Viewpoint

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AIRG vs. GOES: Robust Asset Classes
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Overview

On the current timeline, the NAIC will switch over from the current Academy Interest Rate Generator (AIRG) to their new Generator of Economic Scenarios (GOES) platform with the 2026 Valuation Manual. Despite all the time and effort that has been spent on documenting this conversion, many companies still have questions about what the impact of this change will be. Even with side-by-side results of the two sets of scenarios, it can be very difficult to attribute a particular change in either reserves or surplus to one of the myriad of changes that a transition of this magnitude involves.

Conning has prepared a series of short articles that focus on small, easily comparable differences between these two sets of scenarios. The first three articles compare the results for three different types of assets:

- Part 1 looked at included bond classes
- Part 2 looked at equity classes
- Part 3 looks at some derived asset classes (e.g., MBS)

Then, in part 4, we will attempt to pull it all together by looking at the impact of all of these changes on some potential asset allocation decisions.

Background

Historically, life insurers have invested in two major categories: for their general account assets, their investments were largely in publicly traded fixed-income investments like government and corporate bonds, while their separate account assets (i.e., those backing the types of policies which will use the GOES scenarios) tended to be invested in publicly traded equities. However, insurers have gradually expanded the universe of investments since the 2008 Financial Crisis. First, they expanded into a broader range of fixed-income investments in order to combat the persistently low yields brought about by the crisis. As they got comfortable with these new types of risk,

they then started expanding across the spectrum into investments like private equity, hedge funds, and joint ventures.

In order to help companies model these investments, Conning committed to the NAIC to extend the available list via the Robust Data Set. For some of these (e.g., MBS), the process will tap into additional functionality within Conning's GEMS® Economic Scenario Generator model. For the rest, Conning will develop an estimation process similar to the one used for the international equity investments which will link these new asset classes to existing parts of the GOES model. Since many of these features do not exist in the AIRG, this paper will assume that companies performed a similar process relying on the items generated by the AIRG. Finally, in order to comply with Section 8.C of the NAIC's 2025 Valuation Manual[1], this paper will assume that companies adjusted the average reward to align with the native asset classes.

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1 https://content.naic.org/sites/default/files/pbr_data_valuation_manual_current_edition.pdf
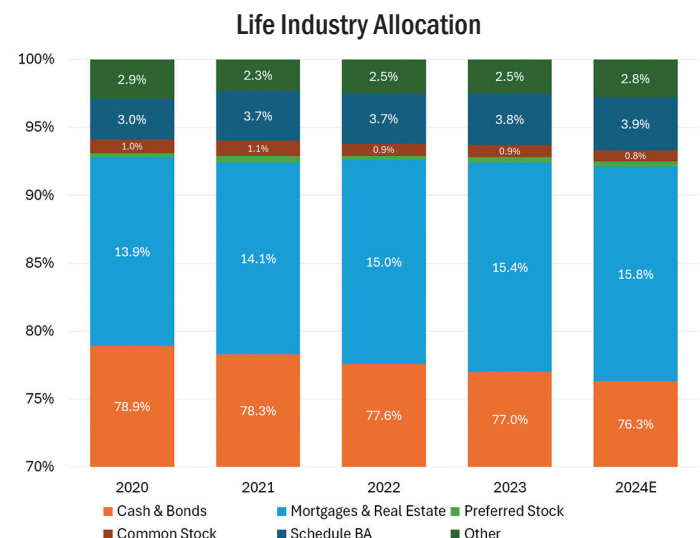

Figure 1: Average life insurance allocation. Source: ©2025 Conning, Inc. Conning, Inc. Life Insurance Industry Investments: 2024 Trends and Top Insurer Profiles.

Residential & Commercial Mortgage-Backed Securities (MBS and CMBS)

As **Figure 1** (previous page) shows, one of the largest additional investments for Life Insurers has been mortgages and real estate. To help fill in this gap, the Robust Data Set will include two additional asset classes: MBS and CMBS. The MBS asset class will use the native GEMS model, which includes a pre-payment model linked to interest rate changes. The composition of the asset class will be a combination of 15-, 20- and 30-year MBS, which aligns with the current market structure. For the AIRG version, we assumed that companies would use something similar to the method used for the native bond classes but with an extra term for convexity. Unfortunately, both duration and convexity have been fairly volatile for this asset class over time (see **Figure 2**, right), so we simply selected the values as of the 12/31/2023 start date that we are using for the simulations: 5.89 duration and -0.19 convexity. Finally, based on the average maturity for that same asset class, we linked the calculation to the 10-year Treasury yield.

For the CMBS asset class, the GOES returns will be simulated based on a combination of Treasuries and corporates calibrated based on historical results. As with the international equities in the Basic Data Set, the weights will be separately calculated for price and income returns. For the AIRG, Conning performed a regression analysis that compared Bloomberg's Investment-Grade CMBS index to their Intermediate US Government index. This resulted in a beta of roughly 0.6 plus an annual residual of roughly 2.3%.

Figure 3 and **Figure 4** (below) show the comparison of the steady-state returns for these asset classes. As we saw with the native
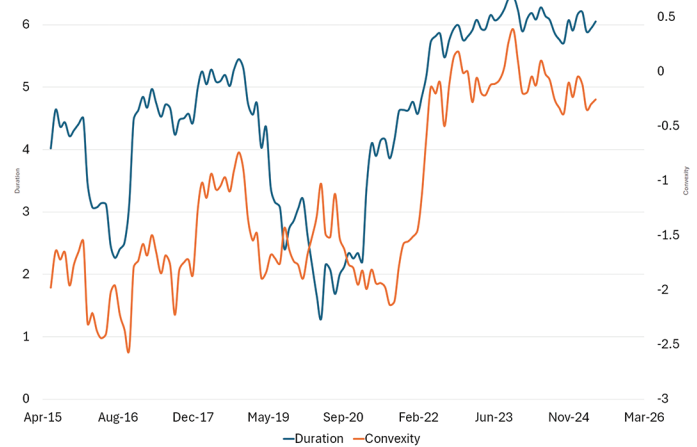
Historical Data: Barclay's MBS Index

Figure 2: Duration and convexity for Bloomberg's Agency Fixed Rate MBS asset class by month. Prepared by Conning, Inc. ©2025 Conning, Inc. Source: ©2025 Bloomberg L.P.

asset class investments, the increase in Treasury volatility creates substantially more volatile results for both asset classes in the GOES model. Given that, an alternative way to look at these Robust Data Set asset classes is to compare them to the native asset classes in the respective models, which is shown in **Figure 5** and **Figure 6** (following page). In these graphs, we can see that both asset classes have slightly less risk than the respective Intermediate government bond asset classes. We can also see that the relative riskiness between these three asset classes is more in line with historical results in the GOES calibration than in the AIRG. For example, the MBS asset class is about 40% more volatile than the CMBS asset class, which is similar to the difference seen in the historical data.
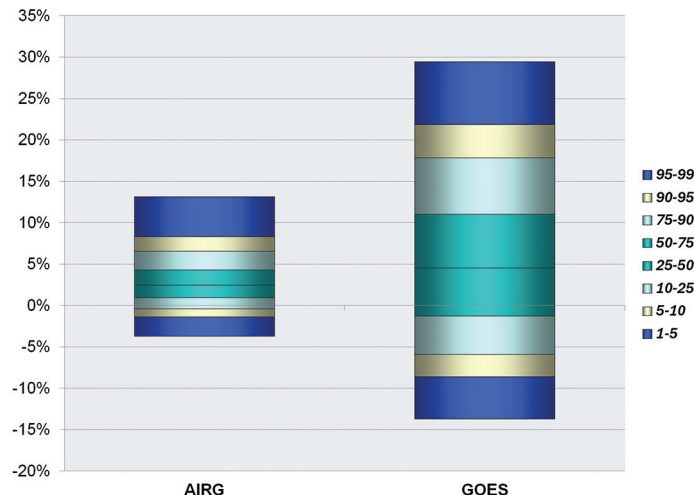
Year 30 Total Returns: MBS

Figure 3: Comparison of year 30 Total Returns for the proposed MBS asset class in the AIRG and GOES models. Prepared by Conning, Inc. ©2025 Conning, Inc. Sources: American Academy Interest Rate Generator v7.1.202406 and GEMS® Economic Scenario Generator.
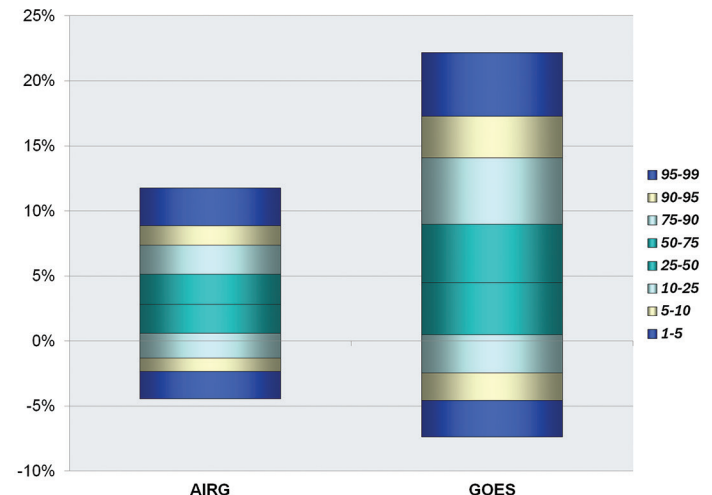
Year 30 Total Returns: CMBS

Figure 4: Comparison of year 30 Total Returns for the proposed CMBS asset class in the AIRG and GOES models. Prepared by Conning, Inc. ©2025 Conning, Inc. Sources: American Academy Interest Rate Generator v7.1.202406 and GEMS® Economic Scenario Generator.

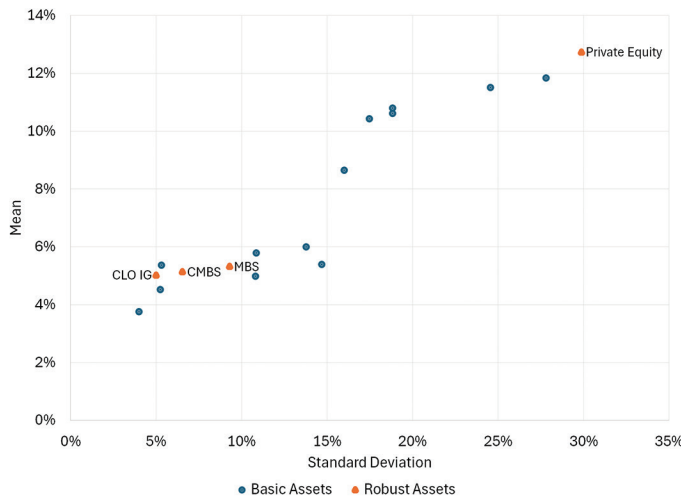## Risk vs. Reward: GOES Year 30

Figure 5: Statistics for both Native and selected Robust asset classes in the GOES 30th simulation year. Prepared by Conning, Inc. ©2025 Conning, Inc. Source: GEMS® Economic Scenario Generator.
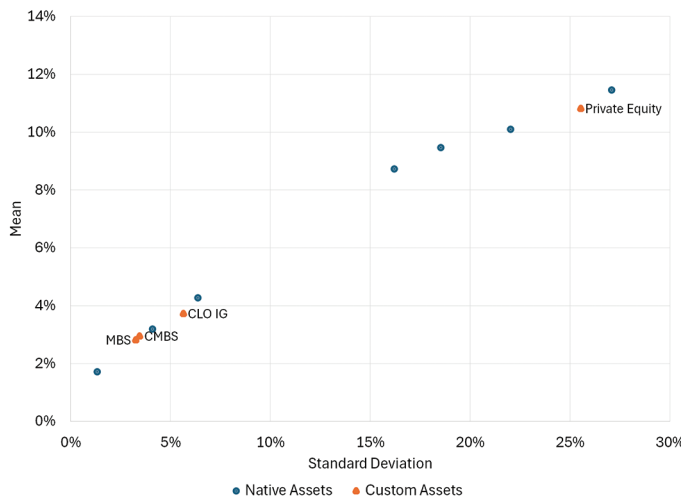
Risk vs. Reward: AIRG Year 30

Figure 6: Statistics for both Native and selected Additional asset classes in the AIRG 30th simulation year. Prepared by Conning, Inc. ©2025 Conning, Inc. Source: American Academy Interest Rate Generator v7.1.202406.

Collateralized Loan Obligations (CLO)

Another investment that has become increasingly popular with life insurance companies is collateralized loan obligations, or CLOs. These are securitized investments that pool together loans to corporations with lower credit ratings or private equity funds. The cash flows from this pool are then broken down into tranches to create different risk vs. reward profiles ranging from AAA down to equity. Unlike the other fixed-income investments that we have looked at, the CLO debt tranches typically have floating coupon payments that are linked to the secured overnight floating rate (SOFR).

When trying to predict how these investments will perform, there are a number of complicating factors. First, the historical return data is relatively short. In addition, there were a wide range of structural changes made to the typical securitization as a result of the 2008 Financial Crisis. This calls into question the applicability of CLO 1.0 results when trying to project the future performance of CLO 2.0s. There is even debate on how to interpret the historical data; for example, some studies of these investments point to things like the higher recovery rates for the underlying first lien investments relative to public high-yield bonds as reasons why the CLOs may outperform going forward.[2] Others point to the large number of potential risks (e.g., the relatively untested nature of the CLO 2.0) as reasons to believe that there may be a lot of unexpected sources of volatility.

Given all this uncertainty, Conning tends to take a holistic approach when deciding how to model these types of assets. Naturally, this process starts with available return data, as it would with any investment. Next, we talk with investors actively involved in this space to find out things such as what risk drivers they look at and what they benchmark their performance against. These inquiries led us to two key features for our CLO asset classes: first, there needed to be relatively little exposure to Treasury yield movements, since these investments are floating rate, and second, the spread level above SOFR should be linked to relatively short, lower-quality public corporates even for the most secure tranches. Finally, once we

2 Understanding Collateralized Loan Obligations (CLOs). Guggenheim Investments, https://www.guggenheiminvestments.com/perspectives/portfolio-strategy/understanding-collateralized-loan-obligations-clo

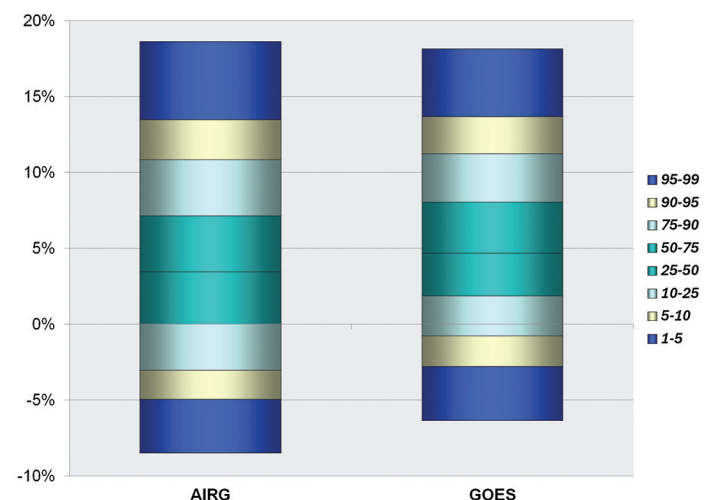## Year 30 Total Returns: CLO IG

Figure 7: Comparison of year 30 Total Returns for the proposed CLO IG asset class in the AIRG and GOES models. Prepared by Conning, Inc. ©2025 Conning, Inc. Sources: American Academy Interest Rate Generator v7.1.202406 and GEMS® Economic Scenario Generator.

put all those parameters into the model, we wanted to ensure that the resulting risks and rewards were reasonable relative to the other asset classes. In particular, this needed to apply not only between the different CLO tranches (e.g., investment grade [IG] vs. BBB vs. equity CLOs), but also when compared to the native asset classes. For the AIRG version, we wanted to capture some of those same characteristics. So, our CLO IG model combined the returns from the MONEY investment with the non-Treasury portion of the LTCORP.[3]

Figure 7 (previous page) shows a comparison of the resulting steady-state returns for the CLO IG asset class. Unlike the other fixed-income investments, these two distributions are fairly similar to one another. That is because these investments have very little exposure to Treasury yield movements, which are quite different between the two models. This does mean that there will be a large change in the relative riskiness for these investments between the two models, however. Specifically, in the AIRG, Figure 6 shows that these CLO IGs would have been one of the riskier fixed income investments. On the other hand, Figure 5 shows that they are now more in line with short corporate bonds in the GOES model.

Private Equity

The final investment we will look at is private equity. Like many private asset classes, there are a number of issues with calibrating these types of investments. First, there is relatively little historical data to base the calibration on, because neither the funds nor their underlying investments are publicly traded. In addition, there are often serious questions about the data that is available. For example, unlike public investments, there are generally no requirements for these funds to publish their returns. As a result, most indices include some form of voluntarily submitted results which makes them subject to several reporting biases (e.g., funds that are in trouble can simply choose to stop reporting their results). Finally, most private equity investments have expected returns that change over their life. Specifically, they typically post losses for a few years after inception and then swing towards large gains over time (i.e., the J curve). In order to align with the other asset classes, our proposed model will consider a combination of different vintages to try and eliminate the need to model this trend.

Given this background, we started our calibration by focusing on some general characteristics of the underlying equity investments. In general, private equity is used at the start of a company's life cycle (i.e., before it is ready to go public). Therefore, we assumed that the base returns are linked to the

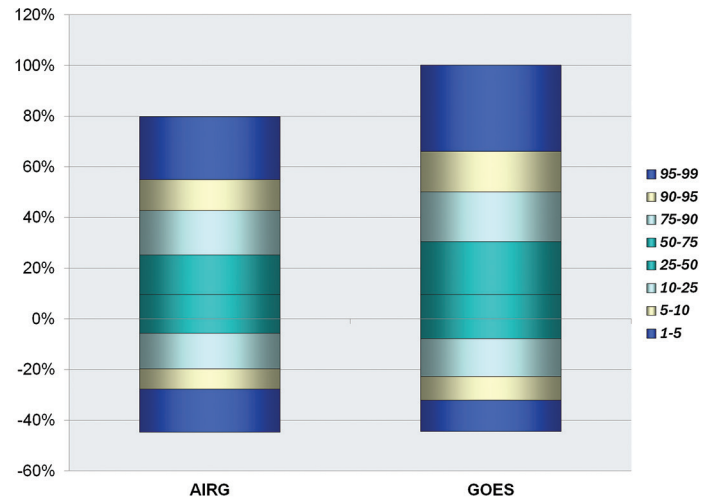### Year 30 Total Returns: Private Equity

Figure 8: Comparison of year 30 Total Returns for the proposed private equity asset class in the AIRG and GOES models. Prepared by Conning, Inc. ©2025 Conning, Inc. Sources: American Academy Interest Rate Generator v7.1.202406 and GEMS® Economic Scenario Generator.

SMALL/small cap returns with a beta above 100% for both AIRG and GOES scenarios. Based on the volatility of the other equity indices, we also targeted a total volatility of around 25% per year. As a reasonability check, we also compared this to several investment firms' capital market assumptions. Not surprisingly given the above points, there was a much wider range of expectations than there were for public equities (e.g., BNY estimated a volatility of 20.1%[4] while BlackRock's estimate was 32.1%[5]), but they generally confirmed that this was a reasonable target. As with the other Robust Data Set asset classes, we then adjusted the expected return to align with the native asset classes. It is important to note that these returns are meant to be gross returns (i.e., before management fees) to be consistent with the rest of the asset classes.

As we saw in the second installment of this series, the equity asset classes have similar steady-state distributions in the two models, so, it is not surprising given the way we have constructed this new asset class that **Figure 8** shows similar steady-state distributions. In fact, the only key difference is that the GOES expected returns are about 50 bps higher, which is a result of the change in Sharpe Ratio definition that we mentioned in that same paper. We can also see that the resulting returns are among the riskiest investments in either model (see Figure 5 and Figure 6). In fact, the only riskier asset classes are AGGR in the AIRG and Aggressive Foreign Equity in GOES.

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3 Specifically, this involves adjusting the simulated LTCORP returns for the Duration times the change in the corresponding 10-year Treasury yields.

4 BNY's 2025 Capital Market Assumptions

5 Capital market assumptions - Institutional | BlackRock

Conclusion

The transition from AIRG to GOES represents a significant evolution in how life insurers will model economic scenarios and assess asset class performance. Through our comparative analysis of several of the Robust Data Set asset classes, we have highlighted how GOES introduces a more nuanced and historically grounded framework, particularly in its treatment of volatility and risk attribution. While AIRG provided a foundational approach, GOES offers both enhanced granularity and alignment with real-world market behaviors, especially for complex or less traditional investments.

Our findings suggest that GOES better captures the relative risk-return profiles of these asset classes, offering insurers a more robust tool for asset allocation and risk management. However, this increased realism also brings greater variability, particularly in interest-rate-sensitive instruments. As insurers prepare for the full implementation of GOES, understanding these dynamics will be critical for strategic planning and regulatory compliance. To this end, the final installment in this series will dive into some real-life examples of these impacts.

GEMS® Economic Scenario Generator

Conning's GEMS® Economic Scenario Generator uses leading-edge economic models and provides full market risk and asset class coverage, including alternative assets and derivatives. In 2023 and 2024 GEMS® won "Market Scenario Generator of the Year" in the Risk.net Risk Markets Technology Awards.*

Risk Markets Technology Awards 2024 Winner | Market scenario generator of the year
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