

# Schroders

## Seven-year asset class forecast returns: 2016 update

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### Introduction

Our seven-year returns forecast largely builds on the same methodology that has been applied in previous years, as explained in the appendix to this document; and has been updated in line with current market conditions and changes to the forecasts provided by the Global Economics team. This document compares our current return forecasts to those last published in July 2015. One key change this year has been an overhaul of our methodology for equity returns forecasting to better capture changing trends in earnings performance, which is explained in greater detail in the appendix. However, as a result equity returns are not readily comparable between this year and previous years.

### Summary

The table below summarises our asset class forecasts for the next seven years. Cash and bonds now universally offer a negative real return, while all equity markets bar the UK offer positive returns. Credit markets find it difficult to escape the pull of negative rates in bonds and cash, but still offer some small inflation-adjusted gains. Alternative assets look to be the next most attractive asset category after equities, but in general it looks like Asian (Japan, emerging markets, but especially Pacific ex Japan) equities are the best bet.

**Table 1: Seven-year asset class forecasts (2016 – 2023)**

		Nominal	Inflation	Real
<b>Cash</b>			% p.a.	
US	USD	1.5	2.0	-0.4
UK	GBP	1.1	1.9	-0.8
Euro	EUR	1.3	1.5	-0.2
Japan	JPY	0.0	0.9	-1.0
<b>Bonds</b>				
US	USD	1.6	2.0	-0.4
UK	GBP	-1.2	1.9	-3.0
Euro	EUR	-2.4	1.5	-3.9
<b>Equity</b>				
US (S&P 500)	USD	6.0	2.0	3.9
UK (FTSE All Share)	GBP	-0.2	1.9	-2.1
Europe ex. UK (Datastream)	USD	3.9	1.5	2.4
Japan (Datastream)	JPY	8.9	0.9	7.9
Pacific ex. Japan (Datastream)	USD	11.9	3.1	8.5
Emerging Markets (Datastream)	USD	11.2	3.8	7.2
MSCI World	USD	6.1	2.0	4.0
<b>Credit</b>				
US HY	USD	2.8	2.0	0.8
US IG	USD	1.9	2.0	-0.1



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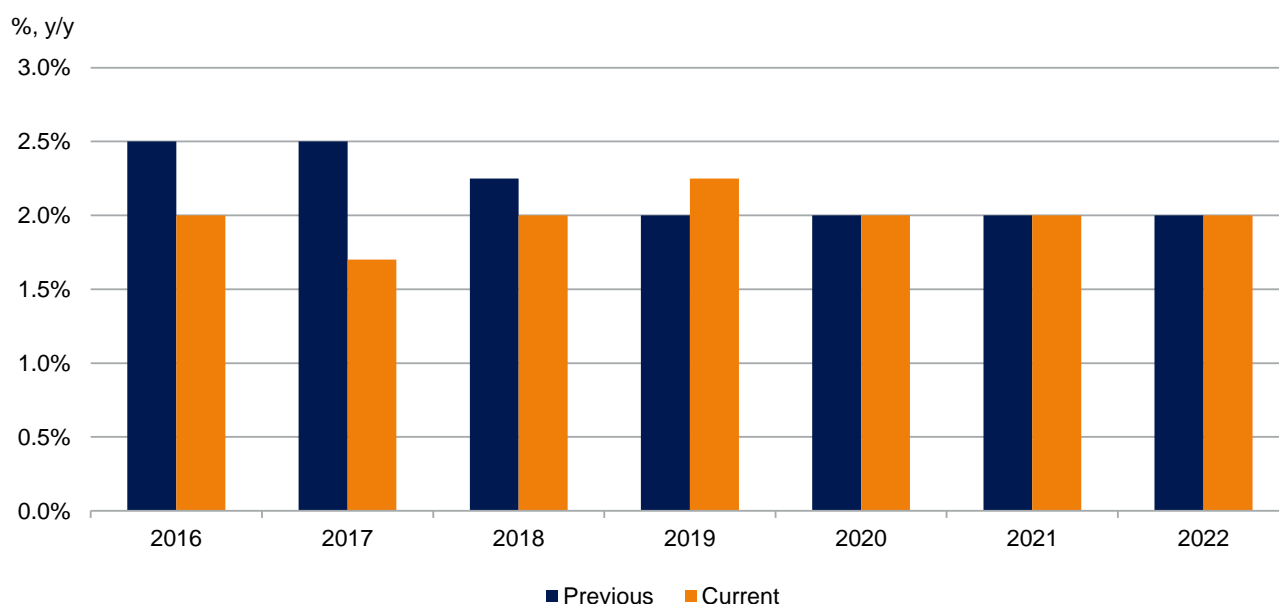
UK IG	GBP	2.2	1.9	0.3
EU IG	EUR	1.5	1.5	0.0
<b>Alternatives</b>				
Emerging Market Dollar Debt (EMD\$)	USD	4.1	2.0	2.1
Commodities	USD	3.0	2.0	1.0
Private equity	GBP	9.6	2.0	7.5
Hedge funds	USD	6.1	2.0	4.0

Source: Schroders Economics Group, July 2016.

## Macroeconomic outlook

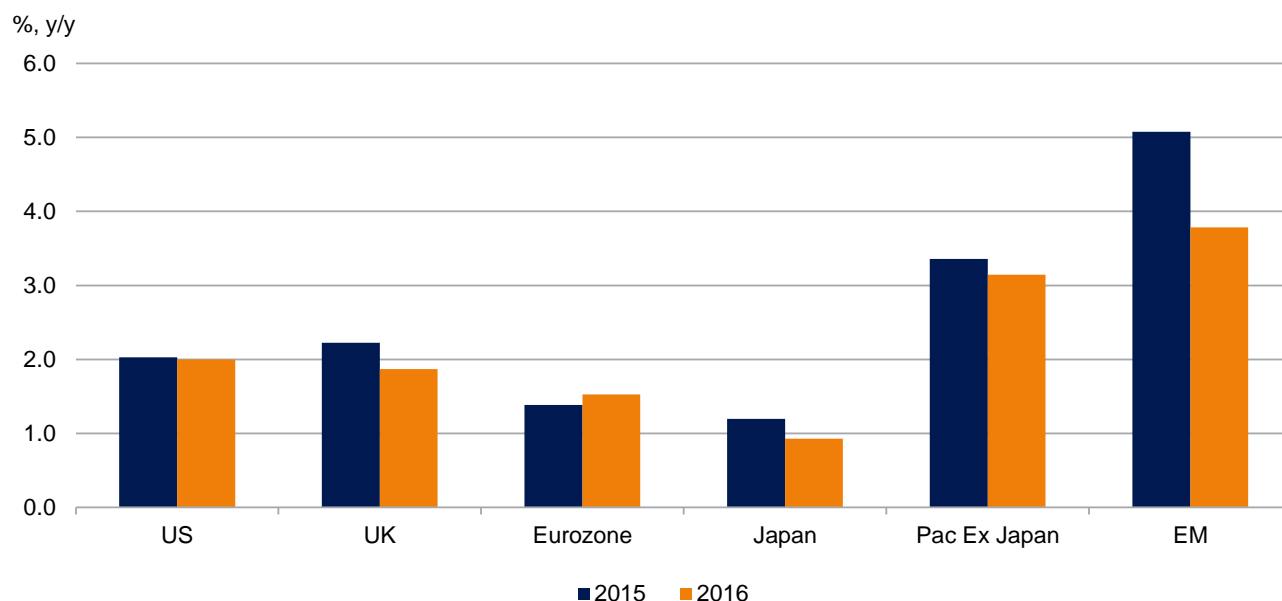
Our overall growth forecast for the next seven years shows a recovery in the world economy, although one that is sub-par by past standards. We have again downgraded our short-term growth forecasts for the US (Chart 1) to reflect a more pessimistic outlook for labour force and productivity growth, and some impact from the UK referendum vote. Demographics are expected to weigh on the participation rate, and we do not see productivity growth returning to pre-crisis rates.

**Chart 1: US growth forecast (2016 – 2023 vs. 2015 – 2022)**



Source: Schroders Economics Group, July 2016.

Inflation too has been revised lower, outside of the Eurozone. Inflation in the emerging markets (EM) has seen the largest downgrade, driven by markets like Brazil and Russia where inflation is dropping from very high levels in 2015. Beyond EM, the fall is driven mainly by the weaker growth outlook and in Japan by the apparent failure of monetary policy as negative rates backfire. Higher Eurozone inflation results chiefly from a weaker euro.

**Chart 2: Inflation forecast (2016 – 2023 vs. 2015 – 2022)**

Source: Schroders Economics Group July 2016.

## Cash

Our forecasts for cash and bonds are based on the projected path of rates and yields over the next seven years. This year we have seen the US and UK move into negative real return territory as rate paths adjust to a lower growth world. As a result, all markets are now forecast to deliver negative real returns over a seven-year horizon.

**Table 2: Cash return forecasts**

	2016 – 2023 (% p.a.)			Change from 2015 (ppts)		
	Nominal	Inflation	Real	Nominal	Inflation	Real
<b>Cash</b>						
US	1.5	2.0	-0.4	-0.2	0.0	-0.2
UK	1.1	1.9	-0.8	-1.1	-0.4	-0.8
Euro	1.3	1.5	-0.2	0.1	0.1	0.0
Japan	0.0	0.9	-1.0	-0.3	-0.3	0.0

Source: Schroders Economics Group, July 2016.

## Government bonds

We forecast significant falls in returns across the board for government bonds as a result of record low current yields in a negative rate environment. Yields are forecast to rise over the period, resulting in capital losses for UK and European bondholders. US bondholders can still make a positive nominal return, but are likely to see this eroded by inflation to leave them with a real loss.

**Table 3: Bond return forecasts**

	2016 – 2023 (% p.a.)			Change from 2015 (ppts)		
	Nominal	Inflation	Real	Nominal	Inflation	Real
<b>Bonds</b>						
US	1.6	2.0	-0.4	-1.4	0.0	-1.3
UK	-1.2	1.9	-3.0	-2.6	-0.4	-2.2
Euro	-2.4	1.5	-3.9	-1.2	0.1	-1.4

Source: Schroders Economics Group, July 2016.

## Equities

Unlike cash or bonds, most equity markets are forecast to deliver a positive real return, particularly Pacific ex Japan, EM, and Japan (Table 4). The UK is alone, and unusual, in delivering negative returns over the forecast horizon, something driven chiefly by abnormally high price-earning (PE) ratios.

**Table 4: Equity return forecasts**

	2016 – 2023 (% p.a.)		
	Nominal	Inflation	Real
<b>Equity</b>			
US (S&P 500)	6.0	2.0	3.9
UK (FTSE All Share)	-0.2	1.9	-2.1
Europe ex.UK (Datastream)	3.9	1.5	2.4
Japan (Datastream)	8.9	0.9	7.9
Pacific ex.Japan (Datastream)	11.9	3.1	8.5
Emerging markets (Datastream)	11.2	3.8	7.2
MSCI World	6.1	2.0	4.0

Source: Schroders Economics Group, July 2016.

We model equity returns by assuming that real earnings-per-share (EPS) growth returns to its long-run trend level by the end of the seven-year period, while the valuation metric (PE) returns to a long-run fair value based on a trimmed mean of historic data. Trend growth rates, and terminal PE ratios, are shown in Table 5.

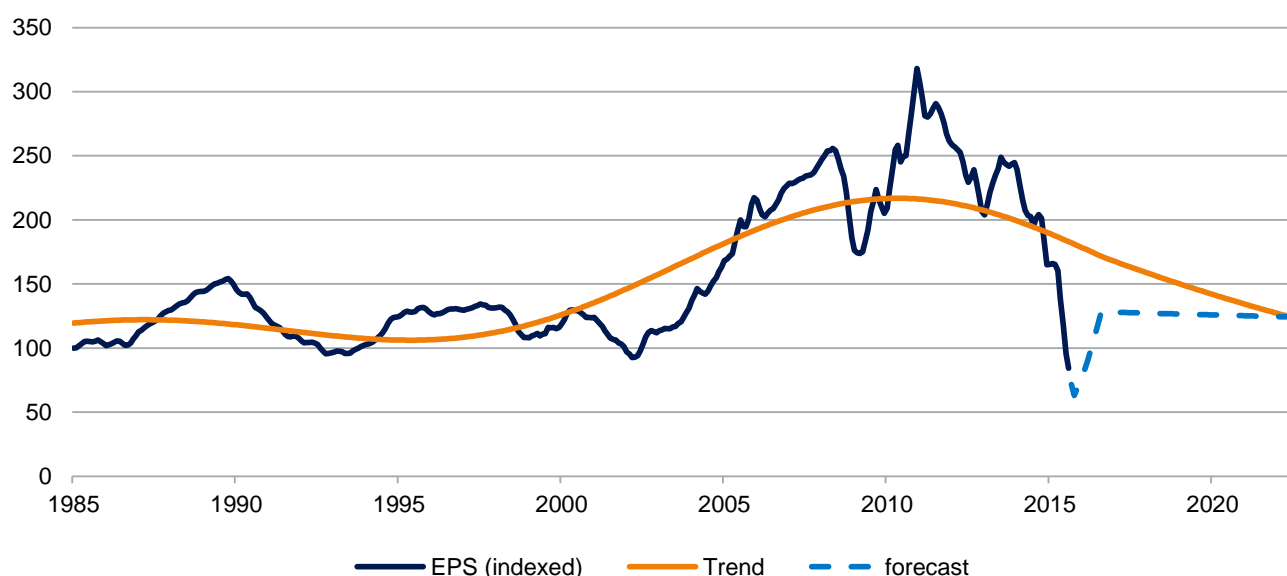
Changes have been made this year to the method used for determining the trend value of real EPS growth. For the year ahead, we use consensus expectations, adjusted for any historical bias. Beyond the first year, we use a Christiano Fitzgerald filter to extract the trend EPS growth rate. A full discussion can be found in the appendix. However, because of this change in methodology and resultant changes in trend EPS growth, our equity return forecasts this year are not readily comparable with previous years, explaining their exclusion from Table 5.

**Table 5: Equity assumptions**

Regions	Trend EPS growth p.a.	PE (t)	PE (t+7)
US	1.8%	20.2	18.6
UK	-5.3%	40.8	16.3
Europe	-2.6%	16.3	15.2
Japan	4.9%	14.6	15.6
Pacific ex Japan	0.2%	12.5	15.8
EM	2.5%	13.0	13.4
World	-1.1%	17.3	19.1

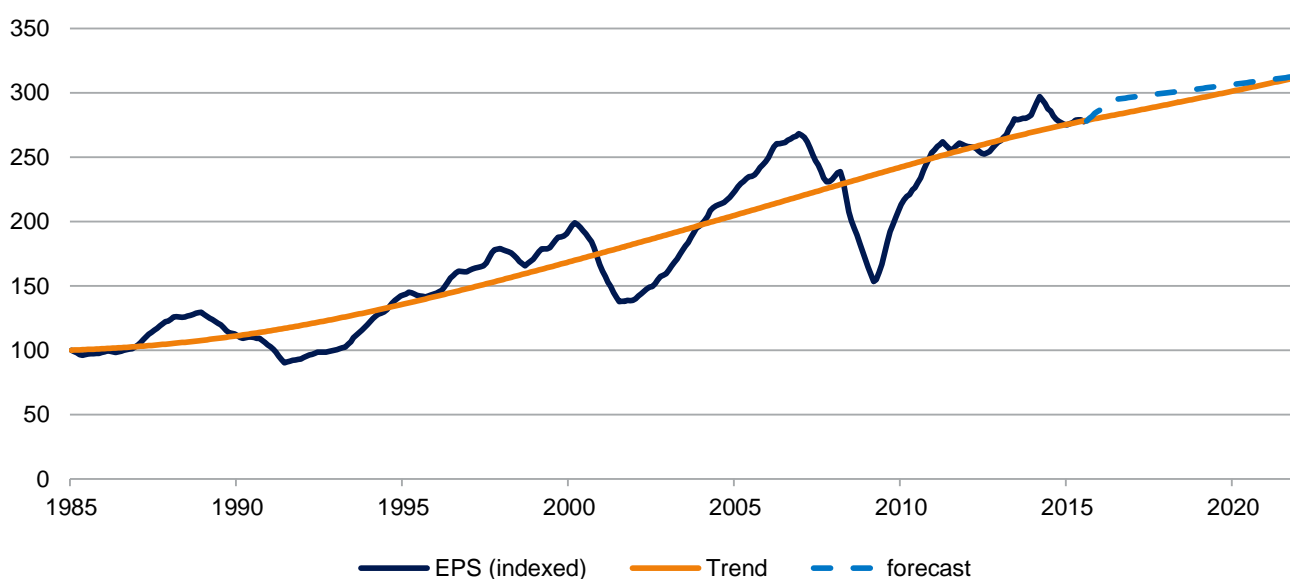
Source: Schroders Economics Group, July 2016.

As noted above, the UK is the only equity market where we predict negative real returns over the forecast horizon. This is linked to the collapse in earnings visible in Chart 3, which has the effect of driving up the PE ratio. As our forecast method assumes a reversion to a trend PE level over time, the spike in the UK PE implies large capital losses. The flipside of low earnings, however, should be a strong income gain helping to counter those capital losses. But in the UK's case, the earnings decline has been strong enough to bring the trend growth rate down, such that the EPS level in 2023 is very close to its forecast level next year. As a result, the boost from EPS growth is limited, and insufficient to fully offset the negative impact from a high starting PE. It is interesting to note that the forecast trend level for EPS is in line with the pre-2005 level, suggesting the last decade may have been something of an aberration for the UK.

**Chart 3: UK earnings relative to trend**

Source: Schroders Economics Group, July 2016.

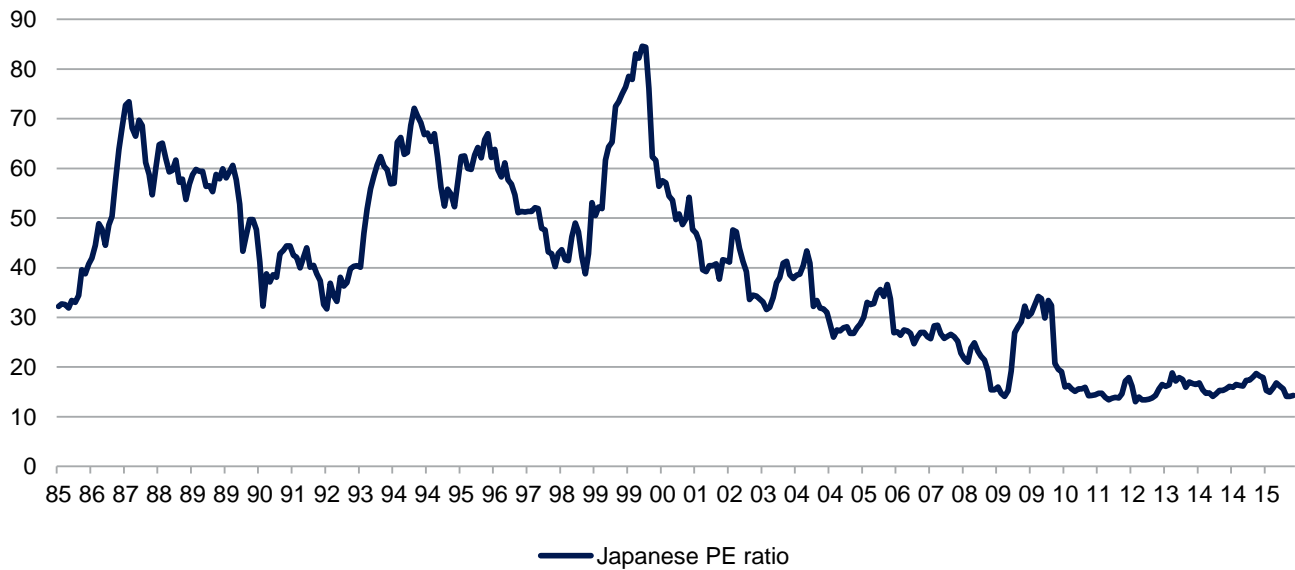
Elsewhere, valuation metrics are less extreme. US equities are slightly more expensive than usual, with a PE of around 20 compared to a terminal value of 18.6, which will exert some drag on returns. However, there is some scope for a small amount of earnings growth with earnings currently on trend (Chart 4), such that the equity market is forecast to yield an annualised return of 3.9%.

**Chart 4: US earnings relative to trend**

Source: Schroders Economics Group, July 2016.

This year we have changed the terminal PE used in Japan. Historically, we took a trimmed mean of the historic data, excluding the bubbles. But as Chart 5 shows, there seems to have been a clear break (if not two) in the performance of the metric, with a decline through the early 2000s and a fairly steady, much lower, level since the global financial crisis. We hypothesise that the crisis and the Japanese policy response in the form of “Abenomics” (particularly aggressive qualitative and quantitative easing) has fundamentally changed the behaviour of PE ratios. The terminal PE ratio chosen is therefore based on an average of the historical data since October 2010 – the time when the Bank of Japan began discussing its more aggressive policy stance. This has resulted in a lower terminal PE of 15.6 compared to a little over 19 before, which reduces the capital gain contribution. However, the starting PE is still lower, at 14.6, providing some space for capital gains.

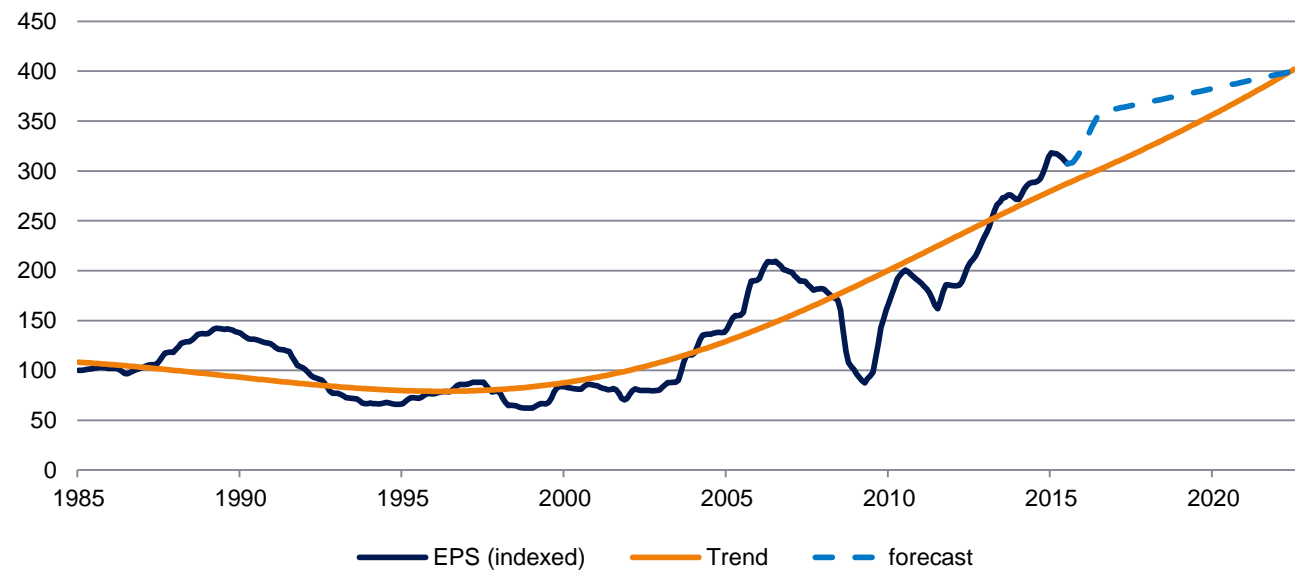
**Chart 5: Japanese PE ratio has fallen dramatically over time**



Source: Schroders Economics Group, July 2016.

On the earnings side, quantitative easing (QE) and/or Abenomics seem also to have changed the behaviour of earnings, with a much more positive trend beginning in the mid-2000s. While EPS is currently above trend, the strong trend growth projected means further EPS improvement is also forecast (chart 6). This helps Japanese equities to deliver a strong annualised performance of 7.9%.

**Chart 6: Japanese earnings relative to trend**



Source: Schroders Economics Group, July 2016.

## Credit

Credit return forecasts are calculated as a spread over a relevant government bond, so it should come as no surprise that credit returns have received a downgrade compared to last year, given our changes to government bond forecasts. Some positive returns are still on offer, thanks to the risk premia associated with corporate debt, but even moving up the risk curve to US high yield only generates an annualised return of 0.8% after inflation. Meanwhile, holding US investment grade credit actually loses money over the forecast period.

**Table 6: Credit market return forecasts**

	2016 – 2023 (% p.a.)			Change from 2015 (ppts)		
	Nominal	Inflation	Real	Nominal	Inflation	Real
<b>Credit</b>						
US HY	2.8	2.0	0.8	-2.0	0.0	-2.0
US IG	1.9	2.0	-0.1	-2.5	0.0	-2.5
UK IG	2.2	1.9	0.3	-0.2	-0.4	0.1
EU IG	1.5	1.5	0.0	1.6	0.1	1.5

Source: Schroders Economics Group, July 2016.

## Alternatives

Assumed emerging market dollar debt (EMD\$) returns (Table 7) have fallen since last July, thanks to lower forecast returns on US Treasuries. The forecast return on commodities has edged lower due to lower US cash returns. Our methodology assumes that hedge funds and private equity generate equity-like returns, which we proxy with the MSCI World return. So with global equity returns higher, private equity and hedge fund nominal returns also climb. One change we have made this year is to reduce the assumed premium generated by private equity funds. Previously, we had assumed such funds would be able to outperform global equities by 5%, but based on data from the industry association<sup>1</sup> we have revised this down to 3.5%.

**Table 7: Alternative asset class return forecasts**

	2016 – 2023 (% p.a.)			Change from 2015 (ppts)		
	Nominal	Inflation	Real	Nominal	Inflation	Real
<b>Alternatives</b>						
EMD\$	4.1	2.0	2.1	-2.4	0.0	-2.3
Commodities	3.0	2.0	1.0	-0.3	0.0	-0.2
Private Equity	9.6	2.0	7.5	0.4	0.0	0.4
Hedge Funds	6.1	2.0	4.0	1.9	0.0	1.9

Source: Schroders Economics Group, July 2016.

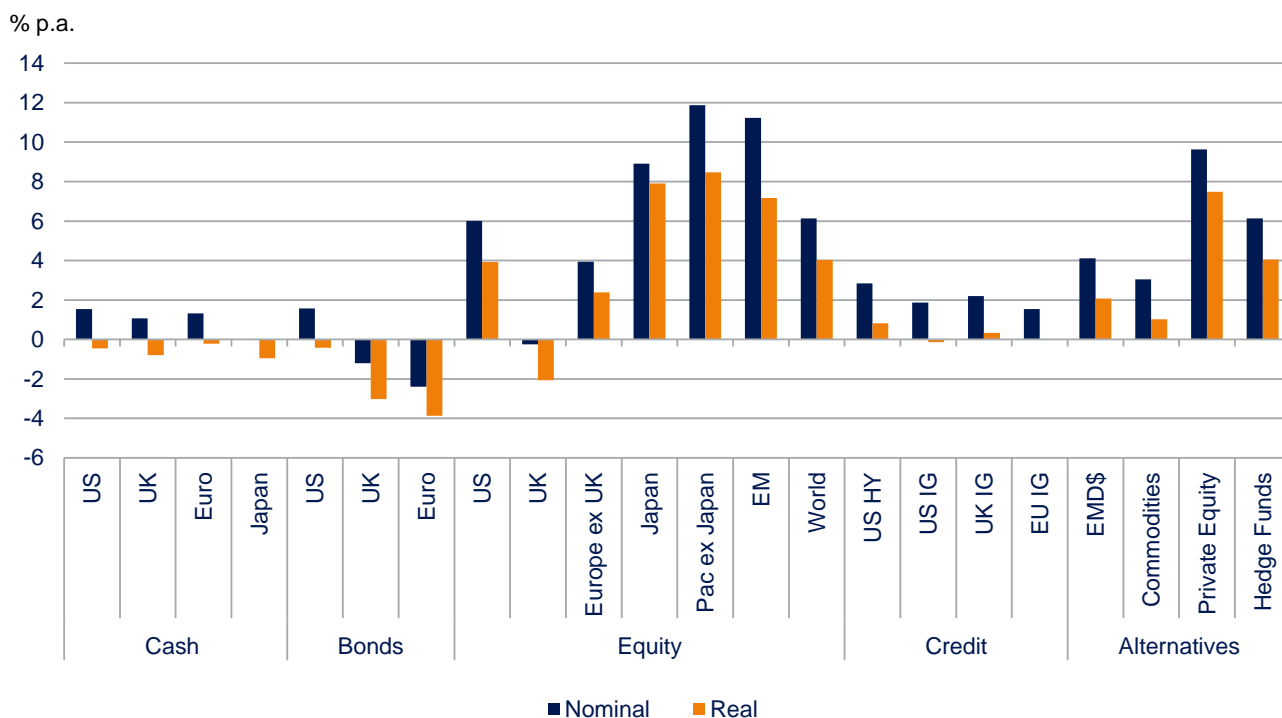
## Conclusions

Investors looking for positive real returns should look to equity and alternatives, with Pacific ex Japan equities promising the highest real returns, with Japan and EM not far behind. However, an important caveat is the higher level of volatility associated with higher yielding asset classes, like EM equities or alternative assets, compared to markets like the FTSE or S&P. As always, there is a risk-reward trade-off. Cash and government bonds would act as a hedge against equity market volatility, but are likely to deliver returns below inflation over the medium term. Credit, which had offered something of a halfway house in previous years, now looks set to yield disappointing returns by historical standards.

<sup>1</sup>British Private Equity & Venture Capital Association (<http://www.bvca.co.uk/>)

## Appendix 1 – Forecast overview

Chart 7: 7 year return forecasts (2016 – 2023)



Source: Schroders Economics Group, July 2016.

Table 8: Change from last update

Change (2016 – 2015)			
	Nominal	Inflation	Real
<b>Cash</b>			
		% p.a.	
US	-0.2	0.0	-0.2
UK	-1.1	-0.4	-0.8
Euro	0.1	0.1	0.0
Japan	-0.3	-0.3	0.0
<b>Bonds</b>			
US	-1.4	0.0	-1.3
UK	-2.6	-0.4	-2.2
Euro	-1.2	0.1	-1.4
<b>Equity</b>			
US (S&P 500)	3.0	0.0	2.9
UK (FTSE All Share)	-5.3	-0.4	-4.9
Europe ex. UK (Datastream)	-1.2	0.1	-1.4
Japan (Datastream)	5.9	-0.3	6.1
Pacific ex. Japan (Datastream)	-2.0	-0.2	-1.7
Emerging markets (Datastream)	-2.3	-1.3	-0.9
MSCI World	1.9	0.1	1.8



**Credit**

US HY	-2.0	0.0	-2.0
US IG	-2.5	0.0	-2.5
UK IG	-0.2	-0.4	0.1
EU IG	1.6	0.1	1.5

**Alternatives**

EMD\$	-2.4	0.0	-2.3
Commodities	-0.3	0.0	-0.2
Private Equity	0.4	0.0	0.4
Hedge Funds	1.9	0.0	1.9

Source: Schroders Economics Group, July 2016.

## Appendix 2 – Forecast methodology

### Cash

Cash returns represent the annualised cash return anticipated over the next seven years based on an explicit interest rate profile.

### Government Bonds

Government bond represent the annualised return anticipated over the next seven years based on explicit year-end government bond yields.

### Credit

#### High yield

Credit returns are based on our seven-year US growth forecast. There is a good relationship between US growth and high yield spreads. We use this relationship to forecast the evolution of spreads over seven years. We combine this with our government bond forecasts to provide an estimate of high yield returns.

#### Investment grade

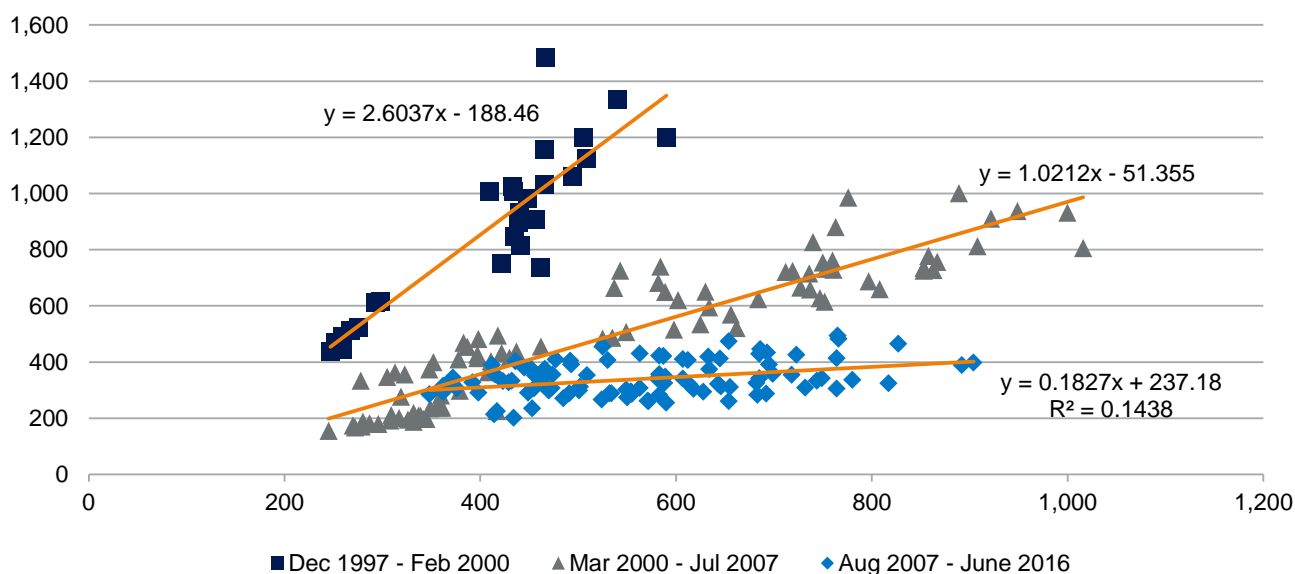
Investment grade spreads track high yield spreads closely. We use this relationship to forecast investment grade spreads. We combine this with our government bond forecasts to provide an estimate of investment grade returns.

### EMD\$

Emerging market debt also has a close relationship with high yield spreads. However this relationship has gone through three distinct phases:

1. 1997 – 2000 where there were problems in the EMD market as several countries went through a restructure or default
2. 2000 – 2007 where both high yield and EMD markets functioned normally
3. 2007 – 2016 where high yield spreads went from being very tight to an historic wide, whereas EMD spreads remained reasonably well supported

**Chart 8: EMD historical relationship with US high yield**



Source: Thomson Datastream, Schroders Economics Group, July 2016.

We believe that with the increasing quality of EMD debt (countries are gradually being upgraded to investment grade) we will see the relationship between EMD spreads and high yield spreads settle between phases two and three outlined above.

## Commodities

We break our commodity forecast into four components.

Commodity Returns = US inflation + Index rebalancing – Roll yield + US cash.

We assume that

- In aggregate commodity prices broadly track US inflation
- Commodity prices mean revert over time, as capacity will be increased where there is a production shortage. Rebalancing the index therefore generates excess return by booking temporary price gains
- The roll yield will be negative due to synthetic storage costs
- Investors receive the return on the collateral which backs the synthetic commodity investment

## Equities

Equity returns consist of two components income and capital returns.

### Income

The income component is determined by the initial dividend yield and growth in dividends. The dividend growth rate is determined by a combination of future earnings growth and the equilibrium payout ratio.

This year, we have altered our methodology for earnings. We judged that our previous estimates of the terminal EPS growth rates were inaccurate given significant changes in earnings behaviour in many markets. We looked at a range of options before settling on using a Christiano-Fitzgerald filter<sup>2</sup>, with a 5-20 year cycle component, to obtain trend EPS levels and growth rates. Earnings are assumed to revert to trend over the forecast period from their position at time t+1. The position of earnings at time t+1 is based on consensus estimates obtained from Bloomberg, adjusted for any historical bias.

The earnings growth rate is then adjusted to give the dividend growth rate. Similarly, we assume that the payout ratio will revert to trend over this time period.

### Capital growth

Computing capital returns require two assumptions: the rate of earnings growth and the terminal PE.

The terminal PE ratio is assumed to equal the 30-year trimmed mean, with the exception of Japan as discussed in the main text. In Japan's case, we take the mean since October 2010, chosen because it marks the point at which the Bank of Japan began publicly discussing aggressive expansion of its government bond buying programme, in line with the new policy regime of Abenomics. PE ratios have remained stubbornly low since, and it was hard to justify PE reversion to a level not seen since before the financial crisis.

The method for calculating the earnings growth rate is described above.

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<sup>2</sup>The Christiano Fitzgerald filter is a band pass filter which aims to decompose a data series into three components: trend, cyclical, and noise.

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