim Rates and Claim Severity. These procedures also included, among others, the involvement of professionals with specialized skill and knowledge to assist in developing an independent estimate of the case reserves for first-lien primary mortgage insurance policies using actual historical data, comparing this independent estimate to management's determined case reserves, and evaluating the reasonableness of management's assumptions related to the Default to Claim Rates and Claim Severity. Performing these procedures involved testing the completeness and accuracy of data provided by management and independently developing Default to Claim Rates and Claim Severity assumptions based on data provided by management.

/s/ PricewaterhouseCoopers LLP
Philadelphia, Pennsylvania
February 24, 2023

We have served as the Company's auditor since 2007.

Radian Group Inc. and Subsidiaries Consolidated Balance Sheets

(In thousands, except per-share amounts)	December 31,	
	2022	2021
Assets		
Investments (Notes 5 and 6)		
Fixed-maturities available for sale—at fair value (amortized cost of \$5,587,261 and \$5,367,729)	\$ 5,017,711	\$ 5,517,078
Trading securities—at fair value (amortized cost of \$122,472 and \$234,382)	115,665	256,546
Equity securities—at fair value (cost of \$162,899 and \$176,229)	148,965	184,245
Mortgage loans held for sale—at fair value	3,549	—
Other invested assets—at fair value	5,511	4,165
Short-term investments—at fair value (includes \$99,735 and \$48,652 of reinvested cash collateral held under securities lending agreements)	402,090	551,508
Total investments	5,693,491	6,513,542
Cash	56,183	151,145
Restricted cash	377	1,475
Accrued investment income	40,093	32,812
Accounts and notes receivable	119,834	124,016
Reinsurance recoverable (includes \$18 and \$51 for paid losses)	25,633	67,896
Deferred policy acquisition costs	18,460	16,317
Property and equipment, net (Note 2)	70,981	75,086
Goodwill and other acquired intangible assets, net (Note 7)	15,285	19,593
Prepaid federal income taxes (Note 10)	596,368	354,123
Other assets (Note 9)	427,024	483,180
Total assets	<u>\$ 7,063,729</u>	<u>\$ 7,839,185</u>
Liabilities and stockholders' equity		
Liabilities		
Unearned premiums	\$ 271,479	\$ 329,090
Reserve for losses and LAE (Note 11)	426,843	828,642
Senior notes (Note 12)	1,413,504	1,409,473
Other borrowings (Note 12)	155,822	150,983
Reinsurance funds withheld	152,067	228,078
Net deferred tax liability (Note 10)	391,083	337,509
Other liabilities	333,604	296,614
Total liabilities	3,144,402	3,580,389
Commitments and contingencies (Note 13)		
Stockholders' equity		
Common stock (\$0.001 par value; 485,000 shares authorized; 2022: 176,509 and 157,056 shares issued and outstanding, respectively; 2021: 194,408 and 175,421 shares issued and outstanding, respectively)	176	194
Treasury stock, at cost (2022: 19,453 shares; 2021: 18,987 shares)	(930,643)	(920,798)
Additional paid-in capital	1,519,641	1,878,372
Retained earnings	3,786,952	3,180,935
Accumulated other comprehensive income (loss) (Note 15)	(456,799)	120,093
Total stockholders' equity	3,919,327	4,258,796
Total liabilities and stockholders' equity	<u>\$ 7,063,729</u>	<u>\$ 7,839,185</u>

See Notes to Consolidated Financial Statements.

Radian Group Inc. and Subsidiaries Consolidated Statements of Operations

(In thousands, except per-share amounts)	Years Ended December 31,		
	2022	2021	2020
Revenues			
Net premiums earned (Note 8)	\$ 981,131	\$ 1,037,183	\$ 1,115,321
Services revenue (Note 4)	92,216	125,825	105,385
Net investment income (Note 6)	195,658	147,909	154,037
Net gains (losses) on investments and other financial instruments (includes net realized gains (losses) on investments of \$(8,278), \$20,842 and \$35,826) (Note 6)	(80,733)	15,603	60,277
Other income	2,454	3,412	3,597
Total revenues	1,190,726	1,329,932	1,438,617
Expenses			
Provision for losses	(338,239)	20,877	485,117
Policy acquisition costs	23,918	29,029	30,989
Cost of services	82,358	103,714	86,066
Other operating expenses	381,148	323,686	280,710
Interest expense	84,454	84,344	71,150
Amortization of other acquired intangible assets	4,308	3,450	5,144
Total expenses	237,947	565,100	959,176
Pretax income	952,779	764,832	479,441
Income tax provision (Note 10)	209,845	164,161	85,815
Net income	\$ 742,934	\$ 600,671	\$ 393,626
Net income per share			
Basic	\$ 4.42	\$ 3.19	\$ 2.01
Diluted	\$ 4.35	\$ 3.16	\$ 2.00
Weighted-average number of common shares outstanding—basic	167,930	188,370	195,443
Weighted-average number of common and common equivalent shares outstanding—diluted	170,664	190,263	196,642

See Notes to Consolidated Financial Statements.

Radian Group Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Net income	\$ 742,934	\$ 600,671	\$ 393,626
Other comprehensive income (loss), net of tax (Note 15)			
Unrealized holding gains (losses) on investments arising during the period for which an allowance for expected losses has not been recognized	(584,856)	(138,435)	178,761
Less: Reclassification adjustment for net gains (losses) on investments included in net income			
Net realized gains (losses) on disposals and non-credit related impairment losses	(7,880)	4,472	26,440
Net decrease (increase) in expected credit losses	—	725	(991)
Net unrealized gains (losses) on investments	(576,976)	(143,632)	153,312
Other adjustments to comprehensive income (loss), net	84	—	(75)
Other comprehensive income (loss), net of tax	(576,892)	(143,632)	153,237
Comprehensive income	\$ 166,042	\$ 457,039	\$ 546,863

See Notes to Consolidated Financial Statements.

Radian Group Inc. and Subsidiaries
Consolidated Statements of Changes in Common Stockholders' Equity

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Common stock			
Balance, beginning of period	\$ 194	\$ 210	\$ 219
Issuance of common stock under incentive and benefit plans	2	2	2
Shares repurchased under share repurchase programs (Note 14)	(20)	(18)	(11)
Balance, end of period	176	194	210
Treasury stock			
Balance, beginning of period	(920,798)	(910,115)	(901,657)
Repurchases of common stock under incentive plans	(9,845)	(10,683)	(8,458)
Balance, end of period	(930,643)	(920,798)	(910,115)
Additional paid-in capital			
Balance, beginning of period	1,878,372	2,245,897	2,449,884
Issuance of common stock under incentive and benefit plans	3,386	3,114	3,143
Share-based compensation	38,058	28,443	19,164
Shares repurchased under share repurchase program (Note 14)	(400,175)	(399,082)	(226,294)
Balance, end of period	1,519,641	1,878,372	2,245,897
Retained earnings			
Balance, beginning of period	3,180,935	2,684,636	2,389,789
Net income	742,934	600,671	393,626
Dividends and dividend equivalents declared	(136,917)	(104,372)	(98,779)
Balance, end of period	3,786,952	3,180,935	2,684,636
Accumulated other comprehensive income (loss)			
Balance, beginning of period	120,093	263,725	110,488
Net unrealized gains (losses) on investments, net of tax	(576,976)	(143,632)	153,312
Other adjustments to other comprehensive income (loss)	84	—	(75)
Balance, end of period	(456,799)	120,093	263,725
Total stockholders' equity	\$ 3,919,327	\$ 4,258,796	\$ 4,284,353

See Notes to Consolidated Financial Statements.

Radian Group Inc. and Subsidiaries Consolidated Statements of Cash Flows

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Cash flows from operating activities			
Net income	\$ 742,934	\$ 600,671	\$ 393,626
Adjustments to reconcile net income to net cash provided by (used in) operating activities:			
Net (gains) losses on investments and other financial instruments	80,733	(15,603)	(60,277)
Purchases of mortgage loans held for sale	(3,890)	—	—
Proceeds from repayments of mortgage loans held for sale	393	—	—
Amortization of other acquired intangible assets	4,308	3,450	5,144
Depreciation, other amortization, and other impairments, net	72,267	72,020	66,585
Deferred income tax provision	206,925	161,793	102,079
Change in:			
Accrued investment income	(7,281)	1,235	(1,714)
Accounts and notes receivable	4,210	(2,722)	(29,280)
Reinsurance recoverable	42,263	5,306	(56,226)
Deferred policy acquisition costs	(2,143)	1,988	2,454
Prepaid federal income tax	(242,245)	(143,234)	(76,089)
Other assets	65,744	65,071	114,769
Unearned premiums	(57,611)	(119,701)	(178,031)
Reserve for losses and LAE	(401,799)	(19,771)	443,648
Reinsurance funds withheld	(76,011)	(50,477)	(13,274)
Other liabilities	(40,499)	(2,914)	(54,980)
Net cash provided by (used in) operating activities	388,298	557,112	658,434
Cash flows from investing activities			
Proceeds from sales of:			
Fixed-maturities available for sale	399,371	735,340	963,589
Trading securities	8,868	7,952	11,602
Equity securities	8,004	36,748	90,450
Proceeds from redemptions of:			
Fixed-maturities available for sale	789,929	1,225,626	645,068
Trading securities	102,121	16,668	22,913
Purchases of:			
Fixed-maturities available for sale	(1,414,966)	(1,980,155)	(2,449,762)
Equity securities	(24,637)	(105,649)	(85,014)
Sales, redemptions and (purchases) of:			
Short-term investments, net	150,694	68,083	(82,925)
Other assets and other invested assets, net	(6,887)	6,126	1,434
Proceeds from sale of subsidiary, net of cash sold	—	—	16,481
Additions to property and equipment	(17,672)	(12,601)	(17,016)
Net cash provided by (used in) investing activities	(5,175)	(1,862)	(883,180)

See Notes to Consolidated Financial Statements.

Radian Group Inc. and Subsidiaries
Consolidated Statements of Cash Flows *(continued)*

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Cash flows from financing activities			
Dividends and dividend equivalents paid	(135,437)	(103,298)	(97,458)
Issuance of common stock	1,341	1,382	1,553
Repurchases of common stock	(400,195)	(399,100)	(226,305)
Issuance of senior notes, net	—	—	515,567
Credit facility commitment fees paid	(814)	(3,325)	(2,292)
Change in secured borrowings, net (with terms three months or less)	102,983	13,565	(37,475)
Proceeds from secured borrowings (with terms greater than three months)	28,704	42,000	207,034
Repayments of secured borrowings (with terms greater than three months)	(75,765)	(48,000)	(138,006)
Net cash provided by (used in) financing activities	(479,183)	(496,776)	222,618
Increase (decrease) in cash and restricted cash	(96,060)	58,474	(2,128)
Cash and restricted cash, beginning of period	152,620	94,146	96,274
Cash and restricted cash, end of period	\$ 56,560	\$ 152,620	\$ 94,146
Supplemental disclosures of cash flow information			
Income taxes paid (Note 10)	\$ 243,500	\$ 143,973	\$ 81,404
Interest paid	79,062	78,704	60,564

See Notes to Consolidated Financial Statements.

1. Description of Business

We are a diversified mortgage and real estate business, providing both credit-related mortgage insurance coverage and an array of other mortgage, risk, title, real estate and technology products and services. We have two reportable business segments—Mortgage and homegenius.

Mortgage

Our Mortgage segment provides credit-related insurance coverage, principally through private mortgage insurance on residential first-lien mortgage loans, as well as contract underwriting and other credit risk management solutions, to mortgage lending institutions and mortgage credit investors. We provide our mortgage insurance products and services mainly through our wholly owned subsidiary, Radian Guaranty.

Private mortgage insurance plays an important role in the U.S. housing finance system because it promotes affordable home ownership and helps protect mortgage lenders and mortgage investors, as well as other beneficiaries such as the GSEs, by mitigating default-related losses on residential mortgage loans. Generally, these loans are made to home buyers who make down payments of less than 20% of the purchase price for their home or, in the case of refinancings, have less than 20% equity in their home. Private mortgage insurance also facilitates the sale of these low down payment loans in the secondary mortgage market, almost all of which are currently sold to the GSEs.

Our total direct primary mortgage IIF and RIF were \$261.0 billion and \$66.1 billion, respectively, as of December 31, 2022, compared to \$246.0 billion and \$60.9 billion, respectively, as of December 31, 2021. In addition to providing private mortgage insurance, in the past we have participated in credit risk transfer programs developed by the GSEs as part of their initiative to distribute mortgage credit risk and increase the role of private capital in the mortgage market. In December 2022, we novated the insurance policies for all outstanding RIF resulting from our past participation in these programs to an unrelated third-party reinsurer. See Note 16 for additional information about this novation.

The GSEs and state insurance regulators impose various capital and financial requirements on our mortgage insurance subsidiaries. These include the PMIERS financial requirements, as well as Risk-to-capital and other risk-based capital measures and surplus requirements. Failure to comply with these capital and financial requirements may limit the amount of insurance that our mortgage insurance subsidiaries write or may prohibit them from writing insurance altogether. The GSEs and state insurance regulators possess significant discretion with respect to our mortgage insurance subsidiaries and all aspects of their business. See Note 16 for additional information on PMIERS and other regulatory information.

homegenius

Our homegenius segment is primarily a fee-for-service business that offers an array of products and services to market participants across the real estate value chain. Our homegenius products and services include title, real estate and technology products and services offered primarily to consumers, mortgage lenders, mortgage and real estate investors, GSEs, real estate brokers and agents. These products and services help lenders, investors, consumers and real estate agents evaluate, manage, monitor, acquire and sell properties. They include SaaS solutions and platforms, as well as managed services, such as real estate owned asset management, single-family rental services and real estate valuation services. In addition, we provide title insurance and non-insurance title, closing and settlement services to mortgage lenders, GSEs and mortgage investors, as well as directly to consumers for residential mortgage loans.

See Note 4 for additional information about our reportable segments and All Other business activities.

Risks and Uncertainties

In assessing the Company's current financial condition and developing forecasts of future operations, management has made significant judgments and estimates with respect to potential factors impacting our financial and liquidity position. These judgments and estimates are subject to risks and uncertainties that could affect amounts reported in our financial statements in future periods and that could cause actual results to be materially different from our estimates, including as a result of macroeconomic stresses such as inflation, slower economic growth and higher levels of unemployment.

2. Significant Accounting Policies

Basis of Presentation

Our consolidated financial statements are prepared in accordance with GAAP and include the accounts of Radian Group Inc. and its subsidiaries. All intercompany accounts and transactions, and intercompany profits and losses, have been eliminated. Certain prior period amounts have been reclassified to conform to the current period presentation.

We refer to Radian Group Inc. together with its consolidated subsidiaries as “Radian,” the “Company,” “we,” “us” or “our,” unless the context requires otherwise. We generally refer to Radian Group Inc. alone, without its consolidated subsidiaries, as “Radian Group.” Unless otherwise defined in this report, certain terms and acronyms used throughout this report are defined in the Glossary of Abbreviations and Acronyms included as part of this report.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of our contingent assets and liabilities at the dates of the financial statements, as well as the reported amounts of revenues and expenses during the reporting periods. While the amounts included in our consolidated financial statements include our best estimates and assumptions, actual results may vary materially.

Investments

We group fixed-maturity securities in our investment portfolio into trading or available for sale securities. Trading securities are reported at fair value, with unrealized gains and losses reported as a separate component of income. Investments in fixed-maturity securities classified as available for sale are reported at fair value, with unrealized gains and losses (net of tax) reported as a separate component of stockholders’ equity as accumulated other comprehensive income (loss).

We also invest in several other types of investments including equity securities, which primarily consist of our interests in a variety of broadly diversified exchange traded funds and are recorded at fair value with unrealized gains and losses reported in income. Mortgage loans held for sale consist of residential mortgage loans, which we purchase with the intention of reselling and have elected to measure at fair value with unrealized gains and losses reported in income. Short-term investments are also carried at fair value and consist of money market instruments, certificates of deposit and highly liquid, interest-bearing instruments with an original maturity of 12 months or less at the time of purchase.

Amortization of premium and accretion of discount are calculated principally using the interest method over the term of the investment. Realized gains and losses on investments are recognized using the specific identification method. See Notes 5 and 6 for further discussion on investments.

We recognize an impairment as a loss for fixed-maturities available for sale on the consolidated statements of operations if: (i) we intend to sell the impaired security; (ii) it is more likely than not that we will be required to sell the impaired security prior to recovery of its amortized cost basis; or (iii) the present value of cash flows we expect to collect is less than the amortized cost basis of a security. In those instances, we record an impairment loss through earnings that varies depending on specific circumstances. If a sale is likely, the full amount of the impairment is recognized as a loss in the consolidated statements of operations. Otherwise, unrealized losses on securities are separated into: (i) the portion of loss that represents the credit loss and (ii) the portion that is due to other factors. In evaluating whether a decline in value for other securities relates to an existing credit loss, we consider several factors, including, but not limited to, the following:

- the extent to which the amortized cost basis is greater than fair value;
- reasons for the decline in value (e.g., adverse conditions related to industry or geographic area, changes in financial condition to the issuers or underlying loan obligors);
- any changes to the rating of the security by a rating agency;
- the failure of the issuer to make a scheduled payment;
- the financial position, access to capital and near-term prospects of the issuer, including the current and future impact of any specific events; and
- our best estimate of the present value of cash flows expected to be collected.

If a credit loss is determined to exist, the impairment amount is calculated as the difference between the amortized cost and the present value of future expected cash flows, limited to the difference between the carrying amount (i.e., fair value) and amortized cost. This credit loss impairment is included in net gains (losses) on investments and other financial instruments in the consolidated statements of operations, with an offset to an allowance for credit losses. Subsequent changes (favorable and unfavorable) in expected credit losses are recognized immediately in net income as a credit loss impairment or a reversal of credit loss impairment.

Fair Value of Financial Instruments

Our estimated fair value measurements are intended to reflect the assumptions market participants would use in pricing an asset or liability based on the best information available. Assumptions include the risks inherent in a particular valuation technique (such as a pricing model) and the risks inherent in the inputs to the model. Changes in economic conditions and capital market conditions, including but not limited to, credit spread changes, benchmark interest rate changes, market

volatility and changes in the value of underlying collateral, could cause actual results to differ materially from our estimated fair value measurements. We define fair value as the current amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

In accordance with GAAP, which establishes a three-level valuation hierarchy, we disclose fair value measurements based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level I measurements) and the lowest priority to unobservable inputs (Level III measurements). The level in the fair value hierarchy within which the fair value measurement falls is determined based on the lowest level input that is significant to the measurement in its entirety. The three levels of the fair value hierarchy are defined below:

- Level I** — Unadjusted quoted prices for identical assets or liabilities in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;
- Level II** — Prices or valuations based on observable inputs other than quoted prices in active markets for identical assets and liabilities; and
- Level III** — Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable. Level III inputs are used to measure fair value only to the extent that observable inputs are not available.

For markets in which inputs are not observable or are limited, we use significant judgment and assumptions that a typical market participant would use to evaluate the market price of an asset or liability. Given the level of judgment necessary, another market participant may derive a materially different estimate of fair value. These assets and liabilities are classified in Level III of our fair value hierarchy.

Available for sale securities, trading securities, equity securities, mortgage loans held for sale and certain other assets and liabilities are recorded at fair value as described in Note 5. All changes in fair value of trading securities, equity securities, mortgage loans held for sale and certain other assets and liabilities are included in our consolidated statements of operations.

Restricted Cash

Included in our restricted cash balances as of December 31, 2022 and 2021, were cash funds held in trusts for the benefit of certain lenders or policyholders.

Accounts and Notes Receivable

Accounts and notes receivable primarily consist of accrued premiums receivable, amounts billed and due from our customers for services performed, and certain receivables related to our reinsurance transactions. Accounts and notes receivable are carried at their estimated collectible amounts, net of any allowance for doubtful accounts, and are periodically evaluated for collectability based on past payment history and current economic conditions. See “—Revenue Recognition—Mortgage Insurance” below for information on our deferred premiums and Note 8 for details on our reinsurance agreements.

Income Taxes

We provide for income taxes in accordance with the provisions of the accounting standard regarding accounting for income taxes. As required under this standard, our deferred tax assets and deferred tax liabilities are recognized under the balance sheet method, which recognizes the future tax effect of temporary differences between the amounts recorded in our consolidated financial statements and the tax bases of these amounts. Deferred tax assets and deferred tax liabilities are measured using the enacted tax rates that are expected to apply to taxable income in the periods in which the deferred tax asset or deferred tax liability is expected to be realized or settled. In regard to accumulated other comprehensive income, the Company's policy for releasing disproportionate income tax effects is to release the effects as individual items are sold.

We are required to establish a valuation allowance against our deferred tax assets when it is more likely than not that all or some portion of our deferred tax assets will not be realized. At each balance sheet date, we assess our need for a valuation allowance. Our assessment is based on all available evidence, both positive and negative. This requires management to exercise judgment and make assumptions regarding whether our deferred tax assets will be realized in future periods.

See Note 10 for further discussion on income taxes.

Reserve for Losses and LAE

Mortgage Insurance

We establish reserves to provide for losses and LAE on our mortgage insurance policies, which include the estimated costs of settling claims, in accordance with the accounting standard regarding accounting and reporting by insurance enterprises (ASC 944). Although this standard specifically excludes mortgage insurance from its guidance relating to the

reserve for losses, because there is no specific guidance for mortgage insurance, we establish reserves for mortgage insurance as described below, using the guidance contained in this standard supplemented with other accounting guidance.

In our mortgage insurance business, the default and claim cycle begins with the receipt of a default notice from the loan servicer. Case reserves for losses are established upon receipt of notification from servicers that a borrower has missed two monthly payments, which is when we consider a loan to be in default for financial statement and internal tracking purposes. We also establish reserves for associated LAE, consisting of the estimated cost of the claims administration process, including legal and other fees and expenses associated with administering the claims process.

We do not establish reserves for loans that are in default if we believe that we will not be liable for the payment of a claim with respect to that default. We generally do not establish loss reserves for expected future claims on insured mortgages that are not in default. See “—Reserve for Premium Deficiency” below for an exception to these general principles.

With respect to loans that are in default, considerable judgment is exercised as to the adequacy of reserve levels. We use an actuarial projection methodology referred to as a “roll rate” analysis that uses historical claim frequency information to determine the projected ultimate Default to Claim Rates based on the Stage of Default and Time in Default as well as the date that a loan goes into default. The Default to Claim Rate also includes our estimates with respect to expected Loss Mitigation Activities, which have the effect of reducing our Default to Claim Rates.

After estimating the Default to Claim Rate, we estimate Claim Severity based on observed severity rates within product type, type of insurance and Time in Default cohorts. These severity estimates are then applied to individual loan coverage amounts to determine reserves.

Rescissions, Claim Denials and Claim Curtailments may occur for various reasons, including, without limitation, underwriting negligence, fraudulent applications and appraisals, breach of representations and warranties and inadequate documentation, primarily related to our insurance written in years prior to and including 2008. For our Loss Mitigation Activities, we incorporate a process referred to as a claims rebuttal process by which the insured or servicer of loans may challenge our decisions. Our estimate of future Loss Mitigation Activities incorporates our estimates of the likely outcomes of our claims rebuttal process based on historical practices.

Estimating our case reserve for losses involves significant reliance upon assumptions and estimates with regard to the likelihood, magnitude and timing of each potential loss. The models, assumptions and estimates we use to establish loss reserves may not prove to be accurate, especially in the event of an extended economic downturn or a period of market volatility and economic uncertainty. These assumptions require management to use considerable judgment in estimating the rate at which these loans will result in claims and the amount of claims we expect to pay. As such, there is uncertainty around our reserve estimate.

Title Insurance

We establish reserves for estimated future claims payments on our title insurance policies at the time the related policy revenue is recorded. Our title insurance reserve for losses and LAE comprises estimates of both known claims and incurred but unreported claims expected to be paid in the future for policies issued as of the balance sheet date.

We provide for losses associated with these policies based upon our historical experience and other factors. However, by their nature, title claims can often be complex, vary greatly in dollar amounts, vary in number due to economic and market conditions such as an increase in mortgage foreclosures, and involve uncertainties as to ultimate exposure. Due to the length of time over which claim payments are made and regularly occurring changes in underlying economic and market conditions, these estimates are subject to variability.

Reserve for Premium Deficiency

Insurance enterprises are required to establish a PDR if the net present value of the expected future losses and expenses for a particular product line exceeds the net present value of expected future premiums and existing reserves for that product line. We reassess our expectations for premiums, losses and expenses for our mortgage insurance business at least quarterly and update our premium deficiency analyses accordingly. For our mortgage insurance business, we group our mortgage insurance products into two categories: first-lien and second-lien mortgage loans.

We did not require a first-lien or second-lien PDR as of December 31, 2022 or 2021.

Revenue Recognition

Mortgage Insurance

Premiums on mortgage insurance products are written on a recurring basis, either as monthly or annual premiums, or on a multi-year basis as a single premium. Monthly premiums written are earned as coverage is provided each month. For certain monthly policies where the billing is deferred for the first month's coverage period, currently to the end of the policy, we record a net premium receivable representing the present value of such deferred premiums that we estimate will be collected at that

future date. As of December 31, 2022 and 2021, this net premium receivable was \$32.0 million and \$30.3 million, respectively, representing the present values of \$77.1 million and \$74.0 million, respectively, in contractual deferred monthly premiums, after adjustments for the estimated collectability and timing of future billing. We recognize changes in this receivable based on changes in the estimated amount and timing of such collections, including as a result of changes in observed trends as well as our periodic review of our servicing guide and our operations and collections practices. Given the difference between the present value of the net premium receivable recorded and the contractual premiums due, such changes to the preceding factors could have a material effect on our results of operations in future periods if any changes are implemented.

Annual premiums written are initially recorded as unearned premiums and amortized on a monthly, straight-line basis. Single premiums written are initially recorded as unearned premiums and earned over time based on the anticipated claim payment pattern, which includes historical industry experience and is updated periodically.

When we rescind insurance coverage on a loan, we refund all premiums received in connection with such coverage. When insurance coverage on a loan is canceled due to claim payment, we refund all premiums received since the date of delinquency. When insurance coverage is cancelled for a reason other than Rescission or claim payment, all premium that is nonrefundable is immediately earned. Premium revenue is recognized net of our accrual for estimated premium refunds due to Rescissions or other factors.

With respect to our reinsurance transactions, ceded premiums written on an annual or multi-year basis are initially set up as prepaid reinsurance and are amortized in a manner consistent with the recognition of income on direct premiums.

Title Insurance and Related Services

Title insurance premiums are recognized as revenue upon closing and completion of the real estate transaction. Premiums generally are calculated with reference to the policy amount. Premiums are charged to customers based on rates predetermined in coordination with each state's respective Department of Insurance. Such regulations vary from state to state. Premium revenues from agency title operations are primarily comprised of premiums recognized upon title order and completion of real estate transaction closing.

Other title-related fees and income are closely related to title insurance premiums and are primarily associated with managing the closing of real estate transactions. As such, revenue is primarily recognized upon closing of the real estate transaction or completion and billing of services. We offer title services that include tax and title data services; centralized recording services; document retrieval; default curative title services; deed reports; property reports and other real estate or title-related activities. Expenses typically associated with premiums include third-party agent commissions and premium taxes.

Other Services

We recognize revenue representing the transfer of services to customers in an amount that reflects the consideration that we expect to be entitled to receive in exchange for those services, which are recognized as the performance obligations are satisfied. Due to the transactional nature of our business, our services revenue may fluctuate from period to period as transactions are commenced or completed.

Our services and related revenue recognition considerations are primarily as follows:

Real Estate Services. We provide real estate services, including asset management and valuation services. Asset management services include management of the entire REO disposition process and services such as diligence and underwriting that serve the single-family rental asset class. Revenue attributable to REO services provided is based on a percentage of the sale and recognized over time, measured based on the progress to date and typically coincides with the client's successful closing on the property. In certain instances, fees are received at the time that an asset is assigned to Radian for management. These fees are recorded as deferred revenue and are recognized over time based on progress to date and the availability to customers.

For valuation services, we leverage technology and a quality control process to deliver real estate valuation products and services to our customers, which include: appraisal review products; hybrid/ancillary appraisal products; automated valuation products; interactive valuation products; and broker price opinions. Each service qualifies as a separate performance obligation for which revenue is recognized as the service is performed and made available to the client.

Technology Services. We are developing a growing suite of real estate technology products and services that are designed to facilitate real estate transactions and are provided as proprietary SaaS solutions. In addition, we offer a web-based asset management workflow solution to assist in managing REO assets, rental properties, due diligence for bulk acquisitions of multiple properties, loss mitigation efforts and short sales. Revenue for these services are recognized over time as the service is provided and made available to the customer.

Mortgage Services. We provide third-party contract underwriting solutions to our mortgage customers. Generally, revenue is recognized when contract underwriting results are made available to the customer or when other related services are completed.

Cost of Services

Cost of services consists primarily of costs paid for employee compensation and related payroll benefits, as well as corresponding travel and related expenses, incurred in providing such services to clients.

Leases

We determine if an arrangement includes a lease at inception, and if it does, we recognize a right-of-use asset and lease liability. Right-of-use assets represent our right to use an underlying asset for the lease term and are recognized net of any payments made or received from the lessor. Lease liabilities represent our obligation to make lease payments and are based on the present value of lease payments over the lease term. In determining the net present value of lease payments, we use our incremental borrowing rate based on the information available at the lease commencement date.

Lease expense is recognized on a straight-line basis over the expected lease term. Lease and non-lease components are generally not accounted for separately. We have elected the short-term exemption for contracts with lease terms of 12 months or less.

Our lease agreements primarily relate to operating leases for office space we use in our operations. Certain of our leases include renewal options and/or termination options that we did not consider in the determination of the right-of-use asset or the lease liability as we did not believe it was reasonably certain that we would exercise such options.

We assess our various asset groups, which include right-of-use assets, for changes in grouping and for potential impairment when certain events occur or when there are changes in circumstances, including potential alternative uses. If circumstances require a change in asset groupings or a right-of-use asset to be tested for possible impairment, and the carrying value of the right-of-use asset is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying value exceeds its fair value. See Notes 9 and 13 for additional information on our right-of-use assets and lease liabilities, respectively.

Reinsurance

We cede insurance risk through the use of reinsurance contracts and follow reinsurance accounting for those transactions where significant risk is transferred. Loss reserves and unearned premiums are established before consideration is given to amounts related to our reinsurance agreements.

In accordance with the terms of the QSR Program, rather than making a cash payment or transferring investments for ceded premiums written, Radian Guaranty holds the related amounts to collateralize the reinsurers' obligations and has established a corresponding funds withheld liability. Any loss recoveries and any potential profit commission to Radian Guaranty will be realized from this account. The reinsurers' share of earned premiums is paid from this account on a quarterly basis. For our Single Premium QSR Program, this liability also includes an interest credit on funds withheld, which is recorded as ceded premiums at a rate specified in the agreement and, depending on experience under the contract, may be paid to either Radian Guaranty or the reinsurers.

The ceding commission earned for premiums ceded pursuant to this transaction is attributable to other underwriting costs (including any related deferred policy acquisition costs). The unamortized portion of the ceding commission in excess of our related acquisition cost is reflected in other liabilities. Ceded premiums written are recorded on the balance sheet as prepaid reinsurance premiums and amortized to ceded premiums earned in a manner consistent with the recognition of income on direct premiums. See Note 8 for further discussion of our reinsurance transactions.

Variable Interest Entities

In connection with our reinsurance programs for our mortgage insurance business, we may enter into contracts with VIEs. VIEs include corporations, trusts or partnerships in which: (i) the entity has insufficient equity at risk to allow it to finance its activities without additional subordinated financial support or (ii) at-risk equity holders, as a group, do not have the characteristics of a controlling financial interest.

We perform an evaluation to determine whether we are required to consolidate the VIE's assets and liabilities in our consolidated financial statements, based on whether we are deemed to be the primary beneficiary. The primary beneficiary of a VIE is the variable interest holder that is determined to have the controlling financial interest as a result of having both: (i) the power to direct the activities of a VIE that most significantly impact the economic performance of the VIE and (ii) the obligation to absorb losses or right to receive benefits from the VIE that potentially could be significant to the VIE. See Note 8 for additional information.

Goodwill and Other Acquired Intangible Assets, Net

Goodwill is an asset representing the estimated future economic benefits arising from the assets we have acquired that were not individually identified and separately recognized. We generally perform our annual goodwill impairment test during

the fourth quarter of each year, using balances as of the prior quarter. Goodwill is deemed to have an indefinite useful life and is subject to review for impairment annually, or more frequently whenever circumstances indicate potential impairment at the reporting unit level. A reporting unit represents a business for which discrete financial information is available. We have concluded that we have one reporting unit, the homegenius segment, for purposes of our goodwill impairment assessment.

Acquired intangible assets, other than goodwill, primarily consist of customer relationships and represent the value of the specifically acquired customer relationships. For financial reporting purposes, intangible assets with finite lives are amortized over their applicable estimated useful lives in a manner that approximates the pattern of expected economic benefit from each intangible asset.

The calculation of the estimated fair value of goodwill and other acquired intangibles is performed primarily using an income approach and requires the use of significant estimates and assumptions that are highly subjective in nature, such as future expected cash flows, discount rates, attrition rates and market conditions. For more information on our accounting for goodwill and other acquired intangibles, see Note 7.

Property and Equipment

We capitalize certain costs associated with the development of internal-use software and the purchase of property and equipment. Software, property and equipment are carried at cost, net of accumulated depreciation and amortization. Amortization and depreciation are calculated on a straight-line basis over the estimated useful life of the respective assets and commence during the month of our placement of the assets into use.

The estimated useful life used to calculate the amortization of internal-use software is generally seven years. Leasehold improvements are depreciated over the lesser of the estimated useful life of the asset improved or the remaining term of the lease. The estimated useful life used to calculate the depreciation of furniture and equipment is generally three years. Depreciation and amortization expense associated with property and equipment for the years ended December 31, 2022, 2021 and 2020, was \$15.2 million, \$15.9 million and \$18.3 million, respectively.

The following is a summary of the gross and net carrying amounts and accumulated amortization / depreciation (including impairment) of our property and equipment as of the periods indicated. See Note 9 for more information about impairments.

Property and equipment

(In thousands)	December 31, 2022			December 31, 2021		
	Gross Carrying Amount	Accumulated Amortization / Depreciation	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization / Depreciation	Net Carrying Amount
Internal-use software	\$ 155,984	\$ (100,734)	\$ 55,250	\$ 145,248	\$ (91,542)	\$ 53,706
Leasehold improvements	39,134	(26,236)	12,898	34,805	(18,108)	16,697
Furniture and equipment	68,217	(65,384)	2,833	67,322	(62,639)	4,683
Total	\$ 263,335	\$ (192,354)	\$ 70,981	\$ 247,375	\$ (172,289)	\$ 75,086

Deferred Policy Acquisition Costs

Incremental, direct costs associated with the successful acquisition of mortgage insurance policies, consisting of compensation, premium tax and other policy issuance and underwriting expenses, are initially deferred and reported as deferred policy acquisition costs. Consistent with industry accounting practice, amortization of these costs for each underwriting year book of business is recognized in proportion to estimated gross profits over the estimated life of the policies.

Estimated gross profits are composed of earned premium, interest income, losses and LAE. Estimates of expected gross profit, including the Persistency Rate and loss development assumptions for each underwriting year used as a basis for amortization, are evaluated quarterly and the total amortization recorded to date is adjusted by a charge or credit to our consolidated statements of operations if actual experience or other evidence suggests that previous estimates should be revised. Considerable judgment is used in evaluating these estimates and the assumptions on which they are based. The use of different assumptions may have a significant effect on the amortization of deferred policy acquisition costs. Ceding commissions received under our reinsurance arrangements related to these costs are also deferred and accounted for using similar assumptions. See Note 8 for additional information.

Earnings per Share

Basic net income per share is computed by dividing net income by the weighted-average number of common shares outstanding, while diluted net income per share is computed by dividing net income attributable to common stockholders by the sum of the weighted-average number of common shares outstanding and the weighted-average number of dilutive potential common shares.

Dilutive potential common shares relate primarily to our share-based compensation arrangements. In computing diluted net income per share, we use the treasury stock method, which is computed by assuming the issuance of common stock for the potential dilution of our unvested RSUs. For all calculations, the determination of whether potential common shares are dilutive or anti-dilutive is based on net income.

Share-Based Compensation

The cost related to share-based equity instruments is measured based on the grant-date fair value at the date of issuance, which for RSU awards is primarily determined by our common stock price on the date of grant. For share-based awards with performance conditions related to our own operations, the expense recognized is dependent on the probability of the performance measure being achieved. Compensation cost is generally recognized over the periods that an employee provides service in exchange for the award. Any forfeitures of awards are recognized as they occur. See Note 17 for further information.

Recent Accounting Pronouncements

Accounting Standards Adopted During 2022

In June 2022, the FASB issued ASU 2022-03, Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions. The amendments clarify that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered in measuring fair value. The amendments also clarify that an entity cannot, as a separate unit of account, recognize and measure a contractual sale restriction. In addition, this update introduces new disclosure requirements for equity securities subject to contractual sale restrictions measured at fair value. The amendments in this update are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted. We adopted this update effective December 31, 2022. The adoption of this update did not have any impact on our consolidated financial statements.

Accounting Standards Not Yet Adopted

In August 2018, the FASB issued ASU 2018-12, Financial Services—Insurance—Targeted Improvements to the Accounting for Long-Duration Contracts. The new standard: (i) requires that assumptions used to measure the liability for future policy benefits be reviewed at least annually; (ii) defines and simplifies the measurement of market risk benefits; (iii) simplifies the amortization of deferred acquisition costs; and (iv) enhances the required disclosures about long-duration contracts. This update is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early adoption is permitted. We adopted this update on January 1, 2023, but do not expect the adoption of these amendments to have a material impact on our consolidated financial statements.

In March 2020, the FASB issued ASU 2020-04, Reference Rate Reform—Facilitation of the Effects of Reference Reform on Financial Reporting. This guidance provides optional expedients and exceptions for applying GAAP requirements to investments, derivatives or other transactions affected by reference rate reform such as those that impact the assessment of contract modifications. In December 2022, the FASB issued ASU 2022-06, Reference Rate Reform—Deferral of the Sunset Date of Topic 848, which extends the period of time that preparers can utilize the reference rate reform relief guidance. The amendments in these updates are optional and may now be elected through December 31, 2024, as reference rate reform activities occur. We continue to evaluate the impact the discontinuance of LIBOR and the new accounting guidance will have on our financial statements and disclosures.

3. Net Income Per Share

The calculation of basic and diluted net income per share is as follows.

Net income per share

(In thousands, except per-share amounts)	Years Ended December 31,		
	2022	2021	2020
Net income—basic and diluted	\$ 742,934	\$ 600,671	\$ 393,626
Average common shares outstanding—basic	167,930	188,370	195,443
Dilutive effect of stock-based compensation arrangements ⁽¹⁾	2,734	1,893	1,199
Adjusted average common shares outstanding—diluted	170,664	190,263	196,642
Net income per share			
Basic	\$ 4.42	\$ 3.19	\$ 2.01
Diluted	\$ 4.35	\$ 3.16	\$ 2.00

(1) The following number of shares of our common stock equivalents issued under our share-based compensation arrangements are not included in the calculation of diluted net income per share because they are anti-dilutive.

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Shares of common stock equivalents	—	28	865

4. Segment Reporting

We have two strategic business units that we manage separately—Mortgage and homegenius. Our Mortgage segment derives its revenue from mortgage insurance and other mortgage and risk services, including contract underwriting solutions provided to mortgage lending institutions and mortgage credit investors. Our homegenius segment offers an array of title, real estate and technology products and services to consumers, mortgage lenders, mortgage and real estate investors, GSEs, real estate brokers and agents.

In addition, we report as All Other activities that include: (i) income (losses) from assets held by Radian Group, our holding company; (ii) related general corporate operating expenses not attributable or allocated to our reportable segments; and (iii) certain investments in new business opportunities, including activities and investments associated with Radian Mortgage Capital, and other immaterial activities.

We allocate corporate operating expenses to both reportable segments based primarily on each segment's forecasted annual percentage of total revenue, which approximates the estimated percentage of management time spent on each segment. In addition, we allocate all corporate interest expense to our Mortgage segment, due to the capital-intensive nature of our mortgage insurance business. We do not manage assets by segment.

See Note 1 for additional details about our Mortgage and homegenius businesses.

Adjusted Pretax Operating Income (Loss)

Our senior management, including our Chief Executive Officer (Radian's chief operating decision maker), uses adjusted pretax operating income (loss) as our primary measure to evaluate the fundamental financial performance of each of Radian's business segments and to allocate resources to the segments.

Adjusted pretax operating income (loss) is defined as pretax income (loss) excluding the effects of: (i) net gains (losses) on investments and other financial instruments, except for certain investments attributable to our reportable segments and All Other activities; (ii) gains (losses) on extinguishment of debt; (iii) amortization and impairment of goodwill and other acquired intangible assets; and (iv) impairment of other long-lived assets and other non-operating items, such as impairment of internal-use software, gains (losses) from the sale of lines of business and acquisition-related income and expenses.

Although adjusted pretax operating income (loss) excludes certain items that have occurred in the past and are expected to occur in the future, the excluded items represent those that are: (i) not viewed as part of the operating performance of our

primary activities or (ii) not expected to result in an economic impact equal to the amount reflected in pretax income (loss). These adjustments, along with the reasons for their treatment, are described below.

- (1) **Net gains (losses) on investments and other financial instruments.** The recognition of realized investment gains or losses can vary significantly across periods as the activity is highly discretionary based on the timing of individual securities sales due to such factors as market opportunities, our tax and capital profile and overall market cycles. Unrealized gains and losses arise primarily from changes in the market value of our investments that are classified as trading or equity securities. These valuation adjustments may not necessarily result in realized economic gains or losses. Trends in the profitability of our fundamental operating activities can be more clearly identified without the fluctuations of these realized and unrealized gains or losses and changes in fair value of other financial instruments. Except for certain investments attributable to our reportable segments and All Other activities, we do not view them to be indicative of our fundamental operating activities.
- (2) **Gains (losses) on extinguishment of debt.** Gains or losses on early extinguishment of debt and losses incurred to purchase our debt prior to maturity are discretionary activities that are undertaken in order to take advantage of market opportunities to strengthen our financial and capital positions; therefore, we do not view these activities as part of our operating performance. Such transactions do not reflect expected future operations and do not provide meaningful insight regarding our current or past operating trends.
- (3) **Amortization and impairment of goodwill and other acquired intangible assets.** Amortization of acquired intangible assets represents the periodic expense required to amortize the cost of acquired intangible assets over their estimated useful lives. Acquired intangible assets are also periodically reviewed for potential impairment, and impairment adjustments are made whenever appropriate. We do not view these charges as part of the operating performance of our primary activities.
- (4) **Impairment of other long-lived assets and other non-operating items.** Includes activities that we do not view to be indicative of our fundamental operating activities, such as: (i) impairment of internal-use software and other long-lived assets; (ii) gains (losses) from the sale of lines of business; and (iii) acquisition-related income and expenses.

The reconciliation of adjusted pretax operating income (loss) for our reportable segments to consolidated pretax income is as follows.

Reconciliation of adjusted pretax operating income (loss) by segment

(In thousands)	December 31,		
	2022	2021	2020
Adjusted pretax operating income (loss)			
Mortgage	\$ 1,131,943	\$ 781,546	\$ 453,294
homegenius	(88,198)	(27,324)	(23,240)
Total adjusted pretax operating income for reportable segments	1,043,745	754,222	430,054
All Other adjusted pretax operating income	8,972	3,527	2,013
Net gains (losses) on investments and other financial instruments ⁽¹⁾	(80,780)	14,094	60,277
Amortization of other acquired intangible assets	(4,308)	(3,450)	(5,144)
Impairment of other long-lived assets and other non-operating items	(14,850)	(3,561)	(7,759)
Consolidated pretax income	\$ 952,779	\$ 764,832	\$ 479,441

- (1) For 2022 and 2021, excludes certain net gains (losses) on investments that are attributable to specific operating segments and therefore included in adjusted pretax operating income (loss).

Revenue and Other Segment Information

The following tables reconcile reportable segment revenues to consolidated revenues and summarize interest expense, depreciation expense, allocation of corporate operating expenses and adjusted pretax operating income for our reportable segments as follows.

Reportable segment revenue and other segment information

	December 31, 2022						
(In thousands)	Mortgage	homegenius	Reportable Segment Total	All Other	Inter-segment	Adjustments	Consolidated Total
Net premiums earned	\$ 957,213	\$ 23,918	\$ 981,131	\$ —	\$ —	\$ —	\$ 981,131
Services revenue	7,390	85,158	92,548	—	(332)	—	92,216
Net investment income	171,221	729	171,950	23,708	—	—	195,658
Net gains (losses) on investments and other financial instruments	—	—	—	47	—	(80,780)	(80,733)
Other income	2,376	170	2,546	78	(170)	—	2,454
Total revenues	\$1,138,200	\$ 109,975	\$1,248,175	\$ 23,833	\$ (502)	\$ (80,780)	\$ 1,190,726
Other segment information:							
Interest expense	\$ 84,440	\$ —	\$ 84,440				
Direct depreciation expense	8,986	2,538	11,524				
Allocation of corporate operating expenses ⁽¹⁾	138,566	22,856	161,422				

(1) Includes allocated depreciation expense of \$3.0 million, \$0.5 million and \$3.6 million allocated to Mortgage, homegenius and Reportable Segment Total, respectively.

	December 31, 2021						
(In thousands)	Mortgage	homegenius	Reportable Segment Total	All Other	Inter-segment	Adjustments	Consolidated Total
Net premiums earned	\$ 998,282	\$ 38,901	\$1,037,183	\$ —	\$ —	\$ —	\$ 1,037,183
Services revenue	17,670	108,282	125,952	154	(281)	—	125,825
Net investment income	132,929	358	133,287	14,622	—	—	147,909
Net gains (losses) on investments and other financial instruments	—	1,509	1,509	—	—	14,094	15,603
Other income	2,678	—	2,678	734	—	—	3,412
Total revenues	\$1,151,559	\$ 149,050	\$1,300,609	\$ 15,510	\$ (281)	\$ 14,094	\$ 1,329,932
Other segment information:							
Interest expense	\$ 84,344	\$ —	\$ 84,344				
Direct depreciation expense	9,580	2,452	12,032				
Allocation of corporate operating expenses ⁽¹⁾	127,482	18,482	145,964				

(1) Includes allocated depreciation expense of \$3.2 million, \$0.5 million and \$3.7 million allocated to Mortgage, homegenius and Reportable Segment Total, respectively.

December 31, 2020							
(In thousands)	Mortgage	homegenius	Reportable Segment Total	All Other	Inter-segment	Adjustments	Consolidated Total
Net premiums earned	\$1,092,767	\$ 22,554	\$1,115,321	\$ —	\$ —	\$ —	\$ 1,115,321
Services revenue	14,765	79,524	94,289	12,535	(1,439)	—	105,385
Net investment income	137,195	361	137,556	16,481	—	—	154,037
Net gains (losses) on investments and other financial instruments	—	—	—	—	—	60,277	60,277
Other income	2,816	—	2,816	534	—	247	3,597
Total revenues	\$1,247,543	\$ 102,439	\$1,349,982	\$ 29,550	\$ (1,439)	\$ 60,524	\$ 1,438,617
Other segment information:							
Interest expense	\$ 71,150	\$ —	\$ 71,150				
Direct depreciation expense	12,387	2,857	15,244				
Allocation of corporate operating expenses ⁽¹⁾	114,802	12,807	127,609				

(1) Includes allocated depreciation expense of \$2.6 million, \$0.3 million and \$2.9 million allocated to Mortgage, homegenius and Reportable Segment Total, respectively.

There was no single customer that accounted for more than 10% of our consolidated revenues (excluding net gains (losses) on investments and other financial instruments) in 2022, 2021 or 2020. There was no customer that accounted for more than 10% of NIW in 2022, as compared to one in both 2021 and 2020.

The table below, which represents total services revenue on our consolidated statements of operations for the periods indicated, represents the disaggregation of services revenues by revenue type.

Services revenue

(In thousands)	Years Ended December 31,		
	2022	2021	2020
homegenius			
Title	\$ 18,687	\$ 40,202	\$ 23,265
Real estate			
Valuation	30,002	28,590	17,986
Single-family rental	24,387	27,291	17,159
REO asset management	3,091	2,370	5,518
Other real estate services	115	144	2,479
Technology			
Asset management workflow platform	4,814	5,535	7,998
Other technology services	3,730	3,869	3,763
Mortgage	7,390	17,670	14,682
All Other ⁽¹⁾	—	154	12,535
Total services revenue	\$ 92,216	\$ 125,825	\$ 105,385

(1) Includes services revenue from Clayton Services LLC, a former indirect subsidiary of Radian Group, prior to its sale in January 2020 and amounts related to our traditional appraisal business, which we wound down beginning in the fourth quarter of 2020.

Revenue recognized related to services made available to customers and billed is reflected in accounts and notes receivable. Accounts and notes receivable include \$11.8 million and \$20.0 million as of December 31, 2022 and 2021, respectively, related to services revenue contracts. Revenue recognized related to services performed and not yet billed is recorded in unbilled receivables and reflected in other assets. Deferred revenue, which represents advance payments received from customers in advance of revenue recognition, is immaterial for all periods presented. We have no material bad-debt expense.

5. Fair Value of Financial Instruments

The following tables include a list of assets that are measured at fair value by hierarchy level as of December 31, 2022 and 2021.

Assets and liabilities carried at fair value by hierarchy level

(In thousands)	December 31, 2022			
	Level I	Level II	Level III	Total
Investments				
Fixed-maturities available for sale				
U.S. government and agency securities	\$ 140,011	\$ 5,431	\$ —	\$ 145,442
State and municipal obligations	—	142,386	—	142,386
Corporate bonds and notes	—	2,490,582	—	2,490,582
RMBS	—	928,399	—	928,399
CMBS	—	593,357	—	593,357
CLO	—	498,192	—	498,192
Other ABS	—	161,359	—	161,359
Foreign government and agency securities	—	4,975	—	4,975
Mortgage insurance-linked notes ⁽¹⁾	—	53,019	—	53,019
Total fixed-maturities available for sale	140,011	4,877,700	—	5,017,711
Trading securities				
State and municipal obligations	—	70,511	—	70,511
Corporate bonds and notes	—	32,827	—	32,827
RMBS	—	6,847	—	6,847
CMBS	—	5,480	—	5,480
Total trading securities	—	115,665	—	115,665
Equity securities	138,716	7,749	2,500	148,965
Mortgage loans held for sale	—	3,549	—	3,549
Other invested assets ⁽²⁾	—	—	4,296	4,296
Short-term investments				
State and municipal obligations	—	2,785	—	2,785
Money market instruments	241,440	—	—	241,440
Corporate bonds and notes	—	42,385	—	42,385
Other investments ⁽³⁾	—	115,480	—	115,480
Total short-term investments	241,440	160,650	—	402,090
Total investments at fair value ⁽²⁾	520,167	5,165,313	6,796	5,692,276
Other				
Derivative assets	—	11	—	11
Loaned securities ⁽⁴⁾				
Corporate bonds and notes	—	47,585	—	47,585
Equity securities	64,554	—	—	64,554
Total assets at fair value ⁽²⁾	\$ 584,721	\$ 5,212,909	\$ 6,796	\$ 5,804,426

Assets and liabilities carried at fair value by hierarchy level

(In thousands)	December 31, 2022			
	Level I	Level II	Level III	Total
Liabilities				
Derivative liabilities ⁽⁵⁾	\$ —	\$ 42	\$ 4,858	\$ 4,900
Total liabilities at fair value	\$ —	\$ 42	\$ 4,858	\$ 4,900

- (1) Includes mortgage insurance-linked notes purchased by Radian Group in connection with the Excess-of-Loss Program. See Note 8 for more information.
- (2) Does not include other invested assets of \$1.2 million that are primarily invested in limited partnership investments valued using the net asset value as a practical expedient.
- (3) Comprises short-term certificates of deposit and commercial paper.
- (4) Securities loaned to third-party borrowers under securities lending agreements are classified as other assets in our consolidated balance sheets. See Note 6 for more information.
- (5) Consists primarily of embedded derivatives related to our Excess-of-Loss Program, which are classified as other liabilities in our consolidated balance sheets. See Note 8 for more information.

Assets carried at fair value by hierarchy level

(In thousands)	December 31, 2021			
	Level I	Level II	Level III	Total
Investments				
Fixed-maturities available for sale				
U.S. government and agency securities	\$ 192,452	\$ 29,278	\$ —	\$ 221,730
State and municipal obligations	—	177,257	—	177,257
Corporate bonds and notes	—	2,910,231	—	2,910,231
RMBS	—	705,117	—	705,117
CMBS	—	709,203	—	709,203
CLO	—	530,040	—	530,040
Other ABS	—	211,187	—	211,187
Foreign government and agency securities	—	5,296	—	5,296
Mortgage insurance-linked notes ⁽¹⁾	—	47,017	—	47,017
Total fixed-maturities available for sale	192,452	5,324,626	—	5,517,078
Trading securities				
State and municipal obligations	—	94,637	—	94,637
Corporate bonds and notes	—	119,186	—	119,186
RMBS	—	9,438	—	9,438
CMBS	—	33,285	—	33,285
Total trading securities	—	256,546	—	256,546
Equity securities	176,828	7,417	—	184,245
Other invested assets ⁽²⁾	—	—	3,000	3,000

Assets carried at fair value by hierarchy level

(In thousands)	December 31, 2021			
	Level I	Level II	Level III	Total
Short-term investments				
U.S. government and agency securities	94,665	—	—	94,665
State and municipal obligations	—	12,270	—	12,270
Money market instruments	274,535	—	—	274,535
Corporate bonds and notes	—	65,191	—	65,191
CMBS	—	3,023	—	3,023
Other investments ⁽³⁾	—	101,824	—	101,824
Total short-term investments	369,200	182,308	—	551,508
Total investments at fair value ⁽²⁾	738,480	5,770,897	3,000	6,512,377
Other				
Derivative assets ⁽⁴⁾	—	—	4,200	4,200
Loaned securities ⁽⁵⁾				
Corporate bonds and notes	—	65,994	—	65,994
Equity securities	38,002	—	—	38,002
Total assets at fair value ⁽²⁾	\$ 776,482	\$ 5,836,891	\$ 7,200	\$ 6,620,573

- (1) Includes mortgage insurance-linked notes purchased by Radian Group in connection with the Excess-of-Loss Program. See Note 8 for more information.
- (2) Does not include other invested assets of \$1.2 million that are primarily invested in limited partnership investments valued using the net asset value as a practical expedient.
- (3) Comprises short-term certificates of deposit and commercial paper.
- (4) Consists primarily of embedded derivatives related to our Excess-of-Loss Program, which are classified as other assets in our consolidated balance sheets. See Note 8 for more information.
- (5) Securities loaned to third-party borrowers under securities lending agreements are classified as other assets in our consolidated balance sheets. See Note 6 for more information.

There were no transfers to or from Level III for the years ended December 31, 2022 and 2021. Activity related to Level III assets and liabilities (including realized and unrealized gains and losses, purchases, sales, issuances, settlements and transfers) was immaterial for the years ended December 31, 2022 and 2021.

Valuation Methodologies for Assets Measured at Fair Value

We are responsible for the determination of the value of all investments carried at fair value and the supporting methodologies and assumptions. To assist us in this responsibility, we utilize independent third-party valuation service providers to gather, analyze and interpret market information and estimate fair values based upon relevant methodologies and assumptions for various asset classes and individual securities.

We perform monthly quantitative and qualitative analyses on the prices received from third parties to determine whether the prices are reasonable estimates of fair value. Our analysis includes: (i) a review of the methodology used by third-party pricing services; (ii) a comparison of pricing services' valuations to other independent sources; (iii) a review of month-to-month price fluctuations; and (iv) a comparison of actual purchase and sale transactions with valuations received from third parties. These processes are designed to ensure that our investment values are accurately recorded, that the data inputs and valuation techniques utilized are appropriate and consistently applied and that the assumptions are reasonable and consistent with the objective of determining fair value.

The following are descriptions of our valuation methodologies for financial assets measured at fair value.

U.S. Government and Agency Securities. The fair value of U.S. government and agency securities is estimated using observed market transactions, including broker-dealer quotes and actual trade activity as a basis for valuation. U.S. government and agency securities are categorized in either Level I or Level II of the fair value hierarchy.

State and Municipal Obligations. The fair value of state and municipal obligations is estimated using recent transaction activity, including market observations. Valuation models are used, which incorporate bond structure, yield curve, credit spreads and other factors. These securities are generally categorized in Level II of the fair value hierarchy or in Level III when market-based transaction activity is unavailable.

Money Market Instruments. The fair value of money market instruments is based on daily prices, which are published and available to all potential investors and market participants. As such, these securities are categorized in Level I of the fair value hierarchy.

Corporate Bonds and Notes. The fair value of corporate bonds and notes is estimated using recent transaction activity, including market observations. Spread models are used that incorporate issuer and structure characteristics, such as credit risk and early redemption features, where applicable. These securities are generally categorized in Level II of the fair value hierarchy or in Level III when market-based transaction activity is unavailable.

Asset-backed and Mortgage-backed Securities. The fair value of these instruments, which include RMBS, CMBS, CLO, Other ABS and mortgage insurance-linked notes, is estimated based on prices of comparable securities and spreads and observable prepayment speeds. These securities are generally categorized in Level II of the fair value hierarchy or in Level III when market-based transaction activity is unavailable. The fair value of any Level III securities is generally estimated by discounting estimated future cash flows.

Foreign Government and Agency Securities. The fair value of foreign government and agency securities is estimated using observed market yields used to create a maturity curve and observed credit spreads from market makers and broker-dealers. These securities are categorized in Level II of the fair value hierarchy.

Equity Securities. The fair value of these securities is generally estimated using observable market data in active markets or bid prices from market makers and broker-dealers. Generally, these securities are categorized in Level I or II of the fair value hierarchy, as observable market data are readily available. Certain equity securities may be categorized in Level III of the fair value hierarchy due to a lack of market-based transaction data or the use of model-based valuations.

Mortgage Loans Held for Sale. The fair value of these mortgage loans is generally estimated using measurements derived from observable market data, adjusted for certain loan-level factors such as loan type, loan amount, note rate, LTV, and expected exit value of the loan. As such, these loans are generally categorized in Level II of the fair value hierarchy.

Other Investments. These securities primarily consist of commercial paper and short-term certificates of deposit, which are categorized in Level II of the fair value hierarchy. The fair value of these investments is estimated using market data for comparable instruments of similar maturity and average yield.

Other Invested Assets. These assets consist of interests in private debt or equity investments. The estimated fair value of these other invested assets is primarily based on the private company's performance, as well as the terms of the instrument and general market benchmarks. As such, these investments are categorized in Level III of the fair value hierarchy.

Derivative Assets and Liabilities. These instruments primarily consist of embedded derivatives related to our Excess-of-Loss Program, which are categorized in Level III of the fair value hierarchy. The fair value of these derivatives reflects the present value impact of the variation in investment income on the assets held by the reinsurance trusts and the contractual reference rate used to calculate the reinsurance premiums we will pay. Beginning in 2022, our derivative assets and liabilities also include the fair value of certain forward commitments and hedging instruments related to our investments in mortgage loans held for sale. These derivative assets and liabilities are categorized in either Level II or III of the fair value hierarchy.

Other Fair Value Disclosure

The carrying value and estimated fair value of other selected liabilities not carried at fair value in our consolidated balance sheets were as follows as of the dates indicated.

Financial liabilities not carried at fair value

	December 31, 2022		December 31, 2021	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
(In thousands)				
Senior notes	\$ 1,413,504	\$ 1,361,844	\$ 1,409,473	\$ 1,534,378
Other borrowings				
FHLB advances	\$ 153,686	\$ 153,728	\$ 150,983	\$ 152,117
Mortgage financing facilities	2,136	2,136	—	—
Total other borrowings	\$ 155,822	\$ 155,864	\$ 150,983	\$ 152,117

The fair value of our senior notes is estimated based on quoted market prices. The fair value of our other borrowings is estimated based on contractual cash flows discounted at current borrowing rates for similar borrowing arrangements. These liabilities are categorized in Level II of the fair value hierarchy. See Note 12 for further information about these borrowings. The fair value of our remaining financial instruments included in other assets and other liabilities in our consolidated balance sheets approximates their carrying amounts as of December 31, 2022 and 2021.

The following table provides a rollforward of the allowance for credit losses on fixed-maturities available for sale, which relates entirely to corporate bonds and notes for the periods indicated. There was no allowance as of December 31, 2022.

Rollforward of allowance for credit losses on fixed-maturities available for sale

(In thousands)	Year Ended December 31, 2021
Beginning balance	\$ 948
Net increases (decreases) in allowance on previously impaired securities	(918)
Reduction for securities sold	(30)
Ending balance	\$ —

Gross Unrealized Losses and Related Fair Value of Available for Sale Securities

For securities deemed “available for sale” that are in an unrealized loss position and for which an allowance for credit loss has not been established, the following tables show the gross unrealized losses and fair value, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position, as of the dates indicated. Included in the amounts as of December 31, 2022 and 2021, are loaned securities that are classified as other assets in our consolidated balance sheets, as further described below.

Unrealized losses on fixed-maturities available for sale by category and length of time

(\$ in thousands)	December 31, 2022								
	Less Than 12 Months			12 Months or Greater			Total		
Description of Securities	# of securities	Fair Value	Unrealized Losses	# of securities	Fair Value	Unrealized Losses	# of securities	Fair Value	Unrealized Losses
U.S. government and agency securities	14	\$ 86,964	\$ (21,370)	10	\$ 47,770	\$ (7,532)	24	\$ 134,734	\$ (28,902)
State and municipal obligations	43	116,285	(14,231)	20	25,401	(7,708)	63	141,686	(21,939)
Corporate bonds and notes	411	1,769,547	(176,768)	203	701,936	(173,769)	614	2,471,483	(350,537)
RMBS	124	610,812	(46,117)	59	261,370	(52,442)	183	872,182	(98,559)
CMBS	108	469,100	(38,178)	55	121,277	(14,368)	163	590,377	(52,546)
CLO	94	246,705	(10,271)	61	245,584	(10,214)	155	492,289	(20,485)
Other ABS	61	115,181	(3,603)	18	31,041	(3,140)	79	146,222	(6,743)
Mortgage insurance-linked notes	2	43,745	(1,639)	—	—	—	2	43,745	(1,639)
Foreign government and agency securities	1	4,975	(143)	—	—	—	1	4,975	(143)
Total	858	\$3,463,314	\$(312,320)	426	\$1,434,379	\$(269,173)	1,284	\$4,897,693	\$(581,493)

December 31, 2021

Description of Securities	Less Than 12 Months			12 Months or Greater			Total		
	# of securities	Fair Value	Unrealized Losses	# of securities	Fair Value	Unrealized Losses	# of securities	Fair Value	Unrealized Losses
U.S. government and agency securities	14	\$ 101,602	\$ (1,165)	2	\$ 6,937	\$ (231)	16	\$ 108,539	\$ (1,396)
State and municipal obligations	20	32,721	(401)	—	—	—	20	32,721	(401)
Corporate bonds and notes	209	864,355	(16,799)	34	99,475	(8,087)	243	963,830	(24,886)
RMBS	57	365,476	(6,749)	3	1,543	(28)	60	367,019	(6,777)
CMBS	81	188,457	(2,053)	9	22,050	(1,015)	90	210,507	(3,068)
CLO	84	313,380	(675)	11	35,612	(223)	95	348,992	(898)
Other ABS	54	138,851	(603)	1	631	(9)	55	139,482	(612)
Total	519	\$2,004,842	\$ (28,445)	60	\$ 166,248	\$ (9,593)	579	\$2,171,090	\$ (38,038)

Given our intent and ability as of December 31, 2022, to hold these securities until recovery of their amortized cost basis, we do not expect to realize a loss on any of our investments in an unrealized loss position. See Note 2 for information regarding our accounting policy for impairments.

Loaned Securities

We participate in a securities lending program whereby we loan certain securities in our investment portfolio to third-party borrowers for short periods of time. These securities lending agreements are collateralized financing arrangements whereby we transfer securities to third parties through an intermediary in exchange for cash or other securities. However, pursuant to the terms of these agreements, we maintain effective control over all loaned securities. Although we report such securities at fair value within other assets in our consolidated balance sheets, rather than within investments, the detailed information we provide in this Note 6 includes these securities. See Note 5 for additional detail on the loaned securities.

Under our securities lending agreements, the borrower is required to provide to us collateral, consisting of cash or securities, in amounts generally equal to or exceeding: (i) 102% of the value of the loaned securities (105% in the case of foreign securities) or (ii) another agreed-upon percentage not less than 100% of the market value of the loaned securities. Any cash collateral we receive may be invested in liquid assets. Cash collateral, which is reinvested for our benefit by the intermediary in accordance with the investment guidelines contained in the securities lending and collateral agreements, is reflected in short-term investments, with an offsetting liability recognized in other liabilities for the obligation to return the cash collateral. Securities collateral we receive is held on deposit for the borrower's benefit and we may not transfer or loan such securities collateral unless the borrower is in default. Therefore, such securities collateral is not reflected in our consolidated financial statements given that the risks and rewards of ownership are not transferred to us from the borrowers.

Fees received and paid in connection with securities lending agreements are recorded in net investment income and interest expense, respectively, on the consolidated statements of operations.

All of our securities lending agreements are classified as overnight and revolving. Securities collateral on deposit with us from third-party borrowers totaling \$16.2 million and \$57.8 million as of December 31, 2022 and 2021, respectively, may not be transferred or re-pledged unless the third-party borrower is in default, and is therefore not reflected in our consolidated financial statements.

Net Investment Income

Net investment income consisted of the following.

Net investment income

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Investment income			
Fixed-maturities	\$ 184,189	\$ 145,613	\$ 148,127
Equity securities	11,210	8,158	6,378
Mortgage loans	39	—	—
Short-term investments	5,716	817	5,774
Other	1,370	368	354
Gross investment income	202,524	154,956	160,633
Investment expenses	(6,866)	(7,047)	(6,596)
Net investment income	\$ 195,658	\$ 147,909	\$ 154,037

Net Gains (Losses) on Investments and Other Financial Instruments

Net gains (losses) on investments and other financial instruments consisted of the following.

Net gains (losses) on investments and other financial instruments

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Net realized gains (losses) on investments sold or redeemed			
Fixed-maturities available for sale			
Gross realized gains	\$ 2,763	\$ 22,766	\$ 37,431
Gross realized losses	(12,737)	(17,105)	(2,562)
Fixed-maturities available for sale, net	(9,974)	5,661	34,869
Trading securities	(135)	390	4
Equity securities	1,655	10,820	353
Mortgage loans held for sale	28	—	—
Other investments	148	3,971	600
Net realized gains (losses) on investments sold or redeemed	(8,278)	20,842	35,826
Change in unrealized gains (losses) on investments sold or redeemed	(3,458)	(8,714)	(1,630)
Impairment losses due to intent to sell	—	—	(1,401)
Net decrease (increase) in expected credit losses	—	918	(1,254)
Net unrealized gains (losses) on investments still held			
Trading securities	(27,700)	(7,330)	10,583
Equity securities	(25,255)	10,210	1,759
Mortgage loans held for sale	51	—	—
Other investments	(387)	1,173	248
Net unrealized gains (losses) on investments still held	(53,291)	4,053	12,590
Total net gains (losses) on investments	(65,027)	17,099	44,131
Net gains (losses) on other financial instruments ⁽¹⁾	(15,706)	(1,496)	16,146
Net gains (losses) on investments and other financial instruments	\$ (80,733)	\$ 15,603	\$ 60,277

(1) Primarily reflects the change in fair value of the embedded derivatives associated with our Excess-of-Loss program. See Note 8 for more information.

Contractual Maturities

The contractual maturities of fixed-maturities available for sale were as follows.

Contractual maturities of fixed-maturities available for sale

(In thousands)	December 31, 2022	
	Amortized Cost	Fair Value
Due in one year or less	\$ 111,909	\$ 110,443
Due after one year through five years ⁽¹⁾	1,274,935	1,197,900
Due after five years through 10 years ⁽¹⁾	989,545	857,164
Due after 10 years ⁽¹⁾	854,097	665,067
Asset-backed securities and mortgage-related assets ⁽²⁾	2,412,973	2,234,326
Total	5,643,459	5,064,900
Less: loaned securities	56,198	47,189
Total fixed-maturities available for sale	\$ 5,587,261	\$ 5,017,711

(1) Actual maturities may differ as a result of calls before scheduled maturity.

(2) Includes RMBS, CMBS, CLO, Other ABS, mortgage insurance-linked notes and mortgage loans, which are not due at a single maturity date.

Other

Our fixed-maturities available for sale include securities totaling \$13.3 million and \$14.3 million at December 31, 2022 and 2021, respectively, on deposit and serving as collateral with various state regulatory authorities. Our fixed-maturities available for sale and trading securities also include securities serving as collateral for our FHLB advances. See Note 12 for additional information about our FHLB advances.

7. Goodwill and Other Acquired Intangible Assets, Net

All of our goodwill and other acquired intangible assets relate to our homegenius segment. There was no change to our goodwill balance of \$9.8 million during the years ended December 31, 2022 and 2021. As part of our annual goodwill impairment assessment performed during the fourth quarter of each year, we determined there was no impairment indicated in either 2022 or 2021.

The following is a summary of the gross and net carrying amounts and accumulated amortization (including impairment) of our other acquired intangible assets as of the periods indicated.

Other acquired intangible assets

(In thousands)	December 31, 2022			December 31, 2021		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Client relationships	\$ 43,550	\$ (38,067)	\$ 5,483	\$ 43,550	\$ (34,620)	\$ 8,930
Technology	8,285	(8,285)	—	8,285	(7,675)	610
Licenses	463	(463)	—	463	(212)	251
Total	\$ 52,298	\$ (46,815)	\$ 5,483	\$ 52,298	\$ (42,507)	\$ 9,791

The estimated amortization expense for 2023 is \$5.5 million, which represents the remaining net carrying amount as of December 31, 2022.

8. Reinsurance

In our mortgage insurance and title insurance businesses, we use reinsurance as part of our risk distribution strategy, including to manage our capital position and risk profile. The reinsurance arrangements for our mortgage insurance business include premiums ceded under the QSR Program and the Excess-of-Loss Program. The amount of credit that we receive under the PMIERS financial requirements for our third-party reinsurance transactions is subject to ongoing review and approval by the GSEs.

The effect of all of our reinsurance programs on our net income is as follows.

Reinsurance impacts on net premiums written and earned

(In thousands)	Net Premiums Written			Net Premiums Earned		
	Years Ended December 31,			Years Ended December 31,		
	2022	2021	2020	2022	2021	2020
Direct						
Mortgage insurance	\$ 967,996	\$ 984,995	\$1,085,670	\$1,025,607	\$1,104,696	\$1,263,684
Title insurance	24,422	39,665	22,843	24,422	39,665	22,843
Total direct	992,418	1,024,660	1,108,513	1,050,029	1,144,361	1,286,527
Assumed ⁽¹⁾						
Mortgage insurance	4,025	7,066	12,197	4,025	7,066	12,214
Ceded						
Mortgage insurance ⁽²⁾	(12,148)	(47,515)	(86,912)	(72,419)	(113,480)	(183,131)
Title insurance	(504)	(764)	(289)	(504)	(764)	(289)
Total ceded ⁽²⁾	(12,652)	(48,279)	(87,201)	(72,923)	(114,244)	(183,420)
Total net premiums	\$ 983,791	\$ 983,447	\$1,033,509	\$ 981,131	\$1,037,183	\$1,115,321

- (1) Represents premiums from our participation in certain credit risk transfer programs, which we discontinued in December 2022 as a result of the novation of these insurance policies to an unrelated third-party reinsurer. See Note 16 for additional information.
- (2) Net of profit commission, which is impacted by the level of ceded losses recoverable, if any, on reinsurance transactions. See Note 11 for additional information on our reserve for losses and reinsurance recoverable.

Other reinsurance impacts

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Ceding commissions earned ⁽¹⁾	\$ 18,998	\$ 31,745	\$ 53,654
Ceded losses ⁽²⁾	(41,980)	(4,570)	58,266

- (1) Ceding commissions earned are primarily related to mortgage insurance and are included as an offset to expenses primarily in other operating expenses on our consolidated statements of operations. Deferred ceding commissions of \$27.4 million and \$38.6 million are included in other liabilities on our consolidated balance sheets at December 31, 2022 and 2021, respectively.
- (2) Primarily all related to mortgage insurance.

QSR Program

2022 QSR Agreement

In the third quarter of 2022, Radian Guaranty entered into the 2022 QSR Agreement with a panel of third-party reinsurance providers to cede a contractual quota share percent of certain of our NIW, which includes both Recurring Premium Policies and Single Premium Policies (as set forth in the table below), subject to certain conditions, including a limitation on ceded RIF equal to \$8.5 billion over the term of the agreement. Radian Guaranty may discontinue ceding new policies under the agreement at the end of any calendar quarter.

Radian Guaranty receives a ceding commission for ceded premiums earned pursuant to these transactions. Radian Guaranty is also entitled to receive a profit commission quarterly, subject to a final annual re-calculation, provided that the loss ratio on the loans covered under the agreement generally remains below the applicable prescribed thresholds. Losses on the ceded risk up to these thresholds reduce Radian Guaranty's profit commission on a dollar-for-dollar basis.

Single Premium QSR Program

Radian Guaranty entered into each of the 2016 Single Premium QSR Agreement, 2018 Single Premium QSR Agreement and 2020 Single Premium QSR Agreement with panels of third-party reinsurers to cede a contractual quota share percent of our Single Premium NIW as of the effective date of each agreement (as set forth in the table below), subject to certain conditions.

Radian Guaranty receives a ceding commission for ceded premiums written pursuant to these transactions. Radian Guaranty also receives a profit commission annually, provided that the loss ratio on the loans covered under the agreement

generally remains below the applicable prescribed thresholds. Losses on the ceded risk up to these thresholds reduce Radian Guaranty's profit commission on a dollar-for-dollar basis.

As of January 1, 2022, Radian Guaranty is no longer ceding NIW under the Single Premium QSR Program.

2012 QSR Agreements

In 2012, Radian Guaranty entered into the 2012 QSR Agreements with a third-party reinsurance provider. Radian Guaranty has ceded the maximum amount permitted under the 2012 QSR Agreements and is no longer ceding NIW under this program. RIF ceded under the 2012 QSR Agreements was \$142.4 million and \$207.1 million as of December 31, 2022 and 2021, respectively.

The following table sets forth additional details regarding the QSR Programs.

QSR Program ⁽¹⁾

	2022 QSR Agreement	2020 Single Premium QSR Agreement	2018 Single Premium QSR Agreement	2016 Single Premium QSR Agreement
NIW policy dates	Jan 1, 2022- Jun 30, 2023	Jan 1, 2020- Dec 31, 2021	Jan 1, 2018- Dec 31, 2019	Jan 1, 2012- Dec 31, 2017
Effective date	July 1, 2022	January 1, 2020	January 1, 2018	January 1, 2016
Scheduled termination date	June 30, 2033	December 31, 2031	December 31, 2029	December 31, 2027
Optional termination date ⁽²⁾	July 1, 2026	January 1, 2024	January 1, 2022	January 1, 2020
Quota share %	20%	65%	65%	18% - 57% ⁽³⁾
Ceding commission %	20%	25%	25%	25%
Profit commission %	Up to 59%	Up to 56%	Up to 56%	Up to 55%
(In millions)	As of December 31, 2022			
RIF ceded	\$ 3,307	\$ 1,993	\$ 876	\$ 1,207
(In millions)	As of December 31, 2021			
RIF ceded	\$ —	\$ 2,198	\$ 1,117	\$ 1,913

(1) Excludes the 2012 QSR Agreements, for which RIF ceded is no longer material.

(2) Radian Guaranty has the option, based on certain conditions and subject to a termination fee, to terminate any of the agreements at the end of any calendar quarter on or after the applicable optional termination date. If Radian Guaranty exercises this option in the future, it would result in Radian Guaranty reassuming the related RIF in exchange for a net payment to the reinsurers calculated in accordance with the terms of the applicable agreement. Radian Guaranty also may terminate any of the agreements prior to the scheduled termination date under certain circumstances, including if one or both of the GSEs no longer grant full PMIERS credit for the reinsurance.

(3) Effective September 30, 2022, one reinsurer terminated its interest in the 2016 Single Premium QSR Agreement in exchange for participating in the 2022 QSR Agreement. As a result, the portions ceded under this agreement declined from 20% to 65% to approximately 18% to 57% as of September 30, 2022.

Excess-of-Loss Program

Radian Guaranty has entered into six fully collateralized reinsurance arrangements with the Eagle Re Issuers, of which five remain active as of December 31, 2022. For the respective coverage periods, Radian Guaranty retains the first-loss layer of aggregate losses, as well as any losses in excess of the outstanding reinsurance coverage amounts. The Eagle Re Issuers provide second layer coverage up to the outstanding coverage amounts. For each of these reinsurance arrangements, the Eagle Re Issuers financed their coverage by issuing mortgage insurance-linked notes to eligible capital markets investors in unregistered private offerings. The aggregate excess-of-loss reinsurance coverage for these arrangements decreases over the maturity period of the mortgage insurance-linked notes (either a 10-year or 12.5-year period depending on the transaction) as the principal balances of the underlying covered mortgages decrease and as any claims are paid by the applicable Eagle Re Issuer or the mortgage insurance is canceled. Radian Guaranty has rights to terminate the reinsurance agreements upon the occurrence of certain events, including an optional call feature that provides Radian Guaranty the right to terminate the transaction on or after the optional call date (5 or 7 years after the issuance of the insurance-linked notes depending on the transaction) and a right to exercise an optional clean-up call if the outstanding principal amount of the related insurance-linked notes falls below 10% of the initial principal balance of the related insurance-linked notes.

Under each of the reinsurance agreements, the outstanding reinsurance coverage amount will begin amortizing after an initial period in which a target level of credit enhancement is obtained and will stop amortizing if certain thresholds, or triggers, are reached, including a delinquency trigger event based on an elevated level of delinquencies as defined in the related insurance-linked notes transaction agreements. The insurance-linked notes issued by Eagle Re 2018-1 and 2019-1 are currently subject to a delinquency trigger event, which was first reported to the insurance-linked note investors on June 25, 2020. For the insurance-linked notes that are subject to a delinquency trigger event, both the amortization of the outstanding reinsurance coverage amount pursuant to our reinsurance arrangements with the Eagle Re Issuers and the amortization of the principal amount of the related insurance-linked notes issued by the Eagle Re Issuers have been suspended and will continue to be suspended during the pendency of the trigger event.

Effective September 26, 2022, Radian Guaranty exercised its optional clean-up call right to terminate Radian Guaranty's excess-of-loss reinsurance agreement with Eagle Re 2020-2 Ltd. In connection with the termination of Radian Guaranty's excess-of-loss reinsurance agreement with Eagle Re 2020-2 Ltd., the insurance-linked notes issued by Eagle Re 2020-2 Ltd. were redeemed in full with a distribution of remaining collateral assets.

The following tables set forth additional details regarding the Excess-of-Loss Program.

Excess-of-Loss Program ⁽¹⁾

(In millions)	Eagle Re 2021-2 Ltd.	Eagle Re 2021-1 Ltd. ⁽²⁾	Eagle Re 2020-1 Ltd.	Eagle Re 2019-1 Ltd.	Eagle Re 2018-1 Ltd.
Issued	November 2021	April 2021	February 2020	April 2019	November 2018
NIW policy dates	Jan 1, 2021- Jul 31, 2021	Aug 1, 2020- Dec 31, 2020	Jan 1, 2019- Sep 30, 2019	Jan 1, 2018- Dec 31, 2018	Jan 1, 2017- Dec 31, 2017
Initial RIF	\$ 10,758	\$ 11,061	\$ 9,866	\$ 10,705	\$ 9,109
Initial coverage	484	498	488	562	434
Initial first layer retention	242	221	202	268	205
(In millions)	As of December 31, 2022				
RIF	\$ 9,150	\$ 7,758	\$ 2,401	\$ 1,769	\$ 1,509
Remaining coverage	472	366	368	385	276
First layer retention	242	221	202	263	200
(In millions)	As of December 31, 2021				
RIF	\$ 10,379	\$ 9,496	\$ 3,241	\$ 2,429	\$ 2,117
Remaining coverage	484	498	488	385	276
First layer retention	242	221	202	264	201

(1) Excludes Eagle Re 2020-2 Ltd., which was terminated in September 2022, as further discussed above.

(2) Radian Group purchased \$45.4 million original principal amount of the mortgage insurance-linked notes issued in connection with this reinsurance transaction, which are included in fixed-maturities available for sale on our consolidated balance sheet at December 31, 2022. See Notes 5 and 6 for additional information.

The Eagle Re Issuers are not subsidiaries or affiliates of Radian Guaranty. Based on the accounting guidance that addresses VIEs, we have not consolidated any of the assets and liabilities of the Eagle Re Issuers in our financial statements, because Radian does not have: (i) the power to direct the activities that most significantly affect the Eagle Re Issuers' economic performances or (ii) the obligation to absorb losses or the right to receive benefits from the Eagle Re Issuers that potentially could be significant to the Eagle Re Issuers. See Note 2 for more information on our accounting treatment of VIEs.

The reinsurance premium due to the Eagle Re Issuers is calculated by multiplying the outstanding reinsurance coverage amount at the beginning of a period by a coupon rate, which is the sum of one-month LIBOR (or an acceptable alternative to LIBOR) or SOFR, as applicable, plus a contractual risk margin, and then subtracting actual investment income collected on the assets in the reinsurance trust during the preceding month. As a result, the premiums we pay will vary based on: (i) the spread between LIBOR (or an acceptable alternative to LIBOR) or SOFR, as provided in each applicable reinsurance agreement, and the rates on the investments held by the reinsurance trust and (ii) the outstanding amount of reinsurance coverage.

As the reinsurance premium will vary based on changes in these rates, we concluded that the reinsurance agreements contain embedded derivatives, which we have accounted for separately as freestanding derivatives and recorded in other assets or other liabilities on our consolidated balance sheets. Changes in the fair value of these embedded derivatives are recorded in net gains (losses) on investments and other financial instruments in our consolidated statements of operations.

See Note 5 herein for more information on our fair value measurements of financial instruments, including our embedded derivatives.

In the event an Eagle Re Issuer is unable to meet its future obligations to us, if any, our insurance subsidiaries would be liable to make claims payments to our policyholders. In the event that all of the assets in the reinsurance trust (consisting of U.S. government money market funds, cash or U.S. Treasury securities) become worthless and the Eagle Re Issuer is unable to make its payments to us, our maximum potential loss would be the amount of mortgage insurance claim payments for losses on the insured policies, net of the aggregate reinsurance payments already received, up to the full aggregate excess-of-loss reinsurance coverage amount. In the same scenario, the related embedded derivative would no longer have value.

The Eagle Re Issuers represent our only VIEs as of December 31, 2022 and 2021. The following table presents the total assets and liabilities of the Eagle Re Issuers as of the dates indicated.

Total VIE assets and liabilities of Eagle Re Issuers ⁽¹⁾

(In thousands)	December 31,	
	2022	2021
Eagle Re 2021-2 Ltd.	\$ 471,942	\$ 484,122
Eagle Re 2021-1 Ltd.	366,169	497,735
Eagle Re 2020-2 Ltd. ⁽²⁾	—	143,986
Eagle Re 2020-1 Ltd.	368,378	488,385
Eagle Re 2019-1 Ltd.	384,602	384,602
Eagle Re 2018-1 Ltd.	275,718	275,718
Total	\$ 1,866,809	\$ 2,274,548

- (1) Assets held by the Eagle Re Issuers are required to be invested in U.S. government money market funds, cash or U.S. Treasury securities. Liabilities of the Eagle Re Issuers consist of their mortgage insurance-linked notes as described above. Assets and liabilities are equal to each other for each of the Eagle Re Issuers.
- (2) In September 2022, the excess-of-loss reinsurance agreement with Eagle Re 2020-2 Ltd. was terminated, as further discussed above.

Other Collateral

Although we use reinsurance as one of our risk management tools, reinsurance does not relieve us of our obligations to our policyholders. In the event the reinsurers are unable to meet their obligations to us, our insurance subsidiaries would be liable for any defaulted amounts. However, consistent with the PMIERS reinsurer counterparty collateral requirements, Radian Guaranty's reinsurers have established trusts to help secure our potential cash recoveries. In addition to the total VIE assets of the Eagle Re Issuers discussed above, the amount held in reinsurance trusts was \$174.5 million as of December 31, 2022, compared to \$167.9 million as of December 31, 2021.

In addition, primarily for the Single Premium QSR Program, Radian Guaranty holds amounts related to ceded premiums written to collateralize the reinsurers' obligations, which is reported in reinsurance funds withheld on our consolidated balance sheets. Any loss recoveries and profit commissions paid to Radian Guaranty related to the Single Premium QSR Program are expected to be realized from this account.

9. Other Assets

The following table shows the components of other assets as of the dates indicated.

Other assets

(In thousands)	December 31,	
	2022	2021
Prepaid reinsurance premiums ⁽¹⁾	\$ 141,402	\$ 201,674
Loaned securities (Notes 5 and 6)	112,139	103,996
Company-owned life insurance ⁽²⁾	105,331	113,386
Right-of-use assets (Note 13)	21,099	31,878
Other	47,053	32,246
Total other assets	\$ 427,024	\$ 483,180

- (1) Relates primarily to our Single Premium QSR Program.

- (2) We are the beneficiary of insurance policies on the lives of certain of our current and past officers and employees. The balances reported in other assets reflect the amounts that could be realized upon surrender of the insurance policies as of each respective date.

Right-of-Use Assets

During 2021, in response to the COVID-19 pandemic and our transition to a hybrid work environment, we made the decision to exit, and to actively market for sublease, all office space in our former corporate headquarters in downtown Philadelphia. As part of this change, we entered into two new leases with reduced square footage, including our new corporate headquarters, effective September 2021, in Wayne, Pennsylvania and a Cherry Hill, New Jersey location.

As a result of this decision and our ongoing evaluation of all of our existing leases, future space needs and evolving sublease market conditions, we recognized impairments to our right-of-use assets of \$7.6 million and \$1.1 million for the years ended December 31, 2022 and 2021, respectively. In addition, we recognized impairments to related property and equipment, including leasehold improvements, of \$5.4 million and \$0.3 million for the years ended December 31, 2022 and 2021, respectively. These impairments related primarily to our former corporate headquarters leases, and reduced the carrying value of certain lease assets and the related property and equipment to their estimated fair values. The right-of-use asset fair values were estimated using an income approach based on forecasted future cash flows expected to be derived from the property based on projected sublease market rents, which could differ from actual results and require us to revise our estimates in future periods. Following these impairments, which were recorded within other operating expenses in our consolidated statements of operations, the aggregate carrying value of the right-of-use assets and leasehold improvements related to the former corporate headquarters leases was \$12.9 million as of December 31, 2022.

10. Income Taxes

Income Tax Provision

The components of our consolidated income tax provision from continuing operations are as follows.

Income tax provision

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Current provision (benefit)	\$ 2,920	\$ 2,368	\$ (16,264)
Deferred provision	206,925	161,793	102,079
Total income tax provision	<u>\$ 209,845</u>	<u>\$ 164,161</u>	<u>\$ 85,815</u>

The reconciliation of taxes computed at the statutory tax rate of 21% in 2022, 2021 and 2020 to the provision for income taxes is as follows.

Reconciliation of provision for income taxes

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Provision for income taxes computed at the statutory tax rate	\$ 200,084	\$ 160,615	\$ 100,683
Change in tax resulting from:			
State tax provision (benefit), net of federal impact	20,869	(1,714)	(9,062)
Valuation allowance	(13,791)	5,700	11,290
Uncertain tax positions	(1,076)	853	(14,784)
Other, net	3,759	(1,293)	(2,312)
Provision for income taxes	<u>\$ 209,845</u>	<u>\$ 164,161</u>	<u>\$ 85,815</u>

Deferred Tax Assets and Liabilities

The significant components of our net deferred tax assets and liabilities from continuing operations are summarized as follows.

Deferred tax assets and liabilities

(In thousands)	December 31,	
	2022	2021
Deferred tax assets		
Net unrealized loss on investments	\$ 121,497	\$ —
State income taxes, net of federal impact	58,031	77,637
Goodwill and intangibles	30,782	29,723
Unearned premiums	26,108	23,699
Accrued expenses	11,913	16,584
Lease liability	10,371	11,240
Differences in fair value of financial instruments	5,998	—
Loss reserves	3,102	6,286
Other	32,328	27,932
Total deferred tax assets	\$ 300,130	\$ 193,101
Deferred tax liabilities		
Contingency reserve	\$ 587,722	\$ 368,000
Depreciation	10,031	12,775
Net unrealized gain on investments	—	31,876
Differences in fair value of financial instruments	—	7,763
Other	23,823	26,768
Total deferred tax liabilities	621,576	447,182
Less: Valuation allowance	69,637	83,428
Net deferred tax asset (liability)	\$ (391,083)	\$ (337,509)

Current and Deferred Taxes

As of December 31, 2022 and 2021, our current federal income tax liability was \$21.4 million and \$19.9 million, respectively, which primarily relates to applying the standards of accounting for uncertainty in income taxes, and is included as a component of other liabilities in our consolidated balance sheets.

We are required to establish a valuation allowance against our deferred tax assets when it is more likely than not that all or some portion of our deferred tax assets will not be realized. At each balance sheet date, we assess our need for a valuation allowance, and this assessment is based on all available evidence, both positive and negative. This requires management to exercise judgment and make assumptions regarding whether our deferred tax assets will be realized in future periods. Certain entities within our consolidated group have generated net deferred tax assets relating primarily to state and local NOL carryforwards which, if unutilized, will expire during various future tax periods. We have determined that certain of these entities may continue to generate taxable losses on a separate company basis in the near term and may not be able to fully utilize certain of their state and local NOLs on their state and local tax returns. Therefore, we have concluded a valuation allowance is required with respect to deferred tax assets relating to these state and local NOLs and other state timing adjustments. As of December 31, 2022 and 2021, this valuation allowance was \$69.6 million and \$83.4 million, respectively. In addition, as of December 31, 2022, we have generated deferred tax assets related to unrealized capital losses, and we consider it more likely than not that these assets will be realized. We will continue to monitor the level of these losses and our overall ability to realize the related deferred tax assets in the coming quarters.

As a mortgage guaranty insurer, we are eligible for a tax deduction, subject to certain limitations, under Internal Revenue Code Section 832(e) for amounts required by state law or regulation to be set aside in statutory contingency reserves. The deduction is allowed only to the extent that, in conjunction with quarterly federal tax payment due dates, we purchase non-interest-bearing U.S. Mortgage Guaranty Tax and Loss Bonds issued by the U.S. Department of the Treasury in an amount equal to the tax benefit derived from deducting any portion of our statutory contingency reserves. As of December 31, 2022 and 2021, we held \$596.4 million and \$354.1 million, respectively, of these bonds, which are included as prepaid federal

income taxes in our consolidated balance sheets. The corresponding deduction of our statutory contingency reserves resulted in the recognition of a net deferred tax liability. See Note 16 for additional information about our U.S. Mortgage Guaranty Tax and Loss Bonds.

On August 16, 2022, the U.S. enacted the Inflation Reduction Act of 2022 (the "IRA"), which, among other things, implemented a 15% minimum tax on book income of certain large corporations, a 1% excise tax on net stock repurchases that occur after December 31, 2022, and several tax incentives to promote clean energy. Currently, we do not believe that this new minimum tax or the other income tax provisions of the IRA will have a material impact on our consolidated financial statements.

Unrecognized Tax Benefits

As of December 31, 2022, we have \$2.8 million of net unrecognized tax benefits, including \$2.1 million of interest and penalties, that would affect the effective tax rate if recognized. Our policy for the recognition of interest and penalties associated with uncertain tax positions is to record such items as a component of our income tax provision, of which \$0.2 million of benefit and \$0.7 million of expense were recorded for the years ended December 31, 2022 and 2021, respectively.

A reconciliation of the beginning and ending gross unrecognized tax benefits is as follows.

Reconciliation of gross unrecognized tax benefits

(In thousands)	Years Ended December 31,	
	2022	2021
Balance at beginning of period	\$ 19,888	\$ 20,249
Tax positions related to the current year:		
Increases	1,791	267
Decreases	—	(858)
Tax positions related to prior years:		
Increases	17,666	230
Decreases	(17)	—
Lapses of applicable statute of limitation	(18,518)	—
Balance at end of period	\$ 20,810	\$ 19,888

Our gross unrecognized tax benefits increased by \$0.9 million from December 31, 2021, to December 31, 2022, primarily due to the impact of unrecognized tax benefits associated with our recognition of certain premium income, partially offset by reductions related to lapses of the statute of limitations. Although unrecognized tax benefits decreased due to statute expirations, certain amounts for premium income recognition continued to impact subsequent years, resulting in a corresponding increase in unrecognized tax benefits related to premium income recognition. Over the next 12 months, our unrecognized tax benefits may decrease by approximately \$0.4 million due to the expiration of the applicable statute of limitations relating to the 2019 tax year. The statute of limitations related to our federal consolidated income tax return remains open for tax years 2019-2022. Additionally, among the entities within our consolidated group, various tax years remain open to potential examination by state and local taxing authorities.

11. Losses and LAE

Our reserve for losses and LAE, at the end of each period indicated, consisted of the following.

Reserve for losses and LAE

(In thousands)	December 31,	
	2022	2021
Primary case	\$ 398,874	\$ 790,380
Primary IBNR and LAE	12,169	22,745
Pool and other	9,912	10,011
Mortgage insurance	420,955	823,136
Title insurance	5,888	5,506
Total reserve for losses and LAE	\$ 426,843	\$ 828,642

For the periods indicated, the following table presents information relating to our mortgage insurance reserve for losses, including our IBNR reserve and LAE.

Rollforward of mortgage insurance reserve for losses

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Balance at beginning of year	\$ 823,136	\$ 844,107	\$ 401,273
Less: Reinsurance recoverable ⁽¹⁾	66,676	71,769	14,594
Balance at beginning of year, net of reinsurance recoverable	756,460	772,338	386,679
Add: Losses and LAE incurred in respect of default notices reported and unreported in:			
Current year ⁽²⁾	160,049	160,565	517,807
Prior years	(499,423)	(141,126)	(34,547)
Total incurred	(339,374)	19,439	483,260
Deduct: Paid claims and LAE related to:			
Current year ⁽²⁾	499	1,112	4,148
Prior years	20,359	34,205	93,453
Total paid	20,858	35,317	97,601
Balance at end of period, net of reinsurance recoverable	396,228	756,460	772,338
Add: reinsurance recoverable ⁽¹⁾	24,727	66,676	71,769
Balance at end of year	\$ 420,955	\$ 823,136	\$ 844,107

(1) Related to ceded losses recoverable, if any, on reinsurance transactions. See Note 8 for additional information.

(2) Related to underlying defaulted loans with a most recent default notice dated in the year indicated. For example, if a loan had defaulted in a prior year, but then subsequently cured and later re-defaulted in the current year, that default would be considered a current year default.

Reserve Activity

Incurred Losses

Total incurred losses are driven by: (i) case reserves established for new default notices, which are primarily impacted by both the number of new primary default notices received in the period and our related gross Default to Claim Rate assumption applied to those new defaults and (ii) reserve developments on prior period defaults, which are primarily impacted by changes to our prior Default to Claim Rate assumptions.

New primary default notices totaled 37,738 for the year ended December 31, 2022, compared to 37,470 for the year ended December 31, 2021, and 108,025 for the year ended December 31, 2020. For the year ended December 31, 2020, the significant number of new primary default notices were substantially all related to defaults of loans subject to forbearance programs implemented in response to the COVID-19 pandemic.

Our gross Default to Claim Rate assumption applied to new defaults was 8.0% as of both December 31, 2022 and 2021, compared to 8.5% as of December 31, 2020. We continue to closely monitor the trends in Cures and claims paid for our default inventory, while also weighing the risks and uncertainties associated with the current economic environment.

Our provision for losses during 2022 and 2021 was positively impacted by favorable reserve development on prior year defaults, primarily as a result of more favorable trends in Cures than originally estimated, due to favorable outcomes resulting from mortgage forbearance programs implemented in response to the COVID-19 pandemic as well as positive trends in home price appreciation. These favorable observed trends resulted in reductions in our Default to Claim Rate assumptions for prior year default notices, particularly for those defaults first reported in 2020 following the start of the COVID-19 pandemic.

Our provision for losses during 2020 was also positively impacted by favorable reserve development on prior year defaults, primarily driven by a reduction in certain Default to Claim Rate assumptions for those prior year defaults based on observed trends.

Default to Claim Rate

Our Default to Claim Rate estimates on defaulted loans are mainly developed based on the Stage of Default and Time in Default of the underlying defaulted loans grouped according to the period in which the default occurred, as measured by the progress toward foreclosure sale and the number of months in default. While our estimates of ultimate losses on defaults from prior years declined in each recent year due to elevated Cures, which reduced our inventory of primary defaults, COVID-19-

related hardship forbearance plans and foreclosure moratoriums resulted in delays in resolving the remaining defaults, leading to an increase in the Default to Claim Rates applied to the remaining inventory in 2021. During 2022, the ongoing favorable trend in Cures led to reductions in our Default to Claim Rate assumptions.

The following table shows our gross Default to Claim Rates on our primary portfolio based on the Time in Default and as of the dates indicated.

Default to Claim Rates

	December 31,		
	2022	2021	2020
Default to Claim Rate on:			
New defaults	8.0 %	8.0 %	8.5 %
Defaults not in Foreclosure Stage			
Time in Default: < 2 years ⁽¹⁾	21.8 %	41.6 %	21.0 %
Time in Default: 2 - 5 years	65.0 %	75.0 %	62.5 %
Time in Default: > 5 years	70.0 %	80.0 %	70.0 %
Foreclosure Stage Defaults	75.0 %	85.0 %	75.0 %

(1) Represents the weighted average Default to Claim Rate for all defaults not in foreclosure stage that have been in default for up to two years, including new defaults. The estimated Default to Claim Rates applied to defaults within this population vary by Time in Default, and range from the Default to Claim Rates on new defaults shown above, up to 55.0%, 80.1% and 55.0% for more aged defaults in this category as of December 31, 2022, 2021 and 2020, respectively.

Our estimate of expected Rescissions and Claim Denials (net of expected Reinstatements) embedded in our estimated net Default to Claim Rate is generally based on our recent experience. Consideration is also given to differences in characteristics between those rescinded policies and denied claims and the loans remaining in our defaulted inventory.

Claims Paid

Total claims paid decreased in 2022 compared to 2021. The decrease in claims paid is primarily attributable to a reduction in payments made to settle certain previously disclosed legal proceedings.

Concentration of Risk

As of December 31, 2022 and 2021, there was no state that accounted for more than 10% of our mortgage insurance business measured by primary RIF. Texas accounted for 12.0% of our direct NIW for the year ended December 31, 2022, while California accounted for 10.9% and 10.4% for the years ended December 31, 2021 and 2020, respectively.

Additional Disclosures

The following tables provide information as of and for the periods indicated about: (i) incurred losses, net of reinsurance; (ii) the total of IBNR liabilities plus expected development on reported claims, included within the net incurred loss amounts; (iii) the cumulative number of reported defaults; and (iv) cumulative paid claims, net of reinsurance. The default year represents the period that a new default notice is first reported to us by loan servicers, related to borrowers who missed two monthly payments.

The information about net incurred losses and paid claims development for the years ended prior to 2022 is presented as supplementary information.

Incurred losses, net of reinsurance

Default Year	Years Ended December 31,										Total of IBNR Liabilities Plus Expected Development on Reported Claims ⁽¹⁾	Cumulative Number of Reported Defaults ⁽²⁾
	Unaudited											
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	As of December 31, 2022	
2013	\$ 505,732	\$ 405,334	\$ 401,444	\$ 404,333	\$ 402,259	\$ 400,243	\$ 399,356	\$ 399,317	\$ 398,820	\$ 397,207	\$ 5	58,577
2014		337,784	247,074	265,891	264,620	260,098	261,507	261,377	260,254	257,773	6	47,976
2015			222,555	198,186	178,042	183,952	183,546	184,066	182,647	180,435	9	42,607
2016				201,016	165,440	149,753	148,811	148,640	148,349	145,267	14	40,503
2017					180,851	151,802	133,357	130,274	126,989	122,407	25	42,888
2018						131,513	116,634	95,534	88,252	75,262	32	37,369
2019							143,475	136,860	109,416	66,466	79	40,985
2020								504,160	408,809	87,213	193	108,025
2021									156,328	72,475	184	37,470
2022										155,908	1,550	37,738
Total										<u>\$1,560,413</u>		

(1) Represents reserves as of December 31, 2022, related to IBNR liabilities.

(2) Represents total number of new primary default notices received in each calendar year as compiled monthly based on reports received from loan servicers. As reflected in our Default to Claim Rate assumptions, a significant portion of reported defaults generally do not result in a claim. In certain instances, a defaulted loan may cure, and then re-default in a later period. Consistent with our reserving practice, each new event of default is treated as a unique occurrence and therefore certain loans that cure and re-default may be included as a reported default in multiple periods.

Cumulative paid claims, net of reinsurance

(In thousands)

Default Year	Years Ended December 31,									
	Unaudited									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013	\$ 34,504	\$ 191,040	\$ 307,361	\$ 357,087	\$ 379,036	\$ 388,688	\$ 392,818	\$ 395,093	\$ 395,292	\$ 395,630
2014		13,108	115,852	200,422	233,607	246,611	252,619	255,742	256,107	255,981
2015			10,479	84,271	142,421	163,916	172,645	174,812	175,874	176,823
2016				11,061	76,616	119,357	134,115	137,306	138,525	139,539
2017					24,653	66,585	99,678	108,484	111,458	112,445
2018						5,584	36,066	54,625	60,926	62,968
2019							4,220	18,703	28,896	35,594
2020								4,148	9,867	14,635
2021									1,112	2,561
2022										498
Total										\$1,196,674
All outstanding liabilities before 2013, net of reinsurance										22,206
Liabilities for claims, net of reinsurance ⁽¹⁾										\$ 385,945

(1) Calculated as follows:

(In thousands)

Incurring losses, net of reinsurance	\$ 1,560,413
All outstanding liabilities before 2013, net of reinsurance	22,206
Cumulative paid claims, net of reinsurance	(1,196,674)
Liabilities for claims, net of reinsurance	\$ 385,945

The following table provides a reconciliation of the net incurred losses and paid claims development tables above to the mortgage insurance reserve for losses and LAE at December 31, 2022.

Net outstanding liabilities - mortgage insurance

(In thousands)

	December 31, 2022
Reserve for losses and LAE, net of reinsurance	\$ 385,945
Reinsurance recoverable on unpaid claims	24,727
Unallocated LAE	10,283
Total gross reserve for losses and LAE ⁽¹⁾	\$ 420,955

(1) Excludes title insurance reserve for losses and LAE of \$5.9 million.

The following is supplementary information about average historical claims duration as of December 31, 2022, representing the average distribution of when claims are paid relative to the year of default.

Average annual percentage payout of incurred losses by age, net of reinsurance (unaudited)

Years	1	2	3	4	5	6	7	8	9	10
Mortgage insurance	6.8%	30.0%	24.5%	10.4%	3.8%	1.5%	0.9%	0.4%	—%	0.1%

12. Borrowings and Financing Activities

The carrying value of our debt at December 31, 2022 and 2021, was as follows.

Borrowings

(\$ in thousands)	Interest rate	December 31,	
		2022	2021
Senior notes			
Senior Notes due 2024	4.500 %	\$ 447,805	\$ 446,631
Senior Notes due 2025	6.625 %	520,305	518,405
Senior Notes due 2027	4.875 %	445,394	444,437
Total senior notes		\$ 1,413,504	\$ 1,409,473

(\$ in thousands)	Average interest rate ⁽¹⁾	December 31,	
		2022	2021
Other Borrowings			
FHLB advances			
FHLB advances due 2022	— %	\$ —	\$ 71,050
FHLB advances due 2023	2.806 %	104,895	52,995
FHLB advances due 2024	2.540 %	32,371 ⁽²⁾	13,954
FHLB advances due 2025	1.590 %	9,984	9,984
FHLB advances due 2027	2.181 %	6,436	3,000
Total FHLB advances		153,686	150,983
Mortgage financing facilities	5.928 %	2,136	—
Total other borrowings		\$ 155,822	\$ 150,983

(1) As of December 31, 2022. See “—FHLB Advances” below for more information.

(2) Includes \$13.4 million of floating-rate advances with a weighted average interest rate of 3.617%, which resets daily based on changes in SOFR.

Senior Notes

Senior Notes due 2024. These notes, which were issued in September 2017, bear interest payable semi-annually on April 1 and October 1 of each year, and mature on October 1, 2024.

Senior Notes due 2025. These notes, which were issued in May 2020, bear interest payable semi-annually on March 15 and September 15 of each year, and mature on March 15, 2025.

Senior Notes due 2027. These notes, which were issued in June 2019, bear interest payable semi-annually on March 15 and September 15 of each year, and mature on March 15, 2027.

Redemption Terms in Senior Notes. We have the option to redeem the Senior Notes due 2024, 2025 and 2027, in whole or in part, at any time, or from time to time, prior to July 1, 2024 (the date that is three months prior to the maturity date of the Senior notes due 2024), September 15, 2024 (the date that is six months prior to the maturity date of the Senior notes due 2025) and September 15, 2026 (the date that is six months prior to the maturity date of the Senior notes due 2027) (in each case, the “Par Call Date”), respectively, at a redemption price equal to the greater of: (i) 100% of the aggregate principal amount of the notes to be redeemed and (ii) the make-whole amount, which is the sum of the present values of the remaining scheduled payments of principal and interest in respect of the notes to be redeemed from the redemption date to the Par Call Date discounted to the redemption date at the applicable treasury rate plus 50 basis points, plus, in each case, accrued and unpaid interest thereon to, but excluding, the redemption date. At any time on or after the Par Call Date, we may, at our option, redeem the notes in whole or in part, at a redemption price equal to 100% of the aggregate principal amount of the notes to be redeemed, plus accrued and unpaid interest thereon to, but excluding, the redemption date.

Covenants in Senior Notes. The indentures governing the Senior Notes due 2024, 2025 and 2027 contain covenants customary for securities of this nature, including covenants related to the payments of the notes, periodic reporting and certificates to be issued and covenants related to amendments to the indentures. Additionally, the indentures include

covenants restricting us from encumbering the capital stock of a designated subsidiary (as defined in the indenture for the notes) or disposing of any capital stock of any designated subsidiary unless either all of the stock is disposed of or we retain more than 80% of the stock. We were in compliance with all covenants as of December 31, 2022.

FHLB Advances

Radian Guaranty is a member of the FHLB. As a member, it may borrow from the FHLB, subject to certain conditions, which include the need to post collateral and the requirement to maintain a minimum investment in FHLB stock, in part depending on the level of its outstanding FHLB advances.

Interest on the FHLB advances is primarily fixed-rate and is payable quarterly, or at maturity if the term of the advance is less than 90 days. Principal is due at maturity. For obligations with maturities greater than or equal to 90 days, we may prepay the debt at any time, subject to paying a prepayment fee.

The principal balance of the FHLB advances is required to be collateralized by eligible assets with a market value that must be maintained generally within a minimum range of 103% to 114% of the amount borrowed, depending on the type of assets pledged. Our fixed-maturities available for sale and trading securities include securities totaling \$163.9 million and \$167.3 million at December 31, 2022 and 2021, respectively, which serve as collateral for our FHLB advances to satisfy this requirement.

Revolving Credit Facility

Radian Group has in place a \$275 million unsecured revolving credit facility with a syndicate of bank lenders. The revolving credit facility matures in December 2026, although under certain conditions Radian Group may need to offer to repay any outstanding amounts and terminate lender commitments earlier than the maturity date. Terms of the credit facility include an accordion feature that allows Radian Group, at its option, to increase the total borrowing capacity during the term of the agreement, subject to our obtaining the necessary increased commitments from lenders (which may include then existing or other lenders), up to a total of \$400 million.

Subject to certain limitations, borrowings under the credit facility may be used for working capital and general corporate purposes, including capital contributions to Radian Group's insurance subsidiaries as well as growth initiatives. The credit facility contains customary representations, warranties, covenants, terms and conditions. Our ability to borrow under the credit facility is conditioned on the satisfaction of certain financial and other covenants, including covenants related to minimum net worth and statutory surplus, a maximum debt-to-capitalization level, limits on certain types of indebtedness and liens, and Radian Guaranty's eligibility as a private mortgage insurer with the GSEs. At December 31, 2022, Radian Group was in compliance with all the covenants and there were no amounts outstanding under this revolving credit facility.

Mortgage Financing Facilities

In July 2022, Radian Mortgage Capital and its wholly owned subsidiary Liberty entered into the Goldman Sachs Master Repurchase Agreement, pursuant to which Liberty may from time to time sell to Goldman Sachs, and later repurchase, certain Participation Interests (as defined in the Goldman Sachs Master Repurchase Agreement) in residential mortgage loan assets. The Goldman Sachs Master Repurchase Agreement will terminate in July 2023, unless extended or terminated earlier.

In September 2022, Radian Mortgage Capital entered into the BMO Master Repurchase Agreement, pursuant to which Radian Mortgage Capital may from time to time sell to BMO, and later repurchase, certain residential mortgage loan assets. The BMO Master Repurchase Agreement will expire in September 2023, unless the agreement is extended or terminated earlier.

Both Master Repurchase Agreements are uncommitted, and Goldman Sachs and BMO are under no obligation to fund the purchase of any residential mortgage loan assets under their respective agreements. In the event Goldman Sachs or BMO advances funds to purchase residential mortgage loan assets, the amount of such advances generally will be calculated as a percentage of the unpaid principal balance or market value of the residential mortgage loan assets, depending on the credit characteristics of the loans being purchased.

The Master Repurchase Agreements contain provisions that provide Goldman Sachs and BMO, respectively, with certain rights in the event of a decline in the market value of the purchased residential mortgage loan assets. Under these provisions, Liberty or Radian Mortgage Capital, as applicable, may be required to transfer cash or additional eligible residential mortgage loan assets with an aggregate market value that is equal to the difference between the value of the residential mortgage loan assets then subject to the applicable Master Repurchase Agreement and a minimum threshold amount.

Radian Group has entered into the Parent Guarantees to guaranty the obligations of certain of its subsidiaries in connection with the Master Repurchase Agreements described above.

Pursuant to the Parent Guarantees, Radian Group is subject to negative and affirmative covenants customary for this type of financing transaction, including, among others, limitations on the incurrence of debt and restrictions on certain transactions with affiliates, payments and investments and various financial covenants that the Company must remain in

compliance with, including those related to: (i) the total adjusted capital of the Company's primary mortgage insurance subsidiary, currently Radian Guaranty; (ii) the Company's minimum consolidated net worth; and (iii) the Company's maximum Debt-to-Total Capitalization Ratio (as defined in the Parent Guarantees). The covenants and financial covenants in the Parent Guarantees are generally consistent with the comparable covenants in the Company's revolving credit facility, including with respect to the payment of dividends on shares of its common stock which are permitted under the revolving credit facility and the Master Repurchase Agreements so long as no default or event of default exists and the Company is in pro forma compliance with the applicable financial covenants on the date a dividend is declared.

As of December 31, 2022, Radian Group was in compliance with all of the Master Repurchase Agreements' covenants, and \$2.1 million in mortgage financing facilities were outstanding and included in other borrowings in our consolidated balance sheets.

13. Commitments and Contingencies

Legal Proceedings

We are routinely involved in a number of legal actions and proceedings, including reviews, audits, inquiries, information-gathering requests and investigations by various regulatory entities, as well as litigation and other disputes arising in the ordinary course of our business.

We also are periodically subject to reviews and audits, as well as inquiries, information-gathering requests and investigations, by various regulatory entities. In connection with these matters, from time to time we receive requests and subpoenas seeking information and documents related to aspects of our business. Our Master Policies establish the timeline within which any suit or action arising from any right of an insured under the policy generally must be commenced. In general, any suit or action arising from any right of an insured under the policy must be commenced within two years after such right first arose for primary insurance and within three years for certain other policies, including certain Pool Mortgage Insurance policies. Although we believe that our Loss Mitigation Activities are justified under our policies, from time to time we face challenges from certain lender and servicer customers regarding our Loss Mitigation Activities. These challenges could result in additional arbitration or judicial proceedings and we may need to reassume the risk on, and increase loss reserves for, the associated policies or pay additional claims.

In the course of our regular review of pending legal actions and proceedings, we determine whether it is reasonably possible that a potential loss may have a material impact on our liquidity, results of operations or financial condition. If we determine such a loss is reasonably possible, we disclose information relating to such potential loss, including an estimate or range of loss or a statement that such an estimate cannot be made. On a quarterly basis, we review relevant information with respect to loss contingencies and update our accruals, disclosures and estimates of reasonably possible losses or range of losses based on such reviews. We are often unable to estimate the possible loss or range of loss until developments in such matters have provided sufficient information to support an assessment of the range of possible loss, such as quantification of a damage demand from plaintiffs, discovery from other parties and investigation of factual allegations, rulings by the court on motions or appeals, analysis by experts and the progress of settlement negotiations. In addition, we generally make no disclosures for loss contingencies that are determined to be remote. For matters for which we disclose an estimated loss, the disclosed estimate reflects the reasonably possible loss or range of loss in excess of the amount accrued, if any.

Management believes, based on current knowledge and after consultation with counsel, that the outcome of currently pending or threatened actions will not have a material adverse effect on our consolidated financial condition. The outcome of legal actions and proceedings is inherently uncertain, and it is possible that any one or more matters could have an adverse effect on our liquidity, financial condition or results of operations for any particular period. In accordance with applicable accounting standards and guidance, we establish accruals only when we determine both that it is probable that a loss has been incurred and the amount of the loss is reasonably estimable. We accrue the amount that represents our best estimate of the probable loss; however, if we can only determine a range of estimated losses, we accrue an amount within the range that, in our judgment, reflects the most likely outcome, and if none of the estimates within the range is more likely, we accrue the minimum amount of the range.

Legal actions and proceedings could result in adverse judgments, settlements, fines, injunctions, restitutions or other relief that could require significant expenditures or have other effects on our business in excess of amounts we have established as reserves for such matters. Loss estimates are inherently subjective, based on currently available information and are subject to management's judgment and various assumptions. Due to the inherently subjective nature of these estimates and the uncertainty and unpredictability surrounding the outcome of legal and other proceedings, actual results may differ materially from any amounts that have been accrued.

Lease Liability

Our lease liability represents the present value of future lease payments over the lease term. Our leases do not provide a readily determinable implicit rate. Therefore, we must estimate our incremental borrowing rate, on a collateralized basis, to

discount the lease payments based on information available at lease commencement. Our leases expire periodically through August 2032 and contain provisions for scheduled periodic rent increases. We estimate the incremental borrowing rate based on the yields of Radian Group corporate bonds, as adjusted to reflect a collateralized borrowing rate, resulting in discount rates ranging from 4.8% to 7.5%. While the majority of our lease population expires within one year of one of Radian Group's corporate bonds, our more significant leases do not. For those leases, we adjust the corporate bond rate for both U.S. Department of the Treasury rate yields, and a corporate spread adjustment determined from recent market data.

The following tables provide additional information related to our leases, including: (i) the components of our total lease cost; (ii) the cash flows arising from our lease transactions; (iii) supplemental balance sheet information; (iv) the weighted-average remaining lease term; (v) the weighted-average discount rate used for our leases; and (vi) the remaining maturities of our lease liabilities, as of and for the periods indicated.

Total lease cost

(In thousands)	Years Ended December 31,	
	2022	2021
Operating lease cost	\$ 10,633	\$ 9,333
Short-term lease cost	220	384
Total lease cost	\$ 10,853	\$ 9,717
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from operating leases	\$ (12,520)	\$ (9,060)

Operating leases

(\$ in thousands)	December 31,	
	2022	2021
Operating leases		
Operating lease right-of-use assets ⁽¹⁾	\$ 21,099	\$ 31,878
Operating lease liabilities ⁽²⁾	49,386	53,523
Weighted-average remaining lease term - operating leases (in years)	7.5 years	7.9 years
Weighted-average discount rate - operating leases	6.9 %	6.2 %
Remaining maturities of lease liabilities for future years is as follows:		
2023	\$ 13,050	
2024	12,832	
2025	10,606	
2026	8,147	
2027	7,233	
2028 and thereafter	29,361	
Total lease payments	81,229	
Less: Imputed interest	(31,843)	
Present value of lease liabilities ⁽²⁾	\$ 49,386	

(1) Classified in other assets in our consolidated balance sheets. See Note 9.

(2) Classified in other liabilities in our consolidated balance sheets.

We entered into a sublease agreement in January 2022, for which we expect sublease receipts to begin in 2023, for a portion of the office space in our former corporate headquarters in Philadelphia and are actively marketing all remaining space in that location for sublease. Upon entering a sublease agreement, we do not anticipate being relieved of our primary obligation under the original lease and will act as a lessor recognizing any sublease income on a straight-line basis over the remaining lease term as an offset to other operating expenses.

Other

We provide contract underwriting to our mortgage insurance customers, pursuant to which we offer limited indemnification remedies. In 2022 and 2021, our provision for contract underwriting expenses and our payments for losses

related to contract underwriting remedies were de minimis. We monitor this risk and negotiate our underwriting fee structure and recourse agreements on a client-by-client basis. We also routinely audit the performance of our contract underwriters.

14. Capital Stock

Shares of Common Stock

The following table shows the changes in common stock outstanding for 2022, 2021 and 2020.

Common stock outstanding

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Balance at beginning of year	175,421	191,606	201,164
Shares repurchased under share repurchase programs	(19,506)	(17,752)	(11,036)
Issuance of common stock under incentive and benefit plans, net of shares withheld for employee taxes	1,141	1,567	1,478
Balance at end of year	157,056	175,421	191,606

Share Repurchase Activity

From time to time, Radian Group's board of directors approves share repurchase programs authorizing the Company to repurchase Radian Group common stock in the open market or in privately negotiated transactions, based on market and business conditions, stock price and other factors. Radian generally operates its share repurchase programs pursuant to a trading plan under Rule 10b5-1 of the Exchange Act, which permits the Company to purchase shares, at predetermined price targets, when it may otherwise be precluded from doing so.

In February 2022, Radian Group's board of directors approved a share repurchase program authorizing the Company to spend up to \$400 million, excluding commissions, to repurchase Radian Group common stock in the open market or in privately negotiated transactions, based on market and business conditions, stock price and other factors. The authorization was originally set to expire in February 2024. During the year ended December 31, 2022, the Company purchased 19.5 million shares at an average price of \$20.52 per share, including commissions, completing this repurchase program. As of December 31, 2022, no purchase authority remained available under this share repurchase program.

In January 2023, Radian Group's board of directors approved a share repurchase program authorizing the Company to spend up to \$300 million, excluding commissions, to repurchase Radian Group common stock in the open market or in privately negotiated transactions, based on market and business conditions, stock price and other factors. Radian plans to utilize a trading plan under Rule 10b5-1 of the Exchange Act, which, once implemented, permits the Company to purchase shares, at predetermined price targets, when it may otherwise be precluded from doing so. The authorization will expire in January 2025.

Other Purchases

We may purchase shares on the open market to settle stock options exercised by employees. In addition, upon the vesting of certain RSUs under our equity compensation plans, we may withhold from such vested awards shares of our common stock to satisfy the tax liability of the award recipients.

Dividends and Dividend Equivalents

We declared quarterly cash dividends on our common stock equal to \$0.125 per share during each quarter of 2020 and the first quarter of 2021 and declared quarterly cash dividends on our common stock equal to \$0.14 per share for the remaining quarters of 2021. In February 2022, Radian Group's board of directors authorized an increase to the Company's quarterly dividend from \$0.14 to \$0.20 per share, beginning with the dividend declared in the first quarter of 2022. In February 2023, Radian Group's board of directors authorized an increase in the Company's quarterly dividend from \$0.20 to \$0.225 per share for the first quarter of 2023.

Dividend equivalents are accrued on RSUs when dividends are declared on the Company's common stock, subject to certain exclusions. See Note 17 for information about our dividend equivalents on RSU awards.

15. Accumulated Other Comprehensive Income (Loss)

The following tables show the rollforward of accumulated other comprehensive income (loss) as of the periods indicated.

Rollforward of accumulated other comprehensive income (loss)

(In thousands)	Year Ended December 31, 2022		
	Before Tax	Tax Effect	Net of Tax
Balance at beginning of period	\$ 152,016	\$ 31,923	\$ 120,093
Other comprehensive income (loss)			
Unrealized holding gains (losses) on investments arising during the period for which an allowance for expected credit losses has not been recognized	(740,324)	(155,468)	(584,856)
Less: Reclassification adjustment for net gains (losses) on investments included in net income ⁽¹⁾			
Net realized gains (losses) on disposals and non-credit related impairment losses	(9,974)	(2,094)	(7,880)
Net unrealized gains (losses) on investments	(730,350)	(153,374)	(576,976)
Other adjustments to comprehensive income, net	106	22	84
Other comprehensive income (loss)	(730,244)	(153,352)	(576,892)
Balance at end of period	\$ (578,228)	\$ (121,429)	\$ (456,799)
	Year Ended December 31, 2021		
	Before Tax	Tax Effect	Net of Tax
(In thousands)			
Balance at beginning of period	\$ 333,829	\$ 70,104	\$ 263,725
Other comprehensive income (loss)			
Unrealized holding gains (losses) on investments arising during the period for which an allowance for expected credit losses has not been recognized	(175,234)	(36,799)	(138,435)
Less: Reclassification adjustment for net gains (losses) included in net income ⁽¹⁾			
Net realized gains (losses) on disposals and non-credit related impairment losses	5,661	1,189	4,472
Net decrease (increase) in expected credit losses	918	193	725
Net unrealized gains on investments	(181,813)	(38,181)	(143,632)
Other comprehensive income (loss)	(181,813)	(38,181)	(143,632)
Balance at end of period	\$ 152,016	\$ 31,923	\$ 120,093

Rollforward of accumulated other comprehensive income (loss)

(In thousands)	Year Ended December 31, 2020		
	Before Tax	Tax Effect	Net of Tax
Balance at beginning of period	\$ 139,858	\$ 29,370	\$ 110,488
Other comprehensive income (loss)			
Unrealized holding gains (losses) on investments arising during the period for which an allowance for expected credit losses has not been recognized	226,280	47,519	178,761
Less: Reclassification adjustment for net gains (losses) included in net income ⁽¹⁾			
Net realized gains (losses) on disposals and non-credit related impairment losses	33,468	7,028	26,440
Net decrease (increase) in expected credit losses	(1,254)	(263)	(991)
Net unrealized gains on investments	194,066	40,754	153,312
Other adjustments to comprehensive income, net	(95)	(20)	(75)
Other comprehensive income (loss)	193,971	40,734	153,237
Balance at end of period	\$ 333,829	\$ 70,104	\$ 263,725

(1) Included in net gains (losses) on investments and other financial instruments in our consolidated statements of operations.

16. Statutory Information

Radian Group serves as the holding company for our insurance subsidiaries, through which we conduct our mortgage insurance and title insurance businesses. These insurance subsidiaries are subject to comprehensive, detailed regulation by the insurance departments in the various states where our insurance subsidiaries are domiciled or licensed to transact business. Insurance laws vary from state to state, but generally grant broad supervisory powers to state agencies or officials to examine insurance companies and enforce rules or exercise discretion affecting almost every significant aspect of the insurance business, including the power to revoke or restrict an insurance company's ability to write new business.

All of our mortgage insurance subsidiaries are domiciled in Pennsylvania and, following the series of capital actions in the fourth quarter of 2022 as described below, we currently write new mortgage insurance business using only one principal subsidiary, Radian Guaranty. Radian Guaranty is authorized as a monoline insurer to write mortgage guaranty insurance (or in states where there is no specific authorization for mortgage guaranty insurance, the applicable line of insurance under which mortgage guaranty insurance is regulated) in all 50 states, the District of Columbia and Guam.

As part of our title services, we offer title insurance through Radian Title Insurance, which is domiciled in Ohio and licensed to issue title insurance policies in 41 states and the District of Columbia.

In addition to complying with state insurance regulations, in order to be eligible to insure loans purchased by the GSEs, mortgage insurers such as Radian Guaranty must meet the GSEs' eligibility requirements, or PMIERS. The PMIERS are comprehensive, covering virtually all aspects of the business and operations of a private mortgage insurer, including internal risk management and quality controls, the relationship between the GSEs and the approved insurer, as well as the approved insurer's financial condition. See "—PMIERS" below for additional information.

The PMIERS and state insurance regulations include various capital requirements and dividend restrictions based on our insurance subsidiaries' statutory financial position and results of operations, as described below. Our failure to maintain adequate levels of capital could lead to intervention by the various insurance regulatory authorities, which could materially and adversely affect our business, business prospects and financial condition.

Recent Capital Actions

As part of our ongoing efforts to enhance financial flexibility and improve operational efficiency, we completed the following series of capital actions during the fourth quarter of 2022 affecting our mortgage insurance subsidiaries:

- Effective December 1, 2022, Radian Reinsurance completed the novation to an unrelated third-party insurer of its entire insured portfolio of credit risk transfer transactions with the GSEs. Under the terms of the novation agreements, which were approved by the GSEs, the third-party insurer assumed all rights, interests, liabilities and obligations under the credit risk transfer transactions originally insured by Radian Reinsurance, which totaled \$276 million of risk in force as of September 30, 2022.

- Following the novation of Radian Reinsurance’s entire insured portfolio, Radian Group completed the merger of Radian Reinsurance into Radian Guaranty, effective December 28, 2022. As of September 30, 2022, Radian Reinsurance had statutory admitted assets of \$325 million that were merged into Radian Guaranty effective for the fourth quarter of 2022.
- Following completion of the merger of Radian Reinsurance into Radian Guaranty, the Pennsylvania Insurance Department approved a \$282 million return of capital from Radian Guaranty to Radian Group, which was paid from Radian Guaranty’s gross paid in and contributed statutory surplus on December 30, 2022. In addition, the Pennsylvania Insurance Department also approved the early repayment from Radian Guaranty to Radian Group of the Surplus Note due 2027, which was also repaid on December 30, 2022.

See “—Statutory Dividend Restrictions” below for further discussion of the impact these actions had on Radian Guaranty’s ability to pay ordinary dividends.

Statutory Financial Statements

We prepare our statutory financial statements in accordance with the accounting practices required or permitted, if applicable, by the insurance departments of the respective states of domicile of our insurance subsidiaries. Required SAP are established by the NAIC, as well as state laws, regulations and general administrative rules. In addition, insurance departments have the right to permit other specific practices that may deviate from prescribed practices. As of December 31, 2022, we did not have any prescribed or permitted SAP that resulted in reported statutory surplus or risk-based capital being materially different from what would have been reported had NAIC statutory accounting practices been followed.

Reflecting the principal differences between SAP and GAAP, statutory financial statements typically do not include unrealized gains or losses on fixed-maturity securities, deferred policy acquisition costs, certain net deferred tax assets and certain other less readily marketable assets that are designated as non-admitted assets. In addition to these general differences, SAP also requires that mortgage insurance companies establish a special contingency reserve equal to 50% of premiums earned in each year, generally to be maintained for 10 years, to protect policyholders against loss during adverse economic cycles.

As a result of the requirement to establish and maintain this statutory liability, contingency reserves affect the ability of a mortgage insurer to pay dividends, as described below. With regulatory approval, a mortgage insurance company may make early withdrawals from this contingency reserve when incurred losses exceed 35% of net premiums in a calendar year. Radian Guaranty did not release any amounts from its contingency reserves in 2022 or 2021. Based on the typical 10-year holding requirement, Radian Guaranty is scheduled to release contingency reserves to unassigned surplus in material amounts beginning in 2024. See “—Statutory Dividend Restrictions” below for additional information.

As a mortgage guaranty insurer, we are eligible for a tax deduction, subject to certain limitations, related to amounts required to be set aside in statutory contingency reserves to the extent we purchase U.S. Mortgage Guaranty Tax and Loss Bonds issued by the U.S. Department of the Treasury. Under SAP, this deduction reduces the tax provision reflected in the statutory financial statements, which in turn increases statutory net income and surplus as well as Available Assets under the PMIERS. As of December 31, 2022, Radian Guaranty held \$596.4 million of these bonds, which have a 10-year original maturity but may generally be redeemed in any tax year prior to maturity.

Our insurance subsidiaries’ statutory net income and statutory policyholders’ surplus for the years ended and as of December 31, 2022, 2021 and 2020, were as follows.

Statutory net income

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Radian Guaranty ⁽¹⁾	\$ 1,091,946	\$ 762,609	\$ 474,431
Other mortgage subsidiaries	1,957	1,669	1,086
Radian Title Insurance	2,589	6,862	2,126

Statutory policyholders’ surplus ⁽²⁾

(In thousands)	December 31,		
	2022	2021	2020
Radian Guaranty ⁽¹⁾	\$ 758,467	\$ 1,105,266	\$ 842,188
Other mortgage subsidiaries	17,086	14,524	41,327 ⁽³⁾
Radian Title Insurance	39,285	36,599	28,849

(1) The amounts for 2021 and 2020 have been updated to reflect the merger of Radian Reinsurance into Radian Guaranty. See “—Recent Capital Actions” above.

- (2) See the “Surplus additions (distributions)” table under “—Statutory Dividend Restrictions” below for additional information on certain changes impacting policyholders’ surplus.
- (3) Includes the surplus for two previous insurance subsidiaries, Radian Mortgage Guaranty Inc. and Radian Investor Surety Inc., which were dissolved in 2021.

Statutory Capital Requirements

Under state insurance regulations, Radian Guaranty is required to maintain minimum surplus levels and, in certain states, a maximum ratio of net RIF relative to statutory capital, or Risk-to-capital. There are 16 RBC States that currently impose a Statutory RBC Requirement. The most common Statutory RBC Requirement is that a mortgage insurer’s Risk-to-capital may not exceed 25 to 1. In certain of the RBC States, a mortgage insurer must satisfy an MPP Requirement. Unless an RBC State grants a waiver or other form of relief, if a mortgage insurer, such as Radian Guaranty, is not in compliance with the Statutory RBC Requirement of that state, the mortgage insurer may be prohibited from writing new mortgage insurance business in that state.

The statutory capital requirements for the non-RBC States are de minimis (ranging from \$1 million to \$5 million); however, the insurance laws of these states generally grant broad supervisory powers to state agencies or officials to enforce rules or exercise discretion affecting almost every significant aspect of the insurance business, including the power to revoke or restrict an insurance company’s ability to write new business. Radian Guaranty’s domiciliary state, Pennsylvania, is not one of the RBC States.

Radian Guaranty was in compliance with all applicable Statutory RBC Requirements and MPP Requirements in each of the RBC States as of December 31, 2022. Radian Guaranty’s Risk-to-capital was 10.7:1 and 11.1:1 as of December 31, 2022 and 2021, respectively. For purposes of the Risk-to-capital requirements imposed by certain states, statutory capital is defined as the sum of statutory policyholders’ surplus plus statutory contingency reserves.

Our other mortgage insurance and title insurance subsidiaries were also in compliance with all statutory and counterparty capital requirements as of December 31, 2022 and 2021.

For many years, the NAIC has been considering changes to the Model Act and has been reviewing the minimum capital and surplus requirements for mortgage insurers. In 2021, the NAIC developed a new, legally non-binding capital monitoring framework that regulators could use as an alternative for assessing the capital adequacy of a mortgage insurer and added a new mortgage guaranty supplemental filing for companies to annually report related information. This monitoring framework, which is separate from the Model Act, is intended to be reactive to, among other things, changes in the economic and housing environment, including changes in home prices and incomes. In October 2022, the NAIC publicly released a new exposure draft of a revised Model Act (the “2022 Exposure Draft”) for comment. With respect to minimum capital and surplus requirements for mortgage insurers, the 2022 Exposure Draft largely preserves the same requirements as exist in the current Model Act. The outcome of the new Model Act process remains subject to change, and therefore, the potential impact on the Company cannot be determined and, among other things, will depend on whether the NAIC adopts final changes to the Model Act and which states, if any, ultimately adopt the new Model Act.

PMIERS

The PMIERS financial requirements require that a mortgage insurer’s Available Assets meet or exceed its Minimum Required Assets. At December 31, 2022, Radian Guaranty is an approved mortgage insurer under the PMIERS and is in compliance with the current PMIERS financial requirements.

The GSEs may amend the PMIERS at any time, and they have broad discretion to interpret the requirements, which could impact the calculation of Radian Guaranty’s Available Assets and/or Minimum Required Assets. In addition, the GSEs have a broad range of consent rights under the PMIERS and require private mortgage insurers to obtain the prior consent of the GSEs before taking certain actions. If Radian Guaranty is unable to satisfy the requirements set forth in the PMIERS, the GSEs could restrict it from conducting certain types of business with them or take actions that may include not purchasing loans insured by Radian Guaranty.

Statutory Dividend Restrictions

As of December 31, 2022, the amount of restricted net assets held by our consolidated insurance subsidiaries (which represents our equity investment in those insurance subsidiaries) totaled \$4.3 billion of our consolidated net assets. Despite holding assets above the minimum statutory capital thresholds and PMIERS financial requirements, the ability of Radian’s mortgage insurance subsidiaries to pay dividends on their common stock has been restricted by certain provisions of the insurance laws of Pennsylvania, their state of domicile.

Under Pennsylvania’s insurance laws, ordinary dividends and distributions may only be paid out of an insurer’s positive unassigned surplus unless the Pennsylvania Insurance Department approves the payment of extraordinary dividends or other distributions from another source. Prior to the beneficial impact to unassigned surplus from the merger with Radian Reinsurance discussed above, Radian Guaranty had negative unassigned surplus of \$562.8 million as of December 31, 2021.

In light of Radian Guaranty's negative unassigned surplus position in recent years, any distributions to Radian Group required the prior approval of the Pennsylvania Insurance Department. Radian Guaranty sought and received such approval during 2022 to return capital by paying Extraordinary Distributions to Radian Group, including a \$500 million distribution in February 2022 and a \$282 million distribution in December 2022, which were paid in cash and marketable securities in the form of returns of paid-in capital.

While all proposed dividends and distributions to stockholders must be filed with the Pennsylvania Insurance Department prior to payment, if a Pennsylvania domiciled insurer has positive unassigned surplus, such insurer can pay dividends or other distributions during any 12-month period in an aggregate amount less than or equal to the greater of: (i) 10% of the preceding year-end statutory policyholders' surplus or (ii) the preceding year's statutory net income, in each case without the prior approval of the Pennsylvania Insurance Department. Aided by the positive impacts of the merger with Radian Reinsurance in December 2022, Radian Guaranty had positive unassigned surplus of \$258.5 million as of December 31, 2022. As a result, Radian Guaranty now has the ability to pay ordinary dividends beginning in the first quarter of 2023.

As of December 31, 2022 and 2021, Radian Guaranty had contingency reserves of \$4.4 billion and \$3.9 billion, respectively. As discussed above, absent early releases related to elevated incurred losses, Radian Guaranty is scheduled to release contingency reserves to unassigned surplus in material amounts beginning in 2024, which should enhance Radian Guaranty's ability to maintain a positive unassigned surplus position and to continue to pay ordinary dividends to Radian Group in future periods.

The surplus additions (distributions) between Radian Group and Radian Guaranty and our other insurance subsidiaries for the years ended December 31, 2022, 2021 and 2020, were as follows.

Surplus additions (distributions)

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Additions to Radian Guaranty surplus	\$ —	\$ —	\$ 200,000
Distributions from Radian Guaranty surplus ⁽¹⁾	(881,979)	—	—
Additions to other insurance subsidiaries' surplus	—	250	—
Distributions from other insurance subsidiaries' surplus ⁽²⁾	(32,500)	(40,000)	(465,000)

(1) Consists of \$782 million in returns of capital and a \$100 million repayment of the Surplus Note due 2027.

(2) These distributions were from Radian Reinsurance prior to its merger with Radian Guaranty.

17. Share-Based Compensation and Other Benefit Programs

In May 2021, our stockholders approved the 2021 Equity Plan. The terms of the 2021 Equity Plan apply to awards granted on or after May 12, 2021, the effective date of the plan (the "Effective Date"). In addition to the 2021 Equity Plan, we also have awards outstanding under the 1995 Equity Plan, the 2008 Equity Plan and the 2017 Equity Plan (collectively, the "Prior Equity Plans"). The last awards granted pursuant to the 2008 and 1995 Equity Plans were granted in 2014 and 2008, respectively.

The 2021 Equity Plan authorizes the issuance of up to 8.3 million new shares of our common stock, plus: (i) any shares of our common stock that remained available for awards under the 2017 Equity Plan as of the Effective Date and (ii) any shares of our common stock subject to outstanding awards under the Prior Equity Plans as of the Effective Date that are payable in shares and that terminate, expire, or are canceled without having been exercised, vested, or settled in full (as applicable) on or after the Effective Date, subject to certain adjustments set forth in the 2021 Equity Plan ("Prior Plans Shares"). There were 8.1 million shares available for grant under the 2021 Equity Plan, including Prior Plans Shares, as of December 31, 2022.

Outstanding awards granted under the Equity Plans include both performance-based and time-based RSUs, non-qualified stock options and phantom stock. The maximum contractual term for stock options and similar instruments under the Equity Plans is 10 years, although awards of these instruments may be granted with shorter terms. All new awards under the 2021 Equity Plan have been granted in the form of performance-based and time-based RSUs.

Most awards vest at the end of the performance or service period and will vest earlier under certain circumstances. In the event of a grantee's death or disability, awards generally vest immediately. Upon retirement, if certain conditions are met, awards generally vest immediately or at the end of the performance period, if any. Certain time-based RSU awards granted to officers under our 2021 Equity Plan and 2017 Equity Plan will vest in whole or in part in the event the grantee's employment is terminated by us without cause or for "good reason." Awards granted to officers will vest in connection with a change of control only in the event the grantee's employment is terminated by us without cause or the grantee terminates employment for "good reason," in each case within 90 days before or one year after the change of control. Awards to our non-employee directors will vest in connection with a change of control only in the event the grantee fails to be appointed to the board of directors of the

surviving entity or is not nominated for reelection, or fails to be reelected after nomination, to the board of directors of the Company or the surviving entity.

The following table summarizes the compensation cost recognized and additional information regarding all share-based awards for the years indicated.

Share-based compensation expense

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Compensation cost recognized ⁽¹⁾			
RSUs	\$ 37,465	\$ 27,803	\$ 18,403
ESPP and other	596	560	790
Total compensation cost recognized	38,061	28,363	19,193
Income tax benefit related to share-based compensation expense	7,524	7,168	4,264
Share-based compensation expense, net	\$ 30,537	\$ 21,195	\$ 14,929

(1) Compensation cost is generally recognized over the periods that an employee provides service in exchange for the award. For purposes of calculating compensation cost recognized for retirement eligible grantees, we consider the service condition to be met (and recognize the full compensation costs) as of the date when a grantee becomes retirement eligible.

As of December 31, 2022, unrecognized compensation expense for all of our outstanding share-based awards was \$31.7 million. Absent a change of control under the Equity Plans, this expense is expected to be recognized over a weighted-average period of approximately 1.7 years. The ultimate unrecognized expense associated with our outstanding awards could differ, depending upon whether or not the performance and service conditions are met.

RSUs

Information with regard to RSUs to be settled in stock for the periods indicated is as follows.

Rollforward of RSUs

	Performance-Based		Time-Vested	
	Number of Shares	Weighted-Average Grant Date Fair Value	Number of Shares	Weighted-Average Grant Date Fair Value
Outstanding, December 31, 2021 ⁽¹⁾	2,340,673	\$ 16.76	1,808,551	\$ 15.51
Granted ⁽²⁾	643,740	20.09	612,099	20.61
Performance adjustment ⁽³⁾	197,534	—	—	—
Vested ⁽⁴⁾	(796,479)	18.35	(503,231)	19.47
Forfeited	(23,067)	20.08	(25,619)	18.77
Outstanding, December 31, 2022 ⁽¹⁾	2,362,401	\$ 17.59	1,891,800	\$ 16.06

- (1) Outstanding RSUs represent shares that have not yet been issued because not all conditions necessary to earn the right to benefit from the instruments have been satisfied. For performance-based awards, the final number of RSUs distributed depends on the cumulative growth in Radian's book value over the respective three-year performance period and, with the exception of certain retirement-eligible employees, continued service through the vesting date, which could result in changes in the number of vested RSUs.
- (2) For performance-based RSUs, amount represents the number of target shares at grant date.
- (3) For performance-based RSUs, represents the difference between the number of target shares at grant date and the number of shares vested at settlement, which can range from 0 to 200% of target depending on results over the applicable performance periods.
- (4) Represents amounts vested during the year, including the impact of performance adjustments for performance-based awards.

The weighted-average grant date fair value of performance-based RSUs granted during 2021 and 2020 was \$20.39 and \$11.91, respectively. The weighted-average grant date fair value of time-vested RSUs granted during 2021 and 2020 was \$21.71 and \$13.49, respectively.

The fair value as of the respective vesting dates of performance-based RSUs vested during 2022, 2021 and 2020 was \$16.9 million, \$18.9 million and \$17.2 million, respectively. The fair value as of the respective vesting dates of time-vested RSUs vested during 2022, 2021 and 2020 was \$10.6 million, \$18.1 million and \$7.6 million, respectively.

Dividend equivalents are accrued on all awards when dividends are declared on the Company's common stock and will generally be paid in cash when the awards are settled.

Performance-Based RSUs. In 2022, 2021 and 2020, the vesting of the performance-based RSUs will be based upon the cumulative growth in Radian's book value per share, adjusted for certain defined items, over a three-year performance period. The payout at the end of the three-year performance period can range from 0% to a maximum payout of 200% of the award's target number of RSUs granted. Performance-based RSUs granted to executive officers are subject to a one-year post vesting holding period.

The grant date fair value of the performance-based RSUs that are based on the cumulative growth in Radian's book value per share is calculated based on the stock price as of the grant date, discounted for executive officers to account for the one-year-post-vesting holding period.

Time-Vested RSUs. With the exception of certain time-vested RSUs granted in 2022, 2021 and 2020 to non-employee directors, the time-vested RSU awards granted in 2022, 2021 and 2020 are scheduled to vest in: (i) pro rata installments on each of the first three anniversaries of the grant date or (ii) generally at the end of three years. Certain time-vested RSU awards granted in 2022, 2021 and 2020 to non-employee directors generally are subject to one-year cliff vesting; however, awards granted to non-employee directors prior to 2020 remain outstanding and the shares are not issued until the non-employee director retires or certain conditions related to a change in control are met, as described above.

Non-Qualified Stock Options

Information with regard to stock options for the periods indicated is as follows.

Rollforward of non-qualified stock options

(\$ in thousands, except per-share amounts)	Number of Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value ⁽¹⁾
Outstanding, December 31, 2021	563,906	\$ 12.21		
Granted	—	—		
Exercised	(192,501)	7.24		
Forfeited	—	—		
Expired	—	—		
Outstanding, December 31, 2022	371,405	\$ 14.78	2.1 years	\$ 1,593
Exercisable, December 31, 2022	371,405	\$ 14.78	2.1 years	\$ 1,593

(1) Based on the market price of \$19.07 at December 31, 2022.

The following table summarizes additional information concerning stock option activity for the periods indicated.

Additional information

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Aggregate intrinsic value of options exercised	\$ 2,926	\$ 3,354	\$ 3,344
Tax benefit of options exercised	614	704	702
Cash received from options exercised	1,341	1,382	1,553

Upon the exercise of stock options, we generally issue shares from the authorized, unissued share reserves when the exercise price is less than the treasury stock repurchase price and from treasury stock when the exercise price is greater than the treasury stock repurchase price.

Generally, the stock option awards have a four-year vesting period, with 50% of the award vesting on or after the third anniversary of the grant date and the remaining 50% of the award vesting on or after the fourth anniversary of the grant date, provided the applicable stock price performance hurdle is met. There have been no stock options granted since 2016.

Employee Stock Purchase Plan

The ESPP is designed to allow eligible employees to purchase shares of our common stock at a discount of 15% off the lower of the fair market value of our common stock at the beginning or end of a six-month offering period (each period being the first and second six months in a calendar year).

Under this plan, we issued approximately 100 thousand shares to employees during each of the years ended December 31, 2022, 2021 and 2020. As of February 2023, approximately 1.5 million shares remain available for issuance under the ESPP.

Benefit Plans

The Radian Group Inc. Savings Incentive Plan (“Savings Plan”) covers substantially all of our full-time and our part-time employees. Participants can contribute up to 100% of their eligible earnings as pretax and/or after-tax (“Roth IRA”) contributions up to a maximum Internal Revenue Service annual limit, which was \$20,500 for 2022. The Savings Plan also includes the catch-up contribution provision whereby participants who are or will be age 50 and above during the Savings Plan year may contribute an additional contribution. The maximum catch-up contribution for the Savings Plan in 2022 was \$6,500. We match up to 100% of the first 6.0% of eligible compensation contributed in any given year. Our expense for matching funds for the years ended December 31, 2022, 2021 and 2020, was \$9.7 million, \$7.8 million and \$7.8 million, respectively.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

We maintain disclosure controls and procedures designed to provide reasonable assurance that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Principal Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management, including our Chief Executive Officer and Principal Financial Officer, conducted an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of December 31, 2022, pursuant to Rule 15d-15(b) under the Exchange Act. Management necessarily applied its judgment in assessing the costs and benefits of such controls and procedures, which by their nature, can provide only reasonable assurance regarding management’s control objectives. Management does not expect that our disclosure controls and procedures will prevent or detect all errors and fraud. A control system, irrespective of how well it is designed and operated, can only provide reasonable assurance and cannot guarantee that it will succeed in its stated objectives.

Based upon that evaluation, our Chief Executive Officer and Principal Financial Officer concluded that, as of December 31, 2022, our disclosure controls and procedures were effective to provide reasonable assurance that the information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. Our internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect our transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP and that our receipts and expenditures are being made only in accordance with authorizations of our management and our directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management, with the participation of our Chief Executive Officer and Principal Financial Officer, assessed the effectiveness of our internal control over financial reporting, as of December 31, 2022, using the criteria described in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the updated internal control framework in *Internal Control-Integrated Framework (2013)*, management concluded that our internal control over financial reporting was effective as of December 31, 2022. The effectiveness of our internal control over financial reporting as of December 31, 2022, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report appearing in Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There was no change in the internal control over financial reporting that occurred during the quarter ended December 31, 2022, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is incorporated by reference to, and will be contained in, our definitive proxy statement, which will be filed within 120 days after December 31, 2022. Accordingly, we have omitted the information from this Item pursuant to General Instruction G (3) of Form 10-K.

Item 11. Executive Compensation

The information required by this Item is incorporated by reference to, and will be contained in, our definitive proxy statement, which will be filed within 120 days after December 31, 2022. Accordingly, we have omitted the information from this Item pursuant to General Instruction G (3) of Form 10-K.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is incorporated by reference to, and will be contained in, our definitive proxy statement, which will be filed within 120 days after December 31, 2022. Accordingly, we have omitted the information from this Item pursuant to General Instruction G (3) of Form 10-K.

Equity Compensation Plans

The following table sets forth certain information relating to the Company's equity compensation plans as of December 31, 2022. Each number of securities reflected in the table is a reference to shares of our common stock.

Equity compensation plans

Plan category ⁽¹⁾	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted-average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by stockholders ⁽²⁾	4,689,802 ⁽³⁾	\$ 1.17 ⁽⁴⁾	9,680,232 ⁽⁵⁾
Equity compensation plans not approved by stockholders	—	—	—
Total	4,689,802 ⁽³⁾	\$ 1.17 ⁽⁴⁾	9,680,232 ⁽⁵⁾

(1) The table does not include information for equity compensation plans assumed by us in mergers, under which we do not grant additional awards.

(2) These plans consist of our Equity Plans and our ESPP.

(3) Represents 12,737 shares of phantom stock issued under our 1995 Equity Plan, 51,459 shares of phantom stock, 76,445 non-qualified stock options and 389,294 RSUs issued under our 2008 Equity Plan, 294,960 non-qualified stock options and 1,742,450 RSUs issued under our 2017 Equity Plan and 2,122,457 RSUs issued under our 2021 Equity Plan. Of the RSUs included herein, 2,362,401 are performance-based stock-settled RSUs that could potentially vest in a number of shares equal to between 0% and 200% of this number of RSUs.

(4) The shares of phantom stock and RSUs were granted at full value, and therefore, have a weighted-average exercise price of \$0. Excluding shares of phantom stock and RSUs from this calculation, the weighted-average exercise price of outstanding non-qualified stock options was \$14.78 at December 31, 2022.

(5) Includes 8,074,795 shares available for issuance under our 2021 Equity Plan and Prior Equity Plans, and 1,605,437 shares available for issuance under our ESPP, in each case as of December 31, 2022. In January 2023, we issued 69,189 shares from the shares available for issuance under our ESPP. As of February 2023, 1,536,248 shares remain available for issuance under the ESPP.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated by reference to, and will be contained in, our definitive proxy statement, which will be filed within 120 days after December 31, 2022. Accordingly, we have omitted the information from this Item pursuant to General Instruction G (3) of Form 10-K.

Item 14. Principal Accountant Fees and Services

The information required by this Item is incorporated by reference to, and will be contained in, our definitive proxy statement, which will be filed within 120 days after December 31, 2022. Accordingly, we have omitted the information from this Item pursuant to General Instruction G (3) of Form 10-K.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)

1. Financial Statements—See the “Index to Consolidated Financial Statements” included in Item 8 on page 101 of this report for a list of the financial statements filed as part of this report.
2. Exhibits—See “Index to Exhibits” on page 158 of this report for a list of exhibits filed as part of this report.
3. Financial Statement Schedules—The following financial statement schedules are filed as part of this Form 10-K and appear immediately following the signature page.

Schedule I—Summary of investments—other than investments in related parties (December 31, 2022)	167
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All other schedules are omitted because the required information is not present or is not present in amounts sufficient to require submission of the schedules, or because the information required is included in our Consolidated Financial Statements and notes thereto.

Item 16. Form 10-K Summary

None.

Index to Exhibits

Exhibit Number	Exhibit
3.1	Third Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated May 11, 2004 and filed on May 12, 2004)
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated May 22, 2008 and filed on May 29, 2008)
3.3	Second Amendment to the Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated May 12, 2010, and filed on May 18, 2010)
3.4	Certificate of Amendment of Certificate of Incorporation of the Registrant effective as of May 15, 2013 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated May 14, 2013, and filed on May 20, 2013)
3.5	Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Registrant effective as of May 11, 2016 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated May 11, 2016, and filed on May 17, 2016)
3.6	Certificate of Change of Registered Agent and Registered Office of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated November 10, 2010, and filed on November 16, 2010)
3.7	Certificate of Designation of Series A Junior Participating Preferred Stock (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated October 9, 2009 and filed on October 13, 2009)
3.8	Certificate of Elimination of the Series A Junior Participating Preferred Stock of the Registrant (incorporated by reference to Exhibit 3.3 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated March 19, 2019, and filed on March 19, 2019)
3.9	Third Amended and Restated By-laws of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated November 9, 2022, and filed on November 14, 2022)
4.1	Specimen certificate for Common Stock (incorporated by reference to Exhibit 4.1 to the Registrant's Annual Report on Form 10-K (file no. 1-11356) for the year ended December 31, 1999)
4.2	Senior Indenture dated as of March 4, 2013, between the Registrant and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated February 27, 2013, and filed on March 4, 2013)
4.3	Fifth Supplemental Indenture dated as of September 26, 2017, between the Registrant and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated September 26, 2017, and filed on September 26, 2017)
4.4	Form of 4.500% Senior Notes due 2024 (included within Exhibit 4.3)

Exhibit Number	Exhibit
4.5	Sixth Supplemental Indenture dated as of June 24, 2019, between the Registrant and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated June 20, 2019, and filed on June 24, 2019)
4.6	Form of 4.875% Senior Notes due 2027 (included within Exhibit 4.5)
4.7	Seventh Supplemental Indenture dated as of May 15, 2020, between the Registrant and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated May 12, 2020, and filed on May 15, 2020)
4.8	Form of 6.625% Senior Notes due 2025 (included within Exhibit 4.7)
4.9	Description of Registrant's Securities (incorporated by reference to Exhibit 4.7 to the Registrant's Annual report on Form 10-K (file no. 1-11356) for the year ended December 31, 2019)
+10.1	Comprehensive 401(k) Profit Sharing Plan Nonstandard Adoption Agreement, effective January 1, 2022, as amended (incorporated by reference to Exhibit 10.1 to the Registrant's Annual report on Form 10-K (file no. 1-11356) for the year ended December 31, 2021)
+10.2	Qualified Retirement Plan and Trust Defined Contribution Basic Plan Document, adopted by Radian Group Inc. effective January 1, 2022 (Incorporated by reference to Exhibit 10.2 to the Registrant's Annual report on Form 10-K (file no. 1-11356) for the year ended December 31, 2021)
10.3	Radian Group Inc. 1995 Equity Compensation Plan (Amended and Restated May 9, 2006) (incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement for the 2006 Annual Meeting of Stockholders (file no. 1-11356), as filed with the Securities and Exchange Commission on April 18, 2006)
+10.4	Amendment to Radian Group Inc. 1995 Equity Compensation Plan (Amended and Restated May 9, 2006) dated February 5, 2007 (incorporated by reference to Exhibit 10.17 to the Registrant's Annual Report on Form 10-K (file no. 1-11356) for the year ended December 31, 2006)
+10.5	Amendment No. 2 to Radian Group Inc. 1995 Equity Compensation Plan, dated November 6, 2007 (incorporated by reference to Exhibit 10.23 to the Registrant's Annual Report on Form 10-K (file no. 1-11356) for the year ended December 31, 2007)
+10.6	Form of Phantom Stock Agreement for Non-Employee Directors under 1995 Equity Compensation Plan (incorporated by reference to Exhibit 10.6 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated February 8, 2005 and filed on February 14, 2005)
+10.7	Radian Group Inc. Amended and Restated 2008 Equity Compensation Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-8 (file no. 333-174428) filed on May 23, 2011)
+10.8	Form of Phantom Stock Agreement for Non-Employee Directors under 2008 Equity Compensation Plan (incorporated by reference to Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended September 30, 2008)
+10.9	Amendment to Form of 2008 Phantom Stock Agreement for Non-Employee Directors under the 2008 Equity Compensation Plan (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2009)

Exhibit Number	Exhibit
+10.10	Form of 2009 Restricted Stock Unit Award Agreement for Non-Employee Directors under the 2008 Equity Compensation Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2009)
+10.11	Amended and Restated Radian Voluntary Deferred Compensation Plan for Officers (incorporated by reference to Exhibit 10.35 to the Registrant's Annual Report on Form 10-K (file no. 1-11356) for the year ended December 31, 2014)
+10.12	Radian Group Inc. Employee Stock Purchase Plan, as amended and restated as of May 9, 2018 (incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14A (file no. 1-11356) filed on April 9, 2018, for the 2018 Annual Meeting of Stockholders)
10.13	Global Expense Allocation and Services Agreement, effective as of January 1, 2016, between the Registrant and each of its insurance subsidiaries: Radian Guaranty Inc., Radian Insurance Inc., Radian Mortgage Assurance Inc., Radian Mortgage Insurance Inc., Radian Guaranty Reinsurance Inc., Radian Reinsurance Inc., Radian Mortgage Guaranty Inc. and Radian Investor Surety Inc. (incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K (file no. 1-11356) for the year ended December 31, 2019)
*10.14	Amendments 1 through 7 to Global Expense Allocation and Services Agreement, effective as of January 1, 2016, between the Registrant and each of its insurance subsidiaries: Radian Guaranty Inc., Radian Insurance Inc., Radian Mortgage Assurance Inc., Radian Mortgage Insurance Inc., Radian Guaranty Reinsurance Inc., Radian Reinsurance Inc., Radian Mortgage Guaranty Inc. and Radian Investor Surety Inc.
10.15	Radian Group Inc. Amended and Restated Allocation of Consolidated Tax Liability Agreement between the Registrant and each of its subsidiaries, dated December 19, 2014, including Amendments 1 through 4 (incorporated by reference to Exhibit 10.15 to the Registrant's Annual Report on Form 10-K (file no. 1-11356) for the year ended December 31, 2019)
*10.16	Amendments 1 through 7 to Radian Group Inc. Amended and Restated Allocation of Consolidated Tax Liability Agreement between the Registrant and each of its subsidiaries, dated December 19, 2014
+10.17	Form of 2012 Stock Option Agreement under the 2008 Equity Compensation Plan (incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2012)
+10.18	Form of 2013 Stock Option Agreement under the 2008 Equity Compensation Plan (incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2013)
+10.19	Form of 2014 Stock Option Agreement under the 2014 Equity Compensation Plan (incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2014)
+10.20	Confidential Settlement Agreement and Release, dated as of September 16, 2014, by and among Radian Guaranty Inc., Countrywide Home Loans, Inc., and Bank of America, N.A., as a successor to BofA Home Loans Servicing f/k/a Countrywide Home Loans Servicing LP on its own behalf and as successor in interest by de jure merger to Countrywide Bank FSB, formerly Treasury Bank (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated September 16, 2014, and filed on September 19, 2014)
10.21	Letter Agreement, effective as of December 10, 2014, between the Registrant and J. Franklin Hall (including Attachment A - Severance Agreement and Attachment B - Restrictive Covenant Agreement) (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated December 10, 2014, and filed on December 15, 2014)

Exhibit Number	Exhibit
+10.22	Radian Group Inc. 2014 Equity Compensation Plan (incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14A (file no. 1-11356) filed on April 7, 2014, for the 2014 Annual Meeting of Stockholders)
+10.23	Form of 2015 Stock Option Agreement under the 2014 Equity Compensation Plan (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended September 30, 2015)
+10.24	Form of Amendment to Restricted Stock Unit Award Agreement for Non-Employee Directors under the 2008 Equity Compensation Plan (incorporated by reference to Exhibit 10.91 to the Registrant's Annual Report on Form 10-K (file no. 1-11356) for the year ended December 31, 2015)
+10.25	Form of 2016 Stock Option Agreement under the 2014 Equity Compensation Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2016)
+10.26	Form of 2016 Executive Severance Agreement (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended September 30, 2016)
+10.27	Form of Restrictive Covenant Agreement (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended September 30, 2016)
*+10.28	Form of 2017 Executive Severance Agreement
*+10.29	Form of 2019 Amendment to Form of 2017 Executive Severance Agreement
+10.30	Employment Agreement, dated as of November 19, 2019, between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated November 19, 2019, and filed on November 19, 2019)
+10.31	Restrictive Covenants Agreement, dated as of February 8, 2017, between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated February 7, 2017, and filed on February 13, 2017)
+10.32	Form of Restricted Stock Unit Agreement between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated February 7, 2017, and filed on February 13, 2017)
+10.33	Radian Group Inc. STI/MTI Incentive Plan for Executive Employees, as amended and restated (incorporated by reference to Exhibit 10.7 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated February 7, 2017, and filed on February 13, 2017)
+10.34	Radian Group Inc. Equity Compensation Plan (Amended and Restated as of May 10, 2017, and May 13, 2020) (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended March 31, 2021)
+10.35	2018 Performance-Based Restricted Stock Unit Grant Letter (book value) under the Radian Group Inc. Equity Compensation Plan between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2018)
+10.36	2018 Time-Based Restricted Stock Unit Grant Letter under the Radian Group Inc. Equity Compensation Plan between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2018)

Exhibit Number	Exhibit
+10.37	Form of Executive Officer 2018 Performance-Based Restricted Stock Unit Grant Letter (book value) under the Radian Group Inc. Equity Compensation Plan (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2018)
+10.38	Form of Executive Officer 2018 Time-Based Restricted Stock Unit Grant Letter under the Radian Group Inc. Equity Compensation Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2018)
10.39	Form of Radian Group Inc. Indemnification Agreement (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated April 8, 2019, and filed on April 10, 2019)
+10.40	Amended and Restated Radian Group Inc. Voluntary Deferred Compensation Plan for Directors (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended March 31, 2020)
+10.41	2020 Performance-Based Restricted Stock Unit Grant Agreement (book value) under the Radian Group Inc. Equity Compensation Plan between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2020)
+10.42	2020 Time-Based Restricted Stock Unit Grant Agreement under the Radian Group Inc. Equity Compensation Plan between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2020)
+10.43	Form of Executive Officer 2020 Performance-Based Restricted Stock Unit Grant Agreement (book value) under the Radian Group Inc. Equity Compensation Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2020)
+10.44	Form of Executive Officer 2020 Time-Based Restricted Stock Unit Grant Agreement under the Radian Group Inc. Equity Compensation Plan (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2020)
+10.45	Form of Executive Officer 2021 Performance-Based Restricted Stock Unit Grant Agreement (book value) under the Radian Group Inc. Equity Compensation Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2021)
+10.46	2021 Performance-Based Restricted Stock Unit Grant Agreement (book value) under the Radian Group Inc. Equity Compensation Plan between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2021)
+10.47	2021 Time-Based Restricted Stock Unit Grant Agreement (book value) under the Radian Group Inc. Equity Compensation Plan between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2021)
+10.48	Form of Executive Officer 2021 Time-Based Restricted Stock Unit Grant Agreement under the Radian Group Inc. Equity Compensation Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2021)
+10.49	Radian Group Inc. Equity Compensation Plan (incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14A (file no. 1-11356) filed on April 9, 2021, for the 2021 Annual Meeting of Stockholders)

Exhibit Number	Exhibit
+10.50	Amendment 2021-1 to Employment Agreement, dated as of March 26, 2021, between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended March 31, 2021)
+10.51	Credit Agreement by and among the Registrant, Royal Bank of Canada, as Administrative Agent, U.S. Bank National Association ("U.S. Bank"), as Syndication Agent, RBC Capital Markets and U.S. Bank as Joint Lead Arrangers and Joint Book Runners, Associated Bank, National Association, as Documentation Agent, and certain other banks and financial institutions serving as lenders (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated December 7, 2021, and filed on December 8, 2021)
+10.52	Radian Group Inc. Short-Term Incentive Plan for employees (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated November 30, 2021, and filed on December 3, 2021)
+10.53	Form of Executive Officer 2022 Performance-Based Restricted Stock Unit Grant Agreement (book value) under the Radian Group Inc. Equity Compensation Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2022)
+10.54	2022 Performance-Based Restricted Stock Unit Grant Agreement (book value) under the Radian Group Inc. Equity Compensation Plan between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2022)
+10.55	2022 Time-Based Restricted Stock Unit Grant Agreement (book value) under the Radian Group Inc. Equity Compensation Plan between the Registrant and Richard G. Thornberry (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2022)
+10.56	Form of Executive Officer 2022 Time-Based Restricted Stock Unit Grant Agreement under the Radian Group Inc. Equity Compensation Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended June 30, 2022)
*+10.57	2022 Time-Based Restricted Stock Unit Grant Agreement under the Radian Group Inc. Equity Compensation Plan between the Registrant and Robert J. Quigley dated December 20, 2022
+10.58	Transition, Separation and Release Agreement between J. Franklin Hall and the Registrant (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated January 13, 2023, and filed on January 20, 2023)
+10.59	Radian Group Inc. Short-Term Incentive Plan for employees (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (file no. 1-11356) for the period ended September 30, 2022)
10.60	Master Repurchase Agreement, dated July 15, 2022, among Goldman Sachs Bank USA, a national banking institution, Radian Liberty Funding LLC, a Delaware limited liability company, and Radian Mortgage Capital LLC, a Delaware limited liability company (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated July 15, 2022, and filed on July 18, 2022)
10.61	Guaranty and Security Agreement dated as of July 15, 2022, made by Radian Mortgage Capital LLC, a Delaware limited liability company, in favor of Goldman Sachs Bank USA, a national banking institution (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated July 15, 2022, and filed on July 18, 2022)

Exhibit Number	Exhibit
10.62	Guaranty Agreement dated as of July 15, 2022, made by Radian Group Inc., a Delaware corporation, in favor of Goldman Sachs Bank USA, a national banking institution (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated July 15, 2022, and filed on July 18, 2022)
10.63	Master Repurchase Agreement, dated September 28, 2022, between Bank of Montreal, a Canadian Chartered bank acting through its Chicago Branch, and Radian Mortgage Capital LLC, a Delaware limited liability company (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated September 28, 2022, and filed on September 30, 2022)
10.64	Guaranty Agreement dated as of September 28, 2022, made by Radian Group Inc., a Delaware corporation, in favor of Bank of Montreal, a Canadian Chartered bank acting through its Chicago Branch (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (file no. 1-11356) dated September 28, 2022, and filed on September 30, 2022)
*21	Subsidiaries of the Registrant
*23.1	Consent of PricewaterhouseCoopers LLP
*31	Rule 13a-14(a) Certifications
**32	Section 1350 Certifications
*101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
*101.SCH	Inline XBRL Taxonomy Extension Schema Document
*101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
*101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
*101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
*101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
*104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101.INS)

* Filed herewith.

** Furnished herewith.

+ Management contract, compensatory plan or arrangement

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on February 24, 2023.

Radian Group Inc.

By: _____ /s/ Richard G. Thornberry

Richard G. Thornberry
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below on February 24, 2023, by the following persons on behalf of the registrant and in the capacities indicated.

Name	Title
<u>/s/ RICHARD G. THORNBERRY</u> Richard G. Thornberry	Chief Executive Officer (Principal Executive Officer) and Director
<u>/s/ ROBERT J. QUIGLEY</u> Robert J. Quigley	Executive Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer and Principal Financial Officer)
<u>/s/ HOWARD B. CULANG</u> Howard B. Culang	Non-Executive Chairman of the Board
<u>/s/ FAWAD AHMAD</u> Fawad Ahmad	Director
<u>/s/ BRAD L. CONNER</u> Brad L. Conner	Director
<u>/s/ DEBRA HESS</u> Debra Hess	Director
<u>/s/ LISA W. HESS</u> Lisa W. Hess	Director
<u>/s/ BRIAN D. MONTGOMERY</u> Brian D. Montgomery	Director
<u>/s/ LISA MUMFORD</u> Lisa Mumford	Director
<u>/s/ GAETANO J. MUZIO</u> Gaetano J. Muzio	Director
<u>/s/ GREGORY V. SERIO</u> Gregory V. Serio	Director
<u>/s/ NOEL J. SPIEGEL</u> Noel J. Spiegel	Director

Radian Group Inc. and Its Consolidated Subsidiaries
Schedule I
Summary of Investments—Other Than Investments in Related Parties
December 31, 2022

(In thousands)	Amortized Cost	Fair Value	Amount Reflected on the Consolidated Balance Sheet
Type of Investment			
Fixed-maturities available for sale			
Bonds			
U.S. government and agency securities	\$ 174,138	\$ 145,442	\$ 145,442
State and municipal obligations	164,325	142,386	142,386
Corporate bonds and notes	2,886,905	2,537,771	2,537,771
RMBS	1,025,795	928,399	928,399
CMBS	645,890	593,357	593,357
CLO	518,677	498,192	498,192
Other ABS	168,033	161,359	161,359
Foreign government and agency securities	5,118	4,975	4,975
Mortgage insurance-linked notes ⁽¹⁾	54,578	53,019	53,019
Total securities available for sale	5,643,459	5,064,900 ⁽²⁾	5,064,900 ⁽²⁾
Trading securities	122,472	115,665	115,665
Equity securities			
Common stocks			
Industrial, miscellaneous and all other	230,525	213,519	213,519
Total equity securities	230,525	213,519 ⁽³⁾	213,519 ⁽³⁾
Mortgage loans held for sale	3,498	3,549	3,549
Other invested assets	5,336	5,511	5,511
Short-term investments ⁽⁴⁾	402,552	402,486 ⁽⁵⁾	402,486 ⁽⁵⁾
Total investments other than investments in related parties	\$ 6,407,842	\$ 5,805,630	\$ 5,805,630

(1) Includes mortgage insurance-linked notes purchased by Radian Group in connection with the Excess-of-Loss Program. See Note 8 of Notes to Consolidated Financial Statements for more information about our reinsurance programs.

(2) Includes \$47.2 million of fixed-maturity securities available for sale loaned under securities lending agreements that are classified as other assets in our consolidated balance sheets.

(3) Includes \$64.6 million of equity securities loaned under securities lending agreements that are classified as other assets in our consolidated balance sheets.

(4) Includes cash collateral held under securities lending agreements of \$99.7 million that is reinvested in money market instruments.

(5) Includes \$0.4 million of short-term investments loaned under securities lending agreements that are classified as other assets in our consolidated balance sheets.

Radian Group Inc.
Schedule II—Financial Information of Registrant
Condensed Balance Sheet
Parent Company Only

(In thousands, except per-share amounts)	December 31, 2022	December 31, 2021
Assets		
Investments		
Fixed-maturities available for sale—at fair value (amortized cost of \$747,309 and \$485,727)	\$ 675,948	\$ 481,659
Equity securities—at fair value (cost of \$140,733)	140,804	—
Other invested assets—at fair value	3,958	3,511
Short-term investments—at fair value (includes \$61,328 and \$1,058 of reinvested cash collateral held under securities lending agreements)	108,232	120,601
Total investments	928,942	605,771
Cash	1,872	38,846
Investment in subsidiaries, at equity in net assets (Note C)	4,576,644	5,210,917
Accounts and notes receivable (Note C)	657	100,002
Other assets (Note C)	157,370	65,923
Total assets	<u>\$ 5,665,485</u>	<u>\$ 6,021,459</u>
Liabilities and stockholders' equity		
Liabilities		
Senior notes	\$ 1,413,504	\$ 1,409,473
Net deferred tax liability (Note A)	196,829	283,585
Other liabilities (Note C)	135,825	69,605
Total liabilities	1,746,158	1,762,663
Common stockholders' equity		
Common stock (\$0.001 par value; 485,000 shares authorized; 2022: 176,509 and 157,056 shares issued and outstanding, respectively; 2021: 194,408 and 175,421 shares issued and outstanding, respectively)	176	194
Treasury stock, at cost (2022: 19,453 shares; 2021: 18,987 shares)	(930,643)	(920,798)
Additional paid-in capital	1,519,641	1,878,372
Retained earnings	3,786,952	3,180,935
Accumulated other comprehensive income (loss)	(456,799)	120,093
Total common stockholders' equity	3,919,327	4,258,796
Total liabilities and stockholders' equity	<u>\$ 5,665,485</u>	<u>\$ 6,021,459</u>

See Supplemental Notes.

Radian Group Inc.
Schedule II—Financial Information of Registrant
Condensed Statements of Operations
Parent Company Only

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Revenues			
Net investment income	\$ 20,584	\$ 7,540	\$ 19,459
Net gains (losses) on investments and other financial instruments	(4,322)	980	5,682
Other income	78	11	101
Total revenues	16,340	8,531	25,242
Expenses			
Other operating expenses	2,043	3,163	2,619
Total expenses (Note B)	2,043	3,163	2,619
Pretax income	14,297	5,368	22,623
Income tax provision (benefit)	8,148	1,167	(3,165)
Equity in net income of affiliates	736,785	596,470	367,838
Net income	742,934	600,671	393,626
Other comprehensive income (loss), net of tax	(576,892)	(143,632)	153,237
Comprehensive income	\$ 166,042	\$ 457,039	\$ 546,863

See Supplemental Notes.

Radian Group Inc.
Schedule II—Financial Information of Registrant
Condensed Statements of Cash Flows
Parent Company Only

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Cash flows from operating activities			
Net cash provided by (used in) operating activities ⁽¹⁾	\$ (71)	\$ 66,317	\$ (13,741)
Cash flows from investing activities			
Proceeds from sales of:			
Fixed-maturities available for sale	56,934	195,452	304,737
Trading securities	8,868	—	—
Equity securities	—	—	13,401
Proceeds from redemptions of:			
Fixed-maturities available for sale	194,859	301,788	238,161
Purchases of:			
Fixed-maturities available for sale	(29,039)	(156,344)	(691,874)
Equity securities	(2,500)	—	—
Sales, redemptions and (purchases) of:			
Short-term investments, net	188,149	113,939	(53,024)
Other assets, net	(3,851)	(864)	(6,068)
Capital distributions from subsidiaries	32,512	44,951	19,000
Capital contributions to subsidiaries	(8,000)	(43,250)	(5,050)
Net cash provided by (used in) investing activities	437,932	455,672	(180,717)
Cash flows from financing activities			
Dividends and dividend equivalents paid	(135,437)	(103,298)	(97,458)
Issuance of common stock	1,341	1,382	1,553
Repurchases of common stock	(400,195)	(399,100)	(226,305)
Issuance of senior notes, net	—	—	515,567
Credit facility commitment fees paid	(814)	(3,325)	(2,292)
Change in secured borrowings, net (with terms three months or less)	60,270	1,057	—
Net cash provided by (used in) financing activities	(474,835)	(503,284)	191,065
Increase (decrease) in cash and restricted cash	(36,974)	18,705	(3,393)
Cash and restricted cash, beginning of period	38,846	20,141	23,534
Cash and restricted cash, end of period	\$ 1,872	\$ 38,846	\$ 20,141

(1) Includes cash distributions received from subsidiaries of \$49.8 million, \$85.0 million and \$1.7 million in 2022, 2021 and 2020, respectively. Excludes non-cash distributions received from subsidiaries of \$888.0 million, \$92.3 million and \$484.1 million in 2022, 2021 and 2020, respectively.

See Supplemental Notes.

Radian Group Inc.
Schedule II—Financial Information of Registrant
Supplemental Notes
Parent Company Only

Note A

The Radian Group Inc. (the “Parent Company,” “we” or “our”) financial statements represent the stand-alone financial statements of the Parent Company. These financial statements have been prepared on the same basis and using the same accounting policies as described in the consolidated financial statements included herein, except that the Parent Company uses the equity-method of accounting for its majority-owned subsidiaries. These financial statements should be read in conjunction with our consolidated financial statements and the accompanying notes thereto.

See Notes 12 and 14 of Notes to Consolidated Financial Statements for additional information on the Parent Company’s debt obligations and capital stock.

The Parent Company has entered into the following guarantees on behalf of our subsidiaries:

- In 2022, Radian Group entered into the Parent Guarantees to support its mortgage conduit business. See Note 12 of Notes to Consolidated Financial Statements for additional information.
- To allow our mortgage insurance customers to comply with applicable securities regulations for issuers of ABS (including mortgage-backed securities), Radian Group has guaranteed two structured transactions for Radian Guaranty with \$58.4 million of aggregate remaining credit exposure as of December 31, 2022.
- Radian Group and Radian Mortgage Assurance are parties to a guaranty agreement, which provides that Radian Group will make sufficient funds available to Radian Mortgage Assurance to ensure that Radian Mortgage Assurance has a minimum of \$5.0 million of statutory policyholders’ surplus every calendar quarter. Radian Mortgage Assurance had \$8.8 million of statutory policyholders’ surplus and no RIF exposure as of December 31, 2022.

As of December 31, 2022, Radian Group recorded a net deferred tax liability of \$196.8 million. This balance includes liabilities related to certain of our subsidiaries, which have incurred federal NOLs that could not be carried-back and utilized on a separate company tax return basis. As a result, we are not currently obligated under our tax-sharing agreement to reimburse these subsidiaries for their separate company federal NOL carryforward. However, if in a future period one of these subsidiaries utilizes its share of federal NOL carryforwards on a separate entity basis, then Radian Group may be obligated to fund such subsidiary’s share of our consolidated tax liability to the Internal Revenue Service.

Note B

The Parent Company provides certain services to its subsidiaries. The Parent Company allocates to its subsidiaries expenses it incurs in the capacity of supporting those subsidiaries, including operating expenses, which are allocated based on the forecasted annual percentage of total revenue, which approximates the estimated percentage of time spent on certain subsidiaries, and interest expense, which is allocated based on relative capital. These expenses are presented net of allocations in the Condensed Statements of Operations. Substantially all operating expenses and interest expense have been allocated to the subsidiaries for 2022, 2021 and 2020.

Amounts allocated to the subsidiaries for expenses are based on actual cost, without any mark-up. The Parent Company considers these charges to be fair and reasonable. The subsidiaries generally reimburse the Parent Company for these costs in a timely manner, which has the impact of temporarily improving the cash flows of the Parent Company, if accrued expenses are reimbursed prior to actual payment.

The following table shows the components of our Parent Company expenses that have been allocated to our subsidiaries for the periods indicated.

Total allocated expenses

(In thousands)	Years Ended December 31,		
	2022	2021	2020
Allocated operating expenses	\$ 163,000	\$ 147,386	\$ 129,870
Allocated interest expense	82,568	82,833	68,938
Total allocated expenses	<u>\$ 245,568</u>	<u>\$ 230,219</u>	<u>\$ 198,808</u>

Note C

During 2022 and 2021, certain non-insurance subsidiaries had not generated sufficient cash flow to reimburse the Parent Company for its share of its direct and allocated operating expenses, and therefore the Parent Company effectively contributed a total of \$82.0 million and \$48.5 million, respectively, to these subsidiaries to reflect the impairment of the intercompany receivables representing unreimbursed direct and allocated costs.

See Note 16 of Notes to Consolidated Financial Statements for additional information related to capital transactions between the Parent Company and its consolidated insurance subsidiaries, including \$882 million paid during 2022 from Radian Guaranty to Radian Group.

During 2022, the Parent Company's other assets and other liabilities increased by \$66.5 million and \$60.3 million, respectively, related to its participation in a securities lending program. See Note 6 of Notes to Consolidated Financial Statements for additional information related to our loaned securities.

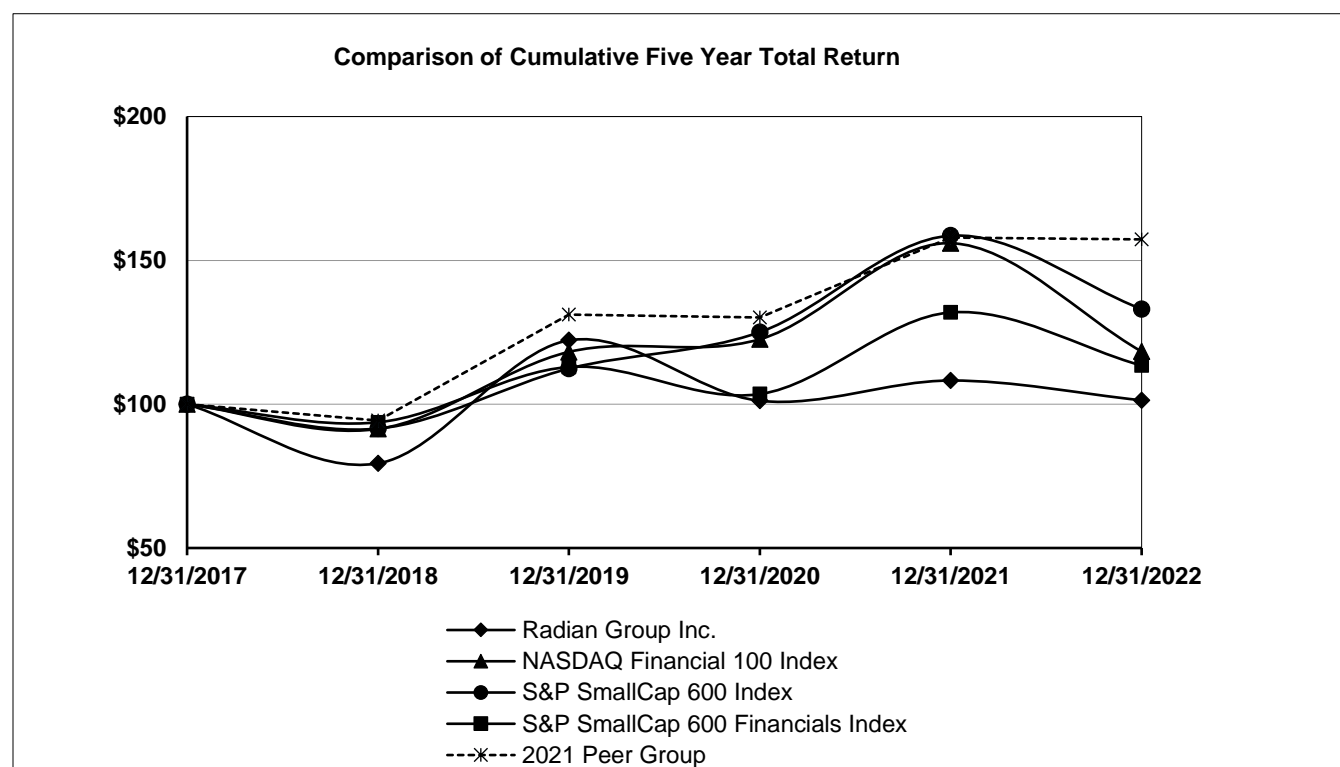
Radian Group Inc.
Schedule IV—Reinsurance
Insurance Premiums Earned
Years Ended December 31, 2022, 2021 and 2020

(\$ in thousands)	Gross Amount	Ceded to Other Companies	Assumed from Other Companies	Net Amount	Assumed Premiums as a Percentage of Net Premiums
2022					
Mortgage insurance	\$ 1,025,607	\$ 72,419	\$ 4,025	\$ 957,213	0.42%
Title insurance	24,422	504	—	23,918	0.00%
Total	\$ 1,050,029	\$ 72,923	\$ 4,025	\$ 981,131	0.41%
2021					
Mortgage insurance	\$ 1,104,696	\$ 113,480	\$ 7,066	\$ 998,282	0.71%
Title insurance	39,665	764	—	38,901	0.00%
Total	\$ 1,144,361	\$ 114,244	\$ 7,066	\$ 1,037,183	0.68%
2020					
Mortgage insurance	\$ 1,263,684	\$ 183,131	\$ 12,214	\$ 1,092,767	1.12%
Title insurance	22,843	289	—	22,554	0.00%
Total	\$ 1,286,527	\$ 183,420	\$ 12,214	\$ 1,115,321	1.10%

Total Stockholder Return Graph

The line graph below compares, for the period from December 31, 2017 through December 31, 2022, the cumulative total return to stockholders of a \$100 investment in (1) Radian's common stock, (2) the S&P SmallCap 600 index, (3) the S&P SmallCap 600 Financials index, (4) the NASDAQ Financial 100 index, and (5) a custom peer group that was included in our 2021 Annual Report which consisted of Arch Capital Group Ltd.; Assured Guaranty Ltd.; Black Knight, Inc.; Essent Group Ltd.; First American Financial Corp.; Genworth Financial, Inc.; MGIC Investment Corporation; Mr. Cooper Group Inc.; NMI Holdings, Inc.; Old Republic International Corporation; PennyMac Financial Services, Inc.; Stewart Information Services Corporation; and Redwood Trust, Inc. (collectively, the "2021 Peer Group"). Both the NASDAQ Financial 100 Index and the 2021 Peer Group were included in our Total Stockholder Return Graph for 2021. We intend to replace these reference points going forward with the S&P SmallCap 600 index and the S&P SmallCap 600 Financials index, which are broader based than the 2021 Peer Group (i.e., likely to represent a more consistent year-over-year measure), and as compared to the Nasdaq Financial 100, are more highly correlated to Radian.

Total stockholder return is determined by dividing (1) the sum of (a) the cumulative amount of dividends for a given period (assuming dividend reinvestment) and (b) the difference between the share price at the end and the beginning of the period by (2) the share price at the beginning of the period.



Total stockholder returns may not be indicative of returns to be achieved in the future or for periods of time longer than the periods shown in the graph.

Total Return To Shareholders (Includes reinvestment of dividends)

Company Name / Index	Base Period 12/31/2017	INDEXED RETURNS Years Ending				
		12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Radian Group Inc.	\$100.00	\$79.42	\$122.20	\$101.18	\$108.23	\$101.37
NASDAQ Financial 100 Index	\$100.00	\$91.39	\$118.18	\$122.57	\$155.97	\$118.32
S&P SmallCap 600 Index	\$100.00	\$91.52	\$112.37	\$125.05	\$158.59	\$133.06
S&P SmallCap 600 Financials Index	\$100.00	\$93.71	\$112.94	\$103.51	\$131.91	\$113.42
2021 Peer Group	\$100.00	\$94.30	\$131.12	\$130.11	\$157.93	\$157.28

DIRECTORS AND OFFICERS

DIRECTORS

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of Housing & Urban Development

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Chief Executive Officer
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Edward J. Hoffman

Senior Executive Vice President,
General Counsel and
Corporate Secretary

Brien J. McMahon

Senior Executive Vice President,
Chief Franchise Officer and Co-Head
of homegenius

Sumita Pandit

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**Stockholders, interested investors,
financial analysts and others may obtain,
without charge, a copy of Radian's Annual
Report on Form 10-K for the year ended
December 31, 2022, as filed with the
Securities and Exchange Commission by
sending a written request to:**

**Edward J. Hoffman
Corporate Secretary**

**Radian Group Inc.
550 East Swedesford Road, Suite 350
Wayne, Pennsylvania 19087**

**or by accessing the Radian website at
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