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Radian Group Inc. (RDN)

Investor Day

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MANAGEMENT DISCUSSION SECTION

Operator: Ladies and gentlemen, please welcome Radian's Senior Vice President of Investor Relations and Corporate Development, John Damian.

John Damian

Senior Vice President, Investor Relations and Corporate Development, Radian Group Inc.

Good morning, everyone, and welcome to Radian's Investor Day at the New York Stock Exchange. It's great to see so many familiar faces in the audience as well as some new ones. On behalf of the management team here at Radian, I want to welcome everyone that is here in person as well as those attending remotely on the webcast. For those of you who don't know me, I'm John Damian, Senior Vice President of Investor Relations and Corporate Development. Thank you, all, for your interest in Radian.

Before we get started, it's important to note that some of the statements we will make today will be forward looking. These statements as well as radiance prospects are subject to certain risks and uncertainties and you should read about these risks on the Safe Harbor statements slide included at the end of today's presentation. The full presentation is not available in advance of our discussion today, but will be posted to the investor section of our website at the conclusion of our Investor Day.

In addition, today's presentation includes certain non-GAAP financial measures. A complete description of those measures in reconciliation to the most comparable GAAP measures may be found at the end of today's presentation and on the Investor section of our website. Finally, I would ask that you please silence any electronic devices for the benefit of those in the room as well as those on the webcast.

Now, let's get to the good stuff. I'd like to give you a preview of what we'll be doing today. Throughout the day, you will hear why we are so excited about our business and the opportunity ahead of us and why Radian is different from the competition. You'll hear from our CEO and CFO, along with our President of Mortgage and our Executive Vice President of Finance. Other senior team members will join our presenters on stage for the Q&A session and panel discussions.

Our goal is to make this an interactive day, so I encourage you to ask the questions that are on your mind. We will have two dedicated time periods for Q&A during our discussion this morning. For those of you in the room, you will have two options to ask questions. First, you can ask your question directly to the management team. All we ask is that you please wait for a microphone before asking your question. That will allow for our webcast audience to hear you clearly.

Second, if you prefer, you can use the QR code located on your table to submit questions electronically. You can submit your questions at any time electronically throughout the day. For those of you attending virtually, you will have the opportunity to submit questions via the link on the webcast platform at any time during our discussion. During the day, we will be collecting those questions submitted electronically and we'll try to answer as many as we can during our two designated Q&A periods. If we aren't able to get to your question today, we will circle back with you after our Investor Day.

Just a few more housekeeping items before we get started. We have scheduled a 10-minute break about halfway through the presentation, so please exit as needed through the rear doors. And following the formal presentations and the two Q&A periods, we will break for lunch at approximately 12 noon. Lunch will be available down the stairs, directly outside the doors to the right.

We ask that you please grab your lunch and be seated as quickly as possible as we will begin our first-of-two lunch and learn panel discussions at approximately 12:20 PM. The topic of our first panel discussion will be data and analytics, and the second panel discussion will be on technology. During these panel discussions, you During these panel discussions you will hear from our management team and business leaders, the ones who interact with our customers each day, oversee our businesses and product lines, and represent the primary reason for our success, our incredible team. Lunch and the panel discussions will conclude at approximately 1:00 PM and then at that time we'll invite you to enjoy coffee and dessert and meet and mingle with members of Radian's Management team. We will officially adjourn at 2:00 PM. Finally, Radian will be ringing today's closing bell, so be sure to follow us using #RadianInvestorDay2023 and see us live on the New York Stock Exchange website.

Okay. Now we will get started. Ladies and gentlemen, please welcome Radiance Chief Executive Officer, Rick Thornberry, to the stage.

Richard G. Thornberry

Chief Executive Officer & Director, Radian Group Inc.

Good morning. Good morning. Thank you all for joining us both here at the New York Stock Exchange and on the webcast. It's been quite a long time since we've been able to do something together in person. And the team and I are very excited to share updates on our business today and take you – take your questions.

For more than 45 years, Radian has been Ensuring the American dream of home ownership. And before that, let's see. We're going to be used to these slides. Here you go. Ensuring the American dream of home ownership in an affordable and responsible and sustainable way. We strive to promote wealth, creation through home ownership, increase access and affordability for low and moderate income borrowers. Ensure sustainable home ownership through sound risk management, and reduce costs and friction from the home buying process using technology to deliver better ways of doing business.

Since 2018 we've helped more than 1 million families achieve their dream of home ownership. And over our 46-year history, millions more have leveraged our products to achieve the American dream. Approximately 60% of customers benefiting from private mortgage insurance are first time homebuyers. Our private mortgage insurance products help home-ready borrowers achieve homeownership sooner than they would otherwise by helping remove one of the largest hurdles to homeownership saving for a 20% down payment. In fact, according to USMI, it could take 35 years for an average firefighter or school teacher to save enough to put 20% down on their home, 35 years. That's a long time. And by achieving homeownership sooner, a borrower can build wealth by increasing the equity they have in their home while also establishing a sense of community and increasing their financial stability.

In addition to increasing access to affordable homeownership, through our proprietary risk management capabilities that are informed by decades of mortgage data and intelligence, we are able to more accurately assess a borrower's readiness for sustainable homeownership. And our family of companies leverage innovative digital solutions to provide affordable options for other aspects of the homebuying process, including reduced title insurance costs by 20% to 30% across many states. We are proud of the important role we play in the housing finance system by building a better way of doing business, and enabling more affordable access to homeownership.

Today, you'll hear us discuss and illustrate the strengths of our company. I want to take a minute to share what we believe are our strategic differentiators that enable us to succeed and are part of our DNA – our corporate DNA. Through our years of successfully serving the mortgage and real estate industries, we forge strong and lasting relationships in the market. You will hear how these broad industry relationships play a critical role and are highly valuable across our businesses.

Our experienced team is supported by a solid culture of expertly managing credit risk and capital, leveraging the set of data and – unique set of data and proprietary analytics. You will learn more today about how we approach portfolio risk management, and many of you are already familiar with our strong focus on capital management over the past several years. And that same team is using technology to solve customer problems and embrace a more efficient and effective digital future for our businesses, with a track record of investing in and driving innovation through the valuable products and services that we offer.

At Radian, we are guided by an enterprise – by our enterprise values and driven by our shared mission and purpose of ensuring the dream of homeownership. Now, this may sound like words that every CEO should say today. For us, it is rooted, deep-rooted in our culture, and I'm proud of how this sense of purpose drives and inspires our team to serve our customers and our communities each and every day.

Clearly, there are macroeconomic concerns in today's environment, and you will hear how we are positioned and ready to navigate the uncertainty. But we are in a unique position with various aspects of the market providing strong multiyear tailwinds for our business. You will hear more about these throughout today. But one that I want to highlight is the fact that there are strong homebuyer demographics as younger populations enter their home-buying years.

Millennials are in their prime years for buying homes, and they have been doing just that over the past 10 years. In fact, it is estimated that 67% of millennials are likely to buy a house in the next two years. They are also the most likely generation to use the Internet to find the home they ultimately purchase and prefer a more digital home buying experience versus the process their parents went through before them.

The millennials, in combination with Gen Z, represent 43% of homebuyers and are either ready to own a home or will be soon. Clearly, this creates an opportunity for strong first time homebuyer demand that is more likely to take advantage of private mortgage insurance. First time homebuyers made up 34% of home purchases in 2022. And as I just noted, first time homebuyers are more likely to take advantage of private mortgage insurance.

It's important to note that housing has become less affordable over the last several decades, which has created headwinds for aspiring buyers. Home prices have increased exponentially, while household income has grown at a slower pace, leading to an increase in home price to income ratio from approximately 3.5 million in 1984 to more than 5 in 2021. The combination of rising interest rates. Housing inventory nearing a 30 year lo, lack of labor, increased construction costs and rising student loan debt all magnify the affordability challenge. These headwinds from an affordability perspective served underscore the importance of private mortgage insurance in helping homebuyers purchase a home with a smaller down payment.

Given today's environment, you may be curious and interested, I get this question asked often in what is different today versus a great financial crisis. The good news is that it is vastly different. I think it's important to highlight how our industry has evolved and how fundamentals of our business have improved since then. While many of the challenges during the great financial crisis were housing led, fueled by toxic mortgage products, poor underwriting and weak servicing standards, today, the quality of mortgage products, underwriting and services standards has improved dramatically.

A few other important differences to note our homeowners today have much stronger credit profiles are in a – and in are more sustainable homeownership position, having built up significant equity in their home. Historically, mortgage insurance was priced using a static rate card. Today, pricing is based on customer and loan level analytics, delivering granular risk-based pricing, which provides us with a unique opportunity to drive economic value through our pricing engines.

The capital structure for the industry during the great financial crisis was materially different than it is today. The mortgage industry has transformed over the past decade to a consistently applied risk-based capital framework for the industry through the private mortgage insurers eligibility requirements. That's a mouthful or PMIERs.

Prior to the crisis, the industry was an originate and hold portfolio model. Today, we are an aggregate, manage and distribute portfolio model, where we actively manage the risk profile of our portfolio through ongoing risk distribution to the capital reinsurance markets, such as mortgage insurance like notes and quota share and auxiliary reinsurance.

The combination of risk-based pricing, enhanced capital models and active portfolio management puts us in a very different position today. Also, as opposed to the great financial crisis, where foreclosures and evictions were prevalent, today, there is both industry alignment were prevalent, today, there is both industry alignment and government support for homeowners with programs in place to help them manage through this environment and remain in their homes.

And a final point and another very big difference is the strength of the housing market and home values based on the extreme supply shortage, as well as growing demand from first time homebuyers. The exact opposite of the oversupply situation during the Great Financial Crisis did led a massive home price depreciation. So the good news is, although there are economic headwinds for the broader macro economy, we believe our industry and more specifically our company are well-positioned to navigate the environment with strong underwriting and servicing standards, embedded home equity for borrowers. A capital framework strengthened by PMIERs, access to the capital and reinsurance markets to distribute risk, and learnings from the past related to how best to assist homeowners that are experiencing temporary hardship.

You've heard me say many times, our mortgage insurance portfolios is a highly valuable asset. While we are operating in a challenging environment for new mortgage originations, our insurance in force has grown. Based on higher interest rates, our business benefits from higher persistency rates, which is the percentage of insurance that remains in force over a period of time across our $261 billion insurance in force portfolio.

The combination of persistency on our portfolio, which is fueled by the higher rate environment combined with continued high quality new insurance written, albeit at lower levels in prior years has driven portfolio growth. In addition, we believe by leveraging our proprietary data and our analytics platforms, with our strict strategic focus on generating economic value in pursuit of alpha that we are increasing the value of the future earnings from the portfolio. And as such, our large and valuable insurance in-force portfolio is expected to drive significant future earnings for Radian.

On this slide, you can see we have consistently grown book value per share. Book value is a key metric for our business, and therefore growth of book value is important. You can see here the 19% growth rate over the past 10 years on our book value per share. We've achieved this growth even after accounting for nearly $400 million of dividends paid since the beginning of 2020.

We have a strong track record of growing book value per share while paying an attractive dividend. As you can see on this slide, we have done this while generating total stockholder return outperformance. In addition to book value growth that I showed you on the prior slide, we've generated outside returns for shareholders. We have outpaced our mortgage insurance peers as well as the S&P 500. We believe this is a result of the consistency of our strong business performance combined with our track record for effectively managing capital.

This leads me to why we believe Radian is a compelling investment opportunity. You can see on this slide our recent price-to-book value and our price the next 12-month earnings per share as compared to P&C companies and financial institutions. You can view the opportunity clearly when you consider our three-year average return on equity on a GAAP basis of 14%. Again, strong sides of relative outperformance.

This slide shows our historical This slide shows our historical book value per share multiple. While our 10-year average price to book value is approximately 1.35, our current price to book is well below at 0.96 times. The pre-COVID trading level above book value versus the post-COVID trading level below book value is noteworthy.

This is despite the fact that our key business fundamentals are solid, which you'll hear throughout today, including the significant embedded earnings related to our $261 billion insurance portfolio and the resiliency of our future earnings and capital structure through stress scenarios.

We're excited about our future and look forward to sharing more during our day, during our time together today. As you listen to the presentations and learn more about our strategy and plans, I would emphasize a few key takeaways. The importance and value of our long-term customer relationships were more than 45 years as a trusted partner. The significance of the favorable multiyear industry tailwinds. The embedded future earnings of our high quality $261 billion mortgages – mortgage insurance in force portfolio. How our differentiated economic value model is designed to drive outsized portfolio, Alpha.

Our financial strength and flexibility, which enables us to be well positioned to succeed and withstand even a severe stress environment. And finally, the value creation opportunity related to our investments in innovative data and analytics and technology assets and capabilities. So, as we continue the program, we're – we have a short video that will give you a sneak peek into our greatest asset at Radian, our people.

[Video Presentation] (00:19:38- 00:22:48

Unverified Participant

Please welcome, President of Mortgage, Derek Brummer.

Derek V. Brummer

President-Mortgage Business, Radian Group Inc.

Good morning, everyone, and thank you for joining us today. I'm going to be focusing on the fundamental strength of our mortgage insurance business, our strategic focus on building long-term economic value or EV, and our competitive differentiation, including the use of our proprietary data and analytics which we leverage to generate alpha for our shareholders. Our MI business is delivering exceptional financial results driven by strong insured portfolio performance. We are continuing to grow the size of our more than $260 billion high-quality portfolio, which serves as the foundation for our future earnings. Underlying market and business fundamentals remain supportive of both our portfolio and the new business we are riding today, which continues to be in a hardening market from a pricing perspective. And as we will discuss later, our MI business is well-positioned to succeed through various market and economic cycles. It's a lot to cover. So let's jump on in.

Rick touched on the favorable demographic tailwinds for our business earlier. Here, you can see the wave of millennials and Gen Zers that are going to be entering the age of a typical first-time homebuyer over the next 10 to 20 years. This is very beneficial to our MI business, given the important role that MI plays enabling home ownership for first-time homebuyers.

In 2022, more than 95% of new mortgages with private MI were for purchases, and more than 60% of those purchase loans with private MI went to first-time homebuyers. The fact that the majority of borrowers with private MI were first-time buyers really underscores the benefit we are able to provide to borrowers via smaller down payment mortgages backed by private capital. In addition, as Rick noted, affordability challenges in today's market make smaller down payment mortgage options with MI more important than ever.

Turning to housing supply, following the financial crisis, new building activity declined dramatically and has not fully recovered, even to levels seen in the 1990s and early 2000s. Net housing supply has consistently failed to keep up with demand over the past 15 years as the number of households has grown more than 1 million per year on average, far outstripping lagging new construction.

This has resulted in a structurally undersupplied market and a housing shortage measured in the millions. While this is a negative from a home sales and affordability perspective, this persistent supply shortage, coupled with demographic driven demand for housing, provides support for home prices, mitigating against the risk of price declines. And there really is no readily apparent solution for this housing shortage that we see on the horizon.

This housing supply shortage is reflected in the low inventory of single-family homes and for sale. Currently, inventory is at only 1.3 million units, which is more than 1 million below the average number of units that were available over the 30-year period prior to 2020. While active housing listings pick up a bit in the spring. New listings are again decreasing on a year-over-year basis.

Here, you see the number of months it would take for the current inventory of existing single-family homes on the market to sell, given the current pace of sales. While month supply has come up a bit recently, it remains well below the lowest levels observed in the 30-year period prior to 2020.

This undersupply is particularly acute for more moderately priced homes that serve as starter homes for first time homebuyers, where current month supply is at around two months. And this spring's homebuying season did not see much of an increase in inventory as demand remained strong in the supply constrained market. This persistent housing shortage and supply demand imbalance is also reflected in a record low portion of inventory that is vacant. It has never been lower in records going back more than 65 years.

65 years. Here, you see highlighted on the left the year-over-year increase, increases in national home prices since 2012, including the more recent spike. This trend, which we viewed as potentially problematic from a sustainability perspective was broken by increasing mortgage rates in 2022, with rates peaking in November.

Given how quickly rates increased and the impact on affordability, home prices have held up remarkably well, outperforming our expectations. Our home prices declined on a national basis last July and August. According to the FHFA Housing Price Index, which is most representative of the homes we insure, prices were flat in Q4 of 2022 and are increasing again in 2023. But importantly, they are increasing at a more sustainable pace. It is also important to keep in mind that in the event of an economic downturn, mortgage rates would likely decrease, bringing in so-called shadow or pent-up demand into the market. Given the housing shortage and structural undersupply I just talked about, this should significantly lessen the risk of a material decline in home prices even in a recessionary scenario.

Turning to other economic indicators. Inflation continues to decrease as wage growth remains strong, relieving pressure on consumer purchasing power. While inflation has outstripped wage growth, the last couple of years, over the past five years, wage growth is up 22% versus the Consumer Price Index, which is up only 20%.

The labor market also continues to be very strong while the unemployment rate remains near historical lows, it was up in April and initial claims for unemployment are starting to increase. This is as expected as interest rate increases seem to be finally filtering their way into the employment market.

We project that unemployment will increase, reaching a similar peak of 5% as predicted by the MDA.

Employment demand also remains strong relative to supply as reflected in there being over 10 million jobs, job openings and 1.8 available jobs per unemployed worker. Meanwhile, consumer balance sheets remain solid. The personal savings rate is on the rise again. And household debt payments as a percentage of disposable personal income remain below 10%, which is historically quite low. Importantly, the decrease in debt service payments from the peak about 15 years ago has been driven by a decrease in mortgage debt service payments.

While purchase mortgage originations have come down from peak levels seen in 2021, we expect strong demand, driven by demographic tailwinds, to lead to continued growth in purchase originations in the future. Purchase volume is the key driver of insured portfolio growth for us as MI penetration rates for purchase loans are more than 10 times penetration rates for refinances.

What you see here at the bottom on the left is the level of refinance originations beginning in 2016. At the top is our insured portfolio persistency rate. In 2020, high refinance activity drove our portfolio persistency down as many of our insured borrowers refinanced. Higher mortgage rates over the last couple of years have driven down refinance activity and led to a significant decrease – a significant increase in our portfolio persistency as fewer insured loans are prepaying or canceling out of our portfolio. We expect to benefit from this higher persistency rate through at least the end of 2023.

This increase in persistency is what is enabling us to grow the size of our insured portfolio despite decreasing levels in NIW with persistency serving as a natural hedge decreasing NIW.

On the right, in blue, is our level of NIW going back to 2019 along with the level of cancellations in gray. You can see that in 2021, despite it being our second highest year of NIW ever, we didn't grow the size of our insured portfolio since the level of cancellations pretty much matched the level of NIW. In contrast, in 2022, while we saw lower levels of NIW relative to 2021, we saw even lower levels of cancellations, which means the size of our insured portfolio grew 6% versus no growth in 2021. This trend has also continued into 2023.

Given the counterbalancing effects of NIW and persistency, it is important to not unduly focus on quarter-to-quarter or year-over-year movements in NIW and remain focused on growth in the size of our insured book, which is what drives future earnings. Since 2015, we have grown our insurance in force by nearly 50% and grown monthly premium insurance in force by more than 85% and we have consistently done this through periods of significant and NIW volatility.

We've been growing our insured portfolio over the past 15 years and we continue to grow in a market built on strong new business and portfolio fundamentals. While Rick discussed some of the significant changes since the financial crisis, it is hard to overstate what a transformation it has been and why we think MI is such a great business to be in today.

The chart on the left illustrates that transformation from a default risk perspective showing the decrease in default risk and the non-existence of so-called product risk. On the right, you see that current credit conditions remain tight as credit availability is back near low – the low levels observed in 2011 and 2012.

On this and the next slide, you see the evolution of our insured portfolio along a number of credit dimensions, given the high quality of business being written in the past 15 years. At the end of Q1, the weighted average original FICO score for our portfolio was 744. And given the substantial home price appreciation in recent years, the weighted average mark-to-market LTV for our portfolio is below 75%. In addition, 98% of our insured loans are fixed rate, and the weighted average note rate for loans in our portfolio is less than 4%. This is really important in terms of protecting borrowers in our portfolio from increasing interest rates.

As I will discuss later, our ability to dynamically control pricing at a very granular level through our radar rates pricing engine has fundamentally transformed our capacity to manage the credit characteristics and the geographic distribution of business being added to our portfolio. Finally, I would note that the underwriting or manufacturing quality of our NIW continues to be very strong.

Here, you see the vast majority of our outstanding portfolio is purchase volume. And higher risk loan products and characteristics which were prevalent prior to 2009, represent very small portions of our portfolio today as risk written prior to 2009 represents less than 3% of our risk in force today. For instance, cash out refinances represent less than 1% of our portfolio. And at the bottom, you can see the significant decrease of layer risk in our portfolio. For instance, the percentage of risk in force right below 680 FICO is combined with a cash out refinancing has gradually decreased from 10% to less than 0.5% today. This distribution on this page of our insurance in force, by no rate, demonstrates the lack of refinance incentive for our insured portfolio even if interest rates were to materially decrease. As more than 85% of our insurance in force has a note rate below 5.5%. Assuming a 100 basis point decrease in mortgage rates, we estimate that only 4% of our portfolio would have an incentive to refinance.

Assuming a 200 basis point decrease, only 12% would have an incentive. This is a big positive from a persistency perspective. Our portfolio also benefits from significant borrow equity. We estimate that 83% of our insurance in force has 10% or more equity. And as equity position is even stronger in our defaulted loan inventory. 95% of our defaulted loans are estimated to have at least 10% equity and 84% have at least 20% equity. This embedded equity significantly mitigates the risk of loss as it decreases both the frequency and severity of claims.

Our insured portfolio performance continues to be very strong, with carriers having consistently outpaced new defaults following the COVID spike and new defaults, which you can see here in the top chart. This has led to a study decrease in the number of loans in default, which were down nearly 20% year-over-year in Q1. As you can see in the bottom chart, our portfolio default rate has been gradually decreasing from the COVID peak and actually fell below 2% in April.

I would also note that 99% of new defaults from the COVID peak in Q2 2020 have now cured. Cure rates for our default inventory have been increasing over time and we have some of the highest levels we ever observed. For instance, cure rates for defaults that have missed 12 or more payments shot up a couple of years ago to above 20% and have remained at those historically high levels. Significant indebted borrow equity that I just talked about has also led to both a considerable decrease in our claim severity and pending claims being withdrawn by servicers more often as it is increasingly the case that our claim liability would be fully offset by the equity.

Before turning to what sets us apart competitively, I just want to emphasize several things. First, underlying market business fundamentals remain strong. We're continuing to grow our large, high quality insured portfolio. Portfolio performance remains very strong. And last, we are well-positioned for continued success. This point, I'm going to turn to what sets us apart competitively. As I mentioned at the beginning, our strategic focus is on building long-term economic value or EV. EV is simply the projected present value of future earnings we expect to generate on the capital we deploy, less the cost of holding that capital. EV serves as our strategic north star and our focus from a new business perspective is to competitively differentiate ourselves through our ability to identify and acquire NIW with the highest EV.

We do this through our unique analytical tools and approach to We do this through our unique analytical tools and approach to pricing, which is what I'm going to be talking about next. At its most basic level, our strategy is simply to acquire an outsized share of EV available in the MI market relative to our competitors. This is what we refer to as generating alpha.

Due to the transformation of the MI industry that Rick talked about earlier, the drivers of success in the industry have vastly changed even as compared to just a few years ago. The drivers of success today and the key to executing our EV-driven strategy and generating Alpha, [indiscernible] 00:40:02 on having industry-leading analytics. In particular, analytics focused on projecting loan performance, predicting local economics, outperforming in today's black box sealed-bid auction environment, and segmenting lenders and servicers by quality. We have built entirely in-house what we believe are best in industry analytics around these four areas, and that's what I'm going to be turning to next.

This slide provides an overview of our primary models, which all leverage AI and machine learning. On the left, you have RADAR, which is comprised of two principal components. A Loan Performance Predictor that projects loan performance based on various borrower and loan attributes, as well as projected economic conditions. The second, our Economic Scenario Generator, which we use to project these economic conditions by simulating MSA level economic drivers of loan performance.

On the right, you have SONAR, which analyzes industry pricing levels and optimizes our pricing. SONAR also has two principal components: a clearing rate estimator, which estimates competitive pricing on over 11 million unique types of loans. And a rate optimizer that we use to determine the optimal price for us to charge on those millions of types of loans in order to maximize EV of our NIW.

This here is a simplified schematic of our modeling framework. As I mentioned before, all of this has been developed 100% in-house. We also leverage extensive proprietary data derived from more than 45 years of experience in the business. Given the number of loans in our portfolio and the thousands of scenarios, we run them through, we got tremendous amount of data and scenarios to process. As a result, we heavily leverage state of the art cloud computing capabilities, enabling us to simulate our entire insured portfolio through thousands of geographic specific economic scenarios in less than an hour.

Given the importance of modeling accuracy to our success, all our models are subject to rigorous back-testing at very granular levels and benchmarked against leading third party models, as well as internally developed AI and machine learning challenger models. Our models outperform all third party models we have tested them against, and all new versions of our models are subject to extensive testing and controls.

On the right side here we show an example of RADAR's accuracy in terms of predicting claims by comparing vintage specific claim rates against what RADAR would have projected the claim rates to be based on economic conditions at the time the loans in each vintage were originated. You can see here the accuracy of RADAR across all vintages over the 20 year period shown here.

Given how much loan performance can vary based on local economic conditions and developments, there's been a tremendous amount of time and effort refining and ensuring the accuracy of our economic scenario generator. We use a multitude of MSA specific economic and housing value measures to project loan performance, ranging from fundamental home value indicators such as per capita income and population growth to real time housing market drivers, such as days on market and inventory levels.

Leveraging these metrics, we simulate millions of MSA specific scenarios through our scenario generator, which is a key input into our MSA specific pricing. Here, we show an example of radars, home price forecasting capabilities. A wider line here is actual HPA for Phoenix starting back in 2005. The other lines are showing radars forecast of FPA for Phoenix at four historic points 2005, 2008, 2011 and 2014. You can see in 2005, Radar's expected path for HPA in Phoenix is very pessimistic, calling for a multi-year downturn ahead. We're glad to see the model making that early call on the downturn. At that point, most of the country was viewed that way by radar.

2008, nearly at the trough, radar is projecting a reversal with HPA turning positive even into above average HPA, which is close to what actually happened. As net negative HPA persisted a bit longer than the point estimate in 2008, house prices started to become undervalued in the view of our models and then by 2011, the forecast is correctly expecting a very strong HPA environment for 2012 through 2014, which again is what actually happened.

As you can imagine, there's a lot of EV opportunity if you can accurately call downturns and recoveries at an MSA-specific level. I would also note that our backtesting and model calibration is done individually on every MSA at every historical period.

Turning to pricing, we think today's black market pricing world can best be viewed as a sealed bid auction environment as there is little to no transparency among MI companies with respect to each other's pricing practices. This represents one of the largest transformations for the industry over the past several years. In this relatively new environment, the ability to granularly estimate market clearing levels is hugely important, and sonar is a tool we developed just to do that.

Sonar takes a probabilistic approach to estimating market-clearing levels and creating demand curves based on market pricing. And it does this on an individual loan basis for each of the millions of available types of loans. We show here in the top chart an illustration of sonars estimated probability distribution for each of our five competitors' prices for a specific type of loan developed primarily based on historical information.

From these distributions, in the bottom graph, you see sonar create a demand curve which captures pricing elasticity. This tells us the probability of a rate quote or bid winning the loan at various prices. For example, at 40 – a 40-basis-point bid, sonar says there is a two-thirds chance of winning the loan. If we set our – if we bid or set our price above 40 bps, the probability goes down or it goes up if we set our price below 40 bps. The trick is being able to accurately estimate both the level and slope of the demand curve.

After we have estimated clearing rates and created a demand curve, the next question is where rating – where should ratings set its price? In order to do that, we asked owner to find the bid price that maximizes our expected EV. In the top, we add to the demand curve illustration, another line showing the EV of the insured loan at different price points. Now, obviously, a higher price would lead to higher EV. Now that if the price is too low, the EV goes negative. This is where the net income from insuring the loan does not fully cover the cost of the capital we hold against the loan, meaning it would have day one negative EV if we insured it. Our expected EV considers the probability of winning the loan from the demand curve, plus the fact that the higher our prices, the more the more valuable the loan is if we win it.

Ultimately, there is an optimal price that best balances the probability of winning the loan with the EV of the loan. We determine this based on SONAR-derived elasticity and SONAR performs this analysis on over 11 million unique loan types at an MSA level. In the case of our illustrative loan, as shown in the bottom graph, SONAR determines the optimal price is 40 basis points as that results in the highest expected EV when considering both the probability of winning the loan and the projected EV at that price point. I would also note that we imposed various constraints on SONAR, such as risk mix and concentration limits. SONAR is able to find the optimal price for all loan types while abiding by all these constraints. Needless to say, this is an extremely large, multi-dimensional optimization task.

Here, we bring together all our models into a comprehensive test of our ability to generate alpha with our geographic price. Specifically, this is a back test of our ability to pick the best and worst performing MSAs. You see here for more than a dozen vintages, the deviation in returns from the vintage average return for what we projected would be the top, middle, and bottom performing MSAs for each vintage. At each historic point, RADAR uses the current economic conditions in each MSA plus other available information to simulate future economic conditions. We feed those simulated economic conditions to our loan performance models and then to our valuation and return models to finally output which MSAs we project will offer the best risk-return opportunities and which the worst.

And each of the historic starting points going back to 2001, our modeling not only succeeds in properly ranking the MSAs, but also in estimating the oversized returns of the best MSAs versus the average and the worst MSAs. As you can see, the separation is significant. The return boost is several percentage points, which represents robust alpha creation. I would note that not only do the top MSAs produce higher returns, they also produce less volatile returns, which should command a lower cost of capital, further boosting EV and alpha. Given the investments we have made in this area and how long we have been working at it, we think the quality of our analytics and capabilities here are very difficult to replicate. There's a lot of econometrics, statistics, and codes that lie behind this.

Given our geographically differentiated pricing Given our geographically differentiated pricing and what we see as less geographic differentiation in the MI competitive market overall, we have been able to steer our business production in a more favorable direction and generate alpha. As a simple example, you see here in the bottom graph the deviation in HPA from national HPA since Q2 2022 among what we projected would be the top, middle and bottom performing MSAs. And in the top graph, you see our Q2 2022 NIW concentration among these MSAs relative to the overall MI market, demonstrating how our NIW was favorably skewed.

Our least favorite MSAs at that time were substantially located in the Mountain and Pacific Census divisions, which have had the largest HPA decline since mid-2022. On the other hand, we were bullish on MSAs located in the Mid-Atlantic and New England census divisions which have performed well from an HBA perspective. As we saw with the Phoenix example earlier, our view of an MSA can go from negative to positive and vice versa as conditions change. And obviously, our pricing and in NIW concentrations evolve along with those views.

As I mentioned earlier, another important determinant of success in today's MI market is understanding and being able to project the impact of lender and servicer quality on performance and of EV our insured loans. Our lender and servicer segmentation framework leverages hundreds of qualitative and quantitative metrics to rank order our lenders and servicers on a monthly basis. We use these metrics to rate lender and servicer-specific dashboards, which we utilize in every lender and servicer decision we make.

We also leverage this information to produce and share insight reports with our customers. These reports provide them with valuable information and set clear expectations regarding their quality and their performance. Two things are abundantly clear in the positive feedback we get from our customers about this. First, the information and analysis we provide them is valuable. And second, we are distinctive among MI companies in terms of the breadth and depth of information and analysis we do on lender and servicer performance. There's no doubt we have built something truly unique and differentiated in this area, which serves as another pillar upon which we are able to generate alpha.

Given the drivers of success in today's MI market, we've also transformed our sales organization into what is better described as a data and analytics-driven account management organization. As part of this repositioning, we reduced our head count in sales by more than 50% over the last several years, and we now have the smallest head count in the industry at 39.

Today, our very lean account management team leverages their relationships to ensure we have an in-depth understanding of our customers and their needs while staying focused on key decision-makers of profitable opportunities. This makes us more effective and more efficient. We've been extremely successful in doing more with less in this area and have provided excellent customer service while supporting our efforts to generate Alpha.

This slide highlights how our pricing process leverages all the analytics and modeling I just talked about. I'm not going to go into detail here other than to point out that this is a dynamic process that is continually evolving along with the market and competitive landscape.

Our approach to writing new business really comes down to capital allocation. We start by identifying the available capital deployment opportunities. And as you can guess by now, we do this at a very granular level. We then sort the opportunities by relative attractiveness. Finally, we position ourselves in the market that we are pricing to optimally deploy our capital. Over the next few slides, I'll share a simple illustration of how we think about allocating and deploying our capital into the EMEA market.

One way to think about identifying capital deployment opportunities is purely from a risk of loss perspective. Here, you see a simple illustration of various loan types with the size of the boxes representing relative levels of risk. After identifying the loans in this manner, we can then sort the loans by level of risk and deploy our capital, beginning with the lowest risk loans on the left as they represent the most attractive opportunities from a risk perspective.

However, given our focus, strategic focus on value, we identify and sort opportunities by the projected EV that can be derived from ensuring the various loan types. You see here EV being represented in the blue portion of the boxes with the loans on the left representing the most attractive opportunities from an EV perspective. One key point is that a loan's level of risk doesn't necessarily correspond to its level of value, as value is driven by a combination of future performance and the price we are able to charge for ensuring the loan.

And as the saying goes, price is what you pay, or, in our case, what we are paid, and value is what we get. Another important point is that shorting the attractiveness of loans by EV versus sorting them by risk can result in a very different view of where you should allocate your capital.

And the final step, we deploy our capital by going out and winning the loans with the highest EV. All the analytical tools such as RADAR and SONAR, our ability to segment lenders and servicers, and our dynamic ability to continually refine our pricing in a very targeted manner is what enables us to identify and capture these highest EV loans. Our ability to do this better than anyone in the industry is our strategic focus, organizational obsession, and how we generate alpha.

Putting some numbers to our approach, we'll look through a simple loan selection example, the question being which among the three options presented, which of the three options presents the most attractive capital allocation opportunity?

As we look across the options presented, loan A clearly has the lowest level of credit risk, given it has the lowest LTV and highest FICO. But as I mentioned earlier, a loan's level of risk doesn't necessarily correspond to its level of value. As our focus is on maximizing value rather than minimizing risk, we need additional information to make our determination.

In order to start assessing value, we need to understand the premium we are able to charge. With the additional information captured in the projected loss ratios presented here, it becomes clear that although loan B is riskier than loan A, it also commands higher premium relative to losses as only 20% of the premium for loan B would be needed to cover losses as represented by the loss ratio. We're still lacking critical information needed to accurately evaluate the options presented. And that requires that we consider capital. And as I mentioned earlier, our approach to writing new business comes down to capital allocation. So the new information in the form of return on capital starts to point to loan C as being the preferred option.

In addition to generating a higher return on capital, loan C would also enable us to deploy more capital over the life of the loan at attractive returns. And that is what we are ultimately after. To get some idea of scale, assuming an average sized loan, loan C stands out even more as it would significantly generate more – it would generate significantly more EV than the other loans.

Before we open it up for Q&A, let me summarize by saying that we believe our proprietary data and analytics that power our predictive models and pricing combined with our company culture of disciplined and informed risk management, are the best in the industry. This is how we build long-term economic value and ultimately generate alpha for our shareholders.

Now we'll open it up for Q&A. And for that, I want to invite to the stage Meghan Bartholomew, Ted Cubbin, Steve Kelleher, and Marshall Gayden.

Rowland Mayor Q

Hi. Rowland Mayor, RBC Capital Markets. Can you talk just how the radar and sonar interacts? What are the hurdle rates like when you're pricing things and how does that interact with your overall risk management framework?

A

Yeah. Do you want to?

Ted Cubbin

A

Yeah, sure. Ted Cubbin here. We – as Derek explained, when we get to the EV calculation, we are looking at the return and the – and the valuation. The EV part of it is relative to a hurdle rate, as you said. We have a proprietary in-house method for assigning capital. So we look at some constraining capital from external places like PMIERs, certainly, but we also have economic capital. And the cost of that capital is a model that we have as well. And so it's that differential between the cost of our economic capital and the return that we can generate that is the EV.

Rowland Mayor

Q

And then as a quick follow-up, on the concentration, you talked about being in the highest HPA areas the last few years and that you said the model gives you a better understanding of what will be the highest HPA. How do you prevent overconcentration in those areas? And the models for Raleigh North Carolina is a good place to write. Now, you presented – prevent from doing only Raleigh North Carolina, I guess, would be a question.

A

Yeah.

A

Yeah. Essentially, what we do, those are the constraints I talked about earlier. So we would have a market share constraint or ceiling, which we wouldn't go past. And so what we can do with sonar is put in place all those various what we can do with sonar is put in place all those various constraints and then rerun the model and kind of do that very quickly.

A

I'd add too that, we do the same thing when you think about credit dimensions. So we have similar kind of things where radars don't identify a lot of opportunity, but we don't go too far at the farm. Conversely, on the – on the other side, we – minimum amount of being in the market.

A

I'll also add that when we construct the models in the first place, of course, they're based on historic data. And we look at the history of some regions versus others. It tells a story about which ones are more risky. But because there's a limited amount of history and history doesn't always repeat itself. And for those reasons, we do a lot of compression of that historic story that's being told through the statistics so that we're not even with the model's output before the constraints, it doesn't tend to over bet on a repeat of history.

Mihir Bhatia
Analyst, BofA Securities, Inc.

Q

Okay. Thanks. This is Mihir Bhatia of Bank of America. I had a question. You talked about the market share differences showing up, but I guess that's you know, ongoing based on NIW. Have you seen differences show up in actual performance of the loans over time? So like where do you see those differences coming? Do you see lower credit? Do you see higher ROEs on the loans you're doing versus the competitors when you do that kind of benchmarking like what is the actual output of all this? Like I understand on the indicators, good on the market share and the HPA projection, but where's the results been?

A

Steve or Tanner.

A

Yeah. So when we look at that, it's tough to see competitors economics at a granular level. When we look at ours, we do see things like HPA influencing performance. Certainly. Certainly, when we think about new defaults, we see it impacting there as well. So it's tough to quantify, I think, relative to competitors. But when we look at our own portfolio, the options that we've leaned into versus those really in the way we've been happy with the performance.

I'd also add that just timing wise, the black box pricing has been in place for the years that it's been in place but when we went through that low rate environment, there was a lot of refi. And so our book turned over like all the Mas did. And that was really the first opportunity that we had to lean into our pricing and turn our book over substantially into the – this geographic regions and other ways that we want to concentrate in. So, it's a relatively new practice, if you will that we've been able to lean into these geographic regions. And that's why we had the last slide in the section on the modeling show, how has the economic performance been since early 2022, for example and in the middle of 2022 is when house price appreciation kind of went near zero in the country. And there's some relatively worse performers.

And the story hasn't fully played out yet because mortgage insurance is a multiyear kind of timeframe. But that's why we put that slide in, that said basically so far so good. The economics in our preferred regions have been relatively better so far.

Q

Got it. Maybe just one other staying on the HPA topic and like [indiscernible] 01:06:17 rates, obviously, [indiscernible] 01:06:18 rates have been very supportive for the last few years. How do you expect that to trend over the next few years given like – can HPA continue to be so strong and cure rates improve further to this stabilize at these levels? Thanks.

A

Yeah. So in terms of impact on new defaults, I mean, right now, it's – the equity that we see, Derek mentioned our new defaults. We estimate have that 80% or so have 20-plus percent equity. When we look back historically, we've seen that that's a driver certainly of roll rate performance. We've seen a big variation in terms of ultimate claim rates, but we've seen a more stable relationship in terms of equity impact on that.

So, well, we looked today, we would expect net performance to continue, unless we see a material change in house prices, and again, a couple percent change here and there isn't going to change the story about a loan having 30% equity dropping to – in a negative equity territory. So, what we would expect positive performance. The other thing too, that I'd mention, and Derek alluded to it a bit, is we see favorable, roll rate experience. We also see extremely favorable severity experience. Right now, I think most recently, about 80% or so of our claims are being settled at something other than the standard coverage option. So, equity impact [audio gap] 01:07:35 that – sorry, equity is impacting the ultimate claim payment in a very favorable way.

A

Yeah. The one thing I would add on cure rates, some of that got elevated. You had the COVID kind of default securing out. And then the other thing is you do have some effect just as [ph] vintages season 01:07:50 and they get in default seasoning. So, you have a little bit of dynamic there as well that can kind of maybe put pressure on cure rates down a little.

A

Yeah. Same is true on the default side too, but it's really to expectations as opposed to these absolute levels.

A

And I would just add one point on cure rates. We saw through COVID just improvement on the loss mitigation programs. The GSEs offered programs that were much more streamlined compared to the financial crisis. And so, that's a good thing for us in terms of borrowers with short-term hardships, there's options for them to resolve the default.

A

Bose?

Bose George
Analyst, Keefe, Bruyette & Woods, Inc.

Q

So, yeah. I wanted – Bose George from KBW. I wanted to stick to the HPA. To the extent, HPA holds up better than expected, you know, what could we see in terms of good returns? Could we see more reserve releases or returns coming in better than expected? Can you just tie it in to your expectations for HPA as you're pricing new business?

A

Look, there's a couple of questions. So, one is probably its impact on reserves which maybe on reserves which maybe we'll kind of get into later. I think again from an estimation perspective, we make the best estimate at this point in time. So it's tough to kind of speculate exactly how much kind of HPA might move that.

I figure other part of your question was on pricing. Could you just restate that – those?

Q

Yeah. The thought is to the extent that HPA is holding up better than expected, does that have to have an impact on pricing because pricing presumably has strengthened as people are expecting home prices to be...

A

I'd like to turn it over to Ted and Steve but I think the way to kind of look at HPA, what's kind of driving our pricing the way we think about it, you kind of have to look at it more kind of our projections over five years. So kind of outperformance kind of in the early years wouldn't move like our pricing that much. But if – obviously, if we're kind of seeing prices go down or be kind of relatively depressed over a five-year period, that would cause us to elevate our pricing but I don't know if Ted or Steve, do you want to add anything or anyone wants to add?

A

Well, I would add that as you heard us say a lot, we do a simulation of the future economics. So our outlook on H – there's some pretty diverse views on house price appreciation forecast at this point in time. I'm sure a lot of us seen, some saying, hey, the bad environment is over with and things are going to be positive and some are still holding onto the more negative projections that certainly started at least by like the middle of 2022.

And while we would look out over the next 12 months and not be too bullish on a point estimate that things may not appreciate much or may even be negative in an expected sense, what's probably more important for our pricing is that we have a wide range of scenarios that we're contemplating. And I would say at this point in time that the kind of width of that range is a bit elevated compared to usual.

A

Yeah. And I would add too. You got to think about pricing in terms of more region specific. So there as opposed to in aggregate.

When we think about certain areas, Derek alluded to Phoenix, there are certain markets where pricing is above average right now, but it's still not at the level that we think is the area that we'd want to deploy capital into. But as those economics change, we could definitely see an opportunity where where we think that market is starting to recover where we actually start to push further into that, which would mean maybe reducing our prices in that market but would actually be increasing our – relative to our average price across the book.

Geoffrey Dunn

Q

Thanks, Geoff Dunn with Dowling Partners. I'm curious how the analytics have worked in practice over the last year where if we have the sense that pricing [indiscernible] 01:11:27 tightened for at least the last four quarters, does that mean net-net your opinion on the broader market has got incrementally worse over the last four quarters, or is it something where you're phasing in actions because if you had taken your opinion a year ago, the probabilities would have dropped too much, you wouldn't have stayed maybe as present in the market as you want to? So how do you react to such quickly changing environments and manage that probability at the same time?

A

Yeah. I don't know – I mean, I'm at a top level, the way we think about it, when we're kind of moving our pricing, it's going to be a combination of either most primarily a combination of our view of macroeconomic outlooks, but then largely all just driven by the competitive market. I mean, so I think in terms of looking back at our macro view, I think compared to last fall, it's probably a bit more bullish and a lot of that is driven by home prices because last fall, we were kind of were coming off that July and August dip in home prices I talked about, and it was difficult to determine given how quickly rates went up, its impact on home prices.

So that had us a bit concerned. So the positive thing is that home prices flattened out and they're actually on the increase. And so from that perspective and then looking at inflation coming down and the Fed perhaps not having to increase rates as much, I think it's perhaps decreased marginally the probability of a hard landing, although I think bank tightening of credit could kind of push a bit harder landing. So, kind of after saying all those things, I think that overall we're probably marginally more positive than we were in the fall, but we play in a competitive kind of landscape and it continues to be a hardening market.

Now, I think if you look at that market, the rate of increases are not going up as rapidly as they were in the fall. But I would still describe it as a hardening market, if that answers your question. Yeah.

A

The other thing I might add from the [indiscernible] 01:13:29 down here is to Derek's point, the market sets the price, right? And we've always said we're not going to be a fast follower when pricing goes down, but we're really pricing up. When you think about the magic of what Derek went through from an EV focus looking for alpha, wherever the market is setting price, we're looking for the highest EV. So, we – we'll have our own view, but ultimately the market's setting the price from a competitive point of view. And we're a – we're generally trying to push price up, right, that's generates EV, and we'll follow slowly down.

But at the end of the day, we operate within a competitive framework, defined EV. And I think that's the essence of what Derek went through, which is given the market situation, we're going to go look for the best way to optimize value.

A

Yeah. And two tangible examples of that, you can point to the COVID environment, right, the MI industry as a whole increased prices quickly, which is a testament of black box pricing and some of the flexibility that we have there. But Radian was one that was a little bit more reticent to give up some of those price increases when we got into the fall and winter of 2020.

And so, we did – our share dipped a little bit when you go into first quarter 2021 and so on. So, to Rick's point, we want to be fast-leading on the way up and fast-leading on the way up and slow on the on the way down. We've done that. And then most recently with last year, we sort of saw rates bottoming out. But when we looked, we've been, even in first, second quarter, we're looking to move rates up. We sort of moved a little bit, didn't see the market respond and pulled that back. But then when again, sort of June-July timeframe and I think where we're faster sort of leading the market up. We have a little bit more of an increase in price in Q3 relative to the market.

The market is sort of caught up in Q4. So it's been a good trajectory. But two examples of what Rick was getting out there.

A

I have something from the webcast here. It says here, it was mentioned in the presentation that you've reduced the size of the sales organization by greater than 50%. Can you expand on that strategy, how things have going, and the feedback you have received from customers?

A

That's for you, [ph] Marshall 01:15:42.

A

Okay, I'll take that. Yeah, I would say that I would begin by just saying we probably took more risk than others. But we did this over about a four-year period of time, and we continued to assess the market and just adjust the sales team with what we saw happening out there. So if you think about that, it started with best pricing and risk based pricing. So when decisions moved from being purely relationship driven to being more price driven, we started modifying the sales force at that point. And then we moved into a pandemic.

So in a pandemic environment, all of the sudden we were all at home and all of our competitors were home. But we had to reassign roles and responsibilities for our sales force. They meant that they were going to make a lot of phone calls. What we learned through that cycle is, our boots on the street, our account managers were not nearly as effective at making the number of outbound calls and connecting with key decision makers as our inside sales team. That was basically a group of ex-loan officers who came out of call centers. They had the capacity to sit there all day and work that. And then what we watched as the pandemic subsided was, number one, the work from home environment persisted and then it continued to persist because originations are down so much in the industry that lenders are making much money and so they're closing branch offices.

And so, we find ourselves in an environment right now where in order to reach decision-makers at the point of sale being loan officers and processors. We have to do the business over the phone. We're a lot more effective at doing that with an inside sales group, and then we've taken our external account managers and we've refocused them on corporate offices and big regional operating centers where management resides and their role and responsibilities to gather all the information that we need in order to execute against a lot of the strategies that we talked about today.

So it wasn't a model to try to support our customers less. It was a model designed to really be more efficient and more effective, and now we're able to do that with a lot less people. As far as feedback, customer service levels have been still at all-time highs. And we actually hear from a lot of the loan officers that we call that we're the only mortgage insurance company that's making contact with them over the phone and they work at home. So, we think we're touching them more and more efficiently as well.

A

Yeah, have another one from the web? Yes?

A

I have one back there too after.

Douglas Harter

Analyst, Credit Suisse Securities (USA) LLC

Q

Sure. This is Doug Harter from Credit Suisse. As you talk about maximizing EV, can you just talk about how things like capital return or kind of how you set the amount of capital that you have to deploy and how do you think about how much EV you can then generate off that capital?

A

I think we might take the kind of capital return questions kind of a bit later in the day. When we look at capital, we look at it on kind of multiple dimensions. We look at [indiscernible] 01:18:55 required capital, we look at economic capital. So we kind of look at it in kind of different measures, I think. But in terms of how we think about it from a return of capital, I think that would be later in the afternoon. But I don't know if you want to kind of kind of make your question more specific, that was kind of a vague answer.

A

I guess just whether you're looking to kind of maximize the total dollars of EV or EV per loan just as you think about capital in that construct.

A

Yeah. I mean, as we kind of went through, we're looking at it on both dimensions really in terms of both that kind of capital efficiency kind of the EV per unit of capital, and then looking at it on an aggregate dollar basis as well. Ultimately, what we're looking to do is generate revenues for the company. So, we're kind of – in the example I ended on we're looking at every dollar. I mean and if you look at that example at the end, I think that Loan C had $1,600 dollars versus that loan A which is $100, right? So it can be vastly different EC.

So taking the kind of highest return on a loan where you deploy the least amount of capital that has shorter duration can result in just a fraction of the ultimate economic dollar. So, we really kind of the objective function within sonar is really an EV dollar. And then when we set constraints, we might have a maximum EV dollar but once we might be beyond our concentration limits, once we sent those constraints, it might result in a model that lower EV dollar but we want to manage that from a risk perspective because we don't want to bet the farm on all of our analytics. So, we take kind of a qualitative and quantitative approach to that.

Q

And Doug, we will be addressing a few more topics around capital for the Enterprise. How do we think about it for Radian, both at the operating company as well as at the holding company, but that'll – I think we'll do it right after this session.

A

Okay. I think, John, you had a question.

John Damian

Senior Vice President, Investor Relations and Corporate Development, Radian Group Inc.

A

Yeah. And I think we're coming close to the end of the – this Q&A portion. But again, so can you describe some of the things you were doing around affordable and sustainable homeownership?

A

Sure. Yes, I can take that. Rick, in his presentation, highlighted just the huge challenges around affordable housing in this market. And Derek said key – one of his key takeaways was Radian's commitment to affordable and sustainable homeownership. Mortgage insurance is a low down payment solution for conventional mortgages. And we have decades of experience underwriting mortgage insurance, pricing, pricing the risk, managing and distributing the risk. We understand the programs and the specifics in the programs like down payment assistance and then also sustainable solutions like I mentioned, loss mitigation options. So, you know, we have a lot of experience here.

We have leaned in more recently, about a year ago, MBA announced Radian as a cornerstone partner for Convergence Philadelphia. And Convergence is a place-based initiative. It's a collective action effort. So we have really been able to lean in with our capabilities, our people, our products. But what Convergence does is gives us access to a huge number of stakeholders in affordable housing that we might not normally have access to and really complement our capabilities and partner with other stakeholders who have capabilities that we might not, like – think like affordable housing construction.

So it's been an exciting opportunity. It's been a great opportunity for employee engagement, and we have a lot of our employees raising their hands and they're part of the CONVERGENCE Philadelphia workstreams. And we're really thrilled to be part of Impactful Solutions in Philadelphia. It's the place that Radians called home for over 45 years.

A

I'm getting a sense we don't have time for many more questions, but I'll take one more. Yeah, go ahead.

Q

Well, my question was somewhat similar to Doug's and that just how you guys think about the value or opportunity to repurchase stock or book value and its input in RADAR and SONAR.

A

Yeah.

Q

It sounds like that's similar...

A

That's a good question for the presentations a little bit later. Yeah. We'll take that.

Unverified Participant

Excellent. Any – I think we're good for the time. All right. All right. Thank you for an engaging panel discussion, everyone.

Unverified Participant

Okay.

Unverified Participant

All right. And now, this month, as we have – as we celebrate National Homeownership Month, we'll play a short video showcasing Radian – how Radian helps achieve the dream of owning a home, both affordable and sustainable.

[Video Presentation] 01:23:54- 01:26:57

Unverified Participant

Please welcome to the stage again Chief Executive Officer, Rick Thornberry.

Richard G. Thornberry

Chief Executive Officer & Director, Radian Group Inc.

We're actually going to take a 10-minute break right now and then we'll start up in 10 minutes. Thanks, everyone.

[Break] 01:27:27- [Video Presentation] -01:37:22) 01:38:48

Unverified Participant

Ladies and gentlemen, we will now resume our program. Please find your seats. Ladies and gentlemen, we will now resume our program. Please find your seats.

[Video Presentation] 01:39:55- 01:40:26

Unverified Participant

...the stage again, Chief Executive Officer, Rick Thornberry.

Richard G. Thornberry

Chief Executive Officer & Director, Radian Group Inc.

Two rounds of applause. I appreciate that. We'll let everybody get seated. We'll get started. Okay. Our presentation today is largely focused on our high-performing mortgage insurance business, plus the strength and resiliency of our overall financial position. I'd like to take a few minutes to provide an update related to our Homegenius segment. As a reminder, our Homegenius segment is focused on transforming the real estate experience for participants across the ecosystem, lenders, real estate agents, investors and consumers. The primary objective of this business and its products is to address the unsolved problem that we have seen in the market for years.

The challenge of the home-buying process that includes our care technology, confusing data points, and unnecessary transactional friction from search to all. Today, I'll provide an update on the three businesses that comprise our Homegenius segment, our real estate services business, our title services business, and our real estate technology services business. With this extreme market changes over the past year and our expectations for the near- and mid-term environment, specifically industry transaction volumes, we believe it is important to strategically review each of these businesses that make up this segment.

We have been and will continue our strategic focus and investment across these businesses based on the current environment and the prospects for the future. Our real estate services business is a market leader in terms of residential real estate management valuations and due diligence services. This business is focused on REO asset management, SFR due diligence, and residential real estate valuations.

Our customers include single-family rental investors, the GSEs, mortgage lenders, and servicers. There are several key factors that help us maintain our market-leading position, including the strong relationships we have with all of the key SFR investors and the strength of our REO management client relationships, our long track record and reputation for consistently delivering high quality customer service, our market leading solution for automating and organizing the asset management process, which is our pyramid platform and is used by many residential real estate investors and managers.

And finally, our data and analytics, combined with a high quality local broker network enables us to deliver real estate valuations of property insights nationally. Although the market has slowed, we are a market leader and expect our real estate services business to continue delivering a positive annual contribution margin through the cycle. We are managing it tightly and position it for growth when the SFR and REO scenario market turns.

Our title services business is a national title underwriter providing closing and settlement services for purchase, refinance, home equity, and default transactions to mortgage lenders, real estate agents, mortgage investors, real estate investors, the GSEs, and consumers. From a strategic perspective, our goals for our title business remain unchanged. We're focused on disrupting a legacy market that has not changed in decades by leveraging our national title underwriter to manage product design and pricing with the objective to reduce cost to lenders and consumers, and delivering lenders, real estate agents, and consumers better ways of doing business through our proprietary title insurance decision engines, and providing innovative digital end to end technology solutions, including our titlegenius platform.

We believe that we are uniquely positioned to work with lenders and real estate agents and consumers to redefine the title insurance and settlement service business model to better control the process, improve the consumer experience, and make title insurance and closing services more affordable. We have a broad set of relationships, a national title and settlement services footprint. As I mentioned, our title underwriter allows us to manage product and price structures, enabling us to innovate products. We have a comprehensive suite of innovative digital platforms, including a blockchain for purchase title transaction platform, titlegenius, automated title insurance decision engines, and digital closing capabilities that power this business.

When we entered the title business a few years ago, essentially from a startup position following a couple of small acquisitions, we knew this would be a multiyear effort to scale. Although we demonstrated a success in terms of growth early adding lenders, delivering excellent customer service, and growing volumes, primarily from refinance transactions. Today, the industrywide mortgage refinance volume is down approximately 80% from its peak in 2021. This rapid peak in 2021. This rapid and significant decline in market volumes has been extremely challenging for our title business. And as such, we've been focused on reducing costs. We recognize that the mortgage and real estate market is at a cyclical low, but we also recognize it's not expected to turn quickly. We continue to assess the go-forward opportunity for this business in a pragmatic and realistic manner. Although the volume run rates are low, we continued to add new lending customers for our refinancing home equity programs to our already blue-chip list of customers.

We have also integrated our highly innovative and proprietary digital purchased title platform Title Genius into our Home Genius real estate technology platform to capture real estate purchase transactions and deliver a more affordable title, insurance and settlement services solution to consumers. Unfortunately, our title business is continuing to generate operating losses in the current environment at these reduced volumes. Over the past few quarters, we've made significant reductions in our expenses and are continuing to focus on managing expenses to address the current operating losses. In addition, we're continuing to evaluate and analyze opportunities for revenue growth and a path to profitability in light of market forecasts.

Our Real Estate Technology Services business is an early-stage digital real estate business with a national footprint leveraging unique data, analytics and technology assets including AI and computer vision. Our Real Estate Technology business allows us to partner with mortgage lenders, financial institutions, real estate brokers, real estate investors and technology service providers and other consumer-focused organizations. We believe we are well positioned. We have a national real estate brokerage and agent network, strong market relationships across the mortgage and real estate ecosystem. Our extensive data and analytics, combined with our proprietary AI and computer vision technology home genius IQ and our highly personalized home search tools provide us with strong market differentiation.

The initial growth ramp for this business has been challenged by the slowdown across the real estate and mortgage market. Based on feedback that we've received from the market and ongoing developments of our capabilities, we have continued to refine our go-to-market strategy. We've been investing in technology to deliver a unique and personalized search to own experience through a customized – customizable digital platform, which we refer to as a digital toolkit which is now in the market. We're focused on launching and offering this toolkit to our enterprise relationships, expanding the distribution channel for our own digital search own, real estate platform, our national real estate brokerage capabilities and real estate network and our titlegenius purchase platform.

Enterprise partners will have the ability to customize their customer experience, allowing us to help to educate, guide, and nurture their customers through their homeownership journey, and just as important, save money through our set of real estate services. I'm excited about the positive feedback that we've received from various market participants that we presented our capabilities to and the fact that we've received commitments from different types of enterprise to proceed with the rollout of our unique capabilities to their customers.

From a strategic perspective or strategic investment perspective, I believe this is a long-term value creation opportunity. From an expense perspective, we're managing the investment in this business with a disciplined and measured with a disciplined and measured approach based on the opportunity that we see to create value. In addition to our organic development of this business, we continue to evaluate strategic partnerships as well as other opportunities to accelerate the growth of the business. I want to note that during lunch, we're going to show a video, which will help demonstrate our highly unique search on and capabilities that we are bringing to our enterprise relationships.

So to summarize, although the market changes have resulted in significant headwinds for these businesses, strategically, we believe our homegenius businesses have the right to win based on several important factors, including the depth of our market relationships, a national footprint across our businesses, a unique real estate, our unique real estate data and analytics assets. Our innovative digital platforms, including AI and computer vision, blockchain, machine learning and robotic process automation technologies. And of course, an experienced and talented team.

I believe we have a realistic view of the current state, an opportunity for the three homegenius businesses in the current and expected future market environment. And we will continue to adjust our cost structure and align our strategy and investments accordingly.

While I did not provide a financial update today for the homegenius segment, I hope you have a better view of how we're managing these businesses through a difficult market cycle and the opportunity that we see. We will continue to report on our progress as we move forward. So before we jump to our financial and capital discussion, we'll play a short video on our corporate responsibility program, including our DEI, philanthropy and ESG efforts. Thank you.

[Video Presentation] (01:52:03- 01:55:53)

Unverified Participant

Please welcome Senior Executive Vice President, Chief Financial Officer, Sumita Pandit; and Executive Vice President of Finance, Dan Kobell.

Sumita Pandit

Chief Financial Officer & Senior Executive VP, Radian Group Inc.

Good morning. It's funny. I was having a couple of conversations during our break and we were talking about how much life has changed since COVID. And something struck me. I haven't worn heels for the last four years. I've literally just always worn sneakers, so it was quite a change to actually walk up with heels on.

It's my pleasure to join you all today. I joined Radian in March of this year, and I'm super excited to be here with all of you for our first in-person Investor Day since COVID. I'm going to start off by providing a recap of our Q1 financial highlights. Then, Dan Kobell is going to talk about our earnings resiliency through various cycles and share results of an illustrative example of a stress-case scenario. Finally, I plan to review our capital management performance and approach. We will have time for questions at the end of the section.

So let's jump right into the materials. I have to figure out how to use this, so give me a minute. Yeah, okay. That's easy. For those of you who are new to the Radian story, I'd like to first point out a few metrics from the first quarter 2023 – first quarter one 2023 that highlights the strength and flexibility of our balance sheet. We ended the first quarter with over $7 billion in total assets, which includes a $6 billion investment portfolio. Our book value at the end of first quarter was $4.1 billion or $26.23 per share.

From a liquidity perspective, total holding company liquidity was $1.2 billion inclusive of our $275 million undrawn credit facility. Radian Guaranty, which is our insurance subsidiary, had PMIERs excess available assets at $1.7 billion, which is a 44% cushion over required assets. From a statutory balance sheet perspective, as of Q1 2023, total capital at Radian Guaranty was $5.3 billion and statutory surplus was $721 million.

If you look at this slide, this chart shows our adjusted pre-tax operating income and adjusted operating ROE performance since 2014. We continue to consistently generate strong earnings through the cycle. In the quarter 2023, we generated $311 million in revenues and $200 million in adjusted pre-tax operating income. For the full-year 2022, we generated over $1 billion in adjusted pre-tax operating income.

Other than a temporary pullback in 2020 due to the impact of elevated defaults at the start of the pandemic, we have consistently produced mid- to high-teen adjusted operating ROEs for the past decade, driven by the size and strength of our high-quality mortgage insurance in-force.

This gives you a snapshot of our investment portfolio. We have a diversified, high quality $6 billion investment portfolio. As you can see from the pie chart on the right, our portfolio is primarily comprised of very high quality investments. 96% of our total investment portfolio is fixed income, of which 99% are rated investment grade. We have significant diversification and conservatism built into the composition of our portfolio, which includes not only diversification between asset classes, but also across industry segments, obligor tenors and in securitized assets obligor tenures and in securitized assets across geographies, collateral, vintage and issuers. Our portfolio is subject to significant insurance regulatory requirements and monitored on a continual basis, both internally as well as by our external managers. We adjust our positioning as we see markets and this change.

This chart shows our meaningful growth in investment income from higher interest rates. This incremental investment income falls straight to the bottom line to benefit EPS. With the benefit of today's high interest rate environment, we generated close to $60 million of investment income during the last quarter, which is 55% higher than the investment income generated during the first quarter two years ago.

As of the end of the first quarter, our average investment yield was 3.8%. We are seeing attractive new money rates of about 5% to 6% in high-quality fixed income securities today. Our new money. investments from premiums and portfolio turnover totaled about $1.2 billion over the trailing 12 months ended March 31, 2023.

Let's take a look at our capital structure, leverage, available assets and acquired assets. We often get asked about the level of our financial leverage, particularly when compared to peers. First I would like to say that we are very comfortable with the amount of leverage we operate with today, given the strong cash flow profile of the business, coupled with the laddering of our debt maturities. We also have strong ratings on our senior debt.

Second, we had nearly $1 billion of available holding company cash and investments as of the end of the first quarter, which could be used if we decided it was the right alternative to pay down a significant portion of our debt. Our net debt at HoldCo, meaning the senior notes at HoldCo, less available holding company liquidity as of the first quarter, was $455 million. For context, we chose to raise new debt in May of 2020 following the start of the COVID pandemic. Instead of issuing equity or issued or increasing soft capital through reinsurance and the operating company Radian Guaranty.

As Derek mentioned during his presentation, we take a holistic economic value approach to this selection. This view also extends to how we think about risk retention and leverage across our enterprise. We think of leverage holistically as both financial leverage and the holding company, which is debt, as well as third-party capital relief at the operating company Radian Guaranty, which we call soft capital.

When we compare our holistic view of leverage, which is debt plus soft capital, we believe we have more financial flexibility than our peers given the earnings power of our large in-force portfolio. Our liquidity position is strong. We have strong interest coverage metrics. We also have a unique built in interest and expense reimbursement through longstanding regulatory approved agreements with Radian Guaranty. This is actually quite unique to us.

And now I'd like to turn it over to Dan to present our earnings strength and capital resiliency through different economic cycles.

Dan Kobell

Executive Vice President-Financial Planning & Analysis

All right. Thank you, Sumita and good morning, everyone. Today, we will provide some illustrations for our mortgage insurance business under different economic illustrations for our mortgage insurance business under different economic scenarios. This is a frequent topic of discussion with investors, particularly for many whose only memory of a recession dates back to the great financial crisis.

As Rick and Eric have noted, our business has fundamentally changed both since and as a result of the financial crisis, leaving Radian and the broader MI industry in a dramatically better position to weather future periods of economic stress. At Radian, we consistently evaluate the risk we insure across a wide range of potential economic scenarios. Using RADAR, our proprietary loan level credit model that Derek discussed earlier, we can quickly [indiscernible] 02:04:33 on the wrong side, we can quickly estimate the performance of MI portfolio, including the specific credit characteristics of approximately 1 million loans through a range of economic conditions. These can include specific scenarios such as the ones we describe today, as well as simulations of thousands of potential economic past.

For today's presentation, we are going to use two scenarios to illustrate the potential performance of our mortgage insurance portfolio as of the end of – end of the first quarter of 2023, under a range of different economic conditions. You will show base and stress scenarios, both consistent with two recent scenarios from Moody's Analytics. In terms of the likelihood for either scenario to occur, Moody's considers their baseline to be the most likely economic outcome and estimates the economy has only a 4% chance of experiencing an economic path as severe as their S4 scenario.

In terms of the economic assumptions for the scenarios we are using, the base scenario predicts a modest increase in unemployment, while the stress scenario has the unemployment rate increasing to a peak approaching 10% with a slow recovery thereafter. 30-year fixed mortgage rates are expected to decline modestly under the base scenario, while the stress scenario has rates declining more significantly in the near term before gradually increasing as the economy recovers.

increasing as the economy recovers.

Looking at home prices, the base scenario assumes a 5% to 10% decline from current levels, followed by a gradual recovery. In contrast, the stress scenario includes a severe decline in home prices consistent with that observed in the great financial crisis, where prices declined more than 20% from their peak, according to FHFA data.

There are five primary components that drive the embedded future earnings within our existing portfolio. These include revenues which consist premiums earned and investment income and expenses that include our ongoing operating expenses to manage the portfolio, expected losses from the insurance in-force, and corporate income taxes. The net of these revenue and expense components make up our embedded future earnings.

Today, we are going to look at an illustration of the embedded earnings within our existing mortgage insurance in in-force portfolio as of Q1 2023. For illustration purposes, we'll start with our in-force portfolio under the base scenario and walk through the components of earnings individually. Future premiums earned are driven by the insurance in-force balance, in this case, $261 billion as of the first quarter 2023, the pricing of those existing policies, and the average life that the policies are expected to remain in-force.

Using actual individual loan characteristics and the interest rate path included in the scenario, RADAR estimates a blended net premium yield over time of approximately 34 basis points and a remaining policy life of 4.2 years for our existing portfolio. This translates to expected average persistency of approximately 79%. Using the inputs discussed over the remaining life of the portfolio, this scenario would result in $3.8 billion of expected future earned premiums.

As Sumita mentioned, growth in investment income has been a nice investment income has been a nice trend for us given the current interest rate environment. It is important to note that for purposes of today's illustration, we are only assuming investment income on the required PMIERs capital over time for this portfolio, as well as the unearned premium reserved for single premium policies. These two components total a current investment balance of $4 billion.

The estimated weighted average capital – estimated weighted average remaining capital life of 4.9 years is a bit longer than the average policy life of 4.2 years, which is an intentional feature of the PMIERs capital framework. We have assumed an investment yield of 4% for this illustration, roughly in line with our recent book yield and well below the new money yield we see available today for high quality fixed income investments as Sumita just mentioned.

Estimated investment income is $800 million, and total revenue in this illustration is $4.6 billion. As I noted earlier, the investment income in this illustration is only calculated on the required PMIERs capital. This does not include investment income in any excess PMIERs assets, which we often refer to as our PMIERs cushion. At the end of the first quarter, these excess PMIERs assets totaled $1.7 billion.

Moving to expenses. For this illustration, we were assuming a 15% expense ratio applied to estimated premiums earned from our existing in-force portfolio. This assumption is lower than our recently reported expense ratio of approximately 26%, as the illustration does not include expenses in support of writing new business and is meant to only reflect the portion of our expense base that relates to servicing our existing portfolio over time.

Net losses on our existing portfolio have been estimated using frequency and severity assumptions derived from radar. In the base scenario, radar estimates approximately 20,000 policies or approximately 2% of the portfolio would eventually result in a claim with an average claim amount of approximately $55,000. The total losses in this illustration are $1.1 billion. After subtracting the $390 million of primary loss reserves held against this portfolio as of Q1 2023, this leaves approximately $700 million of potential future net losses.

Corporate income taxes are assumed at the current 21% statutory rate. On $3.3 billion of pre-tax income, this results in $700 million of tax expense. Putting it all together, this illustration shows that under a base scenario and the inputs that we just outlined, we would generate approximately $2.6 billion of embedded future earnings from the existing portfolio over time. As a reminder, this does not include any new earnings from – any earnings contribution from new insurance written after March 31, 2023.

In our second illustration, we have stress-tested the analysis. This is a powerful illustration of the resiliency and earnings power of our in-force portfolio, even in an adverse economic environment, with unemployment approaching 10% and a home price decline similar to the great financial crisis. Even under this severe stress scenario, this illustration shows that we would generate approximately $1.3 billion of embedded future earnings from the existing portfolio over time.

Our existing in-force portfolio, while being an extremely valuable asset to us, is not actually found on our balance sheet. The book value of our company does not include the expected future earnings from this portfolio, which in the illustration we just presented would be significant even in an extreme downside scenario. This slide highlights the embedded earnings I just discussed on a per share basis in addition to Radian's gap book value as of Q1 2023. Here, we show three potential illustrations for the embedded earnings: the earnings under a base scenario, on a nominal basis, followed by the earnings under both the base and stress scenarios, each discounted using a 10% discount rate for illustration purposes.

For example, the $2.6 billion of nominal earnings I discussed in the base scenario divided by our outstanding share count as of Q1 2023 translates to $16.32 per share. In our view, the embedded earnings represent an underappreciated source of additional future value to investor as they're expected to accrue to our book value over time.

The illustrations I just walked through focused solely on the future earnings power of our existing insurance in-force portfolio as of the end of the first quarter 2023, without considering the contribution from new insurance we continue to write.

As we realize the value stored within our in-force book, we continue to write new business to replenish those embedded earnings and position us to drive future growth. We anticipate the significant capital we expect to generate organically to be sufficient to support our new business writings of attractive business through the economic cycles and allow for the return of excess capital to our holding company.

As we have noted before, given our statutory capital position, we expect the ordinary dividend capacity from Radian Guaranty to our holding company to be driven by the future statutory earnings of our mortgage insurance business.

This final illustration, which includes both our existing portfolio and new business, shows the potential PMIERs capital cushion we would expect to be able to maintain through the stress scenario I described earlier. As you can see, there's an expected near-term decline in Radian Guaranty's PMIERs capital cushion, followed by a gradual recovery, with Radian Guaranty continuing to maintain a significant excess PMIERs position through the cycle.

In addition, in this illustration, it is noteworthy that we would continue to generate positive earnings each year with a recovery to our run rate return on equity by year three. Importantly, in this illustration, we would grow book value and have significant ordinary dividend capacity even through this potential severe economic environment. We hope these illustrations highlight why we believe reading is well positioned to continue delivering excellent financial performance by generating substantial earnings, building capital strength and demonstrating flexibility in managing our capital across the enterprise through a wide range of potential operating environments.

And I will now turn it back to Sumita.

Sumita Pandit

Chief Financial Officer & Senior Executive VP, Radian Group Inc.

Thanks, Dan. I hope the $2.3 billion of embedded earnings from our existing in-force portfolio that is not even on our balance sheet got you excited for lunch. But I'm going to keep you a little longer to talk about capital management. Slide 93. Okay. So Rick walked you through the slide that shows our long-term book value per share trend. This highlights our long-term track record of successfully executing against our strategic plan, which is demonstrated in part by our ability to grow book value per share for nine-plus years and counting.

This increase in book value per share is after accounting for nearly $400 million of dividends that we returned to shareholders during the same timeframe. We are proud of the fact that we have grown book value per share by a compounded annual growth rate of almost 19% during this period while continuing to return capital to shareholders.

Illustrated on this slide is the capital strength of Radian Guaranty, our insurance operating subsidiary. We optimize our capital position at the operating company while ensuring compliance with certain requirements prescribed by the GSEs through PMIERs, as well as the requirements of our state insurance regulators. We want to ensure that we not only adhere to these capital frameworks, but also maintain an adequate risk buffer to protect against unforeseen stresses. We've achieved a meaningful growth and optimize available assets over the past four years with total PMIERs available assets at year-end 2022 of $5.6 billion.

The bottom chart shows the amount of net capital returned each year by mortgage insurance subsidiaries to Radian Group, the holding company over the past five years, which totals $2 billion. Even after returning this significant amount of capital to our holding company, we were still able to grow PMIERs available assets by 60% over the past four years. This demonstrates the cash flow power and overall financial strength at Radian Guaranty, including the benefits of the embedded earnings at Radian Guaranty as Dan just discussed.

Today, with the 44% or $1.7 billion PMIERs cushion at the operating company and approximately $1 billion more available liquidity at our holding company, we feel very comfortable with the strength of our position today. The excess capital we have both in our OpCo and HoldCo reduces our ROE. But we believe we are prudent in holding this cushion given the uncertain macroeconomic outlook today.

The top chart on this slide shows the trend for unassigned funds in our insurance subsidiary Radian Guaranty. The fourth quarter of 2022 was a very monumental quarter for Radian. With our statutory capital, Radian Guaranty's unassigned funds account reached an inflection point to become positive after being negative since the start of the great financial crisis in 2007. This was important because it enabled Radian Guarantee in the first quarter of this year to pay its first ordinary dividend to Radian Group in over 15 years. And for those of you who want to geek out over insurance accounting, the two charts on the page provide a little more detail on this important item.

Unassigned funds [indiscernible] 02:18:11 the undistributed amount of surplus at the balance sheet date in excess of paid in capital. One of the key conditions of being able to pay an ordinary dividend is that unassigned funds be positive. Unassigned funds increase by positive statutory earnings and contingency reserve releases while it decreases by contingency reserve setups and dividends paid to the parent company.

You can see from the chart that we ended the first quarter 2023 with a positive a $221 million balance in unassigned funds. The second chart highlights the amount of scheduled contingency reserve releases expected over the next 10 years from premiums already earned in the last 10 years. These contingency reserve releases are expected to support ordinary dividend capacity in the future. Contingency reserves are required by regulators to ensure mortgage insurers maintain sufficient claims being resources for policyholders during adverse was economic cycles and are established by contributing 50% of on-premiums every year.

Releases of contingency reserves occur with either an annual loss ratio greater than 35% or after 10 years on a first come, first served basis and are released into unassigned funds. After fully drawing down on its contingency reserves during the financial crisis, Radian Guaranty began to rebuild its contingency reserve balance in 2013. And now, at the 10-year holding period, is scheduled to release material amounts back to unassigned funds beginning in 2024. As a result, we expect these releases to more or less offset the additions to contingency reserves required from net premiums earned in future years.

Dan walked you through the illustration, demonstrating embedded earnings in just our existing in-force insurance portfolio. I want to reiterate that we expect Radian Guaranty's ordinary dividend capacity to the holdco to approximate Radian Guaranty's future statutory earnings. That gets us to capital allocation. We are in an enviable position of having significant optionality regarding uses of capital. We take a deliberate and balanced approach to capital allocation, which we believe has uniquely positioned us to deliver outsized value to our shareholders.

It is important to note that when we evaluate our capital and develop our plan, it is really never static as we need to position ourselves to be responsive to potential changes in the environment, particularly in this uncertain economy. So, with that as a backdrop, let's talk about what we contemplate when planning our capital allocation priorities.

First and foremost is our organic growth. The more capital we can deploy back into the business at attractive risk-adjusted returns, the better. Next is return of capital to shareholders. We utilize two main levels to return capital to shareholders in the form of both dividends and share repurchases. We will touch on this a bit more in a few minutes. But returning capital to shareholders has been an area where we has been an area where we feel we have really differentiated ourselves from our peers. As you can see from this chart on the right-hand side of the page, since 2018, we've returned $1.7 billion of capital, including dividends and buybacks to shareholders as of the end of 2022.

The other item we spend time thinking about is optimizing our capital structure. That includes not only our debt to capital ratio, but also the geography as to where we hold excess capital. As we had previously discussed, we are very comfortable with our leverage ratio today. We do have some debt maturities upcoming that will need to be addressed either through a refinancing or a full or partial pay down as I had mentioned earlier. Our strong financial position provides us with flexibility.

As far as where we hold our excess cash position, our general philosophy is to upstream excess capital from operating company to the Holdco whenever possible. We believe this provides us maximum flexibility across the enterprise. And if the operating company ever did need the capital, we could always down stream it. We are pleased to report that we didn't guarantee followed the $100 million ordinary dividend paid in the first quarter of 2023, with another $100 million distribution to Holdco. Last month we planned to dividend an additional $100 million to $200 million from the OpCo to the Holdco during the remaining part of 2023 based on current performance expectations and our expectations for available unassigned funds in the third and the fourth quarter of this year.

Finally, we consider investing in non-organic growth opportunities by acquisitions or investments. These could be related to businesses we already operate in as well as existing or adjacent markets. We see many opportunities each year, but the bar is very high for us to deploy excess capital in this manner as it is measured against the returns provided by other uses of capital. The market is challenging for many businesses to date. Fortunately for us, we are in a position of strength to selectively take advantage of opportunities that present themselves. We don't feel like we need to do anything in this regard but we are well positioned if the right opportunity came along.

Our dividend yield of 3.6% is the highest in the MI industry. The historical growth in our dividend has been supported by strong earnings and cash flows of the business and also reflects management's confidence in the prospects of our business in the future. Since initiating a meaningful dividend increase in the first quarter of 2020, we've increased our quarterly dividend for three consecutive years, growing our dividends per share by an annual growth rate of 21.6% in the last three years.

Let's take a look at our capital return in comparison to pure play MIs. During 2021 to 2022, we returned over $1 billion to shareholders more than twice the amount of capital that peers returned on average during that same timeframe. We believe our strategy and execution of returning capital in the form of both dividends and share repurchases to shareholders differentiates us from our peers.

With that, we will open up for Q&A. I'd like to introduce Rob Quigley, Chief Accounting Officer and controller. Rob and Rick will be joining us for this Q&A session along with Dan.

QUESTION AND ANSWER SECTION

A

I don't know, sitting or standing.

A

I think we're good.

we're good. You guys comfortable?

A

Yes.

A

Good. All right. We're open to take questions. Mike will be in there. See, Bo's back there. Just make sure you ask all the tough questions to these three over here, Bo.

Q

Actually, this is going to be one on Homegenius.

A

Okay.

A

Rob, [indiscernible] 02:25:56.

Q

It's on title insurance. Yeah. Is the growth there are going to be purely organic or how do you think about M&A in terms of terrific sort of things?

A

Yeah. I appreciate that question. So, look, today, as [indiscernible] 02:26:10 said, there are a number of opportunities that we see across the market. I think title is no exception. From an inorganic opportunity, many of them are struggling with the same issues that we've confronted. So I would say little value really kind of from an inorganic approach. But there were always look at opportunities. For us, our thoughts are how do we grow this business, leveraging our relationships in the market, and do we see a path to profitability to do that in a reasonable period of time?

So I think we have a pretty realistic view, the strength of our position in that business are really our lender relationships and our real estate agent relationships and some of the unique capabilities that we have from a digital platform perspective. But it's – our businesses, we have to scale it. So our focus right now is more towards organic scaling and assessing the opportunity in that direction through our relationships and kind of review in that context.

Q

Thanks. And then, actually, a follow-up there. I know you didn't update any sort of guidance for that segment, but if volumes remain weak for the next couple of years, do you see a path to breakeven over that period?

A

For the title business?

Q

Yes. Actually, for Homegenius more broadly.

A

Look, I think our objective and the reason I went through the three different businesses to give you a view the reason I went through the three different businesses to give you a view of kind of the three pieces, I would say real estate services, you know, given our market position there and you know, the SFR market, REO market are, you know, at low levels today, but we do expect them both to return. So we expect that business to continue to contribute profitably. Title I'll come back to one second. On the homegenius technology side, which is really, I would say more of a startup like digital, an investment in kind of digital innovation across that space, which we think we have a really unique set of assets in that space. That's I would think of that as more of a typical proptech kind of timeline.

So again, not giving a forward estimates. Title is the one that today, we scaled very quickly and the team did an amazing job scaling that business through pretty significant volume growth. But as that markets contracted, we have to look at that and say, you know, how do we get back to profitability? We've been adjusting expenses aggressively, but we have to find our way towards revenue growth. So I'm not – I'm not going to give you a forward forecast, but I can tell you we are intensely focused, the team is intensely focused on bringing kind of this back in the balance from a profitability perspective kind of moving forward.

So we're going to update each quarter on our progress and the team has done an amazing job of really reacting to it. But I will just leave you with one thought. Title, we can kind of all understand we do have a unique set of capabilities. I think we hear that from our lenders. There's just no volume. But – and so and we don't expect that to turn quickly. On the technology side, we really do see inherent value and what we have that's been confirmed by others, other than ourselves in terms of kind of how far our teams push using AI and computer vision to really kind of change the search zone experience. So we're – we have confidence that we have a valuable set of assets and we'll watch to see how it scales with our enterprise clients.

Bose George
Analyst, Keefe, Bruyette & Woods, Inc.

Q

Thanks.

A

Thanks, Bose.

Mihir Bhatia
Analyst, BofA Securities, Inc.

Q

Hi. Mihir Bhatia, Bank of America. Maybe just following up on that last point you made about the technology and search tool and capabilities, but the capability that you built. How do you monetize that? Is it on consumer side? Is it just all going to be B2B like particularly on the technology asset?

A

Yeah, on the technology asset, our focus – look, there's always – there's always a touch of a little bit of B2C, but that's not our focus. Our focus is on B2B2C, okay, where we leverage our relationships in the marketplace to help them help their customers, their brand and relationships, maybe with your fine organization someday here. But to bring their customers our capabilities, which are unique, which are differentiated, and that doesn't require us to go out and kind of, as I always joke with our team -- where's Elizabeth? She's in the room here somewhere. You know, we're not a Super Bowl ad. That's not our focus. Our focus is to leverage the relationships we have in the market, to build distribution of our products and services across our real estate network, our purchase title platform and other products. So again, very early. But, you know, I think no less exciting. We're getting great confirmation back from the interactions we're having with customers.

Mihir Bhatia
Analyst, BofA Securities, Inc.

Q

Okay. Maybe just switching gears to the financial side a little bit. I understand you guys have focused a lot on this, about the contingency reserves and the ability to pay ordinary dividends and why that's important and, obviously, helpful not to get – not to have to go to the regulators each time. But I was curious, has the inability to pay ordinary dividends in the last three or four years have put you in any way in terms of just capital? I mean, as you pointed out, you've been almost leading the industry in that segment, in that department metric, whatever, right. So how is the – why is this such a big change for Radian and for investors? Like, how has it hampered you over the last few years?

A

Yeah, maybe I can start, Rob. You should provide more context. I mean, I think it does make a difference that we are now able to do it at our discretion and the fact that we don't have to actually go back to our regulators for that permission. We also can more flexibly, think about where we allocate that excess capital as I walk through our presentation. We will always be biased towards moving it into the holdco because you can always downstream later. But I think from our perspective, we believe that it gives us a lot of flexibility in how we think about the geography of that excess capital.

Rob, anything on the history?

A

Yeah. Understand I think what it does is it gives more certainty to it. I think we've had a very good relationship with the regulators, both the Pennsylvania Insurance Department and the GSEs. But I think as soon as we said, not having to go and request that as a special dividend just adds more certainty to our future cash flows.

A

And I think transparency to the market, right, versus us reporting afterwards, hey, we got permission. The market can understand that we have this capability, right? So I think those are the changes.

Q

Have we all ever denied permission when you requested? Now that it's in the past, maybe you can tell us.

A

Actually not during my tenure. And I know not during Samantha's tenure. How about, Rob? I don't think so.

A

No. Nothing, not that I can recall.

A

Yeah. Right over here. Who's up?

A

Hi. Jeff, you're up.

Q

[ph] Jeff Donald, Donnelly 02:33:15. Samantha, can you share your thoughts on optimal capital structure both at the operating company? I think you're roughly 35/65 soft capital to equity.

soft capital to equity. And then how you consider longer term debt relative to that already levered operating company platform over time?

A

Yeah, and I think I mentioned a little bit about our philosophy, Jeff, as I walked you through this question that we always get, like, are you more levered than your peers? And we feel very comfortable with our leverage. I think the key thing to maybe keep in mind is how much excess cash we have in our holding company. So just to like go through the math again, we have $1.2 billion today, and I think our debt is $1.4 billion. On a net debt basis, if you look at – and obviously that includes our credit facility. So, maybe the better number to use is $1 billion minus the $1.4 billion. About $400 million of net debt is what we have in our books today.

We could pay down the debt. We could use a portion of our excess cash to actually go out and pay down the debt. But we are being prudent. We are looking at our options of how we use that excess cash. Some of it could go towards repurchases. A portion could go to actually repaying down some debt. But we are keeping a little bit of that flexibility with us. Our leverage ratio today, we are very comfortable with. We don't think there is too much upside from a rating agency perspective to pay down our debt. So we feel pretty comfortable about where we are today.

Q

Yeah, I guess it was more in terms of thinking of soft capital at the operating companies leverage as well as far as I'm concerned. So to run 45%, 50% soft capital plus 25% debt to cap would be extreme leverage relative to peers versus if you're running 26% debt to cap. Is your longer term goal get that down to 10% relative to running 45% soft capital leverage? So how do you think about the two combined?

A

Yeah. And maybe Dan or Derek, do you want to take it? I mean, when we ran the numbers on our competitive both leverage at holdco plus soft capital, we are actually lower than our peers right now. But maybe, Dan, you want to give a little more detail?

Dan Kobell
Executive Vice President-Financial Planning & Analysis

A

Yeah, I think that's right. And so we think about it holistically as you kind of discussed, operating company and holding company. I would say also, when we look at the mix of capital at the operating company and as we approach risk distribution, we use the same kind of economic value analytical framework that Derek discussed on the kind of pricing side to think about managing and distributing risk as well. So that's how we kind of evaluate different risk cohorts and different forms of execution, different attach attached, detached points and think about ways to maximize the economic value of the risk that we retain through our risk distribution. And that's part of also the calculus that goes into thinking about the mix of soft capital and hard capital at the operating company.

A

Yeah. And I would just add, we're constantly reviewing risk distribution opportunities on an ongoing part of our strategy. Derek and team are highly focused on that. So it really is – we don't talk forward about our capital plan because we always talk kind of in back. But I think from an optimization point of view, we lean towards risk distribution where it makes economic sense. And from a holding company point of view, we're very comfortable [indiscernible] 02:36:24 went through with the structure. I think we talk internally about having a bit of a champagne problem with all the excess capital that we have. And I think it's a really heavy focus internally about how we think about that going forward. Good problem to have. Yeah.

Q

[indiscernible] 02:36:45 RBC. So sticking on that point you just made, it's about a $100 million a quarter of incremental ordinary dividends, I believe, is sort of the $400 million a year from the contingency reserve.

A

$300 million to $400 million a year.

A

$300 million, to $400 million, yeah.

Q

But – just generally, what portion of that is already committed to your dividend, shareholder dividends and repurchases? And what of that amount is incremental that you've defined a source for or used for?

A

So we've got our dividend level out there, which we affirm every quarter I think is the best way to say it. We've also got a $300 million open share repurchase purchase program at the end of March that had – or remind me how much.

A

[ph] 285 02:37:25.

A

[ph] 285 02:37:26, yeah. [ph] 285 02:37:27. That's right. So, again, so we have plenty of capital both at HoldCo and any capital coming up. So, that capital today, when you think about as Sumita said, we're just really changing the geography from a strategic opportunity perspective, I think is the best way to think about it. But I don't know that we directly connected the operating – the dividends from the OpCo up to HoldCo, as being kind of encumbered by future dividends out of HoldCo, or share buybacks. I think we have plenty of capital in both places.

Q

Great. And then just from timing, do you anticipate the operating dividend to be an annual decision? Do you [ph] test-pay 02:38:07 quarterly decision, how do you – are you evaluating that?

A

Say that again?

A

If it's an annual decision of the company.

A

So, we – our rating guarantee has a board, and we go through a formal process each quarter. I think it is a fair way to say it, Rob. Do you want to?

A

Yeah, I think that's fair to say. And I'll also add, you mentioned the $300 million to $400 million guidance for 2023.

Q

Yeah.

A

We've also said in the future we expect that ordinary dividends to mirror statutory net income. And that's because another one of the rules from a statutory perspective, in addition to having positive unassigned funds, we can pay out the greater of either 10% of the prior year-end surplus or 100% of the prior year statutory net income. So going forward, it'll really be the statutory net income, a rating guarantee that we'd expect would drive the ordinary dividends. And as Rick said, we'd meet quarterly and we evaluate that relative to the size of our unassigned funds, as well as, the overall risk that we see.

Q

Thank you.

Douglas Harter
Analyst, Credit Suisse Securities (USA) LLC

Q

Great. This is Doug Harter from Credit Suisse.

A

Hi, Doug.

Douglas Harter
Analyst, Credit Suisse Securities (USA) LLC

Q

With that greater visibility into the regular dividend, does that change the amount of HoldCo cash liquidity that you want to hold, and does that – how does that inform your decisions around the magnitude of capital return?

A

Yeah. I mean, today, I think we are being a little more prudent. I think I mentioned in my remarks that our ROE is a little lower because we are holding some more excess, and we think that's the right thing for us to do given the current macroeconomic environment.

We also have debt maturities coming up next year, and we need to decide whether we pay down a portion of it, we refinance it, and I think we will take a decision on that in the quarters to come. So I think at least in the short term, we are holding a little more excess just to make sure that we are prudent in our capital decisions.

Q

Great. Thank you.

A

Thank you.

A

Yeah. Back there. Henry?

Harry Fong

Q

Good morning. Harry Fong from ROTH MKM. It seems to me pretty clear that the balance sheet is in a very strong position today, certainly under the base scenario and even under the stress scenario.

However, if we take a look at the stress scenario, in the initial year of stress, your GAAP earnings could plunge, presumably. Have you looked into any way to cushion that plunge? I know the term finite reinsurance is no longer acceptable in nicer circles, but it still exists. Is there a way in which to offset that initial year because stock investors never like to see down earnings?

I'll take it and everybody add to it, okay? How about that?

A

Yeah.

A

I think, look, it's – the stress scenario that Dan walk through, I think is one, a very extreme stress scenario, right, from a Great Financial Crisis-like scenario. We also went through kind of a number of the positive kind of tailwinds around this industry, which, maybe make that probability. I think it was 4% was the probability of occurrence. So it is an example, an illustration of how our balance sheet, how our financial performance would go. It is an earnings event, okay? It's not a capital event per se, all right? Much like COVID. And if you think about COVID, we went through a very, actually in a much greater shock in terms of earnings that like you would through kind of the stress scenario that Dan illustrated, which would happen over time a little bit, which is actually better. So I just want to emphasize that.

From a reinsurance point of view, I think we – as Derek went through in great detail, we're very comfortable with the analytics and our approach from looking at kind of geographies and different attributes from an EV perspective. So I think that that should be more resilient through the cycle. Stress scenario doesn't really apply to that, okay?

The second thing I would say is, is that we're in the business of holding risk and kind of managing through it. So risk distribution kind of is that tail risk, and so we're going to continue to issue reinsurance or [ph] ILNs 02:42:57 as the market comes back to distribute risk. But we feel very comfortable with the bucket of risk and kind of navigate through an earnings event, which again, I think remains positive through this scenario.

A

Yeah. Yeah, that's right. And I would just reiterate, we did have in that stressful scenario, I mentioned positive earnings even in the year that kind of it began.

The other point I would just mention too, from a loss perspective, the way losses develop in the mortgage insurance business, there's a long tail in terms when you actually have to pay those claims. And so from a cash flow and a ongoing cash needs to support the business, [indiscernible] 02:43:33 that we had in 2020 – the second quarter of 2020, we reported negative earnings. We're still very cash flow positive in that quarter.

Q

Yeah.

A

And we continue to generate significant cash from the portfolio over time. And we recover later in the year and show positive earnings for the year. So I think it's more – the initial onset of the stress much more about kind of maintaining your capital cushion, and then you kind of manage through it over time.

A

Yeah. And maybe just going back to the slide, I mean, you'd see the drop in ROE in year one, but you very quickly come back on your original path. By year three, you're actually back to where you started from. And as you noticed in the – on the left-hand side, we actually show that you still have positive earnings in the stress scenario, which, by the way, is expected to be 4% of expected scenarios. So it's very remote. And even in that remote scenario, we have a positive earnings year.

A

Yeah. I love the question because we kind of think through that and try to evaluate it. But I – going through the analysis, even what we've demonstrated here, and obviously we do this through multiple scenarios. Going through this analysis, really hoping to share with you all the resiliency of both our earnings and our capital structure through a pretty extreme scenario, not even taking into account any level of differentiation we might see through our portfolio of analytics, but I appreciate the question.

Q

I have one. And I know we're getting close to the end of this Q&A session, but how do you think about growth in the business?

A

Yeah. So, look, we're – when you think about our business today think about our business today, as I think many of us went through probably myself Sumita, Dan through all the different slides, one thing that is growing is our insurance in force, and that's the primary generator of future earnings in this business. The embedded earnings plus the continual addition of new NIW. I think what it's grown since 2015 by 49%. Did I get that right? Okay. So, that grows and that's really the primary contributor of future earnings as we go forward.

And I would think – as Dan Slide showed, not only do the embedded earnings come through but the way I like to think about it is five years from now, kind of with a constant flow of NIW, we also replace those earnings again and we have that same kind of embedded earnings out five years from now for five years in the future, right? It's a – so growth, growth comes through the growth of the portfolio. The quality of the portfolio Derrek went through, through the combination of persistency kind of remaining at high levels combined with high quality NAW.

Homegenius going back to Bose's question, we tend to think of Homegenius as one of the growth opportunities, going to come in different forms. And as I said, we're evaluating kind of the path of each of these businesses as part of that future. We haven't talked about it today very much but you – many of you are aware that we launched our conduit business last summer, I think Derrek, right? I think it was in the summer. And we've kept it pretty, pretty much bridal back, held it back a little bit time up but we've held it back largely because of the market environment.

Our team is – we've got an incredibly strong team. We see it as an opportunity and a channel to aggregate other forms of US mortgage credit risk and leverage our relationships with our lenders. We do see that as a growth opportunity as the market comes back. The other factor is investment income. I don't know if you remember that chart that went up there. Investment income has grown, what?

A

55%.

A

55%. But the strength of that, there was $60 million in the first quarter. I can do simple math, that would be almost a $0.25 billion a year of contribution kind of an increasing rate environment. And then as Sumita and I both have talked about the incredible amount of capital generation in this business gives us a tremendous amount of flexibility to think about other avenues of growth, either through share buybacks from a book value per share perspective, but also other strategic inorganic opportunities. So I think we're internally because of the strength of our business, we are highly focused on channels of growth, both organically and looking at inorganic opportunities that might be an adjacent opportunities. And again, just trying to be very prudent with our capital through the cycle. Anything you want to add?

A

The only other thing I would add is maybe just starting at term since a lot of investors do want to think about what is the total addressable market and is that growing? And I think as Derek and Rick both presented in their respective sections, our overall market is growing. It's growing slowly, it's 5%. But that's not something that people assume, given how matured the overall market is. But even our TAM is growing. And then within our TAM, because of the quality of our book and the persistency, as Rick mentioned, we've grown our own insurance in-force by 49% since 2014.

A

Yeah. And when you think about the TAM is – and so that went through, we – you look at the forces driving purchase volume. The only thing that's holding purchases back today is supply. And I think there highlighted that there's no immediate solution for that. But the demand curve is kind of you can't dispute the fact that millennials and Zs are sitting there already to buy home. I have a number of friends of mine who have kids who can't find a house who want to buy a house. They are more than qualified. Interest rates don't matter to them. They just want a house and they can't find one. So the constant demand force with the shortage of supply and a growing purchase market proven not only by units but housing values is a growth engine for our portfolio. So anyway, it's a good question. Thank you.

Anything else before we wrap up here? Appreciate the great questions. Okay. I think we're good. Thank you very much.

Q

Thank you.

Unverified Participant

All right. So I think I stand in front of lunch. I got to find my slides. Thank you for the great questions by the way. I really appreciate that. All right. So I think I am the act before lunch. That's always a great place to be. Thank you, John, for putting me there.

I also want to comment because I know Sumita went a little off script and talked about her high heels that she had just found since – in our – in the post-COVID days. I don't know, Jeff, I see you wearing a tie but I am still looking for my ties post-COVID. I haven't found them. For anybody who – there's a few other ties but how would you like to be a tie maker post-COVID right now? It's kind of a difficult environment.

But anyway, we appreciate you all being here and I want to thank the team for the excellent presentation today. I hope you found it helpful and I hope it stimulates dialogue with all of us, among all of us as we go forward. I believe this information is power and today's deep dive into our business will help you see what we see and hopefully, get you even more excited about our future. I've had the opportunity to spend time with many of – many of you and I'm often asked, why do you think the market misunderstands your value? Earlier, I walked you through the comparison of our price to book value and EPS multiple to other market benchmarks, specifically P&C and financial institution entities. And showed you our outperformance in terms of return on equity versus those market segments. As you all know, it is you, our investors, who set the value for our stock. This can be based on information, perception or data, likely it's a combination of all three. Our goal today was to share our perspectives on the business and hopefully provide valuable insights for you.

Derek and I covered how MI's and the mortgage industry in general have been transformed since the great financial crisis, including the quality of originations and servicing. The strength of our risk-based capital pricing. I'm sorry. The strength of risk-based capital models under PMIERS. The granular risk based pricing we apply to our mortgage insurance business, and the government's support to address homeowners experiencing temporary hardship. You heard us talk about our trusted long-term customer relationships, which is a valuable asset to our current businesses. Mortgage and homegenius, as well as any other future activities we may consider. Derek and I have outlined the favorable multiyear industry tailwinds, including the powerful demographics that are fueling first time homebuyer demand and a need for private mortgage insurance.

Also, the long-term supply challenges that are driving home price appreciation and increasing equity for homeowners. And Derek walks you through for homeowners. And Derek walked you through the secret sauce for Radian. Don't tell anybody. We believe our data assets, combined with our proprietary analytics, deliver differentiated economic value and outsized portfolio alpha. And more broadly, you heard how we are fully embracing the value of our deep data analytics proprietary – deep data assets, proprietary analytics, AI and technology across our businesses to deliver better ways of doing business.

Dan provided an illustration of embedded future earnings, with our large, high quality insured portfolio under various economic scenarios, which is not recorded in our book value, as Sumita noted, and is expected to be a significant contributor to our future earnings. Sumita and Dan walked through our financial strength and flexibility, as well as how we are positioned to continue to maximize value for shareholders in various economic environments.

I want to thank you all for your interest in Radian and look forward to continuing the dialogue related to the opportunity for Radian into the future. Thank you.

Unverified Participant

Appreciate it. We now invite you to join us for lunch and listen to two panels' discussions. They will be stimulating beyond your imagination. I think you'll find them very interesting. Most of all, you're going to get to hear from other members of our talented team and how we embrace data and analytics and technology across our businesses. You'll have the opportunity to ask our team questions and to learn more about what makes Radian unique. And I'm going to show you a little video that gives you a sneak peek and then grab some lunch and we'll see you in a few minutes. Thank you.

[Video Presentation] (02:55:01-   03:21:30

Unverified Participants

We can start it now.

Unverified Participants

So if everyone can take their seat that would be great. Looks like everyone's been able to grab some lunch. So fantastic. So as a, as a reminder for the rest of the afternoon here, so we'll be having two panel discussions. The first one is going to be on data and analytics, and the second would be on technology. And we're going to get the conversation started with a few questions with the panelists, and then we'll kind of open it up to the audience for questions. And in between the two panels, we'll show a short video kind of highlighting some of our capabilities. So, I think with that, I'll turn it over to Steve Keleher, who's going to lead our first panel discussion. Yes. Over here.

Steve Keleher

Executive Vice President-Management & Pricing

Over here.

Unverified Participant

Over here.

Unverified Participant

Just filing order?

Unverified Participant

Whatever order you prefer. Okay. So good afternoon. Thank you for joining us today for the discussion panel on the importance of data and analytics in Radian's business. In today's data-driven world, businesses that are able to effectively collect, analyze, and utilize data have a significant competitive advantage over those that don't or are not doing so in the most complete way.

Our panel of experts with me here today will answer your questions related to the role of data and analytics in Radian's business and provide insights into how we leverage both to drive results. So while you guys are thinking of your questions, which we're happy to take, I'd like to start off by introducing our panelists, and then jump into some questions.

So first to my left, Meghan Bartholomew. She's the EVP of Credit and Counterparty Risk Management. She's been with Radian for 21 years and leads teams focused on lender and servicer risk management, credit policy, quality control, public policy, and Radian's Affordable Homeownership Counsel.

To her left is Ted Cubbin, who spoke earlier. He's our Chief Analytics Officer for Radian's Mortgage segment. He's been with Radian for an aggregate of 17 years. He had two stints with a brief break in the middle there, and he's responsible for R&D and the production environment related to our mortgage risk and valuation models.

We have Elizabeth Emmons. She's been with Radian for 23 years and oversees digital experience, demand generation, life cycle and product marketing efforts for both the mortgage insurance and homegenius business.

And then Steve Gaenzler, the SVP of Products, Data, and Analytics for homegenius. He's been with the company for 4.5 years and is responsible for homegenius SaaS product development, as well as data science and innovation for homegenius.

So I'll start off the questions with Meghan. So, Meghan, you spent years focused on lender and servicer risk management. How would you describe the evolution of data and analytics for this How would you describe the evolution of data and analytics for this counterparty risk function? And what are the key areas of focus and priorities for your team?

A

Sure. Sure. Thank you. Yeah, I think I'll date myself, but I moved into risk management at Radian, specifically lender risk management in 2008. So I've been doing this for over a decade and really seeing Radian's transformation in terms of building our lender and service, our risk management capabilities. I would say we've, for a long time, long made counterparty risk management a priority. Derek in his presentation talked about our customer segmentation framework. And we, over time, have really built up. We have a set of lender level metrics, servicer level metrics, hundreds of metrics that we use to evaluate our lenders and our servicers. And we push that information out to our lenders and servicers through our dashboard reporting so they have a clear understanding of how we view their performance. And it really promotes very robust dialogues, both with lenders and with servicers. And they have a clear understanding of our expectations.

The other – through the customer segmentation framework, we also have been able to centralize those metrics. So the internal departments have access to the same information. And really that promotes consistency in terms of what we're measuring, our tolerances around those metrics and really coordinated action plans if there's issues with lenders. And maybe to highlight that, if I think back to 2008,

there was some tension between risk and sales because sales wanted more business from a lender, risk wanted to control it. But now we're very aligned in terms of what we want to achieve, which is economic value.

More recently, we've improved just through our business intelligence tools. So the information on our customers is pushed out to the action owners rather than people having to go grab that information. And really, we've become more efficient. I think, over time, we've improved our lender risk management capabilities and really just become more efficient on that. And what it's allowed my team to do is expand into other areas of focus like operational risk management and definitely recently a focus on servicer risk management.

And I'll wrap up, but servicer risk management, it's worth highlighting a couple points. During COVID, it became very quickly clear that we really needed to understand the servicing activities with our defaulted loans. We needed to understand the borrowers who are in forbearance. We needed to understand the loss mitigation workouts. And we had a gap to close there. We were receiving monthly reporting from our servicers, but it really – it wasn't complete. It wasn't always accurate. And so we engaged directly with our servicers to make sure that we were getting the right data from them.

And, really, it's put us in a position now where we have a good understanding of our defaulted loan portfolio borrowers who might be coming to the end of forbearance. We're going to look to see if there's a loss mitigation workout in place, like a payment deferral. And if we see that loss mitigation workout completed, then we should see the resolution of the default shortly after that. And if we're not seeing those milestones being met, then we're going to engage directly with the servicer and make sure that they're doing the right things, right activities with the borrower.

Q

Okay. Thank you.

A

So don't be shy. Raise your hand. We'll get a mic to you. In the meantime, I'll go to Ted here. So machine learning and artificial intelligence, definitely a lot of discussion on those two topics. So how is Radian utilizing those in its mortgage insurance business?

A

Yeah. Thanks, Steve. Our philosophy is that AI and machine learning, AI and machine learning, particularly in when it comes to MI pricing is very valuable and we use it a lot. With that said, I'd also add that we will rarely exclusively rely on an AI model for MI pricing.

And the reason for that is that sometimes AI models can be hard to interpret, which means it's sometimes hard to understand why the model is doing what it's doing. And so for that reason, we take usually more of a hybrid approach where we put on our economists hat, our quantitative finance hat, and we go into the layers and nodes inside where all the equations are in the neural network. And we kind of handcraft those so that they have economic meaning to them, we leverage economic theory and constrain the parameters, how they're set so that we can always go into that model, dive into it, and answer the why questions that we inevitably get when the model is telling us to change prices and kind of tell that story.

There's an adage I like to say, like a picture is worth a thousand words, but also a good economic equation can be worth a trillion cloud computing calculations. It's nice to see an equation. Sometimes if we do all the cloud computing, if I kind of can't get there on at least 80% of the way there on paper, I don't quite sleep as well at night. I like to see the theory and that's kind of in the nature of how we use AI.

Unverified Participant

Okay. So we'll go to Elizabeth. Switching topics over to marketing here. So, much of modern marketing is about understanding your customers above and beyond the relationship with the sales team. How are that and the analytics leveraged at Radian to help marketing and our business better understand our customers and influence decisions?

Elizabeth Emmons

Senior Vice President-homegenius Marketing

Yeah. So for us it's about connecting the dots. We can do all the right things from a marketing perspective. It's all the things people think about. It's the right content; it's the right messaging. You can be creative; you can break through the clutter; you can use social media and TikTok; you can get customer feedback; you can do customer research. But the challenge is if you're not connecting the dots about the insights you're gathering on your customers on the back end, I liken it to sitting in a rocking chair. It's giving you something to do, but it doesn't really take you anywhere.

And so, for us, it's about leveraging our customer data management platform and really connecting the disparate dots from across the organization. So whether it's behavioral – behaviors and preferences in marketing engagement or in product usage or our demographics or [indiscernible] 03:31:12 of our customers, we really bring that all together in one place to create a more full view of what our customers are doing and how they're interacting with us.

Now, to make that actionable, we have to push key facets of that data into our core operating platforms. And those are the core operating platforms for our go-to-market teams. It's for the marketing team. It's our marketing automation platform. For sales and customer success, it will be our client relationship platform. And by doing that, we're actually giving actionable intel and insights to each of those go-to-market teams. They actually get to know their customers better.

And so by doing so, we make it possible for everybody to go to market, knowing their customers so much more significantly than they otherwise would. And then one way for us and the marketing team in particular, where we leverage this, we call it reverse segmentation. A lot of people go to market with marketing strategies. They use the data that's available to them. And it's like I created this marketing plan. We go to market and we've launched it. But once we have our plans in place for a certain period of time, we actually set aside those predetermined client segments that we thought we built our plans around. We thought it was working.

We set it aside and we actually do a different analysis of the data that's available to us for that customer data platform. And by doing so, we try to look to see if there are any natural trends or different segments that actually kind of pop up as an aha moment we might not have considered. So it's almost like regression testing in the marketing space. And by doing so it really gives us a different opportunity to dial in and make our marketing efforts more effective, even for our go-to-market teams.

A

Okay. Thank you. Audience questions. Yeah. We'll go over to Steve. So, Steve, how do you see the user data changing in the real estate and mortgage space? What are you focused on to help grow shareholder value in a responsible way?

A

Yeah. It's a good question. So like [indiscernible] 03:33:11, it's all about the data. And data for us is both tangible and intangible. And you think about the successful companies, especially in the tech space, the Facebooks and the Apples and the Microsofts. And they've done a really nice job of learning how to collect, curate and then monetize data. And so there's two ways that you can access data. One is by originating yourself, right? So creating data. And the other is by organizing in a way that becomes valuable, and that's called curating data, right? And there's a side to end to this. We have and – I want to turn out a little bit in their insights, analogies here. We have a saying in the data science world that says data will lie to you if you let it, right?

So you don't know what the data is supposed to be telling you. You're just being led astray by it. So it's really important to understand that data. And so we do both intentionally. We both create and curate data. And we think that it's important to do both of those two things for a couple of different reasons. A lot of companies have struggled in benefiting from data science because they don't have the right architectures in place to move data around like fluid, large data models, right? So the big companies have developed large language models because they can and have identified ways to move data quickly around and allow that to benefit the business. And so, we've invested a significant amount of time and treasure in developing some very robust architectures to support that and therefore support data science. And I can bring that into kind of focus with a couple examples. So homegenius IQ, which I think Rex mentioned early enough, a few other folks have mentioned is our proprietary artificial intelligence system developed around residential real estate, computer vision and image recognition technologies.

And so, we are able to evaluate an image based on just the image itself and an important side engine to that is that we don't actually take in consideration any other information about the image other than that image. So we don't know in residential real estate who owns the home. We don't know where it's located. We don't know all this other information. And so, there is an ancillary benefit to us in that, while we can now predict, because we have developed deep learning models to do so, features of the home, finishes of the home, conditions of the home all really valuable piece of information because we have intentionally designed these systems not to know some of this other information that is effective, anonymized.

There are other areas that we can actually benefit from this creation and things like helping to root out appraisal bias in the real estate space. Right? Areas where there is the potential for bias, but we don't have those kind of built into the models. And so, creating that opportunity is kind of a tangible benefit to the company.

The other is in our ability to create large amounts of intellectual property in the form of data. So those same instruments we've – we've developed these, these image models off of literally billions of images. But as a result, we've created over 110 billion inferences, right? Pieces of new unknown information about a property, about a home across the United States. That in and of itself is highly meaningful, not just from the perspective of we can leverage that information and building better models, right? We can present that information and we use it to cross validate, information we already have. So it's a very unique way for us to leverage newer technologies in the [indiscernible] 03:36:39 space.

When we embark on a journey in computer vision three years or so ago, we identified we have about 40 different use cases for these types of technologies and we have already putting plan a number of them and seeing great value from them in the tools that we have here and search and valuation of analytics that are driving some of the home genius real estate differentiators in the marketplace. And so data for us is about our ability to create tangible and intangible benefit for both creating it or curating it and I think we've done a really remarkable job so far in R&D efforts that we've embarked on.

A

Appreciate that. [indiscernible] 03:37:23 any questions? No hands here. Okay, I'll mix up the order a little bit. Okay. So, we'll go back to Ted. So, Ted, how is the role of data and analytics in my space today different than the past? And how do you see it changing in the future?

Ted Cubbin

A

Well, I'll start with – we'll echo some of the things you heard today about our models. Credit models think about what we have today that's definitely around in the past. We've put up − we've been here for over 45 years. Credit models which are the models that predict how the borrower and loans going to perform under different conditions You can find credit models and financial institutions back 45 years ago, I've seen them from the 1950 and 1960. So that type of model has been around for a long time, but certainly as big data took over and a lot of techniques they've evolved. So that's probably any answer that can be part of the past, a part of the question there. What it say about those is because they've been around for so long, there's a diminishing return on R&D for those, I would say. And if we look at all the models for this credit performance that are available from third parties and other MIs, they're probably a lot more similar than different.

Moving out of the past, Derek talked about other two types of models that we have. The economic scenario generator, which is forecasting the local economics and the models that handle the sealed bid auction market nature of our business.

On the – I'll say something quickly about the economic forecasting models. Those have been around for a while. But interesting contrast to the credit models, we all see that there are companies that make forecasts, for example, house price appreciation in the different cities and MSAs around the country. And if you collect all of those and compare them, no two are alike.

I'm sure I could insert the old joke about economists in a room, a number of opinions here. But when you look at them and say how correlated are they, for example, they're just moderately correlated, any two providers of those forecasts.

So when we assess that, going back like five-plus years ago, we thought there was an opportunity for us to invest in that skill and the tools to do it, to see if we could forecast the economic variables that are important to us in a better way, and we think that we have. So, that's somewhat old and somewhat new and part of it, and I'm going to try and make this make sense. Then the most futuristic one or the newest thing is the sealed-bid tools. And Derek touched on those in our presentation today that, that environment's totally new for us being able to kind of see in the dark. Sometimes we say it of trying to figure out where those clearing rates are going to be, so that we can optimize our prices. That's the new optimize our prices. That's the new and maybe still quickly-evolving near-term future modeling that you wouldn't see at mortgage insurers in the past.

John Damian

Senior Vice President, Investor Relations and Corporate Development, Radian Group Inc.

Okay. We'll go to Meghan now. So you spoke about lender and service-service management. What other ways that an analytics use to improve ratings risk management functions?

Meghan Bartholomew

Vice President-Risk Management

Yeah, I think one area that's worth highlighting is our underwriting function. So Radian has been underwriting mortgage insurance for decades, and we have our non-delegated underwriting channel and there's a lot of resources that go into reviewing the applications that come in through the non-delegated channel. We have a program called Risk Informed Underwriting. And so before an underwriter even picks up the file, we have tons of information about that in my application. We have hundreds of data elements that come through the application data. We're running our models.

So for example, we have the RADAR output that tells us the expected loss on the loan. We have information from the GSEs that tell us about the appraisal quality through their collateral underwriter risk scores. We have the homogenius AVN values, so we have a view of the valuation risk. We can compare that AVN value relative to the appraised value that the lender submitted to us.

And then we also have a risk score card. So we measure the complexity of the underwriting understanding whether it's a first-time homebuyer, employment, tenure for the borrowers, variable income, self-employment income, payment shock. We have all this information that's telling us whether it's a complex loan to underwrite or not. And so my risk team partners with Suzanne Powell's operations team, where we are really trying to make sure that we're triaging the applications and focusing our underwriters' attention on the MI applications that need the most attention or the components of those – the components of the underwrite that warrant the underwriters' attention. So we've been able over time to just get much more efficient in that process.

A

Okay. Thank you. It looks like we have a question from the audience.

Q

Yeah. Just how basically did you start exclusively modeling like the competitive bid behavior and expected win rate? Was that something that's happened in the last couple of years or for a lot longer?

A

It's more like the last couple of years. And when we started developing it more than two years ago when it was evident that the black box pricing market was going to take over the industry and kind of – in the second chapter of that phase, it became clear that it was going to be a sealed bid. And that's when we started doing that work. So I think we could trace the beginnings of it back to about three to four years ago we really put pencil to paper.

A

It used to be much easier when everyone had the same rates...

A

Yeah.

A

...to know what rates were.

Q

Meghan, Just on the last point you made about the underwriting models, do you think the enhanced data, does that give you a better outcome on predicting credit outcomes or is it more on the efficiency side of achieving those outcomes?

Meghan Bartholomew
Vice President-Risk Management

A

I'll let you talk about predicting credit outcomes but we're focusing, I would say, largely on the efficiency aspect of it, right? So we're taking in all this data and doing the calculations. A lot of those activities used to be very manual.

One thing I didn't highlight that we're doing now is that we have all the application data that I described and we're also separately extracting the data from the underwriting documents.

And so we're able to compare the data and really see what's matching and the data and really see what's matching and what's not matching. And obviously, we want to focus our attention on the mismatches. Right. But, historically, those were things that were manual activities, right? Somebody had to look at that and compare. And so a lot of it is really about – it's about efficiency and really focusing and prioritizing our underwriters attention on the complexities and the things that really need underwriter attention. Right.

And for the other things where the information's matching up or we can do the calculations in an automated way, then we don't need to spend the underwriters time on that.

Q

So does that allow you to review more files or a higher percentage of the files?

A

Yeah. And I can – and Suzanne Powell is going to be up here later on. She's responsible for the operations part of it, managing the capacity. But, yes, it is – it's more efficient. We can do more work with fewer people.

[Unverified Participant]

Okay. I think we're wrapping up on time. So I'm glad we got some audience involvement there. You got another panel coming. So by all means, get your questions ready. Thank you for everyone's time today.

[Video Presentation] 03:45:33- [Video Presentation] 03:51:38

Unverified Participants

Please welcome Eric Ray, Senior Executive Vice President, Chief Digital Officer and co-Head of. Homegenius.

Eric R. Ray

Chief Digital Officer & Senior Executive VP, Radian Group Inc.

All right. Hello. My name is Eric Ray. I'm the Chief Digital Officer | of Radian. I'm Co-Head of homegenius, and I'll be the host for the technology panel discussion.

I would like to first thank you for sticking around to learn a little bit more about the meaningful investments Radian has made in technology over the past five years to modernize our platforms and position us for success. These investments enable us to drive operational efficiencies, competitive differentiation and future scale with technology.

Second, you will hear some examples of the positive impact these technology investments are making in our business. And finally, the format for this session will be questions from me to our panel and from our audience.

Now, let's introduce you to our panelists. I like each panelist to introduce themselves and say a little more about what their responses are within Radian or homegenius. Suzanne, let's start with you.

Suzanne Powell

Executive Vice President-Mortgage Underwriting & Loan Services

Yes, Suzanne Powell. I'm the Executive Vice President for Underwriting Operations and Loan Services. And I've been with Radian a little over four years now.

Eric R. Ray

Chief Digital Officer & Senior Executive VP, Radian Group Inc.

Thanks, Suzanne. Jim?

Jim Tighe

Executive Vice President-Mortgage Operations & Technology

Thanks. My name is Jim Tighe. I'm the Executive Vice President of Mortgage Operations and Technology. I've been with Radian for a little over 13 years. In my role, I oversee a number of the mortgage insurance operations areas, including our premium and billing area, our customer service, our claims area, and then all the technology that supports that mortgage business.

Jeff Berg

Senior Vice President & Product Owner-homegenius

And I'm Jeff Berg, the Senior Vice President and Product Owner for our homegenius search platform, homegenius.com website. I've been with the company over 19 years in various product development and operational leadership positions.

Mark Wai

Chief Technology Officer & EVP

Mark Wai, Chief – Chief Technology Officer. I've been with Radian for about seven years. I'm responsible for technology and digital, all the fun stuff. Yeah.

Eric R. Ray

Chief Digital Officer & Senior Executive VP, Radian Group Inc.

Thanks, Mark. Now, let's start the discussion with a question for Suzanne. Can you discuss – sorry, Jim.

Jim. Jim, this is a question for you. Can you discuss how Radian uses technology to strengthen its customer relationships and digitally deliver our mortgage products?

A

Sure. Thanks, Eric. Radian has a long history and an excellent track record of making the ease of doing business a core competency. And within the mortgage insurance business specifically, our teams are always looking for opportunities to deliver Radian's products and services to our customers in the most convenient way possible.

Over the past few years, Radian has made a number of key investments into the technology that supports the mortgage business. One benefit of those investments is that our sales and product delivery process now has expanded digital capabilities that can be customized to meet our customer needs. So these capabilities allow for efficient integration with the customer's loan origination systems and their product and pricing engines. Right now, Radian currently maintains over 30 integrations with the leading mortgage software platform providers as well as a number of direct integrations with Radian's larger mortgage banking customers.

These integrations are all aimed at providing real-time data exchanges that allow for seamless customer interactions. Some other examples of how we've leveraged technology to improve the customer experience, we've redesigned our MI Online, which is our customer-facing portal and also the MI Rate Finder platform. The enhancements that we made to these applications, they haven't only improved the customer experience for our customers, obviously, but they've also enabled our technology teams to be able to experiment in these areas to utilize new tools such as robotic process automation and artificial intelligence.

One example I can give of that, and it's come up a lot obviously today with all the discussion around pricing, but Ted Cubbin, who leads our pricing analytics team, he permutates with his team through millions of transactions to determine our MI premium rates. Because of their fabulous work, RMI pricing technology needs to be capable to support the evaluation of over 11 million loan combinations with speed and precision to deliver accurate real time rate quotes for all of our MI customers.

Thanks to the advancements we've made in the technology in these areas and the use of automation for items like regression testing. We can now provide accurate pricing in an instant and we also have the capability to roll out new MI premium rates into the market in a matter of days versus in the past, it used to take us on this week's.

Unverified Participant

Thanks, Jim. All right. Now, Suzanne, I was so excited to ask you this question. Over the past year, we've had a significant improvement in productivity with loans per day, per underwriter, improving close to 85%. What would you attribute this improvement to?

Unverified Participant

Yeah. Really great improvement. It's been very exciting. In addition to the 85% increase in loans per day, our cost per loans has been reduced by over 50%. So very, very proud of that in the last year. Some things that we've done. First, we mapped out the process end to end. In order to automate something, you need a consistent process. So we spent a lot of time on the process. We then brought technology to bear, so we used data analytics. Megan touched on some of the good work and partnership we've had with her. We then split the work into like functions. So we looked at each of the transactions. We looked at things like risk things, complexity. We sent the right work to the right skill level of employee, which I think is very important. We spent the right amount of time on any given transaction, which I think was very important as well.

One of the things that also did for us is that let us measure light performance. So instead of blended averages, we really could look at performance. So, instead of blended averages, we really could look at how long it would take for a particular piece of work based on other peers of theirs performing like work. And so that certainly helped with performance.

And then as Jim touched on, finally, we brought other technology products to bear like RPA. So, that robotic process automation really allowed us to automate what you call those no-brainer-type activities, take those off the underwriters' plates so that they can focus on what humans do best, that judgment work. And I think that balance that we created between technology and what humans do is really what's allowed for true innovation.

Eric R. Ray

Chief Digital Officer & Senior Executive VP, Radian Group Inc.

Thanks, Suzanne. [ph] Mark 03:58:41, what differentiates our purchased title platform titlegenius from others in the market?

Unverified Participant

Thanks, Eric. We built titlegenius from the ground up by businesspeople and technologists who have the title experience. Some of our developers have developed more than three title platform in the past. I still remember how frustrated I was doing the title process and when I was buying my first home. The process was long. My real estate agent and the title company people keep asking me many different questions, many documents. I never know where I was in the process. Our mission in titlegenius was to change all that.

I always like to use Uber-like experience to describe titlegenius. For example, homebuyer can see every step in their title journey just like you take an Uber ride. And like the Uber app, we've built a super nice portal so that users can check the statuses and follow up outstanding task anywhere they want and any devices that they want to use. And because titlegenius is so easy to use and the design is super intuitive, [indiscernible] 04:00:23 consistently received the highest user experience rating in many user reviews.

In terms of integrating – integrating with our partners, we built a very comprehensive and easy-to-use APIs for our partner to use and save our partners both time and money. And in terms of the actual savings for our customers, on average, we are able to offer 25% less than our competitors nationwide. And lastly, our titlegenius platform is powered by our patent pending, blockchain infrastructure, and it provides [indiscernible] 04:01:23 security, immutable transaction and really peace of mind for our customers and partners, which is a very good thing. And there are more to come. So stay tuned.

A

Thanks, Mark. Jeff, how do we currently leverage artificial intelligence to differentiate our Homegenius digital platform?

A

Yeah. Thanks, Eric. I get the exciting job. I work with Mark and Steve and others on the team. And really for me, closest to home is what we're doing to introduce unique and rich datasets we've talked about, created through AI homegenius product platform, which we saw a little bit in the video just before.

As Ted alluded to or stated in his favorite quote, right, the picture is worth a thousand words. And we really believe that pictures matter to home search, home value and the experience overall as you research and analyze the properties.

So with our computer vision and AI capabilities, we've developed this unique dataset, processing billions of photos over decades to determine property room conditions, features, objects, amenities that Steve articulated, I think, the numbers 50 plus with 14 to 15 different rooms that can be uniquely identified. And as an output, we've created this proprietary unique, rich dataset, homegeniusIQ.

And for search, which is near and dear to my heart, right, as a product owner, as an example, we now enable homebuyers to search based on these unique homegenius IQ data attributes. So rather than just square footage and price bedrooms fast, they're searching deeply through established tools and experiences that they're familiar with. But they're hitting into the photography – or the photographs and the data that we've extracted uniquely in the market to allow them that experience.

But we've taken it a step further in allowing them to experience this AI real time as they upload a photo from their device or copy something from a third party vision board or immediately able to research active listed properties based on the photo contents of those listings themselves and how they match to their desired photos from their phone, from their tablet, from their computer.

And so this use of AI is enabling a deeper and richer property search and analysis experience, and it really is a true differentiator in our product strategy.

Unverified Participant

Thanks, Jeff, and thank you all for your thoughtful and informative responses. Any questions from the audience? If not, we have some time [indiscernible] 04:03:55 here.

Unverified Participants

Yeah. Just a quick question. My daughter and son-in-law have been searching for a house up in the Syracuse area. And for whatever reason, they always seem to be selling me homes that they're looking for Zillow. How do you compare Homegenius against Zillow? Zillow seems to show up everywhere.

Unverified Participants

Yeah, great question, Jeff?

Unverified Participants

Yeah. Zillow has been established, the 800 pound gorilla in the search space, right? They started it roughly 30 years ago. We're in the roughly six to eight months since we've gone live. And I think what really what we're able to do and then what I've been doing is product owners leaning into the familiar, right? So a search application should have a map. It should allow you to search based on specific fields for both criteria. But as I've mentioned and what studies, third party studies have proven is that there's an emotional connection to photography. So people go and they find their 5,500 listings and they start scrolling through each listing at a time, go t the photo gallery and go. Okay, imagine me in this kitchen or is this a fixer upper right?

And so they're basically going through with a dataset that we share, right? It's MLS data is the majority of what Zillow is bringing. What we've done through the investment in technology and specifically the Homegenius IQ powered by computer vision is we've introduced the unique dataset that can be filtered and interacted with through some of those common utilities but no one else has that data. Right? So your – I think you said son or daughter would go into Homegenius,com and search based on do I want a kitchen island, do I want granite countertops within the price range that they're looking at? Right? Are they looking for a master bedroom with natural lighting or a an excellent condition walk-in closet because that matters to them, or are they actually looking for average or on the poor end of the spectrum, because they want to afford and go with the fix [indiscernible] 04:06:00. You can't do that on Zillow. So my answer would really be just wait.

A

[ph] Jeff 04:06:10.

Q

Along similar lines, how defendable are some of your advancements or your standout marketing tools? Zillow, I understand there's patents, but they probably have a [Obscenity] 04:06:22 lot bigger budget than you do for an R&D. Can they go out and replicate the [ph] photo 04:06:26 application or title insurance? Every large title insurer is talking about purchase automation and digital platform. They're running a couple of hundred million year of technology budget. So how easy is it for a bigger player to take one of your innovations and replicate and kind of come off that growth momentum that you see?

A

Yeah. It's a great question. Hey, Steve. Do you want to talk about our computer version technology? We believe we have defensible position. I'll let Steve answer the question.

A

Yeah. I'll just – so from a technology perspective, one of the massive advantages that we have is this data set. That company is – including the company that we're – we've been talking about don't have – their access to data is just different than ours. And so they're – the legacy of – their lineage is much, much shorter, a couple of years, maybe three.

And so because we have 20 years of data, we have the lineage we have, what these homes look like over time. And so building models off of that is far more rich than some of the other tools, these others – these other companies have been leveraging. We absolutely see other competitors trying to come in the space. And so we're constantly evaluating what the next enhancement or innovation is going to be to the types of enhanced image technologies that we're leveraging. And so the starting point for us was identifying importantly what room in-house it is, identifying objects. And because we're operating objects. And because we're operating in the space of being in the valuation space and being in the real estate space, we had the ability to use SMEs from those spaces to inform what it is that consumers are really looking for when they're searching for a property. And so to Eric's question, being able to create that dream home, that vision, if you will, and create a search off of that is very, very unique.

But we're leaning into all these technologies the best we can to continue to maintain not just a moat from a technology perspective, but a moat from a data perspective. And so at least from the

homegenius.com and from the consumer experience, and I'll add to that, Rick made a comment earlier today that our strategy is from B2B2C and leveraging that relationship that we have with lenders. Again, that company we were talking about doesn't have that trusted bond, that trust relationship. And so we have a very unique position inside both mortgage and real estate that allows us to kind of work with our with our constituents in a way that I think is very, very, productive to what we're trying to achieve.

And then lastly is, it does take large budgets. And so there are very few companies that probably could compete in trying to chase what we've already accomplished in this space. There are certainly some big ones. Again, we'll continue to work on from those. But the smaller entities tend to be very – their circle is much smaller, right, it's not as concentric. And so their ability to build some of the things that we've already built is much more difficult.

Unverified Participant

Thanks, Steve. Any other questions? Okay. One more for Suzanne. What are the key technology priorities you are working on and how will those disrupt the industry?

Suzanne Powell

Executive Vice President-Mortgage Underwriting & Loan Services

Yeah, very excited about it. We're continuing to lean in on that automation first-path and so we are working on a great technology product that will do that. The goal is to have automation first when it does sell out for any exceptions. Again, it goes to the right skill level, the right person to do that piece of work. We're going to be very differentiated in our workflow, which is also something that I think is going to differentiate us because we will send the item or the task to a person with just the information they need to work that particular task. And what that's going to do is, it's going to allow us to get new employees, more junior employees. We can we can move up, you know, with their ability to train on higher skill level work. We can get people proficient much faster so we can get economies of scale a lot faster. We're going to really lean in on the data rules analytics piece that we've been talking about, continue to use that type of automation, which I think is very exciting. And then, one of the other things we're going to do is, is really have this ability to have differentiate work. So we have a proprietary, Pulsating Web is what we call it, which will allow us to not tie work that's unrelated.

So I'll give you a quick example. When you're looking at a loan-to-value exception, I don't need to pull in income information because it has nothing to do with the calculation of loan-to-value. And a lot of the systems today, the amount of training that's required, you know, to go through everything, to really be able to deal with that one exception and that component review will eliminate that. And so, we can get people productive a lot faster. We can really lean in on the efficiency and then, we'll use AI to really help us automate more of those decisions.

So, you know, the machine will learn what the outcomes are that underwriters manually take when there are exceptions because there will always be exceptions and we'll be able to learn from those outcomes to further automate, further innovate. So a very automation-first path is some of the technology products that we're working on right now.

Unverified Participant

Thanks, Suzanne. Well, I think we're out of time. So really appreciate your time and attention and questions. Thank you.

Suzanne Powell

Executive Vice President-Mortgage Underwriting & Loan Services

Thank you, guys.

John Damian

Senior Vice President, Investor Relations and Corporate Development, Radian Group Inc.

Okay. So I'd like to thank the participants of the two panels and for everyone else that – on the team that was involved in the preparation and their presentations today. So this concludes the formal part of the program. So for everyone attending here today and remotely on the webcast, you know, we thank you. Thank you for your interest in Radian. And so, we'll have some coffee and dessert available for people to meet with the management team who will be available until 2. And don't forget to check us out this afternoon as we ring the closing bell. So thanks, everyone. Have a great day.

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