

## radian

An Investment Thesis in Radian

**Barclays Financial Services Conference** 

**NYSE: RDN** 

**September 10, 2019** 

#### Safe Harbor Statements

All statements in this presentation 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 of 1933, Section 21E of the Securities Exchange Act of 1934 and the U.S. 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. Any forward-looking statement is not a guarantee of future performance and actual results could differ materially from those contained in the forward-looking statement. These statements speak only as of the date they were made, and we undertake no obligation to update or revise any forwardlooking 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, 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:

- changes in economic and political conditions that impact the size of the insurable market, the credit performance of our insured portfolio, and our business prospects;
- changes in the way customers, investors, ratings agencies, regulators or legislators perceive our performance, financial strength and future prospects;
- Radian Guaranty Inc.'s ("Radian Guaranty") ability to remain eligible under the Private Mortgage Insurer Eligibility Requirements (the "PMIERs") and other applicable requirements imposed by the Federal Housing Finance Agency and by Fannie Mae and Freddie Mac (collectively, the "GSEs") to insure loans purchased by the GSEs, including potential future changes to the PMIERs which, among other things, may be impacted by the general economic environment and housing market, as well as the proposed Conservatorship Capital Framework ("CCF") that would establish capital requirements for the GSEs, if the CCF is finalized:

- our ability to successfully execute and implement our capital plans, including our risk distribution strategy through the capital markets and reinsurance markets, and to maintain sufficient holding company liquidity to meet our short- and long-term liquidity needs;
- our ability to successfully execute and implement our business plans and strategies, including plans and strategies to reposition and grow our Services segment as well as plans and strategies that require GSE and/or regulatory approvals and licenses:
- our ability to maintain an adequate level of capital in our insurance subsidiaries to satisfy existing and future regulatory requirements;
- changes in the charters or business practices of, or rules or regulations imposed by or applicable to, the GSEs, which may include changes in the requirements to remain an approved insurer to the GSEs, the GSEs' interpretation and application of the PMIERs, as well as changes impacting loans purchased by the GSEs, such as whether GSE eligible loans are "qualified mortgages" (QM) under applicable law, and the GSEs' requirements regarding mortgage credit and loan size and the GSEs' pricing;
- changes in the current housing finance system in the U.S., including the role of the Federal Housing Administration (the "FHA"), the GSEs and private mortgage insurers in this system;
- any disruption in the servicing of mortgages covered by our insurance policies, as well as poor servicer performance;
- a decrease in the "Persistency Rates" (the percentage of insurance in force that remains in force over a period of time) of our mortgage insurance on monthly premium products;
- competition in our mortgage insurance business, including price competition and competition from the FHA and U.S.
   Department of Veterans Affairs as well as from other forms of credit enhancement, including GSE sponsored alternatives to traditional mortgage insurance;
- the effect of the Dodd-Frank Wall Street Reform and Consumer Protection Act on the financial services industry in general, and on our businesses in particular, including future changes to the QM loan requirements, which currently are subject to an Announced Notice of Proposed Rulemaking (ANPR) issued by the Consumer Financial Protection Bureau;
- legislative and regulatory activity (or inactivity), including the 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 settlements, payments or adjustments associated with federal or other tax examinations;
- the possibility that we may fail to estimate accurately 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," each as defined under the PMIERs, which will be impacted by, among other things, the size and mix of our insurance in force, the level of defaults in our portfolio, 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 our investment portfolio;
- potential future impairment charges related to our goodwill and other acquired intangible assets;
- changes in "GAAP" (accounting principles generally accepted in the U.S.) or "SAPP" (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) rules and guidance, or their interpretation:
- 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 Risk Factors detailed in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018, and to subsequent reports and registration statements filed from time to time with the U.S. Securities and Exchange Commission. 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 presentation. 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.



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#### Who is Radian?

#### **NYSE: RDN**

### Mortgage Insurance Segment

**Radian Mortgage Insurance** promotes responsible and sustainable homeownership and allows lenders to offer affordable mortgage financing options to prospective homeowners. Our products also facilitate the sale of low-down payment mortgages in the secondary market and enable homebuyers to purchase homes more quickly with down payments of less than 20%.

**Radian Risk Services** offers proprietary mortgage risk analytics and custom insurance products to help lenders more efficiently manage risk and help investors participate in mortgage risk sharing.

### **Services Segment**

Radian Mortgage Services helps loan originators and investors evaluate, acquire, surveil and securitize mortgages. These services include loan review, RMBS securitization and distressed asset reviews, review and valuation services related to single family rental properties, servicer and loan surveillance and underwriting.

Radian Real Estate Services helps lenders, investors and real estate agents evaluate, manage, monitor and sell properties. These real estate services include software as a service solutions and platforms, as well as managed services, such as REO asset management, real estate valuation services and real estate brokerage services.

Radian Title Services provides a comprehensive suite of title insurance products, title settlement services and both traditional and digital closing services.

- www.radian.biz -



### **Investment Thesis**

### **Industry**

Strong Industry, Economic and Regulatory Backdrop

### Value

Represents Strong Relative Value for Returns on Capital

### Risk Distribution

Actively Aggregates, Manages, and Distributes Risk

### Uniqueness

Radian is Unique Among Peers

## radian

### What is Private Mortgage Insurance?

Private mortgage insurance (Private MI) helps potential homeowners, often first-time homebuyers, obtain a mortgage by reducing the size of their required downpayment, thereby reducing the risk to the investor.

#### **WITHOUT Mortgage Insurance**

#### **WITH Mortgage Insurance**

For many families, coming up with the required downpayment can be one of the **biggest hurdles** to homeownership.



A typical user of private MI is a first time homebuyer. A first time homebuyer is about 32 years old, with average household income of \$75,000 and purchasing a home with a median home price of \$190,000. Without Private MI, a typical homebuyer needs a 20% downpayment. On a \$190,000 house, that would be **\$38,000**.

Private MI has **helped millions become homeowners** by enhancing their ability to borrow in an affordable way by reducing the risk of their loans to the investor/lender.



By mitigating the risk to the lender/investor, Private MI allows lenders to accept smaller downpayments, such as 5% instead of 20%. A 5% downpayment on a \$190,000 house would be \$9,500.

Source: USMI, National Association of Realtors



### What is Private Mortgage Insurance?

For more than 60 years, Private MI has provided a first layer of credit protection against mortgage credit losses, helping to reduce risk in the mortgage financing system through private capital versus taxpayers and the federal government.

Congress established the first Government Private MI began in 1957, when real Sponsored Enterprise (GSE) in the home estate attorney Max Karl created a finance segment of the economy with the way for banks to more efficiently The Private MI industry has paid creation of the Federal Home Loan Bank serve borrowers with low more than \$50 billion in claims for system in 1932. The objective was to help downpayment loan options by losses to the GSEs since the GSEs securitize mortgage loans and increase insuring home loans with Private MI, entered conservatorship during the versus FHA insurance. liquidity. 2008 financial crisis (from 2008 today). 1932 1957 2008 1934 1977 Now The Federal Housing With PMIERs, Dodd-Frank reform, the Radian was founded in 1977 Administration (FHA) was Uniform Master Policy, a more granular and has been providing Private established in 1934 to regulate risk-based pricing approach, and use MI for more than 40 years. mortgage lending and insure lowof more advanced risk distribution, such as insurance-linked notes (ILN), downpayment mortgages. today's Private MI industry is highly regulated and well capitalized.

Source: USMI



### Private MI is a specialized industry with high barriers to entry

### Large Initial Investment, Limited Early Cash Flow

Minimum of \$500 million initial capital is required to become a GSE-eligible private mortgage insurer. (1)

### Operational Complexity

Private MIs use a unique operating platform that requires GSE interface, underwriting systems, and complex technology infrastructure.

### State and GSE Regulations

A private MI company typically needs to obtain 50 separate state licenses.

Private MIs must also comply with PMIERs to do business with the GSEs, along with federal and local regulations.

### Formidable Capital Requirements

PMIERs is a risk-based capital framework that requires a minimum level of assets to be held in anticipation for potential losses, and may increase sharply in times of stress. PMIERs also stipulates that any approved insurer must maintain at least \$400 million of Available Assets. (1)

### Companies that wish to enter the Private MI market face several challenges that create significant barriers to entry.

The barriers to entry have increased since the 2008 financial crisis primarily due to more restrictive capital and operating requirements under PMIERs.

While it is difficult for new companies to enter the Private MI market, investors may still gain exposure to this asset class by investing in existing Private MI companies, GSE credit risk transfer (CRT) transactions or the risk distribution transactions of the Mis' Insurance-linked Notes (ILNs).



<sup>(1)</sup> http://www.freddiemac.com/singlefamily/pdf/PMIERs.pdf

### The Three Pillars of Private MI

Today's private MI industry is strong, stable and reliable, supported by three key pillars

### Modern Private Mortgage Insurance



Pillar I: Strengthened postcrisis mortgage origination landscape



Pillar II: Risk-based capital requirements



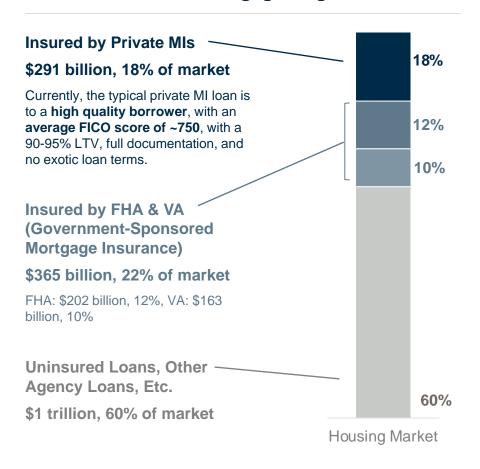
Pillar III: Managed risk exposure



### Pillar I: Strengthened Post-Crisis Mortgage Origination Landscape

Private MI covers a specific segment of the total mortgage market. Today, loans covered by Private MI are very high quality, primarily due to the greater risk discipline of the Private MI providers and the loan requirements for a Qualified Mortgage (QM).

#### **Breakdown of 2018 Mortgage Originations**



#### **Improved Quality**

The credit quality of loans insured by Private MI improved dramatically after the 2008 crisis and continues to be strong today.

Following the housing crisis in 2008, several key changes were made in mortgage origination requirements including:

- Full documentation of loans is now required
- Availability of credit has been rationalized
- Mortgage servicing practices improved to keep people in their homes and out of foreclosure

In 2014, the **Qualified Mortgage (QM) loan requirements** under the Dodd-Frank Act went into effect.

- Ability-to-repay requirements help ensure loan terms are reasonable and affordable
- Other requirements include that points and fees will not exceed 3% of the loan amount; the term will not exceed 30 years; and the loan is fully amortizing with no negative amortization, interest-only, or balloon features (1)
- The CFPB continues to refine the requirements for QM loans, and is seeking comment on whether the definition should retain a direct measure of a consumer's personal finances (for example, debt-to-income ratio).



<sup>(1)</sup> https://www.consumerfinance.gov/ask-cfpb/what-is-a-qualified-mortgage-en-1789/

### Pillar I: Strengthened Post-Crisis Mortgage Origination Landscape

The Private MI industry has **significantly evolved** over the past several years...

Past		Present
Exposure-based Capital (Statutory)	$\rightarrow$	Risk-based Capital (PMIERs)
Less granular, relatively static pricing	$\rightarrow$	More granular, risk-based and dynamic pricing
Consistent, transparent pricing across industry	$\rightarrow$	Differentiated, opaque pricing across industry
Manage risk through credit policy	$\rightarrow$	Manage risk through credit policy and pricing
Focus on avoiding adverse credit selection	$\rightarrow$	Focus on proactive portfolio selection based on economic value
Relationships a primary driver	$\rightarrow$	Data and analytics the primary driver
Buy and hold risk-taker	$\rightarrow$	Active risk manager (aggregate, manage and distribute risk)
Minimize risk for a given level of price	$\rightarrow$	Maximize economic value for a given level of risk

...and its evolution continues and plays to Radian's strengths



### Pillar II: Risk-Based Capital Requirements

Over the years, Private MI capital requirements have evolved from a "risk-neutral" to a risk-based capital framework. PMIERs 2.0 - loan-level, risk-based PMIERs 1.0 (~14:1 risk-to-capital ratio) - loan-level, risk-based State Regulations (25:1 risk-to-capital ratio) – based on total exposure 2008 2015 2019 **Financial Crisis** PMIERs 1.0 introduces risk-PMIERs 2.0 became effective in March 2019. The based requirements and nearly primary change from PMIERs 1.0 to 2.0 was doubles capital held immaterial to the industry, representing a change in the Available Assets definition to exclude the premium benefit of policies written before 2009.

Prior to 2008, state regulators were the only regulators providing capital requirements for private MI companies. The primary requirement was that the capital-to-risk ratio be no less than 4% (i.e., risk-to-capital of 25:1). **This historic methodology did not distinguish among different loan-level risk characteristics.** 

In 2015, the GSEs introduced the **Private Mortgage Insurer Eligibility Requirements (PMIERs 1.0)** as counterparty financial requirements. PMIERs is a risk-based, well-tuned system of capital requirements calibrated to a severe stress scenario that exists alongside the state regulatory framework. When applied, PMIERs results in a capital-to-risk ratio of approximately 7% (i.e., risk-to-capital of 14:1), based on recent New Insurance Written (NIW).

Under PMIERs, the Available Assets<sup>(1)</sup> that must be held to protect against stress scenarios vary based on the LTV of the loan and FICO score of the borrower, as well as other factors including loan vintage, documentation type, MI product type, payment status and completing a HARP refinance.

As an example, a typical new loan with LTV > 95% and FICO < 620 would require 29.07% of the risk in force to be held in Available Assets against the risk. A loan with LTV  $\leq$  85% and FICO > 760 requires 1.58% of the risk in force to be held in Available Assets.



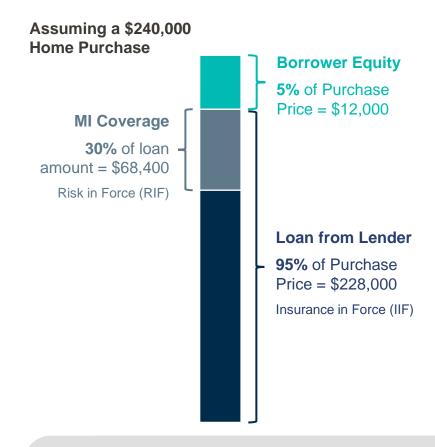
<sup>(1)</sup> Available assets are defined by the GSEs as "Assets that are readily available to pay claims, and include the most liquid investments of an approved insurer."

### Private mortgage insurance covers only a portion of the risk associated with a mortgage loan.

A typical home purchase is made up of borrower and lender provided funds. For conforming loans with a loan-to-value ratio (LTV) above 80%, credit enhancement is required by the GSEs. This credit enhancement is typically in the form of private mortgage insurance, which is the first level of credit protection against the risk of loss on a mortgage in the event a borrower is not able to repay the loan.

#### **Private MI losses are limited by the following:**

- ✓ Covers a portion of the loan amount in the first-loss position after borrower equity, typically 12-35% for a 30 year mortgage (see standard coverage table to right)
- Borrower-paid policies generally cancel automatically when the mortgage is scheduled to reach 78% of the home's original value.
- Does not cover property losses or physical damage (e.g., damage caused by floods, hurricanes, or other catastrophic losses).
- Generally a home must complete foreclosure before a claim is paid. Since 2008, many new homeowner protection programs have been created to prevent foreclosures.



GSE Standard Coverage Percent of loan amount							
Base LTV	> 20 Years	≤ 20 Years					
95.01% to 97%	35%	35%					
90.01% to 95%	30%	25%					
85.01% to 90%	25%	12%					
85% and under	12%	6%					



## Risk distribution is a means to optimize our retained exposure and benefits Radian in a number of ways:

- Decreases tail risk associated with stress scenarios, thereby reducing financial volatility
- Significantly reduces the capital that would otherwise be needed to support the risk
- Access to lower cost of capital
- Increases projected returns on capital
- Increases rating agency claimspaying resources
- Increases potential dividend capacity

### Factors considered when evaluating risk distribution opportunities and structures:

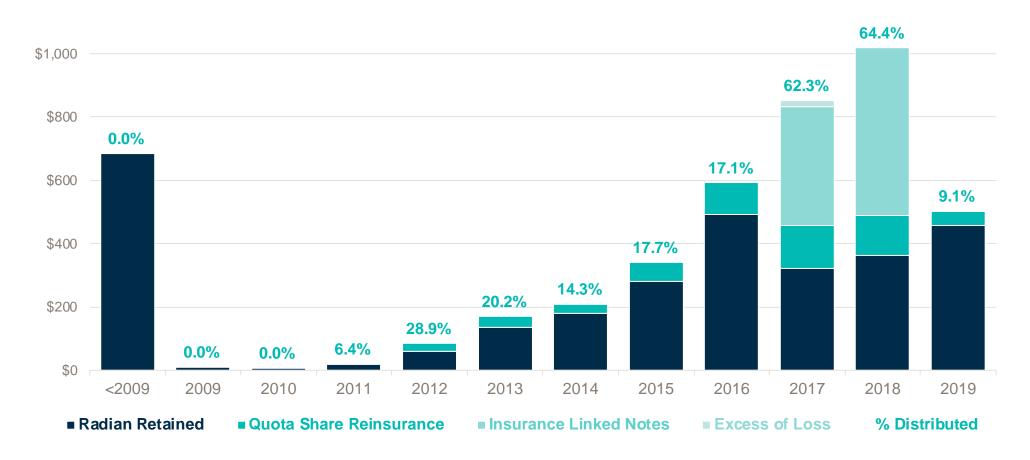
- Cost of capital
- Certainty and amount of capital credit through time
- Insured portfolio impact
- Benefit in stress scenarios
- Rating agency credit
- Ease of execution and administration
- Flexibility of terms
- Counterparty risk

### Radian expects to continue to leverage multiple forms of risk distribution:

- To date, Radian has utilized Insurance-Linked Notes, forward Quota Share Reinsurance, and Excess of Loss Reinsurance
- 64% of Radian's Primary risk in force (RIF) is subject to a form of risk distribution, with approximately 38% of RIF being ceded
- Risk distribution has reduced Radian's PMIERs minimum required assets by \$1.5B on a consolidated basis



The Impact of Radian's Reinsurance Programs on PMIERs Minimum Required Assets (MRA), by Vintage \$ in millions, as of June 30, 2019



Total MRA relief is approximately \$1.5 billion with \$1.2 billion of collateral held against it



Radian covers its new business via various risk distribution structures that reduce volatility by protecting against stress loss events. These risk distribution structures have been sized to achieve significant credit under the PMIERs.

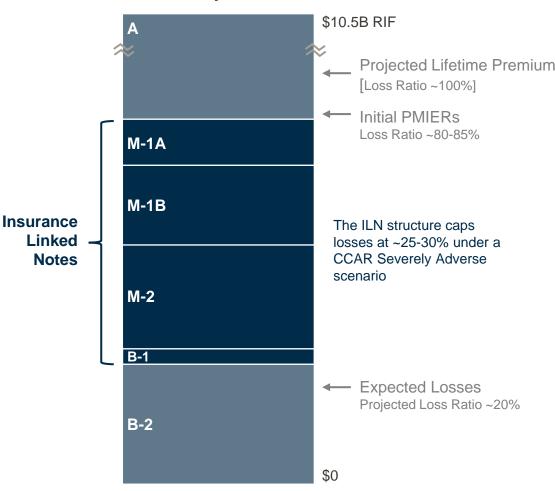
Under a CCAR Severely Adverse scenario\*, we project that our recent Insurance-Linked Notes (ILN) structures would attach and absorb losses without exhausting the structures.

 As a result, Radian projects a cumulative loss ratio for its 2018 Monthly Premium business of approximately 25-30% under a CCAR Severely Adverse scenario

In addition to reducing its tail loss exposure via risk distribution, Radian benefits from premium and investment income, neither of which is given capital credit under the PMIFRs.

- Forecasted lifetime premium exceeds the initial PMIERs requirements.
- With risk distribution structures such as EMIR 2019-1 (i.e., our recently issued ILN), the premium generated fully covers Radian's first-loss retained exposure as well as the cost of the program, with ample earnings left to cover losses in excess of the ILN's detachment point.

#### 2018 Radian Monthly Premium Business





<sup>\*</sup> CCAR scenarios are modified to accommodate, among other items, the time horizon required for our analysis

### Common Misconceptions about Private MI

There are many misconceptions regarding the Private MI industry and the market we serve.

The impact of interest rate fluctuations, including mortgage rates, on Private MI

The impact of the total mortgage origination market on Private MI volume

Fluctuations in home prices affect a first-time homebuyer's plans to own a home

The value of the insured portfolio

How the portfolio will perform in a stress scenario

How Private MI company valuations compare to other financial sectors



### Common Misconceptions about Private MI

The impact of interest rate fluctuations, including mortgage rates, on Private MI

Modest changes in interest rates have a limited impact on affordability, and rates are still historically low.

#### **Interest Rate Trend**



For a typical first-time homebuyer, an increase of 50 basis points in their mortgage interest rate would change their monthly payment from \$888 to \$942, only a **\$54** or **6% increase.**<sup>(1)</sup>

Source: Freddie Mac Primary Mortgage Market Survey (PMMS)



<sup>(1)</sup> Assumes: \$190,000 home with 5% down payment, 30 year mortgage and average rate of 4.25% (increased to 4.75%).

### Common Misconceptions about Private MI

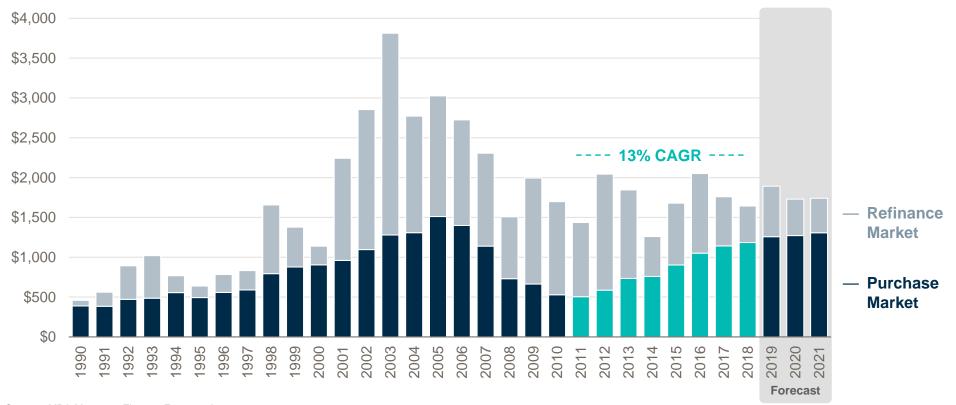
The impact of the total mortgage origination market on Private MI volume

While the total mortgage origination market has experienced small declines in recent years, purchase mortgage activity is the primary driver of new Private MI. Purchase transactions are 3-5 times more likely to use Private MI than refinance transactions.

The purchase market **has increased at a 13% annual growth rate** over the past 8 years, and is expected to continue to grow. Purchase transactions accounted for **94%** of Radian's 2018 NIW.

#### **Mortgage Originations Trend**

\$ in billions



Source: MBA Mortgage Finance Forecast August 2019.

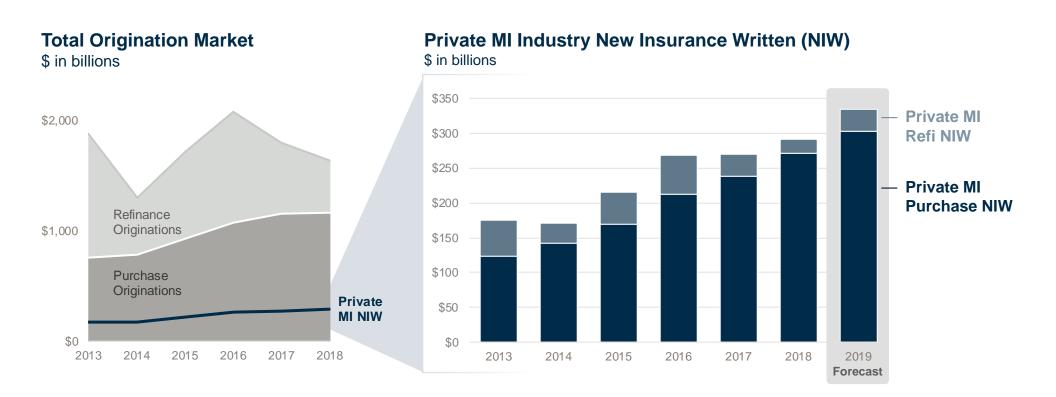


### Common Misconceptions about Private MI The impact of the total mortgage origination market on Private MI volume

#### Purchase originations account for 84% of new Private MI since 2013

Total Private MI NIW has grown by 66% from 2013 through 2018, with purchase MI growing 118% during this time

While refinance volume can cause significant variation in total mortgage originations, **Private MI New Insurance** Written has increased steadily during the same time period.





### Common Misconceptions about Private MI Fluctuations in home prices affect a first-time homebuyer's plans to own a home

Modest changes in home prices also have a limited impact on the demand for Private MI, which typically comes from first-time homebuyers.

These homebuyers generally use a low downpayment to purchase a moderately-priced home and often are motivated to buy based on life events such as a growing family or new job.

More than 60% of purchasers using Private MI are first-time homebuyers (1)

For a typical first-time homebuyer, a 5% increase in home price would change their monthly payment from \$942 to \$989, only a \$47 increase. (2)

### According to recent studies by the National Association of Realtors,

- 73 to 84% of non-owners expressed a desire to be a homeowner. <sup>(3)</sup>
- 9 in 10 believe owning a home is part of the American Dream. (3)
- For first-time homebuyers, 66% expressed that the number one reason for their purchase was their desire to own a home of their own (versus job relocation, growing family, etc.).



<sup>(1)</sup> Source: GSE aggregate data

<sup>(2)</sup> Assumes: \$190,000 home with 5% downpayment and average 30 year mortgage rate of 4.75%.

<sup>(3)</sup> National Association of Realtors, 2019 NAR Aspiring Home Buyers Profile

<sup>(4)</sup> National Association of Realtors, 2018 Profile of Home Buyers and Sellers

Our largest asset is not on our Balance Sheet.

Insurance In Force: Off Balance Sheet Value Generator

**Insurance in Force (IIF)** is the largest earning "asset" for Radian

Our **\$231 billion portfolio of IIF** does not appear on our GAAP financial statements but drives our primary source of revenue – earned premiums

Our **financial results** show the accounting value of earned premiums realized in a given period, but **not the full value that is yet to be realized** remaining in the portfolio

These remaining future earnings are not reflected in current period book value, but are **expected to be earned over time** 

Two important measures of the value of our IIF portfolio are the expected **Future Earnings** and the **Economic Value** 

### Future Earnings

The estimated *undiscounted* GAAP earnings yet to be recognized from the in force portfolio

#### Economic Value

The discounted Future Earnings less an estimated cost of PMIERs required capital



**Economic Value** is an economic concept utilized for managing **our pricing**, **portfolio management** and has some application for **estimating enterprise value** 

#### **Applications:**

#### **Economic Value of NIW**

Ensures that our pricing decisions are made in a "fully loaded" economic context and with the expectation of achieving AT LEAST a hurdle rate of return – positive Economic Value means that we are expected to earn returns ABOVE the hurdle rate

#### **Economic Value of IIF Portfolio**

Helps us evaluate portfolio enhancements such as risk distribution. Possible to increase Economic Value after origination through managing expected losses, investment income, cost of capital and expenses.

- Concept used in other insurance lines, mostly life insurance ("Value of In Force")
- O Useful for insurance lines with policies that have expected multi-year cash flows / benefit
- Economic vs. accounting concept that takes into account the expected future results of the portfolio less a cost of capital
- Has different application for management than Future Earnings



Each vintage of NIW is expected to generate a significant amount of future earnings. For example, a \$50B vintage of NIW (with assumptions as shown below) is expected to generate \$725M in lifetime GAAP net income.

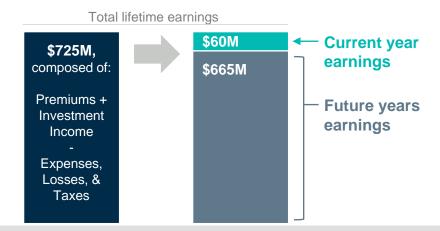
Of this amount, *less than 10%* is expected to be recognized in the year of origination, leaving approximately \$665M of GAAP net income that is expected to be recognized in future periods.

#### **Example Income Assumptions:**

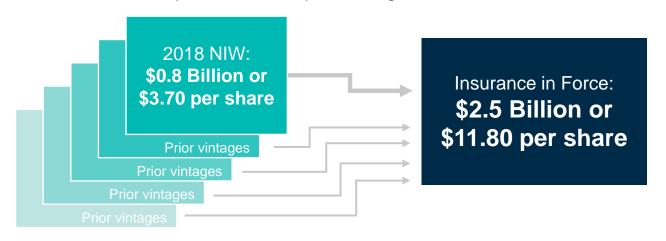
**50 bps** premium yield **25%** expense ratio

**6 year** average life **21%** effective tax rate

**20%** loss ratio **3%** investment income yield



As of March 31, 2019, Radian's 2018 NIW was expected to generate **~\$800M** in Future Earnings, while the Insurance In Force portfolio was expected to generate **~\$2.5 billion** in Future Earnings



Expected future earnings are calculated as of March 31, 2019

Amounts shown reflect Moody's baseline economic scenario.

Per share amounts reflect outstanding share count as of 3/31/19.

Future Earnings are derived from estimated: earned premiums, investment income on required PMIERs capital and unearned premium reserve, losses, expenses of current portfolio over time, and taxes.



**In addition to discounted Future Earnings**, our Economic Value framework considers the cost of holding required PMIERs capital to support the outstanding risk in force.

#### **Estimating Cost of Capital**

For example, a \$50B vintage of NIW (with assumptions shown below) is expected to have a lifetime Total Cost of Capital of \$300M.

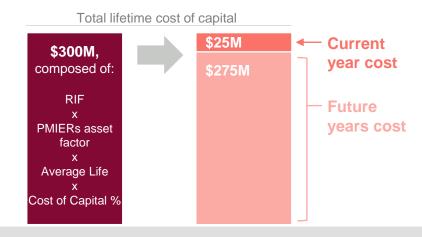
#### **Example Cost Assumptions:**

25% RIF coverage

**7.5%** Gross PMIERs minimum required asset factor

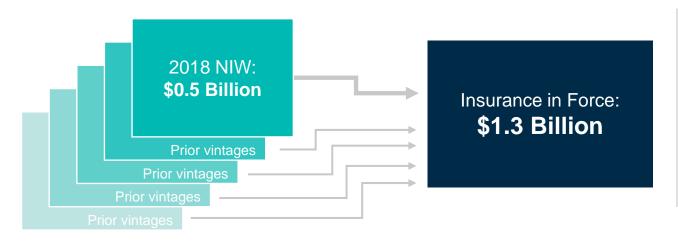
**4%** Net PMIERs minimum required asset factor after considering risk distribution

10% cost of capital



The **Economic Value** of NIW is simply the amount of Future Earnings less the cost of holding required capital, discounted to present value.

As of March 31, 2019, Radian's 2018 NIW was expected to generate **~\$500M** in Economic Value, while the Insurance In Force portfolio was expected to generate **~\$1.3 billion** in Economic Value.



Using the assumptions given above for a **\$50B vintage of NIW**, the Economic Value is **\$450M**.

Our Economic Value framework incorporates MI policy pricing, capital requirements, risk distribution strategies, and operational assumptions, all evaluated on a through an economic cycle basis.

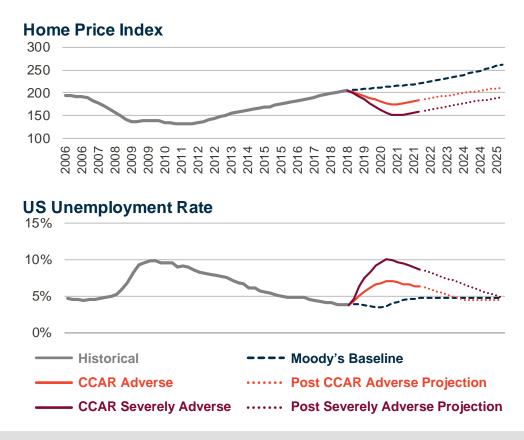


### Common Misconceptions about Private MI How the portfolio will perform in a stress scenario

Both Future Earnings and Economic Value are sensitive to economic assumptions, primarily house price appreciation, unemployment, and interest rates.

As shown at right, Future Earnings are projected to remain in excess of \$1B even in a CCAR Severely Adverse scenario, which includes a 26% decline in house prices and 10% unemployment.

In addition, Economic Value is projected to be positive in all three scenarios shown, including the CCAR Severely Adverse scenario, meaning Radian is projected to be able to achieve its cost of capital hurdle even through a severe economic shock.



#### **Projected Future Earnings:**

Baseline: ~\$2.5B

CCAR Adverse\*: ~\$1.4B

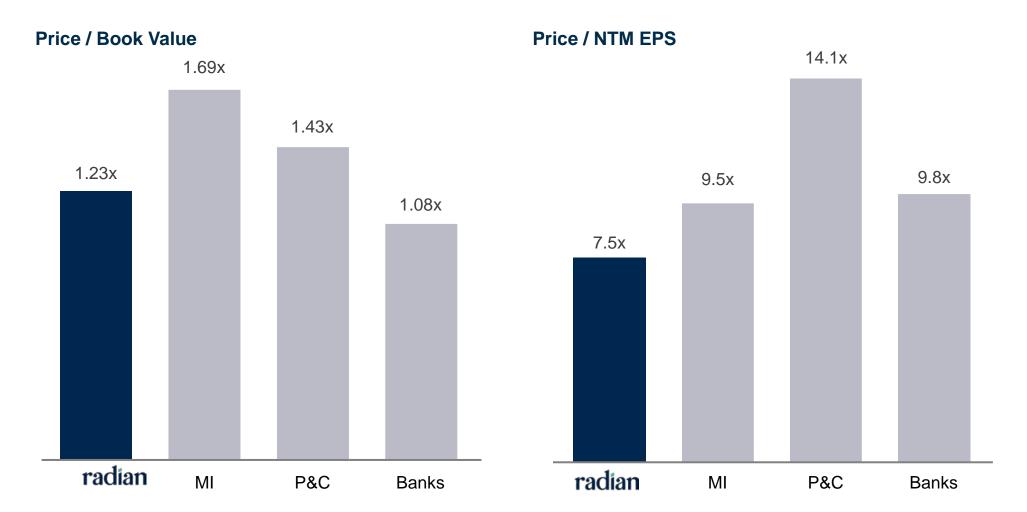
CCAR Severely Adverse\*: ~\$1.1B

\* CCAR scenarios are modified to accommodate, among other things, the time horizon required for our analysis. Calculated as of March 31, 2019



### Common Misconceptions about Private MI How Private MI company valuations compare to other financial sectors

Private MI provides attractive valuation relative to other financial sectors.



Source: Company Filings, SNL Financial and FactSet. Market Data as of 8/29/19.

Note: Mortgage Insurance index consists of MTG, ESNT, NMIH, and ACGL. P&C index consists of GBLI, SG, UFCS, AMSF, EIG, JRVR, PRA, KNSL, ARGO, RLI, SIGI, THG, AXS, ORI, RNR, AFG, RE, CAN, WRB, MKL, ACGL, CINF, HIG, TRV, AIG, CB, and Y. Banks index consists of JPM, BAC, C, WFC, USB, PNC, BK, COF, STT, BBT, STI, FITB, CFG, KEY, RF, NTRS, MTB, HBAN, FRC, CMA, ZION, SIVB, PBCT, BPOP, CIT, SBNY, SNV, EWBC, FHN, BOKF, FCNC, FNB, WTFC, ASB, BKU, VLY, CFR, IBKC, STL, TCBI, WBS, HWC, UMPQ, PNFP, PACW, CBSH, WAL.



### Radian is Unique Among the Private MIs

Our broad set of mortgage and real estate capabilities enable us to be an important and trusted business partner to mortgage market players

#### **Solutions Across the Mortgage and Real Estate Spectrum**

	Mortgage Insurance	Underwriting	Training	Technology	Risk Solutions	Title Insurance	Settlement Services	Real Estate Valuation	Real Estate Asset Management	Real Estate Data and Analytics	Real Estate Brokerage	REO Management	Single Family Residential	Servicing Surveillance	Securities Due Diligence
Radian	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Other MI Companies	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>										

#### **Competitive Differentiation**

Radian is much more than a Mortgage Insurance provider. We not only lead the mortgage insurance industry, but are also well-positioned across the mortgage value chain, allowing us to engage in strategic opportunities aligned with shared objectives of our clients.



### Radian is Unique Among the Private MIs

Our **established relationships** span the mortgage and real estate ecosystem providing **valuable strategic insights** into market needs

radian

1,200+

Mortgage Lenders 300+

Mortgage and Real Estate Investors

35,000+

Real Estate Brokers and Agents

These relationships provide an excellent foundation to distribute our products and services, and serve as an intermediary connecting the participants across the mortgage and real estate ecosystem



### Radian is Unique Among the Private MIs Creation and Management of Excess Capital



Returns from our MI business are strong and further enhanced by risk distribution



### Radian is Unique Among the Private MIs Statutory Capital

\$ in millions	Dec	ember 31, 2017	De	cember 31, 2018	ľ	March 31, 2019	June 30, 2019	
RIF, net	\$	36,793.4	\$	40,711.3	\$	41,283.5	\$ 42,154.0	· /
Common Stock & paid in capital	\$	1,866.0	\$	1,416.0	\$	1,416.0	\$ 1,041.0	
Surplus Note		100.0		100.0		100.0	100.0	
Unassigned funds (deficit)		(765.0)		(702.1)		(651.1)	(605.7)	
Statutory policyholders' surplus		1,201.0		813.9		864.9	535.2	
Contigency reserve	\$	1,667.0	\$	2,110.8	\$	2,224.6	\$ 2,351.2	
Total statutory capital	\$	2,867.9	\$	2,924.7	\$	3,089.4	\$ 2,886.5	

Common stock and paid in capital without further action will stay flat

Surplus Note may be redeemed

Forecast

Unassigned deficit continues to decline

Contingency Reserves continue to build as we earn premiums

Total Statutory Capital grows due to future earnings, which impact Unassigned Funds and Contingency Reserves



### Radian is Unique Among the Private MIs

For more than 40 years, Radian has been a solid business partner. We demonstrated resilience and strength during the worst economic downturn in recent history. And today, we are a best-in-class mortgage and real estate risk management company that stands out from the rest.

- ✓ Market leading mortgage insurance franchise
- ✓ Growing, high-quality, high-value mortgage insurance portfolio
- ✓ Disciplined economic value-driven approach to credit risk management
- ✓ Growing a diversified set of high-quality mortgage and real estate products and services
- ✓ Strong market brand with broad customer relationships
- ✓ Growth driven through a unique enterprise sales and marketing platform
- ✓ Significant capital and financial flexibility, including history of shareholder return
- ✓ Highly experienced and talented team



#### An Investment Thesis for Radian

Radian is a company with strategic focus, business momentum, customer relationships and a high-quality insurance portfolio that has achieved strong year-over-year growth.

#### Insurance in Force (\$B)

#### **9%** growth from prior year

One of the largest in the industry and primary driver of our future earnings

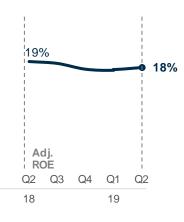
Monthly Premium IIF has grown 12% compared to prior year



### Adjusted Net Operating Return on Equity (1)

#### Consistent returns in the high teens

Shows our ability to generate profit more efficiently on capital



### Adjusted Diluted Net Operating Income per Share (1)

16% growth from prior year,13% growth in adjusted pre-tax operating income<sup>(1)</sup> over prior year

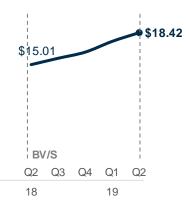
Driven by consistent revenue growth, positive operating leverage, and opportunistic share repurchases



#### **Book Value per Share**

**23%** book value growth from prior year

Driven by growth in retained earnings, net unrealized gains on investment securities and opportunistic share repurchases



<sup>(1)</sup> Adjusted Net Operating Return on Equity, Adjusted Diluted Net Operating Income per Share (ADNOI/S) and Adjusted Pretax Operating Income (APOI), as used in this presentation, are non-GAAP financial measures. For reconciliations to the comparable GAAP measures and our definitions of these terms, see Appendix Slides 37-40.



### **Investment Thesis**

### **Industry**

Strong Industry, Economic and Regulatory Backdrop

### Value

Represents Strong Relative Value for Returns on Capital

### Risk Distribution

Actively Aggregates, Manages, and Distributes Risk

### Uniqueness

Radian is Unique Among Peers

## radian

# radian

### **Appendix**

Consolidated Non-GAAP Financial Measures Reconciliations



#### Use of Non-GAAP Financial Measures

In addition to the traditional GAAP financial measures, we have presented "adjusted pretax operating income", "adjusted diluted net operating income 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 the Company's business performance is evaluated by both management and the 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," "adjusted diluted net operating income per share" and "adjusted net operating return on equity" are non-GAAP financial measures, we believe these measures aid in understanding the underlying performance of our operations. 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 the Company's business segments and to allocate resources to the seaments.

Adjusted pretax operating income is defined as GAAP consolidated pretax income excluding the effects of: (i) net gains (losses) on investments and other financial instruments; (ii) loss 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 losses from the sale of lines of business and acquisition-related expenses. Adjusted diluted net operating income per share is calculated by dividing (i) adjusted pretax operating income 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. Adjusted net operating return on equity is calculated by dividing annualized adjusted pretax operating income, 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.

Although adjusted pretax operating income 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. 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. We do not view them to be indicative of our fundamental operating activities.

- Loss 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. Therefore, these items are excluded from our calculation of adjusted pretax operating income (loss).
- 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) losses from the sale of lines of business and (ii) acquisition-related expenses.

See Slides 38 through 40 for the reconciliation of the most comparable GAAP measures of consolidated pretax income, diluted net income per share and return on equity, to our non-GAAP financial measures for the consolidated company of adjusted pretax operating income, adjusted diluted net operating income per share and adjusted net operating return on equity, respectively.

Total adjusted pretax operating income, adjusted diluted net operating income per share and adjusted net operating return on equity are not measures of total profitability and therefore should not be considered in isolation or viewed as substitutes for GAAP pretax income, diluted net income per share or return on equity. Our definitions of adjusted pretax operating income, adjusted diluted net operating income per share and adjusted net operating return on equity may not be comparable to similarly-named measures reported by other companies.



### Reconciliation of Consolidated Pretax Income to Adjusted Pretax Operating Income

	2019			2018	
(\$ in thousands)	Q2	Q1	Q4	Q3	Q2
Consolidated pretax income	\$209,545	\$216,136	\$176,485	\$184,688	\$180,571
Less reconciling income (expense) items:					
Net gains (losses) on investments and other financial instruments	12,540	21,913	(11,705)	(4,480)	(7,404)
Loss on extinguishment of debt	(16,798)	_	_	_	_
Amortization and impairment of other acquired intangible assets	(2,139)	(2,187)	(3,461)	(3,472)	(2,748)
Impairment of other long-lived assets and other non- operating items <sup>(1)</sup>	103	(5,660)	(2,033)	(4,059)	(286)
Total adjusted pretax operating income (2)	\$215,839	\$202,070	\$193,684	\$196,699	\$191,009

<sup>1)</sup> The amount for the three months ended September 31, 2018 includes \$3.6 million of other exit costs associated with impairment of internal-use software included within restructuring and other exit costs. The amounts for all other periods are included in other operating expenses and primarily relate to impairments of other long-lived assets.



<sup>2)</sup> Please see slide 37 for the definition of this line item and additional information regarding our use of non-GAAP financial measures.

### Reconciliation of Diluted Net Income Per Share to Adjusted Diluted Net Operating Income Per Share

	2019 2018			2018			
	Q2	Q1	Q4	Q3	Q2		
Diluted net income per share	\$0.78	\$0.78	\$0.64	\$0.66	\$0.96		
Less per-share impact of reconciling income (expense) items:							
Net gains (losses) on investments and other financial instruments	0.06	0.10	(0.05)	(0.02)	(0.03)		
Loss on extinguishment of debt	(0.08)	_	_	_	_		
Amortization and impairment of other acquired intangible assets	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)		
Impairment of other long-lived assets and other non- operating items	_	(0.02)	(0.01)	(0.02)	_		
Income tax provision (benefit) on reconciling income (expense) items (1)	(0.01)	0.01	(0.02)	(0.01)	(0.01)		
Difference between statutory and effective tax rates <sup>(2)</sup>	_	(0.01)	_	_	0.30		
Per-share impact of reconciling income (expense) items	(0.02)	0.05	(0.06)	(0.05)	0.27		
Adjusted diluted net operating income per share (1) (3)	\$0.80	\$0.73	\$0.70	\$0.71	\$0.69		

<sup>1)</sup> 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.



<sup>2)</sup> The quarter ended June 30, 2018 includes \$0.34 of tax benefit related to the settlement of the IRS Matter, which includes both the impact of the settlement with the IRS as well as the reversal of certain previously accrued state and local tax liabilities.

<sup>3)</sup> Please see Slide 37 for additional information regarding our use of non-GAAP financial measures.

### Reconciliation of Return on Equity to Adjusted Net Operating Return on Equity

	20	19		2018				
	Q2	Q1	Q4	Q3	Q2			
Return on equity (1)	17.8%	19.0%	16.4%	17.4%	26.7%			
Less impact of reconciling income (expense) items: (2)								
Net gains (losses) on investments and other financial instruments	1.3	2.4	(1.4)	(0.5)	(0.9)			
Loss on extinguishment of debt	(1.8)	_	_	_	_			
Amortization and impairment of other acquired intangible assets	(0.2)	(0.2)	(0.4)	(0.4)	(0.4)			
Impairment of other long-lived assets and other non- operating items	_	(0.6)	(0.3)	(0.5)	(0.1)			
Income tax provision (benefit) on reconciling income (expense) items (3)	(0.1)	0.3	(0.4)	(0.3)	(0.3)			
Difference between statutory and effective tax rates <sup>(4)</sup>	0.2	_	0.2	(0.5)	8.5			
Impact of reconciling income (expense) items	(0.4)	1.3	(1.5)	(1.6)	7.4			
Adjusted net operating return on equity (5)	18.2%	17.7%	17.9%	19.0%	19.3%			

<sup>1)</sup> Calculated by dividing annualized net income by average stockholders' equity, based on the average of the beginning and ending balances for each period presented.



<sup>2)</sup> Annualized, as a percentage of average stockholders' equity.

<sup>3)</sup> 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.

<sup>4)</sup> The quarter ended June 30, 2018 includes 9.4% of tax benefit related to the settlement of the IRS Matter, which includes both the impact of the settlement with the IRS as well as the reversal of certain previously accrued state and local tax liabilities.

<sup>5)</sup> Please see Slide 37 for additional information regarding our use of non-GAAP financial measures.