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Long-term Expected Returns

Summary

The main driver of financial markets over recent months has been inflation and the related tightening of monetary policy (higher target interest rates). Central banks are now close to their terminal rate (rate level at the end of the cycle). The slowdown in economic activity is a necessary evil to bring inflation down.

Estimating long-term expected returns is all about looking beyond the current economic environment, and thus the ability of central banks to stabilize inflation around their target and estimating long-term economic growth. Regarding inflation, we expect a gradual move lower towards the long-term target of 2% during 2024. We do not expect inflation to fall again below 2% because the global economy is undergoing a regime shift. Unemployment rates are expected to remain well below the average of the last 10 years while the energy transition will also support inflation. Lastly, inflation uncertainty is probably here to stay and should justify a premium between short- and long-term term rates as has been the case historically.

Supply chain constraints have faded, and we expect demand to be supported by the massive public and private investments made to fight climate change, improve energy independence and deal with food and commodity security. Economic growth and earnings should thus be somewhat higher than in the previous decade. We use a higher growth rate for our estimation of long-term expected returns compared with recent years and even compared with the estimates calculated last year. Expected bond market returns have been revised up due to the recent market adjustments.

Table 1: Long-term Expected Returns (10 years)

	Estimates 2023	Revision	Estimates 2022	Volatility (10-year
Euro cash	1.50%	0.75%	0.75%	-
USD cash	2.25%	0.50%	1.75%	-
Government bonds Eurozone	2.50%	0.50%	2.00%	5.10
Government bonds U.S.	3.50%	0.50%	3.00%	6.50
Corporate High Grade Europe	3.00%	0.50%	2.50%	8.20
Corporate High Grade U.S.	4.00%	0.50%	3.50%	9.20
High Yield Bonds Europe	5.25%	0.25%	5.00%	9.20
High Yield Bonds United-States	6.00%	0.25%	5.75%	8.00
Emerging Hard Currency bonds	5.50%	0.25%	5.25%	11.30
Equities Eurozone	7.00%	0.25%	6.75%	12.60
Equities U.S.	6.50%	0.00%	6.50%	11.40
Equities U.K.	7.00%	0.00%	7.00%	12.50
Equities Japan	6.00%	0.25%	5.75%	13.70
Equities Emerging Markets	8.25%	0.00%	8.25%	14.20
UCITs	4.25%	0.25%	4.00%	8.30
Listed real Estate	6.75%	0.25%	6.50%	15.60
Private Equity	9.50%	0.25%	9.25%	-
Infrastructure	9.00%	0.25%	8.75%	-
Commodities	4.00%	0.00%	4.00%	28.87
Gold	4.00%	0.00%	4.00%	14.50

Source: BNP Paribas WM, Bloomberg

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Fixed Income Assets

Government Bonds: the expected return of 10-year government bonds can be simply estimated by the average yield to maturity of a Government bond with a 10-year maturity, the risk being that such measure can fluctuate quite a bit in the short term. For the eurozone, we use an average yield to maturity (YTM) of a Government bond index including most member countries (with an average maturity close to 10 years). We estimate the expected return for Government bonds to be 2.5% for the eurozone and 3.50% for the US. Compared with our estimates last year, this is a +0.50% revision for the eurozone and the US respectively.

Investment Grade Corporate Bonds: we use our estimate of the Government bond to which we add a historical risk premium ("credit spread") and make adjustments for the expected effects of some companies defaulting over the time period. K. Giesecke, F. Longstaff, S. Schaefer, and I Strebulaev (2010) find an average credit spread for IG corporate bonds of about 0.80% over govies. The average default rate over the period was 0.9% with a recovery rate of 50%. Based on these assumptions, we estimate the expected return on Investment Grade Corporate bonds at 3% for the eurozone and 4% for the US. These are the same upward revisions as Government bonds.

High Yield (HY) Corporate Bonds: we include a historical spread over Government bonds to estimate the long-term expected return. We use a spread of 500bp, an expected default rate of 3.3% in the US and 1.9% in Europe, and a recovery rate of 40%.

These figures are based on an article by F. Reilly, D. Wright and J. Gentry (2009) and on the "2016 Annual Global Corporate Default Study" by S&P. We estimate the expected return on High Yield Corporate bonds at 5.25% for the eurozone and 6% for the US. Compared with our estimates in 2022, this is a 0.25% upward revision for both.

Emerging Market Bonds: the historical long-term spread over US Government bonds for the JP Morgan index (EMBI+ JP Morgan index) is approximately 400bp, which we adjust for the expected default and recovery rate. This is based on the JP Morgan study on "EM Corporate Default Monitor". Using these usual assumptions, we estimate the expected return on Emerging Market bonds in USD at 5.5% (up from 5.25% last year).

Equities

We use the Gordon-Shapiro model (constant growth form of the dividend discount model) which links the expected return for stocks (or stock index) to the dividend yield and the expected growth rate of the dividend. We also take into account potential re-rating effects (changes in the price-to-earnings ratio). Details can be found in Table 2. Another way to approach these calculations is to use our expected returns on Government bonds and add the long-term historic average risk premium. This risk premium varies from country to country and was on average 3.5% to 4.5% for the period 1900-2020 (see Elroy Dimson, Paul Marsh, Mike Staunton, 2021). This would lead to expected returns broadly in line with our estimates for most equity markets.

Table 2. Long-term Expected Returns for Equities

	Expected Return	Assumptions
Europe	7%	We use the assumption of a 3.5% dividend yield and a 1.25% real growth of dividends and a re-rating effect of 0.25%. This suggests a 'real' expected return of 5%. Using the assumption of 2% long-term inflation, we achieve 7%.
US	6.50%	Same approach except that we assume a 2.25% dividend yield, 2.25% real growth of dividends and no re-rating effect. This suggests a 'real' expected return of 4.5%. Using the assumption of 2% long-term inflation, we get to 6.5%.
UK	7%	A 3.75% dividend yield, 1% real growth of dividends, and a re-rating effect of 0.25%. This yields a 5% expected real return and we use a 2% long-term inflation.
Japan	6.00%	We use a 2.5% dividend yield, 1.25% real growth of dividends, a re-rating effect of 0.25% and 2% long-term inflation.
Emerging Markets	8.25%	We use a 3.25% dividend yield, 3% real growth of dividends, no re-rating effect and 2% long-term inflation.

Alternative UCITs and Real Estate

Given the diversity and complexity of strategies, we use academic research papers based on historical data that take into account measurement biases, to estimate expected returns. The main reference is Ibbotson, Chen and Zhu (2011). Based on this article, we use the assumption of an excess return over cash of 2.5%. This premium is added to the expected average return on cash in euros and US dollars (1.75%). We thus estimate the average expected return on alternative UCITs at 4.25%.

For listed real estate, we use a similar approach as the one used for equities. We assume a dividend yield of 4.25%, a real growth rate of the dividend of 0.5% and 2% inflation. The expected return is thus 6.75%.

Commodities

Calculating an expected return on commodities, in particular gold, is quite difficult as no future income can be discounted. Looking at long-term data 1877-2020, Ilmanen, Antti. (2022) argues that “with no statistical evidence of time-varying expected return, the best forward-looking estimate for the long-term future is the historical average premium”. He finds that “based on the evidence above, a constant premium of some 3% over cash seems appropriate for a diversified commodity portfolio (though not for single commodities!)”. Based on our assumption of the expected return on cash, we apply an expected return of 4% to both commodities and gold.

Private Equity

R. Harris, T. Jenkinson and S. Kaplan (2014) find that for Private Equity, “the outperformance versus the S&P 500 averages 20% to 27% over the total life of the fund and more than 3% per year”. Forward indicators, such as higher interest rates, a tighter competitive environment and too much capital chasing too few deals point to somewhat lower excess returns in the future. Also see Ilmanen, Antti. (2022) for more details. We thus estimate the forward excess return at 2.75%. The expected return on Private Equity is thus 9.5%. Private Equity investments are less liquid, justifying an additional risk premium.

Infrastructure

Antti Ilmanen (2011) studied the history of the UBS Global Infrastructure Index, including and excluding utilities (the index dates back to 1990). He argued that “Infrastructure stocks earned an annual total return of 9.3% over 1990–2009”. Using the period 1990-2015, we find a figure closer to 7%. For more recent data, we use the S&P Global Infrastructure index. Over the past 20 years (since April 2002), the annual total return has been close to 9.5%. Based on these studies, we use a risk premium over traditional equity indices of 2.25%. This would lead to 9% for Infrastructure investments. Furthermore, Infrastructure investments are also less liquid compared with traditional assets, justifying an additional risk premium.

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