



# Evaluating fixed income portfolio performance: a conundrum for insurers

**Insurance companies, one of the biggest classes of institutional investors, maintain a business model that makes a unique set of demands on their asset managers. The “buy-and-maintain” investment style accompanied by balance-sheet driven restrictions does not lend itself to the standard benchmarking by which investment managers’ performance and added value are normally evaluated. In this article the authors describe a solution developed by NN Investment Partners.**



Insurers’ balance sheets have many complexities that cascade down to the management of their assets. These intricacies call for a “buy-and-maintain” approach and adherence to a broad set of investment restrictions, accounting considerations and regulatory objectives. Consequently, comparisons of the portfolio’s performance with standard benchmark indices have limited use in assessing the added value of the portfolio managers overseeing the investment mandates. How, then, can the insurer objectively determine whether its asset manager is doing a good job?

## MANAGING INSURANCE PORTFOLIOS

Life insurers have long-term investment horizons and multi-dimensional balance sheets. Consequently they are typically income orientated, using cash flows to match liabilities and employing a buy-and-maintain investment approach. This means that when portfolio managers buy an asset, they intend to keep it on the balance sheet until maturity unless there is a compelling reason to sell earlier. Asset turnover and the associated tax treatment can impact insurer’s Solvency II capital position and hurt accounting metrics such as book yields. Motivations to sell an asset would include credit deterioration or balance-sheet management considerations such as a change in strategic asset allocation.

Insurers may implement additional goals that restrict the portfolio manager’s investment universe. These goals may include duration targets, ESG objectives, compliance with country restrictions, or a focus on capital generation rather than total return. In this article we consider these types of restrictions as they apply to buy-and-maintain portfolios.

## PERFORMANCE EVALUATION OF FIXED INCOME PORTFOLIOS

The customary way to evaluate an actively managed portfolio is to benchmark it to a broad index. Fixed income indices’ compositions change regularly as new issues are added to the universe and existing issues removed. A buy-and-maintain portfolio manager has limited flexibility to trade, so the portfolio does not evolve with the index; moreover, the manager may be restricted from purchasing some bonds in the index. The resulting deviations from the benchmark and the associated differences in return are not the result of the manager’s active views. So how can an insurer assess whether the investment manager is adding value?



S. Taylor MSc CAIA (left) is Head of the Investment Solutions team at NN Investment Partners, focusing on investment and hedging strategies.

W. van Dommelen MSc (middle) is Strategic Advisor at the Fixed Income Solutions (FIS) department of NN Investment Partners.

G. van Oostrom MSc CAIA FRM is a senior Data Scientist in the Investment Solutions team at NN Investment Partners.



### PRACTICALITY VERSUS COMPLEXITY

The investor has the choice of using a simple an intuitive measure that may not capture the complexity or constructing and complex one that could be difficult to implement and possibly opaque for both the investor and manager.

An investor could ignore the difficulties outlined above and simply use a standard index. The major impediment is that relative returns, especially in the short term, will be excessively affected by general market movements and therefore not accurately reflect the manager's skill. Another method is to use a defined spread or total return target. Such targets are easy to observe and measure, but defining a suitable target level that incorporates the buy-and-maintain restrictions and considers short-term market influence is challenging.

### NN IP'S SOLUTION

NN IP has developed a method that aims to properly calculate the added value of the portfolio manager, cognizant of the relevant constraints. It decomposes publicly available indices into rating and / or maturity buckets, maps the portfolio to the characteristics of these cohorts. The resulting metrics are intuitive and useful, but come with some operational complexity.

The performance metric has two components: capital generation to assess returns, and losses as a measure of risk. For returns, we establish the credit spread of the portfolio relative to the benchmark; for risk, we compare realized losses with expected losses. These elements are at the core of a portfolio manager's mandate, which is to achieve superior investment returns and to avoid credit losses.

### ASSESSING PORTFOLIO RETURNS

The credit spread represents the amount of capital a bond generates when held to maturity. The traded spread of each bond is compared to a cohort within an appropriate benchmark index. For the European investment grade credit portfolio, we break the index down into rating

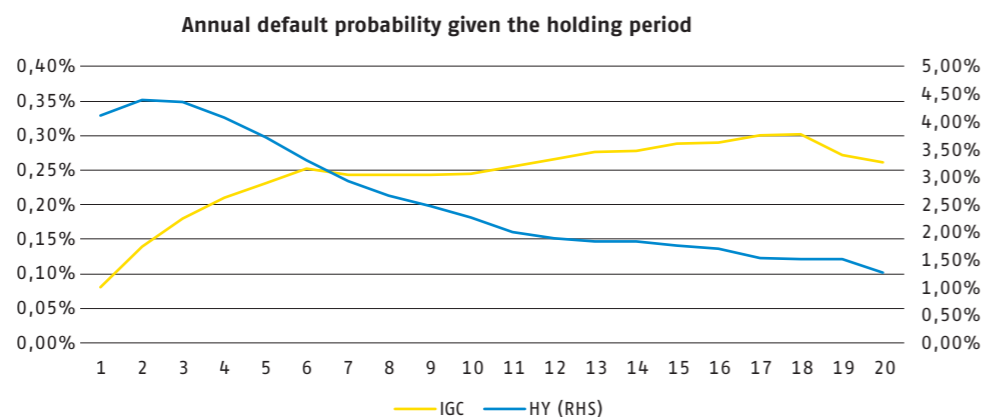
and maturity buckets (for example BBB-rated 3-5 year or A-rated 7-10 year) and map each bond in the portfolio to these grid-points. Any skewing of the portfolio to a higher rating or longer duration than the index is accurately captured, as each bond is compared with its appropriate rating and maturity cohort.

### MEASURING PORTFOLIO LOSSES

The second component of the metric is loss. A portfolio manager seeks to minimize the expected loss of a portfolio resulting from defaults or credit-driven sales; that is, pre-emptive sales aimed at avoiding defaults. Our method assesses the impact of such events for the relevant investment universe and compares it with the expected losses of the portfolio as assessed by a major rating agency.

For credit-driven sales, the spread at the time of buying and the spread at sale date are used to calculate the principal loss. We use spread rather than price development, as the interest rate impact on price should be offset by a corresponding change in the value of the liabilities. For a defaulted asset we use the recovered value, which can introduce calculation complexity as it may take some time to recover proceeds of the asset, especially if the default is followed by a convoluted restructuring.

The realized loss is then compared with the expected loss, using two methods. The first method derives the expected loss by employing rating agency long-term cumulative default matrices, the bond holding period and bond rating. This might be considered the most appropriate method for a buy-and-maintain portfolio given its longterm nature; a manager should therefore be assessed through a full economic cycle. A benign credit environment such as in recent years will most likely flatter the manager when compared with longterm expected default rates. The chart shows how expected default rates change over time for higher (increase) versus lower (decrease) rated bonds, highlighting the importance of incorporating holding period into the assessment.



### A MORE TIMELY VERSION TO ALIGN WITH REPORTING AND ASSESSMENT CYCLES

Manager evaluation and reporting cycles are clearly shorter than economic cycles on which the expected default losses are based, so we also apply a timelier measure that uses rating agency assessments of defaults in the market per rating cohort over the previous year, relative to the size of the market. The major drawback of this method is similar to that of standard benchmarking of buy-and-maintain portfolios: asset managers cannot adjust their portfolios to prevailing market conditions. We believe that both the short-term and long-term measures, especially in combination, add value as long as their shortcomings are also acknowledged.

The table shows how one investment grade and one high yield bond would be assessed. There were no defaults in either cohort for 2021, so there is no benefit attributed to the portfolio manager for avoiding portfolio losses as the market itself suffered no losses.

| Bond description | Rating | Trade date | Spread | Benchmark          | Benchmark spread | Hold period | Long-term probability of default | Long-term capital generation | Default 2021 | Capital generation 2021 |
|------------------|--------|------------|--------|--------------------|------------------|-------------|----------------------------------|------------------------------|--------------|-------------------------|
| TELEFONICA 2023  | BBB    | 12-2016    | 0.54%  | BBG EUR YC 7y      | 0.53%            | 4y          | 0.31%                            | 0.20%                        | 0%           | 0.01%                   |
| PROGROUP 2026    | Ba3    | 05-2018    | 2.34%  | BAML Euro Corps BB | 2.21%            | 2y          | 1.12%                            | 0.80%                        | 0%           | 0.13%                   |

Source: Bloomberg, NN Investment Partners

A further extension of the metric includes assessment of expected versus realized downgrades from investment grade, which is out of this article's scope.

### CONSIDERATIONS IN APPLYING THE METRICS

The biggest hurdle to applying this metric is obtaining spread (or at least price) and rating data of each trade.

A second consideration is that although we eschew traditional benchmarks, certain biases might remain. Energy sector bonds, for example, may be excluded from a portfolio due to ESG restrictions. If they display wider spreads than other sectors and make up a large proportion of the BBB-rated bucket, the relative measure could be skewed such that it indicates that the BBB-rated bonds in the portfolio are underperforming. Additionally, the cohorts are not available on the notched-rating level, which may affect results.

Finally, there is the question as to whether the metrics are suitable for use as an explicit target for a portfolio manager. We believe these

measures provide a good indication as to how a portfolio manager is performing in the multifaceted environment of buy-and-maintain insurance investing. Still, it is difficult to incorporate all of the complexities of the balance sheet accurately and to sufficiently remove all biases that occur between the portfolio and the benchmark so that the portfolio manager can explicitly manage to this metric.

### CONCLUSION

Insurers have complex balance sheets, and they often demand tailored portfolios from their asset managers. Such bespoke low-turnover investment programs make it difficult to objectively assess manager performance. In selecting an evaluation metric, insurers must therefore make a trade-off between practicality and complexity. Although operationally more complex to set up, the NN IP method offers intuitive results that appropriately reflect the asset manager's added value. We therefore believe it is a suitable alternative to the use of standard benchmarks, which are simple to implement but do not provide the insights that the insurer requires in order to appropriately evaluate investment performance. ■