The Insurer Investment Management Insights

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For Professional Clients, Qualified Investors and Qualified Clients/Sophisticated Investors only.

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Introduction

2021 continues to be busy for insurers. In this letter, we will focus on two main issues that look set to dominate the agenda in the European insurance regulation: the Solvency II Review and climate change. Then, we will detail the implications for insurers: after a bumpy year, the building blocks of the insurance general account returns, EURO IG Bond's yields, are back at historically low levels. EURO IG investments are not compensating the cost of their regulatory capital, forcing EURO insurers to look for diversification in the Leveraged loans, US municipal bonds and USD Emerging markets.

It's the final countdown

Two years after work first began on the Solvency II Review, the suspense is building in anticipation of what the European Commission will propose this Autumn. A key input to the European Commission's thinking will be the advice from EIOPA, which was delivered in December 2020.

While it is easy to get lost in the technicalities of Solvency II, the context in which the Solvency II review takes place and how the Solvency II Review fits in with wider EU policy priorities are important to consider. The EU's Green Deal, the Digital transformation and its pursuit of strategic autonomy are key drivers of EU policymaking. We therefore find it interesting that issues relating to sustainability, but also cyber resilience, are notably absent from EIOPA's advice.

However, we believe that a key question for the European Commission will be how it will use the Solvency II Review to unlock long-term investment by the insurance industry to finance the economic recovery as part of its Capital Markets Union Action Plan.

Several dimensions of EIOPA's advice are relevant to understand the likely impact of the proposed changes, including measures relating to the valuation of long-term liabilities and measures relating to long-term investments.

With regards to the valuation of long-term liabilities, EIOPA is proposing significant changes to the extrapolation method, as well as changes to the volatility adjustment and the risk margin. While the changes to the volatility adjustment and the risk margin, in particular, are likely to be net positive when it comes to valuing long-term liabilities, the changes to the extrapolation method could counterweigh these benefits. EIOPA found, as part of its impact assessment, that taken together the package of measures would reduce capital surplus by between 20-45bn EUR.

When looking at the asset side, we have already seen a number of measures introduced to incentivise long-term investment, including revised calibrations for infrastructure and for long-term equity. Of note here are EIOPA's proposals on spread risk and the long-term equity risk sub-module. While EIOPA concludes that introducing a more benign treatment for long-term corporate bond holdings under the spread risk module is unwarranted, the supervisor does propose to amend the long-term equity risk requirements to make them more attractive to insurance undertakings.

Taken together, in our view EIOPA's advice remains rather timid when it comes to making any significant changes to Solvency II when it comes to long-term investments and liabilities. However, we expect the current political and economic backdrop to act as a significant tailwind to alleviating some of the more onerous requirements to enable the insurance industry to fuel the economic recovery.

We also note that similar reflections are ongoing on the other side of the Channel, with the UK Government also undertaking a review of Solvency II post-Brexit. Some of the same areas of contention, such as the risk margin, the matching adjustment and the treatment of long-term investments, are also under the spotlight but may lead to different answers from those reached in the EU.

Read our full analysis here.

> The EU's Green Deal, the Digital transformation and its pursuit of strategic autonomy are key drivers of EU policymaking

Seeing green

Despite noting the absence of any consideration of climate change or sustainable investing in EIOPA's Solvency II advice, the drive to integrate the consideration of climate change risk into insurance regulation continues to gather pace.

Measures to date by supervisors have focused on soft law, with supervisors undertaking reviews and setting out best practice. For example, the UK PRA and French ACPR have both undertaken reviews on current practices and have set out their supervisory expectations in this space, which are coalescing around four key building blocks:

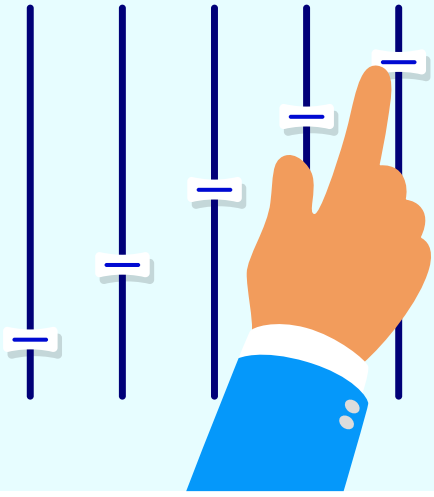
- Governance
- Risk management and metrics
- Scenario analysis
- Disclosure

For its part, EIOPA has undertaken sensitivity analysis for the European insurance sector to better understand the risks linked to climate change. In its report on Sensitivity analysis of climate-related transition risks, EIOPA found that insurance firms stand to lose 0.32% on non-unit-linked portfolios about 0.73% on unit-linked portfolios. However, these figures mask the much more substantial losses on equity investments in high-carbon sectors, reaching more than 25% on average for these equity holdings. This stands in contrast to the positive performance of renewable energy, which would increase in value by 10% for equity investments.

> EIOPA found that insurance firms stand to lose 0.32% on non-unit-linked portfolios about 0.73% on unit-linked portfolios

The analysis is based on climate scenario analysis, which is increasingly seen as a useful tool to understand how portfolios may respond to different climate scenarios, in this case, a sudden policy shock leading to a rapid rise in carbon pricing in 2030. EIOPA's work in this space is part of a wider body of work currently being undertaken by central banks and regulators to develop climate scenario analysis as a means to assess climate risks in the financial sector, including the collaborative work being undertaken internationally under the auspices of the Network for Greening the Financial Sector, as well as planned pilot climate stress tests being undertaken by the UK Bank of England and French ACPR.

While the design features of the stress tests proposed by regulators are evolving rapidly, they have identified similar objectives and challenges:



Multiple scenarios
Supervisors are coalescing around the three main scenarios set out by the NGFS: an orderly transition to net zero where action is taken in 2020, a disorderly transition where action is taken late and therefore requires a very steep reduction in emissions; and a hot house scenario where insufficient action is taken and world temperatures reach 4°C by 2100. However, within these scenarios, there remain a range of variables that need to be calibrated, including assumptions regarding the availability of carbon reduction technologies such as Carbon Capture and Storage.

Translating scenarios into financial impacts
Translating these scenarios into financial impacts remains challenging, requiring numerous assumptions to be made regarding a range of input variables over long time horizons, which significantly impact the outcome of the stress scenario. The level of granularity to be explored is also a core question for supervisors looking to strike a balance between complexity of the scenario on the one hand and how meaningful the results are likely to be.

Lack of data
The lack of comparable and reliable data remains one of the biggest hurdles. Many of the proposed methodologies require firms to segment their portfolios by economic activity or by technologies, which in many cases is difficult to do based on current data available. While they recognise that this is only the start of the journey and that scenario analysis remains in its infancy, supervisors have been keen to spur activity in this space. Despite these challenges, insurance firms in Europe, at least, can expect to be increasingly expected to take part in such climate simulations and encouraged to develop their own internal capabilities to model climate impacts on their assets and liabilities.

While supervisors focus on the potential risks emanating from climate change, there is an increasing focus on the role of the insurance sector in financing the transition towards a low-carbon economy. The EU Taxonomy, that will define criteria for environmentally sustainable investments, and the forthcoming EU Green Bond Standard aim to foster investment in sustainable activities by providing certainty to investors against claims of greenwashing. The next steps is whether such investments might benefit from lighter capital treatment, which brings us back to the Solvency II Review.

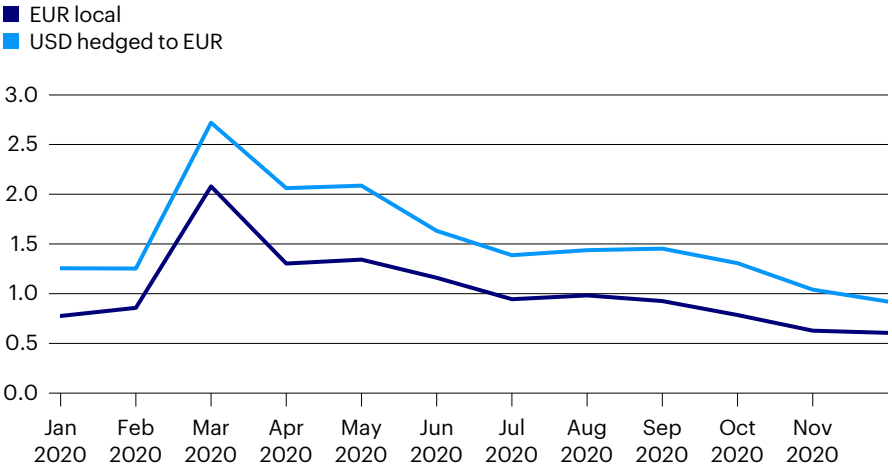
Read the first White Paper in our series on climate risk for the insurance sector here.

Insurance asset allocation benchmarks market updates

Observations

- The 10Y European IG Yields are now lower than precrisis levels, yielding 0.61% as at end of December 2020. During the height of the March sell-off, the EUR IG yield jumped to as high as 2.1%
- The 10Y USD IG (hedged in EUR) remains more attractive than EUR IG 10Y, providing an uptick of 31 Bps
- ECB policy will probably remain accommodative in 2021 to favour the economic recovery of the Eurozone. Thus, the outlook for short- and long-term rates is likely to remain low
- In this environment, the yield pick-ups on long term USD hedged bonds could be strategic for EUR based investors

Figure 1
EUR 10Y IG Corporate Historical Yields

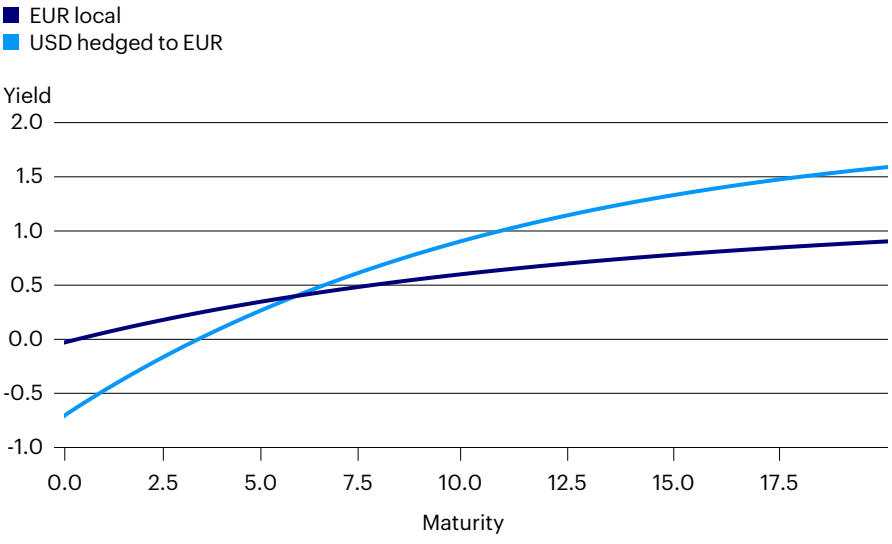


As at 31/12/2020. Source: IG yield curves are built upon constituents in Bloomberg Barclays US Corp, Euro Corp, UK Corp and are all sourced from Barra; Benchmark curves are sourced from Barra and currency basis curves are sourced from Bloomberg.

Observations

- The yield curves normalised following the March sell off
- The difference between the yields on the EUR 10-year and the 5Y note was 27bps reflecting a flat yield curve, while the difference between hedged USD 10-years yield and the shorter-term 5Y was 68bps
- As a consequence, over c. 6 years of maturity USD credit hedged in EUR is more attractive and provides a higher yield than EUR denominated bonds
- Overall, if the pandemic is controlled in 2021 in the US, one could expect a further steepening of the US yield curve resulting from a rise in inflation expectations

Figure 2
Benchmark Corporate Yield Curves (%) by Maturity

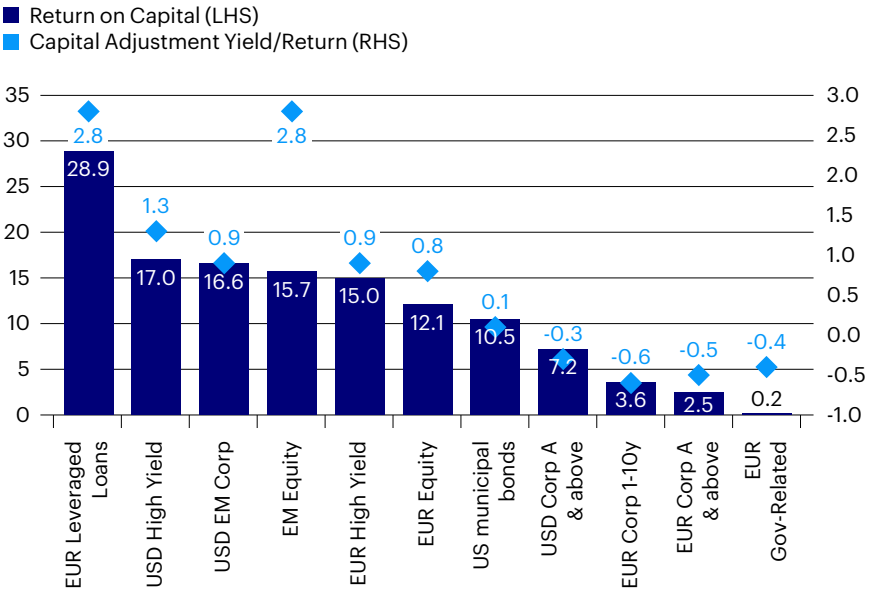


As at 31/12/2020. Source: IG yield curves are built upon constituents in Bloomberg Barclays US Corp, Euro Corp, UK Corp and are all sourced from Barra; Benchmark curves are sourced from Barra and currency basis curves are sourced from Bloomberg.

Observations

- Using 10Y expected to assess the relative capital efficiency, USD EM Corp and US municipal bonds appear as good opportunities for insurers to increase the economic profitability of their fixed income book
- EM Equity have the strongest expected capital adjusted returns of 2.8%. This Equities strategy could provide a good yield pick up, but the high capital requirements tend to lower the return on regulatory capital to only c. 16%
- High Yield asset classes look attractive compared to equities considering the capital adjusted return metrics

Figure 3
EUR Capital Adjusted Yield and Return on Capital (%)

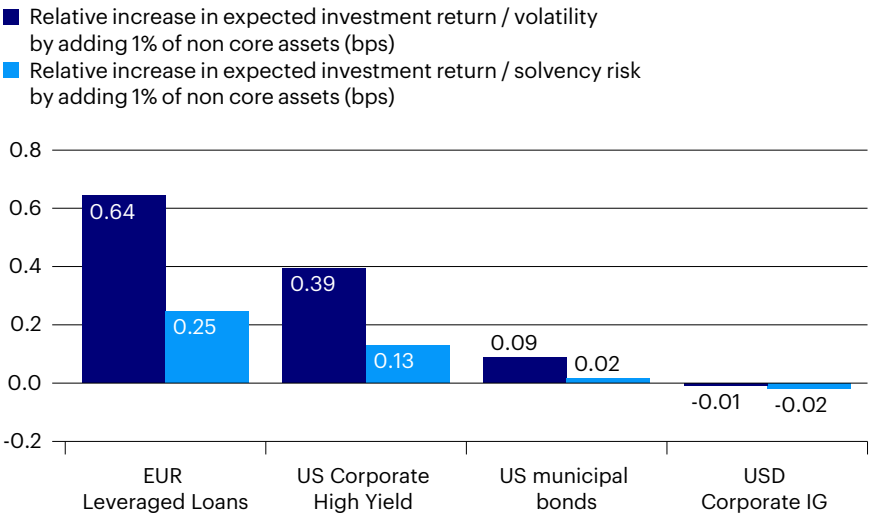


Capital Adjusted Yield/Return = Expected Return – Cost of Capital * SCR
Return on Capital = Expected Return / (Solvency Ratio * SCR)
Note: For fixed income assets, Barra's duration weighted yield to maturity is used as expected return. For other assets, Invesco CMAs are used where available. CMAs are as of 2020-12-31. Otherwise manual inputs from Invesco Solutions are used. EUR Direct Lending and USD CML are assumed to be in private equity-style fund vehicles. All the hedging of fixed income assets is based upon swap curves from Barra and basis curves from Bloomberg; where hedging is not assumed, yields / returns are converted into the report's base currency based upon Bloomberg Generic Govt 10Y Yield differentials. Interest rate risk is excluded from SCR charges. Assets with zero SCR charges are not shown in the graph.

Observations

- Adding 1% of EUR leveraged loans and US Corporate HY to the baseline portfolio provides an increase in expected return / volatility and expected return / solvency risk, thus making the asset classes attractive from a economic and solvency risk perspective
- Adding 1% US municipal bonds HY to the baseline portfolio provide a marginal increase in expected return / volatility. The additional yield provided by US municipal bonds could support the profitability of the high quality Fixed Income book (incl. Govies)

Figure 4
Reallocating 1% to Non-core Assets: Risk-return Trade-off (%)



Baseline portfolio consists of: EUR GOVT 40%; EUR CORP 40%; EUR HY 3%; MSCI EUR XUK 12%; REITS 5% Note: The 1% re-allocation is sourced via a pro-rated reduction of baseline portfolio holdings. For fixed income assets, Barra's duration weighted yield to maturity is used as expected return. For other assets, Invesco CMAs are used where available. CMAs are as of 2020-12-31. Otherwise manual inputs from Invesco Solutions are used. Assets denominated in foreign currency are assume to be hedged back to the home currency in this exhibit. All the hedging of fixed income assets is based upon swap curves from Barra and basis curves from Bloomberg; where hedging is not assumed, yields / returns are converted into the report's base currency based upon Bloomberg Generic Govt 10Y Yield differentials. Interest rate risk is excluded from SCR charges.

About Invesco Insurance Investments

The Invesco Insurance Investment Solutions team works closely with insurance Chief Investment Officers and their teams to achieve their business objectives.

Through deeper understanding of the insurance environment and experience in insurance investment management we are privileged to partner with our clients whilst seeking to provide a differentiated value-added outcome across the full investment cycle that could produce enhanced business results.

Meeting the evolving needs of our insurance clients
Focusing on specific clients' goals, our approach is designed to optimise investment return for both policyholder and shareholder under specific insurance constraints:

- Liabilities: duration, duration volatility, guaranties cost, estate protection, required liquidity, product design;
- Accounting Earnings: aiming to deliver steady, stable and sustainable outcome for shareholders and policyholders under local and international standards;
- Regulatory capital: seeking to preserve the solvency ratio, limit the volatility of the general account or improve the return on capital;
- Risk Management: financial risk sensitivities, concentration risk, liquidity risk, eligible instruments (prudent person).

Using advanced analytics in conjunction with the insurance specific regulatory & accounting constraints, our approach offers you the potential to:

- Design liability matching portfolios and evaluate the performance and risk of insurance portfolios in conjunction with liabilities using our proprietary methods and compare it with regulatory requirements;
- Enhance current portfolio outcome by assessing a broader range of asset classes and factor exposures;
- Design innovative strategies allowing our clients to build high value add competitive products for their clients.

In developing customised solutions for clients, the team's approach includes liability modelling, efficient capital optimisation, solvency II constraints, risk analytics, and practical implementation challenges including current asset allocation and liquidity challenges:

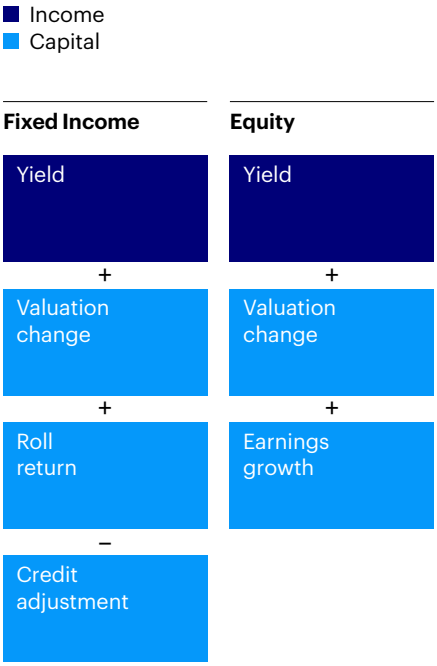
- Assisting clients in North America, Europe and Asia, Invesco investment solutions global solutions team consists of over 70 professionals, with 20+ years of experience across the leadership team;
- The team benefits from Invesco's on-the-ground presence in more than 26 countries worldwide, with over 800+ investment professionals managing €1.17[1] trillion in assets globally across a comprehensive range of investment capabilities.

> Focusing on specific clients' goals, our approach is designed to optimise investment return for both policyholder and shareholder

[1] Source: Invesco, 31 March 2021.

References

Our building block approach to estimating returns



1 About our capital market assumptions methodology

We employ a fundamentally based "building block" approach to estimating asset class returns. Estimates for income and capital gain components of returns for each asset class are informed by fundamental and historical data. Components are then combined to establish estimated returns. Here we provide a summary of key elements of the methodology used to produce our long-term (10-year) estimates. Five-year assumptions are also available upon request. Please see Invesco's capital market assumption methodology whitepaper for more detail.

Fixed income returns are composed of:

- Average yield: The average of the starting (initial) yield and the expected yield for bonds.
- Valuation change (yield curve): Estimated changes in valuation given changes in the Treasury yield curve.
- Roll return: Reflects the impact on the price of bonds that are held over time. Given a positively sloped yield curve, a bond's price will be positively impacted as interest payments remain fixed but time to maturity decreases.
- Credit adjustment: Estimated potential impact on returns from credit rating downgrades and defaults.

Equity returns are composed of:

- Dividend yield: Dividend per share divided by price per share.
- Buyback yield: Percentage change in shares outstanding resulting from companies buying back or issuing shares.
- Valuation change: The expected change in value given the current Price/Earnings (P/E) ratio and the assumption of reversion to the long-term average P/E ratio.
- Long-term (LT) earnings growth: The estimated rate in the growth of earning based on the long-term average real GDP per capita and inflation.

Currency adjustments are based on the theory of Interest Rate Parity (IRP) which suggests a strong relationship between interest rates and the spot and forward exchange rates between two given currencies. Interest rate parity theory assumes that no arbitrage opportunities exist in foreign exchange markets. It is based on the notion that, over the long term, investors will be indifferent between varying rate of returns on deposits in different currencies because any excess return on deposits will be offset by changes in the relative value of currencies.

Volatility estimates for the different asset classes, we use rolling historical quarterly returns of various market benchmarks. Given that benchmarks have differing histories within and across asset classes, we normalise the volatility estimates of shorter-lived benchmarks to ensure that all series are measured over similar time periods.

Correlation estimates are calculated using trailing 20 years of monthly returns. Given that recent asset class correlations could have a more meaningful effect on future observations, we place greater weight on more recent observations by applying a 10-year half-life to the time series in our calculation.

Arithmetic versus geometric returns. Our building block methodology produces estimates of geometric (compound) asset class returns. However, standard mean-variance portfolio optimisation requires return inputs to be provided in arithmetic rather than in geometric terms. This is because the arithmetic mean of a weighted sum (e.g., a portfolio) is the weighted sum of the arithmetic means (of portfolio constituents). This does not hold for geometric returns. Accordingly, we translate geometric estimates into arithmetic terms. We provide both arithmetic returns and geometric returns given that the former informs the optimisation process regarding expected outcomes, while the latter informs the investor about the rate at which asset classes might be expected to grow wealth over the long run.

References

2 Market update proxies

Asset class	Asset Description
EUR Leveraged Loans	Credit Suisse Western European Leveraged Loan Index
Hedge funds	IVZ Hedge Fund US HFRI Equity Hedge
EUR Corp A & above 10+	Bloomberg Barclays Corporate sub-index (Stat EOM): A-AAA 10+ Year
EUR Corp BBB 10+	Bloomberg Barclays Corporate sub-index (Stat EOM): BBB 10+ Year
EUR Gov-Related A & above	Bloomberg Barclays Government-related sub-index (Stat EOM): A-AAA
EUR Gov A & above 1-5y	Bloomberg Barclays Treasury sub-index (Stat EOM): A-AAA 1-5 Year
EUR Gov A & above 10+	Bloomberg Barclays Treasury sub-index (Stat EOM): A-AAA 10+ Year
EUR Gov A & above 5-10y	Bloomberg Barclays Treasury sub-index (Stat EOM): A-AAA 5-10 Year
EUR Gov BBB 1-5y	Bloomberg Barclays Treasury sub-index (Stat EOM): BBB 1-5 Year
EUR gov BBB 10+	Bloomberg Barclays Treasury sub-index (Stat EOM): BBB 10+ Year
EUR Gov BBB 5-10y	Bloomberg Barclays Treasury sub-index (Stat EOM): BBB 5-10 Year
USD high yield	Bloomberg Barclays High-Yield Index (Stat EOM)
EM equity	MSCI EM (EMERGING MARKETS) IMI – Monthly
EUR equity	MSCI EUROPE ex UK IMI – Monthly
EUR Private equity	IVZ Private Equity Europe ex-UK All PE excl Mezz & Dist
EUR Direct Lending	IVZ Private Debt floating Europe ex-UK SME
USD CML	IVZ Private Debt fixed US Senior CRE
EUR Infrastructure equity	IVZ Infrastructure Equity Europe ex-UK Renewables
EUR property	IVZ Real Estate Europe ex-UK Property
EUR high yield	Bloomberg Barclays Euro HY
USD EM corp	Bloomberg Barclays EM USD Agg: Corporate
USD Corp A & above 10+	Bloomberg Barclays US Credit: A-AAA 10+ Year
USD Corp A & above 1-10y	Bloomberg Barclays US Credit: A-AAA 1-10 Year
EUR Corp A & above 1-10y	Bloomberg Barclays Euro Agg Corporate: A-AAA 1-10 Year
EUR Corp BBB 1-10y	Bloomberg Barclays Euro Agg Corporate: BBB 1-10 Year
USD Agency 10+	Bloomberg Barclays US Agency Long
USD EM sov	Bloomberg Barclays EM USD Agg: Sovereign
EUR Gov-Related BBB	Bloomberg Barclays Euro-Aggregate: Government-Related Baa
USD Corp BBB 10+	Bloomberg Barclays US Long Credit Baa
USD Corp BBB 1-10y	Bloomberg Barclays US Intermediate Credit Baa
USD agency 1-10y	Bloomberg Barclays US Agency Intermediate
USD agency MBS	Bloomberg Barclays U.S. MBS: Agency Fixed Rate MBS (Ret)
EUR covered	Bloomberg Barclays Euro-Aggregate Securitized – Covered (Ret)

References

3 Risk-Ret proxies

Asset class	Asset Description
Euro Govt.	Bloomberg Barclays Euro Agg: Government Related
Euro Corporates	Bloomberg Barclays Euro Agg: Corporate
Euro High Yield	Bloomberg Barclays Euro HY
EM Debt (USD)	Bloomberg Barclays Emerging Markets (U.S. Dollar) (Stat EOM)
Equity – Euro ex UK	MSCI EUROPE ex UK IMI – Monthly
REITs	FTSE EPRA/NAREIT Developed Europe REITS Index
Bank loans	Credit Suisse Western European Leveraged Loan Index
EM Corporates (USD)	Bloomberg Barclays EM USD Agg: Corporate
Infrastructure equity (EUR)	IVZ Infrastructure Equity Europe ex-UK Renewables
US Corporates	Bloomberg Barclays Corporate sub-index (Stat EOM)
US High Yield	Bloomberg Barclays High-Yield Index (Stat EOM)
Private Equity (EUR)	IVZ Private Equity Europe ex-UK All PE excl Mezz & Dist

4 For the benchmark (government and swap) curves, the Bloomberg tickers are:

YCGT0025 Index	USD SOV
YCGT0016 Index	EUR SOV
YCGT0022 Index	GBP SOV
YCSW0023 Index	USD SWP
YCSW0201 Index	EUR SWP
YCSW0222 Index	GBP SWP

Note that EUR SOV = Germany

Capital Market Assumptions (CMAs)

Invesco Investment Solutions develops CMAs that provide long-term estimates for the behavior of major asset classes globally. The team is dedicated to designing outcome-oriented, multi-asset portfolios that meet the specific goals of investors. The assumptions, which are based on a 10-year or 5-year investment time horizon, are intended to guide these strategic asset class allocations. For each selected asset class, we develop assumptions for estimated return, estimated standard deviation of return (volatility), and estimated correlation with other asset classes. For additional details regarding the methodology used to develop these estimates, please see our white paper Capital Market Assumptions: A building block methodology.

This information is not intended as a recommendation to invest in a specific asset class or fund, or as a promise of future performance. These asset class assumptions are passive, and do not consider the impact of active management. Given the complex risk-reward trade-offs involved, we encourage you to consider your judgment and quantitative approaches in setting strategic allocations to asset classes and strategies. This material is not intended to provide, and should not be relied on for tax advice.

References to future returns are not promises or estimates of actual returns a client portfolio may achieve. Assumptions and estimates are provided for illustrative purposes only. They should not be relied upon as recommendations to buy or sell securities. Forecasts of financial market trends that are based on current market conditions constitute our judgment and are subject to change without notice. Estimated returns can be conditional on economic scenarios. In the event a particular scenario comes to pass, actual returns could be significantly higher or lower than these estimates.

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They are not intended to be indicative of the performance of any fund. It is not possible to invest directly in an index. Forecasts are not reliable indicators of future performance.

Investment Risks

The value of investments, and any income from them, will fluctuate. This may partly be the result of changes in exchange rates. Investors may not get back the full amount invested.

Important information

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