FLASH

Long-Term Expected Returns and Implementations

Summary

Since our last publication in November 2023, the economic environment has stabilised with inflation falling quite sharply. Bond yields have stabilised at around 3% in the eurozone and 4.25% in the US. Bond yield spreads for Corporate bonds especially high yield bonds have continued to fall and are now well below historical averages. That has led us to revise downwards the long-term expected return on high yield bonds by -0.5% to 5.25% in Europe and to 6% in the US. The other bond market expected return estimates remain unchanged. Stock markets have performed very well since November last year and are becoming expensive. Indeed, dividend yields have fallen, and price-to-earnings ratios have risen. However, the risk appetite is picking up and stock buy-back programmes should be supportive in the coming years. The expected returns are mostly unchanged except for the US and Japan with a small upward revision (see table 1). No change for other asset classes.

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

		Estimates june-24	Revision	Estimates nov-23	Volatility (10-year Historical)
Fixed Income	Euro cash	1,50%	0,00%	1,50%	-
	USD cash	2,25%	0,00%	2,25%	-
	Government bonds Eurozone	3,00%	0,00%	3,00%	5,50
	Government bonds U.S.	4,25%	0,00%	4,25%	4,70
	Corporate High Grade Europe	3,50%	0,00%	3,50%	4,90
	Corporate High Grade U.S.	4,75%	0,00%	4,75%	8,00
	High Yield Bonds Europe	5,25%	-0,50%	5,75%	8,60
	High Yield Bonds United-States	6,00%	-0,50%	6,50%	9,50
	Emerging Hard Currency bonds	6,25%	0,00%	6,25%	10,60
Equities	Equities Eurozone	7,00%	0,00%	7,00%	15,90
	Equities U.S.	6,75%	0,25%	6,50%	16,40
	Equities U.K.	7,00%	0,00%	7,00%	13,80
	Equities Japan	6,25%	0,25%	6,00%	18,50
	Equities Emerging Markets	8,25%	0,00%	8,25%	19,30
Alternatives	Alternative UCITs	4,25%	0,00%	4,25%	5,10
	Listed real Estate	6,75%	0,00%	6,75%	18,50
	Private Equity	9,50%	0,00%	9,50%	-
	Infrastructure	9,00%	0,00%	9,00%	-
	Commodities	4,00%	0,00%	4,00%	23,80
	Gold	4,00%	0,00%	4,00%	13,70

Source: BNP Paribas WM, Bloomberg

Estimating Long-term Expected Returns

First, we need to look at the 3 key determinants of an interest rate:

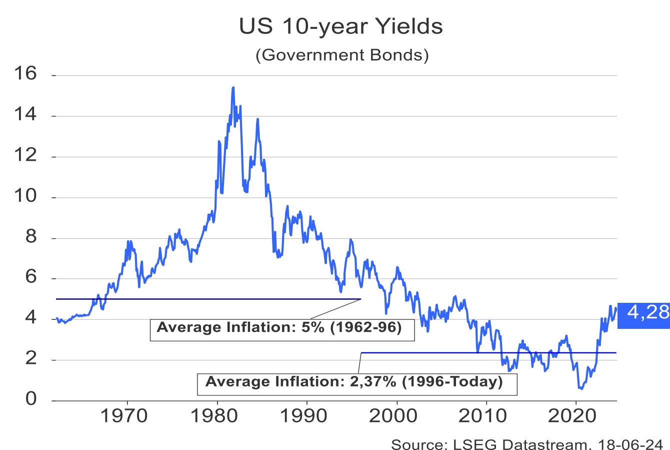
1. The potential loss of purchasing power linked to inflation during the period.

2. The real interest rate, expressed as purchasing power. This rate reflects the opportunity cost of not investing in other projects.

3. The risk of non-repayment of capital.

Looking only at historical averages is not a good approach to estimating future returns. Indeed, high returns in the past can be linked to a period of unusually high inflation. The same applies to economic growth. As can be seen in chart 1, we see a structural change in US inflation in the mid 1990s.

Figure 1: Structural changes in Inflation



Guy Ertz, PhD.
Deputy Chief Investment Officer
BNP Paribas Wealth Management

That has brought down the expected returns for bond yields. The best way is therefore to focus on expected inflation and growth trends, using theory.

For long-term expected inflation we use 2%. It is the objective of the major central banks, and we see no reason to doubt this commitment. The real interest rate is strongly linked to expected economic growth. The concept of potential economic growth serves as a benchmark for economic growth forecasts over 10 years. This measure is mainly based on demographic trends, productivity and capital stock (productive equipment). Today, our estimates of potential growth (excluding inflation) are around 0.75% in the eurozone and 2% in the United States.

The risk-free interest rate is therefore simply the sum of the real interest rate and expected inflation. In other words, 2.75% in the eurozone and 4% in the United States.

For 10-year bonds of a eurozone or US sovereign issuers, the additional risk comes mainly from the fact that these imply a longer maturity. We can simply use 3% in the eurozone and 4.25% in the United States. This is also quite close to the level of the 10-year government bond yields observed in financial markets on 25 June.

For IG Corporate bonds, we use an average credit spread of about 0.80% over Government bonds, an average default rate of 0.9% with a recovery rate of 50% (see references at the end of this document). Based on these assumptions, we estimate the expected return for Investment Grade Corporate bonds at 3.50% in the eurozone and 4.75% in the US.

For High Yield (HY) Corporate bonds, we include a spread over Government bonds of 400 basis points. We include an expected default rate of 3.3% in the US and 1.9% in Europe, and a recovery rate of 40%. Using these assumptions and in view of the very low levels of spreads currently, we estimate the expected return at 5.25% for the eurozone and 6% for the US. This a -0.5% downward revision compared our publication last year. For Emerging Market bonds in hard currency, the historical long-term spread over US Government bonds is approximately 400bps, which we adjust for the expected default and recovery rate. As previously, we use an estimate of 6.25%.

Equity markets

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) or effects linked to stock repurchase programmes. Details can be found in table 2 below.

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 one country to the next 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 except for the US.

Table 2. Long-term Expected Returns for Equities

	Expected Return	Assumptions
Europe	7.00%	We use the assumption of a 3% dividend yield and a 1.5% real growth of dividends, a re-rating effect of 0.25% and a 0.25% stock repurchase effect. This suggests a 'real' expected return of 5%. Using the assumption of 2% long-
US	6.75%	Same approach except that we assume a 1.75% dividend yield, 2.5% real growth of dividends and 0.5% stock repurchase effect. This suggests a 'real' expected return of 4.75%. Using the assumption of 2% long-term inflation, we
UK	7.00%	A 3.5% dividend yield, 1.25% real growth of dividends and a 0.25% stock repurchase effect. This yields a 5% expected
Japan	6.25%	We use a 2% dividend yield, 1.5% real growth of dividends, a re-rating effect of 0.5% and a 0.25% stock repurchase
Emerging Markets	8.25%	We use a 3% dividend yield, 3.25% real growth of dividends, no re-rating effect and 2% long-term inflation.

Private Equity (no change)

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 forecast a 2.5% excess return. The expected return on Private Equity is thus 9.5%. Private Equity investments are less liquid, justifying an additional risk premium.

Infrastructure (no change)

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 to traditional equity indices of 2%. That would lead to 9% for Infrastructure investments. Indeed, infrastructure investments are less liquid than traditional assets, justifying an additional risk premium.

Alternative UCITs and Real Estate (no change)

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 (no change)

Estimating 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 on the expected return on cash, we apply an expected return for both commodities and gold of 4%.

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THE INVESTMENT STRATEGY TEAM

FRANCE

Edmund SHING
Global Chief Investment Officer

Isabelle ENOS
Investment Advisor

Charles GIROT
Investment Advisor

ITALY

Luca IANDIMARINO
Chief Investment Advisor

BELGIUM

Philippe GIJSELS
Chief Investment Advisor

Alain GERARD
Senior Investment Advisor, Equities

Xavier TIMMERMANS
Senior Investment Strategist, PRB

GERMANY

Stephan KEMPER
Investment Strategist

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LUXEMBOURG

Guy ERTZ
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Edouard DESBONNETS
Senior Investment Advisor, Fixed Income

ASIA

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Chief Investment Officer, Asia

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