

Schroders

Global Market Perspective

Economic and Asset Allocation Views Q2 2016



Schroders

Introduction

Financial markets had a roller coaster experience in the first quarter with sharp falls in January being followed by a rally which left investors close to where they had started by the end of March. The moves closely tracked oil prices and the Chinese Yuan (CNY) as investors weighed the odds of a global recession. Our forecasts, backed up by our key indicators (see the research note), suggested that such fears were overdone and that the world economy would avoid such an outcome. However, it also took action by the major central banks to help investors regain their risk appetite. In particular, the Fed signalled that rates in the US would remain lower for longer and in doing so brought a halt to the US dollar's remorseless appreciation.

Although markets ended the quarter on a better note, the outlook remains difficult. Prospects for global GDP growth remain tepid and consequently corporate earnings growth is likely to remain lacklustre. We would also note that should we see a significant strengthening of activity, the prospects for a Fed rate rise are likely to increase significantly. In this respect, markets face a typical late cycle problem where central banks will be looking to tighten on signs of an acceleration in growth. Whilst we are some way from this in the Eurozone and Japan the US, and to some extent the UK, are ahead in the cycle and their central banks are likely to move in this direction over the next 12 months.

Consequently, there is a slightly more defensive tone to our asset allocation this quarter by, for example, being neutral equity and favouring the US equity market over the higher beta Europe ex UK. Credit is a preferred area where we believe high yield bonds are attractive on our central view. Meanwhile, investors will continue to seek pockets of value and we have included our 30 year returns to help identify the areas which offer the best potential for long run returns.

Keith Wade, Chief Economist and Strategist, Schroders

8 April 2016

Contents

Asset Allocation Views – Global Overview	3
Regional Equity Views – Key Points	5
Fixed Income – Key Points	6
Alternatives – Key Points	7
Economic View: Global Update	8
Strategy: Panic over, what's next?	12
Long run asset class performance: 30-year return forecasts (2016–45)	17
Research note: Is the risk of a US recession high?	22
Market Returns	27
Disclaimer	Back Page

Editors

Keith Wade, Harvinder Gill and Tina Fong

Asset Allocation Views: Multi Asset Group

Global Overview

Economic View Our global growth forecast has been trimmed to 2.4% for 2016 led by downgrades to the US, Japan and emerging markets. In the case of the US and Japan, downgrades have been made following weaker-than-expected growth at the end of 2015. With regard to the emerging markets, the change largely reflects a reduction in the forecast for Brazil and Russia, with our China growth forecast remaining at 6.3% for 2016.

The inflation forecast for 2016 has also been reduced for the advanced economies to reflect the lower oil price profile. Emerging market inflation is, however, higher as a result of currency depreciation and administered price hikes. For 2017, our forecasts are little changed compared to last quarter, with growth strengthening modestly as a result of more stable emerging market activity.

In terms of risk scenarios, we have made little change compared to last quarter. On the deflationary side we have “China hard landing”, “US recession”, “EM defaults emerge” and “FX wars return”. Note that the latter is the least deflationary of these and is actually expected to be reflationary for the emerging economies that benefit from currency depreciation. On the reflationary side we have “US wages accelerate” and “Global reflation”. The latter reflects a co-ordinated fiscal stimulus to growth by the major economies. Finally, we have the stagflationary “OPEC cuts oil production” based on an agreement between Saudi Arabia and Russia which pushes the oil price to \$70 by the end of 2016, some \$30 higher than in the base. On the whole, risks are still skewed toward deflationary outcomes where weaker global growth and inflation would occur.

Central Bank Policy Compared to last quarter, monetary policy is easier than in our previous forecast. We expect the next US rate rise in June and Fed funds to rise to 1% by end-2016 and 1.5% by end-2017. Meanwhile, having extended quantitative easing and long-term financing operations (LTROs) in March the European Central Bank (ECB), is expected to cut the deposit rate to -0.5% by the end of the year where it stays through 2017. The Bank of Japan (BoJ) is also assumed to cut rates further to -0.25% by the end of 2016 and -0.5% by end-2017. These changes are partly driven by the weaker profile for the Chinese renminbi (RMB), which is expected to end this year at 6.8 and next year at 7.0 versus the US dollar. The People’s Bank of China (PBoC) is still expected to cut interest rates and the reserve requirement ratio (RRR) over the forecast period. For the other BRIC economies, we expect rates to remain unchanged in Brazil but there is scope for rate cuts in Russia and India.

Implications for Markets Looking at our asset class views, we have maintained our neutral bias on equities. Valuations are generally looking fair relative to the risk free rate and even cheap on some absolute measures. However, our cycle and momentum indicators continue to suggest a more cautious view on equities is warranted. Momentum measures have deteriorated with a general fall in earnings revision ratios compared to last quarter. Meanwhile, a driver of the deterioration of the cycle indicator has been a slowdown in manufacturing in areas such as the US and Japan. This along with the less benign liquidity backdrop, particularly as the Fed normalises rates, suggests a more challenging landscape for earnings growth, which is critical for the equity call.

Within equities, we prefer the high-quality and the low-beta properties of the US market, which makes it an attractive holding compared to other regions. On Europe ex UK, we have downgraded to negative largely due to our analysis that negative interest rates are likely to be harmful to the profitability of banks and be a headwind to the broader market. In comparison, we have turned neutral on EM equities given efforts by Chinese policymakers to reflate the economy, and improving sentiment towards the region.

Implications
for Markets
(continued)

Elsewhere, we are neutral on the UK, Japan and Pacific ex Japan. On the former, there is a tug of war between a weaker sterling versus concerns around fiscal tightening and Brexit. For the Japanese market, we believe that consensus forecasts for earnings are likely to adjust for a stable-to-strong yen.

With regard to the duration views, we have a neutral bias on government bonds. There is a delicate balancing act between the normalisation of rates by the Fed, which will put general upward pressure on yields, and the sluggish macro backdrop and ongoing monetary easing from the ECB and BoJ. Amongst the bond markets, we have retained our neutral view on US Treasuries. On German Bunds and Japanese government bonds (JGBs), we remain neutral as monetary policy is supportive though yields remain low. In comparison, we have downgraded UK Gilts to neutral given the risk of increase volatility around the EU referendum which could hit investors' sentiment towards this market. By contrast, we have upgraded emerging market sovereign debt (USD) to neutral as the extra spread on this market has improved significantly making valuations attractive.

In terms of the credit markets, we have maintained a positive view on both high yield and investment grade bonds. In the high yield segment, we prefer the US over Europe as corporate spreads are not as attractive. The recovery in energy prices has also soothed some market concerns on the energy and mining sectors in the US high yield universe. Over in investment grade, we are still positive on US investment grade as valuations remain attractive and debt affordability remains good. However, we have turned neutral on the European segment as the market has already priced in a large amount of positive news on non-banking investment grade purchases.

We have retained our neutral stance on commodities as the global economy continues to undergo a sluggish and desynchronised recovery. Amongst the sectors, we have upgraded the energy sector as the pace of inventory growth has started to reverse and the drag from the negative carry has lessened. Meanwhile, we have maintained our neutral view on industrial metals as there are signs that the Chinese authorities are easing at the margins. However, there remains ample supply across most base metals. For agriculture, our base case is that prices are likely to trade sideways with an upward bias. While major grains are in abundant supply, prospects for adverse weather over the year are rising, which could be disruptive to future crop yields. On precious metals, specifically gold, we have upgraded our view to positive as real yields continue to fall and inflation base effects are turning positive.

Table 1: Asset allocation grid – summary

Equity	0	Bonds	+			Alternatives	0	Cash	-
Region		Region		Sector		Sector			
US	+ (0)	US Treasury	0	Government	0 (+)	UK property	0		
						EU property	+		
Europe ex UK	- (+)	UK Gilts	0 (+)	Index-Linked	0	Commodities	0		
UK	0	Eurozone Bunds	0	Investment Grade Corporate	+	Gold	+ (-)		
Pacific ex Japan	0	Emerging market debt (USD)	0 (-)	High yield	+				
Japan	0								
Emerging Markets	0 (-)								

Key: +/- market expected to outperform/underperform (maximum +++ minimum ---) 0 indicates a neutral position. The above asset allocation is for illustrative purposes only. Actual client portfolios will vary according to mandate, benchmark, risk profile and the availability and riskiness of individual asset classes in different regions. For alternatives, due to the illiquid nature of the asset class, there will be limitations in implementing these views in client portfolios. Last quarter's GMP positioning in brackets. Source: Schroders, April 2016.

Regional Equity Views

Key Points

0	Equities	
+ (0)	US	<p>Despite the tightening in monetary policy by the Fed and a more challenging earnings outlook, the risk premium relative to the risk-free rate remains attractive. Investors are also likely to seek opportunities with pockets of value and focused on stocks benefitting from the dividend and buy-backs theme.</p> <p>While global growth expectations continue to decline, the high-quality and more defensive nature of the US market makes it an attractive holding compared to other regions.</p>
0	UK	<p>We continue to remain neutral on UK equities with profit margins expected to remain under pressure from higher labour costs for domestically-focused firms given the pick up in wages and slowdown in productivity. The degree of fiscal tightening outlined for 2016 will add downside risks to the UK economy, whilst the ongoing debate over EU membership continues to create market uncertainty.</p> <p>On the other hand, a weaker sterling should provide tailwinds for multinationals and some relief for UK corporate earnings.</p>
- (+)	Europe ex UK	<p>Despite ECB's ultra-accommodative policy, which could provide some support to the economy, we have downgraded Europe to negative. Our analysis suggests that negative interest rates are likely to be harmful to the profitability of banks and be a headwind to the broader market. Meanwhile, Brexit concerns and implications for the Eurozone have yet to be discounted to the same extent as it has been in the UK.</p> <p>Equity upside from earnings is also capped from limited currency depreciation and furthermore we believe that domestic economic growth will be dampened by the slowdown in global activity.</p>
0	Japan	<p>On valuations grounds, Japanese equities continue to be compelling relative to other markets as well as benefitting from positive price momentum.</p> <p>Nevertheless, we are concerned that consensus forecasts for Japanese earnings are too optimistic and fail to make adequate provisions for a stable-to-strong yen, which could lead to the potential for earnings disappointment in 2016.</p>
0	Pacific ex Japan (Australia, New Zealand, Hong Kong and Singapore)	<p>Equity valuations remain attractive in Pacific ex Japan equities particularly in Taiwan and Singapore.</p> <p>However, earnings momentum remains relatively poor compared to elsewhere, markedly in those areas exposed to a Chinese slowdown although the authorities in China have been easing policy recently. Overall, we maintain our neutral score in the absence of a medium-term growth catalyst.</p>
0 (-)	Emerging Markets	<p>We have upgraded EM to neutral after several years of a negative score. The recent efforts by Chinese policymakers to reflate the economy, the rebound in copper and iron ore prices, and improving sentiment towards the region suggest EM risks have subsided for now.</p> <p>Nonetheless, EM assets face a challenging environment given the subdued growth outlook and the Fed tightening rates.</p>

Key: +/- market expected to outperform/underperform (maximum +++ minimum ---) 0 indicates a neutral position.

Fixed Income Views

Key Points

+	Bonds	
0 (+)	Government	<p>We have a neutral bias on government bonds. There is a delicate balancing act between the normalisation of rates by the Fed, which will put general upward pressure on yields, and the sluggish macro backdrop and on-going monetary easing from the ECB and BoJ.</p> <p>Amongst the bond markets, we have maintained our neutral view on US Treasuries given the balancing act between the dovish rhetoric from the Fed and a central bank compelled to eventually tighten monetary policy. Whilst we favour further US curve flattening in the near term, on a 12-18 month time horizon the outlook is less clear. The Fed is expected to hike in June and thus putting pressure on the long-end while the short-end is vulnerable to further adjustments.</p> <p>We have downgraded our view on UK Gilts to neutral. Gilts remain a beneficiary of the benign monetary backdrop of low interest rates and Eurozone QE. However, there is the risk of increased volatility around the EU referendum which could hit investors' sentiment towards this market.</p> <p>Having taken profit on our curve flattening position last year we remain neutral on German Bunds. Monetary policy is ultra-supportive though yields remain low and unattractive from a valuation perspective.</p> <p>In spite of the unattractively low and negative yields, we continue to hold a neutral view on the medium- to long end of the Japanese yield curve given the aggressive support from the BoJ.</p>
+	Investment Grade (IG) Corporate	<p>On a 12-month horizon, we remain positive on US investment grade. Despite the recent rally, valuations remain attractive relative to history and debt affordability remains good.</p> <p>We have downgraded European investment grade to neutral. While we are at the earlier stage of the credit cycle and ECB policy remains accommodative, there is the risk that the market has already priced in a large amount of positive news on non-banking investment grade purchases.</p>
+	High yield (HY)	<p>We remain positive on US high yield (HY). Despite recently suffering from weakness in energy prices, spreads remain attractive even after adjusting for corporate defaults, which we believe will be contained within the energy and material sectors.</p> <p>On European HY, we remain neutral. While ultra-accommodative policy from the ECB would be positive for carry, we prefer US HY as spreads are not as attractive as those in the US.</p>
0 (-)	USD-denominated Emerging market debt (EMD)	<p>We have turned less negative on EM USD bonds as the extra spread on EM USD debt has improved significantly making valuations attractive. With falling inflation expectations within some of the countries in the universe, there is scope for more policy easing or less aggressive rate hiking by central banks. Meanwhile, the stabilisation in commodity prices and stimulus efforts by the Chinese authorities has alleviated some of the downside risks for now.</p>
0	US index-linked	<p>We have retained our neutral view on US inflation-linked bonds. Real yields continue to fall and inflation expectations could be lifted by CPI base effects and a recovery in commodity prices. However, interest rate normalisation (resulting in the strengthening of the US dollar) could act as a headwind for inflation expectations.</p>

Key: +/- market expected to outperform/underperform (maximum +++ minimum ---) 0 indicates a neutral position.

Alternatives Views

Key Points

Alternatives	
0	<p>Commodities</p> <p>On the whole we remain neutral as we are less constructive on cyclical commodities as the global economy continues to undergo a sluggish and desynchronised recovery, while the negative carry also weighs on the asset class. On energy, we have upgraded the sector as the pace of inventory growth has started to reverse and the drag from the negative carry has lessened.</p> <p>We have retained our neutral stance on industrial metals as this complex is still oversupplied and should remain in surplus over the year. In particular, the cost of production has fallen given the currency depreciation in producing countries, and lower oil prices. However, with improvements in the Chinese economy on the margin, we are seeing base metals find a floor.</p> <p>Major grains in the agriculture sector are in abundant supply, with a third record harvest. However, prospects for adverse weather are rising as we move through the fourth-strongest El Niño (periods of above-average sea surface temperatures) since 1950 with an increasing likelihood of an intense La Niña (periods of below-average sea surface temperatures) this year, which could be disruptive to future crop yields. We remain neutral with an upgrade bias.</p> <p>We have turned positive on precious metals, specifically gold. Real yields continue to fall, reducing the opportunity cost for investors to hold gold. In addition, the global manufacturing cycle continues to slow and inflation base effects are turning positive.</p>
0	<p>UK Property</p> <p>Investors have become more cautious over the last six months. The total value of investment transactions was 16% lower in the second half of 2015 than in the corresponding half of 2014. The rise in Stamp Duty in the UK Budget is likely to have had a small negative impact. Property yields have also fallen sharply since mid-2013 and in some parts of the market they have returned to mid-2007 levels. Finally, EU referendum uncertainty is increasingly weighing on the market. However, there are no immediate signs that rental growth is weakening and values rose on average by 4% in February. The gap between the all property initial yield and 10-year Gilt yields has also widened to around 3.5% making valuations more attractive.</p> <p>Over this period, occupier demand has held steady. While the approach of the EU referendum has led to fewer large office lettings in central London, demand for small and medium sized office and industrial units has remained solid. The weak spot is retail, which have lost market share to the internet. Looking ahead, we forecast total returns of around 5% over the next five years, equal to the income return. We expect industrial to be the strongest sector (7% p.a.) and retail the weakest (4% p.a.).</p>
+	<p>European Property</p> <p>Whereas investment activity in the UK slowed in the second half of 2015, it accelerated in most other European countries. In total there were €195 billion of real estate investment transactions in continental Europe in 2015, up 22% on 2014. Although Middle Eastern investors and US opportunity funds were less active in the second half of 2015, the gap was more than filled by Asian investors and European institutions. As a result of this strong liquidity, prime yields fell on average by a further 0.25% in the final quarter of last year and in several cities they are now back to, or below their previous low in 2007-2008.</p> <p>We forecast that total returns on average investment grade European real estate to average 7-9% per year to the end-2019. The majority of performance will come from the income return of around 5%, but capital values should also be supported by a steady increase in rents.</p>

Note: Property views based on comments from the Schroders Real Estate Research team.
Key: +/- market expected to outperform/underperform (maximum +++ minimum ---) 0 indicates a neutral position.

Economic View

Central View

Global update: downward drift in growth, inflation and rates

We have trimmed our forecast for global growth to 2.4% for 2016 (previously 2.6%) as a result of modest downgrades to the advanced and emerging markets (EM). For the former, the most significant changes are made in the US and Japan following a weaker-than-expected performance at the end of last year. Our China growth forecast remains unchanged this year and the downgrade to emerging market growth largely reflects a reduction in the forecast for Brazil and Russia. For 2017, our forecasts are little changed, with growth strengthening modestly largely as a result of more stable activity in the emerging markets.

While we have downgraded the US growth forecast this year, we believe a combination of lower oil prices, rising household incomes and fiscal expansion will keep final demand growing. The slowdown in profits growth over the past year is a concern and indicates slower capital spending and job growth going forward, but corporate balance sheets are in good shape and not overextended.

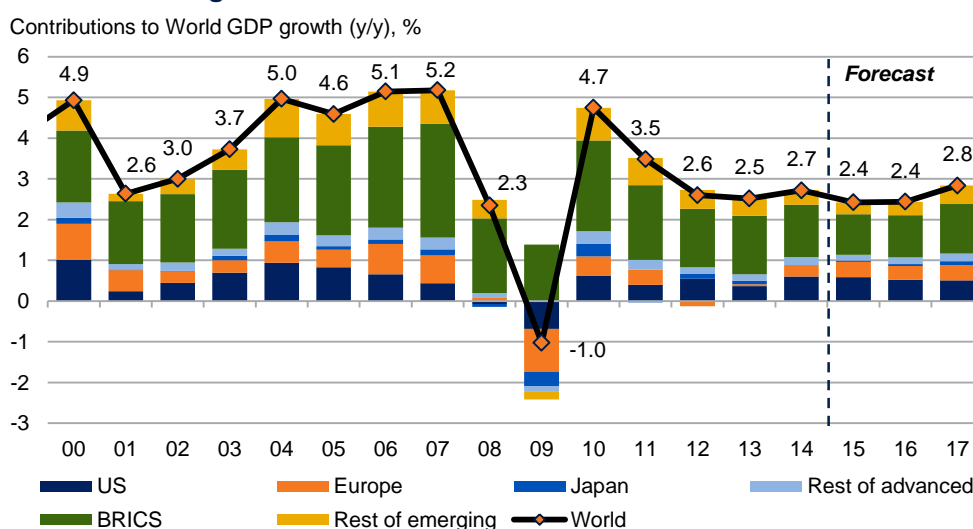
In the Eurozone, our latest forecast has a slight downgrade to growth, but most of the changes compared to last quarter are caused by base effects rather than any fundamental change in views. The quarterly growth profile for France was the only one that was downgraded, prompted by a build-up of inventories. For the UK, we expect a slowdown caused by the resumption of austerity efforts, a pick up in inflation caused by diminishing spare capacity, and concerns over Brexit leading companies to postpone investment decisions.

There are relatively few changes to our BRIC outlook this quarter. Events in China are playing out largely in line with our expectations, with state intervention helping shield the economy from commodity price slumps. A similar story holds for India, though we do see some deflationary impact there from cheaper oil. The more substantial changes in the BRICs have come in Russia and particularly Brazil, where the economic data and the policy environment have continued to deteriorate.

Meanwhile, the inflation forecast for 2016 has been reduced for the advanced economies to reflect the lower oil price profile. Emerging market inflation is, however, higher largely a result of currency depreciation and administered price hikes.

Monetary policy is expected to be easier than in our previous forecast. We expect the next US rate rise in June and Fed funds to rise to 1% by end-2016 and 1.5% by end-2017. Further easing is expected by both the ECB and BoJ, with the PBoC expected to cut interest rates and the reserve requirement ratio (RRR) over the forecast period.

Chart 1: Global growth and forecast for 2016 and 2017



Source: Thomson Datastream, Schroders Economics Group, 22 February 2016.

Economic View (continued)

Macro risks: Scenario analysis

Full details of the scenarios can be found on page 11. The risks to our base case are skewed towards a deflationary outcome whereby both growth and inflation are weaker than expected.

In our first scenario, labelled “**Currency wars return**”, after a period of truce, China devalues the CNY by 20% in April 2016. The Chinese authorities choose to go for a large one-off move so as to quash speculation about further devaluation. Japan responds by devaluing the JPY via QQE with the ECB later responding by stepping up its own QE programme. Taken by the markets as a sign of a chronically weak world economy, poor performing equity markets have a knock on impact on consumption and investment. Whilst inflation is pushed up in China and EM, advanced economies experience weaker growth and lower inflation, with the overall global effects to growth and inflation being muted.

The “**Global reflation**” scenario occurs where frustration with the weakness of global activity leads policy makers to increase fiscal stimulus in the world economy. This then triggers an increase in animal spirits which further boosts demand through stronger capital expenditure (capex). As a result, global growth exceeds 3% in 2016 and 2017.

Another reflationary scenario, “**US wages accelerate**” comes about by tight labour markets and rising headline inflation causing wages to accelerate faster than in the base case in the US, parts of Europe and Japan. Stronger growth, underpinned by an acceleration in consumer spending helps drive inflation higher than in the baseline. The scenario turns stagflationary in 2017 as growth slows, in part caused by the Fed tightening more aggressively.

“**OPEC cuts oil production**” depicts a scenario where an agreement between Saudi Arabia and Russia brings OPEC members together to reduce world oil production. With demand continuing to recover, this results in a surge in the oil price toward \$70/ barrel by end 2016, some \$30 higher than in the base. A stagflationary environment results with higher inflation weakening growth worldwide.

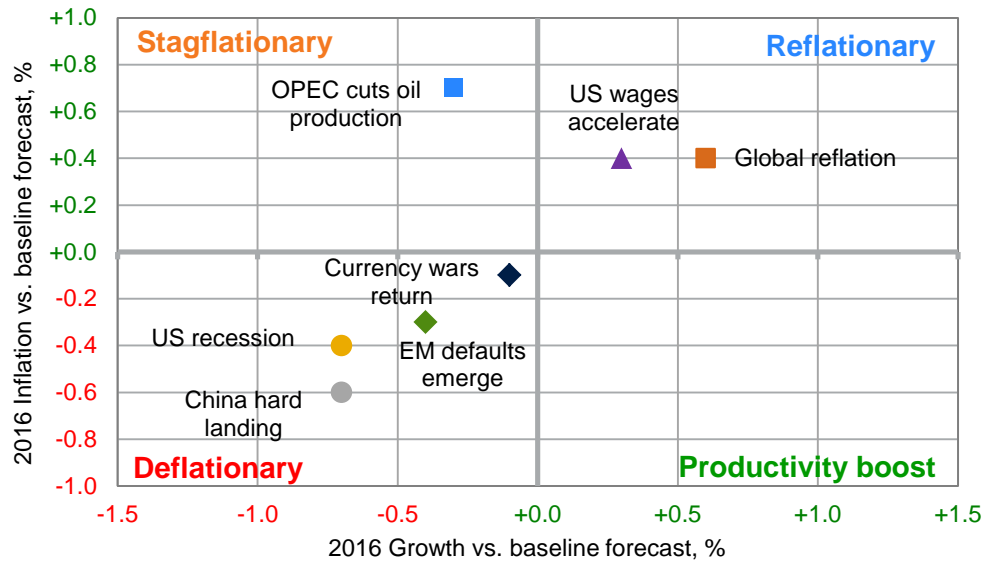
We keep with our deflationary “**US recession**” scenario which sees slower profits growth cause a retrenchment in the corporate sector with capex and jobs being cut. Consequently, the US economy tips into recession in the first half of 2016. Weaker demand from the US hits global activity and the fall in inflation is given added impetus by a drop in commodity prices, placing greater pressure on energy and mining companies and producers.

The risk of a “**China hard landing**” continues to loom over the world economy, triggered by a collapse in the equity market. Despite government support, a crisis of confidence and losses hit the financial sector. The Chinese government quickly loses credibility and bank guarantees are called into question, causing a run on the banks. As growth slows in China due to curtailed lending activity, a deflationary outcome ensues as global growth deteriorates due to weaker Chinese demand despite lower inflation benefiting the consumer.

Finally, we have the “**EM defaults emerge**” scenario. As commodity prices show no sign of recovering, banks become more restrictive towards energy and metal producers causing a series of defaults in 2016 as hedges roll off and cash flows deteriorate. Commodity producing countries will be hardest hit with knock on effects being felt across the region. Advanced economies suffer weaker demand from EM and stronger currencies.

Economic View (continued)

Chart 2: Scenario analysis – global growth and inflation impact

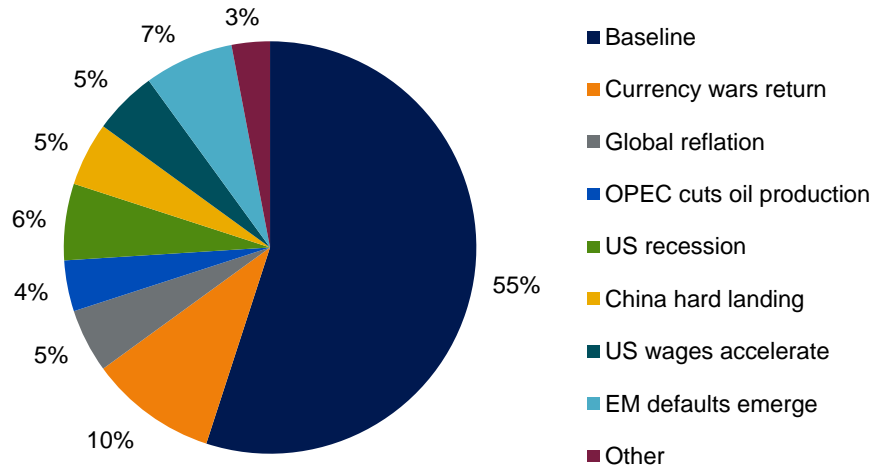


Source: Schroders Economics Group, 22 February 2016

Chart 2 summarises the impact each scenario has on global growth and inflation relative to the baseline. There is a bias towards deflationary outcomes with four scenarios, representing a combined probability of 28%, demonstrating growth and inflation lower than the central scenario.

Like last quarter, there are no scenarios that fall in the productivity boost category (higher growth and lower inflation than the baseline). The probability of a reflationary scenario has fallen marginally to 10% compared to last quarter’s 12%.

Chart 3: Scenario probabilities (mutually exclusive)



Source: Schroders Economics, 22 February 2016.

Economic View (continued)

Table 2: Scenario summary

Scenario	Summary	Macro impact
1. Currency wars return	After a period of truce, China devalues the CNY by 20% in April 2016. The Chinese authorities choose to go for a large one-off move rather than a series of smaller moves so as to quash speculation about further devaluation. Japan responds by devaluing the JPY three months later by 8%. Finally, the ECB steps up its own QE programme pushing the EUR down by 10%. These currency devaluations unnerve financial markets with weaker equity markets having a knock on effect on activity through slower consumption, negative wealth effects and weaker investment.	Mild deflation: The impact on the world economy is modestly deflationary with mixed results between EM and DM. Inflation is pushed up in China and the EM, whilst the advanced economies experience weaker growth and lower inflation. Overall the global effects are not great as much of the moves in exchange rates cancel each other out. However, the USD does strengthen as a result of each devaluation, thus putting deflationary pressure on the US. There is also a general deflationary effect on activity from heightened financial market volatility.
2. Global deflation	Frustration with the weakness of global activity leads policy makers to increase fiscal stimulus in the world economy. This then triggers an increase in animal spirits which further boosts demand through stronger capex. Global growth exceeds 3% in 2016 and 2017. However, higher commodity prices (oil heading toward \$70/ b) and tighter labour markets push inflation up by 0.5% in 2016.	Reflationary: Central banks respond to the increase in inflationary pressure with the fastest response coming from the US and UK. The US Fed raises rates to 3.5% by end-2016 and starts to actively unwind QE. Although there is little slack in Japan, higher wage and price inflation is welcomed as inflation approaches the 2% target. This is likely to lead the BoJ to signal a tapering of QQE, but no increase in interest rates. Inflation concerns result in tighter monetary policy in the emerging markets.
3. OPEC cuts oil production	A Saudi and Russian led cut brings OPEC members together to reduce world oil production. With demand continuing to recover, this results in a surge in the oil price toward \$70/ barrel by end 2016.	Stagflationary: Although cuts in energy capex are cancelled and the outlook for the sector brightens, higher inflation weakens consumer spending and growth worldwide. The EM economies fare slightly better, but growth losses in China and India weigh on the group. On the policy front, higher inflation results in a slightly faster tightening of policy by the Fed with rates expected to peak at 2%.
4. US recession	Slower profits growth causes a retrenchment in the corporate sector which cuts capex and jobs. Consequently, the US economy tips into recession in the first half of 2016. Corporate confidence and the equity market are badly hit, resulting in widespread retrenchment. Weaker demand from the US hits global activity.	Deflationary: The fall in US demand hits activity around the world whilst the fall in inflation is given added impetus by a drop in commodity prices, adding pressure on energy, mining companies and producers. The Fed reverses course, cutting rates and restarting its QE programme. Interest rates are generally lower around the world.
5. China hard landing	The equity market collapses despite government support efforts, inflicting losses and a crisis of confidence across the financial sector. With government credibility crushed, bank guarantees are called into question and bank runs begin. Lending activity halts and the housing market slumps, impacting consumption and investment. Chinese growth slows to 3.5% in 2016 and is under 4% in 2017.	Deflationary: Global growth slows as China demand weakens with commodity producers hit hardest. However, the fall in commodity prices will push down inflation to the benefit of consumers. Monetary policy is likely to ease/ stay on hold while the deflationary shock works through the world economy.
6. US wages accelerate	Tight labour markets and rising headline inflation cause wages to accelerate faster than in the base in the US, parts of Europe and Japan. Consumer spending initially accelerates compared to the base, but inflation also picks up further out.	Reflationary in 2016: stronger growth and higher inflation compared to the baseline. Note that this scenario will turn stagflationary in 2017 as growth slows whilst inflation remains elevated. Better growth in the US provides a modest stimulus to activity elsewhere, however this is likely to be tempered by a more volatile financial environment with long yields rising as inflation expectations rise and the Fed tightens more aggressively.
7. EM defaults emerge	With little prospect of a recovery in commodity prices the banks take a more restrictive approach to energy and metal producers with the result that we see a series of defaults in 2016 as hedges roll off and cash flows deteriorate. Problems are concentrated amongst the commodity producers although there is a knock-on effect to the wider EM region. The deterioration in EM credit conditions is exacerbated by Fed tightening.	Deflationary: Global trade takes another hit as commodity producers are forced to retrench with knock-on effects across the EM complex. Advanced economies experience weaker demand from EM, stronger currencies and more volatile financial markets as bank defaults increase risk aversion. Fed continues to tighten but more slowly with rates peaking at a lower level than in the baseline.

Strategy: Panic over, what's next?

Keith Wade
Chief Economist
and Strategist

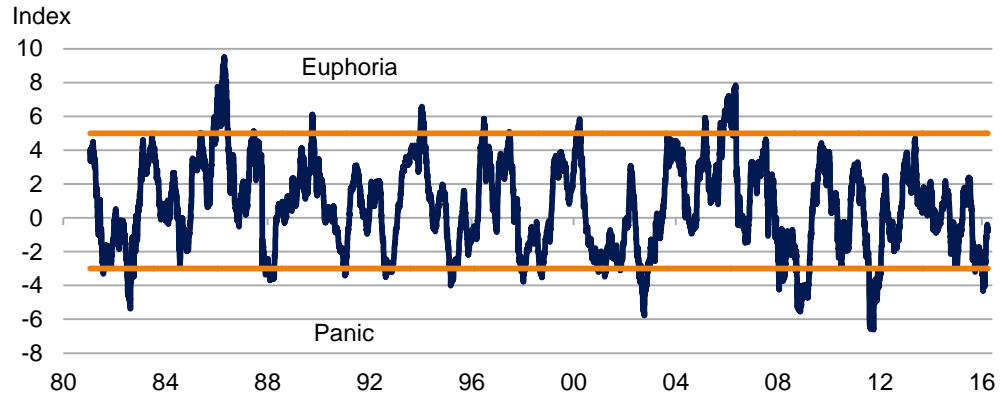
Markets rebound as tail risks diminish

Action by central banks and firmer data have helped restore confidence

Risk appetite regained

After hitting the panic button in January, investors have regained some composure: equities and credit have rallied whilst bond yields have risen and the risk appetite index has moved out of panic mode (chart 4).

Chart 4: Risk index out of panic mode as markets bounce



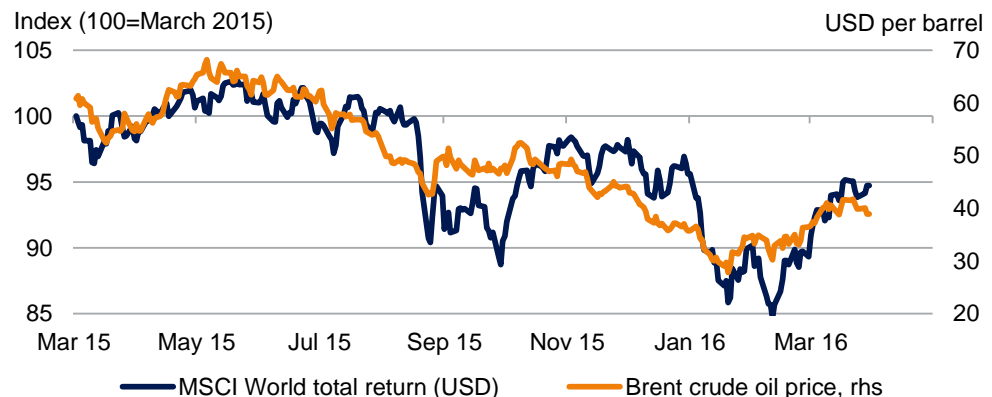
Source: Credit Suisse, Schroders Economics Group, 31 March 2016.

Arguably, the equity and credit markets simply became oversold and were due a bounce, but the key macro factors underlying the rally were the actions of central banks and firmer economic data.

On the first, we would highlight comments from Governor Zhou at the People's Bank of China (PBoC), who has made it clear that he was not looking to devalue the Chinese yuan (CNY) in trade-weighted terms. In addition, various Federal Reserve (Fed) governors offered dovish remarks on US monetary policy, which culminated in the decision not to tighten in March, alongside a lowering of the committee's projection for interest rates going forward (the "dot-plot"). Further rate cuts from the Bank of Japan (BoJ) and European Central Bank (ECB) have also helped, although we still have doubts about the efficacy of negative interest rates.

On China, those comments from Governor Zhou were significant as they were a signal that policymakers were comfortable with growth and not looking for a significant devaluation of the CNY. The hard data in China has indicated that growth continues, although admittedly the distortions from Chinese New Year make it difficult to read the true picture. Nonetheless, it was encouraging to see a smaller drop in foreign exchange reserves in February and an increase in March, indicating that the authorities are getting a grip on capital outflows and the currency. The recent G20 meeting indicated that China has tacit permission to use capital controls focused on stabilising the currency, even if this goes against the previous requirements of the International Monetary Fund (IMF) in granting Special Drawing Rights status to the renminbi.

Chart 5: Oil price recovery boosts equity markets

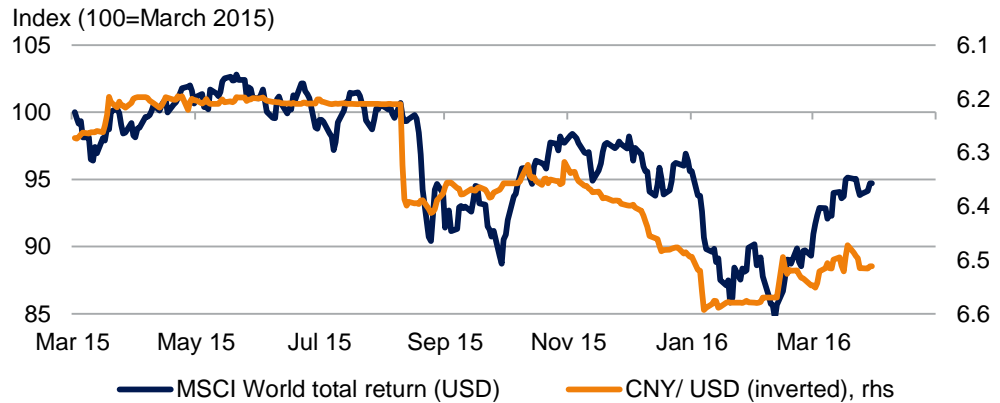


Source: Thomson Datastream, Schroders Economics Group, 31 March 2016.

Strategy (continued)

Coming back to the markets, these developments have resulted in a firmer CNY, a stable to softer dollar and a rise in oil prices, which has supported global equities (chart 5 on previous page and chart 6).

Chart 6: Global equities supported by firmer CNY



Source: Thomson Datastream, Schroders Economics Group, 31 March 2016.

Indicators
signal steady
growth, but no
acceleration

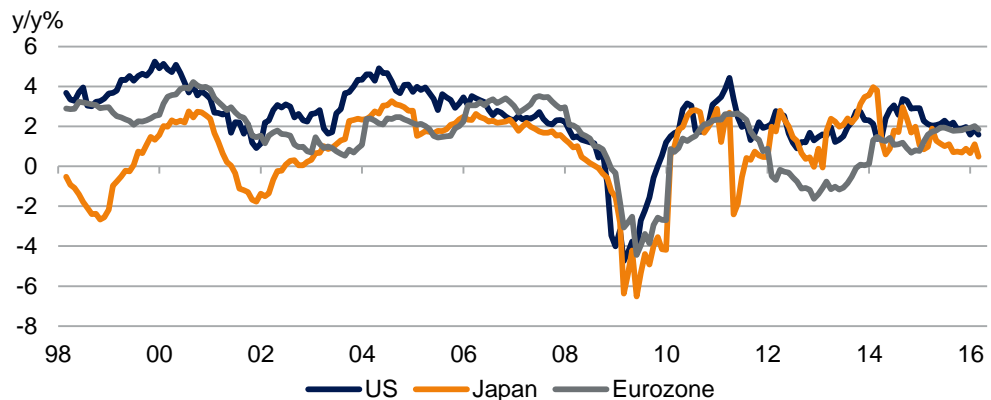
On the activity side, global growth is still sluggish, but the worst fears have not been realised with the US and China avoiding recession and growth in Europe continuing. Manufacturers continue to struggle with the slowdown in global trade growth and an inventory overhang, however the latest monthly surveys indicate that we are approaching a turning point with a rise in orders likely to boost activity in coming months.

The tail risks have eased, but has the outlook brightened?

So having been down the hill and back up again, the question is whether markets can go on to scale new heights, or will plunge back into the valley? The answer really depends on whether the outlook for global activity will improve. We can explain the rally in terms of a reduction in tail risks and this may carry assets higher from here, but for a sustained improvement we need to see better growth in real GDP and corporate earnings.

At this stage, it is difficult to make the case for an acceleration in real GDP growth. Our indicators point to steady, but not spectacular growth, a continuation of the pattern of recent years where the world economy struggles to get growth much above 2.5% (chart 7).

Chart 7: G-trackers point to steady growth in the US and Europe, Japan deteriorates

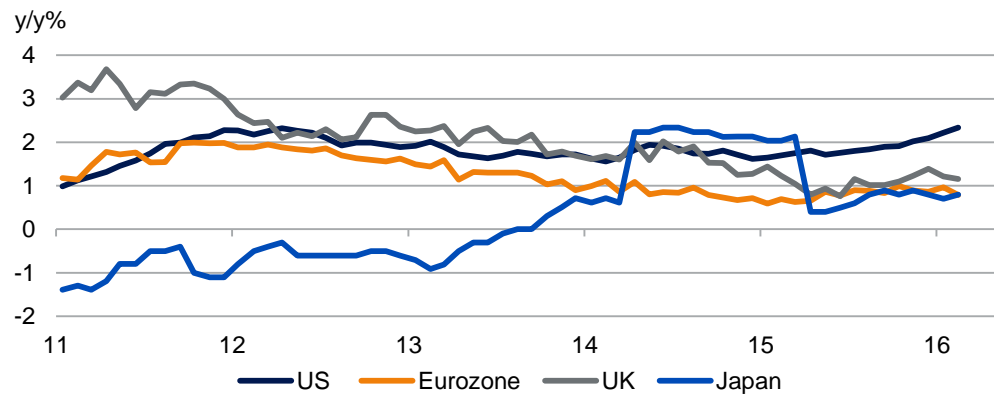


Source: Thomson Datastream, Schroders Economics Group, 31 March 2016.

Strategy (continued)

Alongside this, our inflation indicators are picking up. Much of this reflects the turn in oil prices, which will lift headline inflation rates later in the year. Core inflation rates (in other words, the rate that excludes volatile components such as food and energy) are generally low and stable at around 1% in the Eurozone, UK and Japan. This is an important factor behind the further easing by the BoJ and ECB, whilst a UK rate rise has been pushed out further. However, we have seen an uptick in US core CPI inflation to its highest level for 5 years (chart 8).

Chart 8: Core inflation rates diverge as the US rises



Source: Thomson Datastream, Schroders Economics Group, 31 March 2016.

Fed still expected to tighten monetary policy...

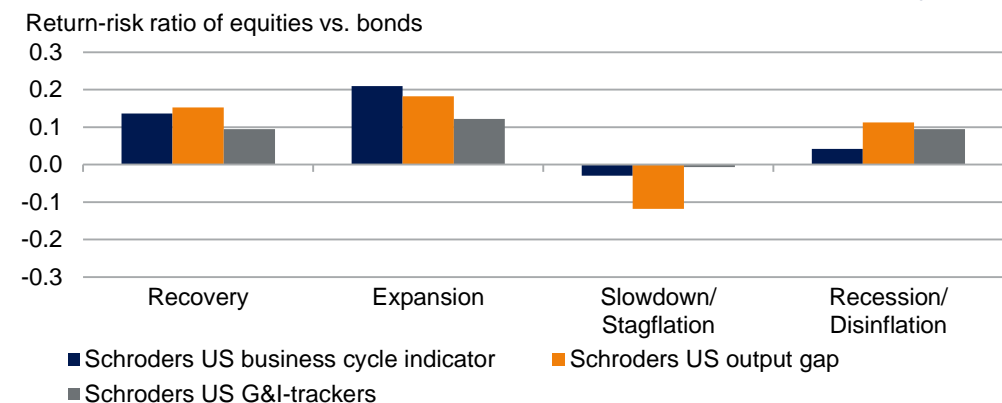
Wage growth in the US has yet to significantly accelerate, but the divergence in inflation trends is a reminder that the US is at a later stage of the cycle than the rest of the world and will need higher interest rates. Although we do not see a major inflation problem in the US as external factors weigh on prices, some tightening will be needed from the current low levels which are well below zero in real terms.

...raising the prospect of further dollar strength and renewed market volatility

This is important as it means that the current calm in the markets around Fed tightening may well be temporary. As growth resumes and inflation returns to its 2% target, the Fed will raise rates, twice this year in our view. For example, in her recent speech to the New York Economic club, Fed chair Janet Yellen said that she saw the neutral real interest rate at zero which would be consistent with an economy in equilibrium. Clearly we are not there yet, but as the economy grows and the labour market continues to tighten, the process of rate normalisation will resume. As a consequence, financial market volatility is likely to return.

This conclusion is reinforced by our broad cyclical analysis for US markets. Two of our three cyclical indicators (business cycle and G&I trackers) are in the "slowdown" phase, where lack of growth and concern over tighter monetary policy cause equities to underperform bonds. The slower moving output gap indicator is in the expansion phase (stronger growth and higher inflation) which suggests a better outcome for risk assets, although this tends to be a medium-term than near term predictor (chart 9).

Chart 9: Performance of equities vs. bonds over each phase of the cycle



Note: Performance of S&P 500 vs. US 10-year gov. bonds are average monthly total returns adjusted for volatility and calculated over a completed cycle. Source: Schroders Economics Group, 31 March 2016

Strategy (continued)

As expectations of Fed tightening return, we are also likely to see another phase of US dollar strength. This would then put pressure on China to depreciate the CNY against the dollar to keep the trade-weighted currency stable, potentially reigniting concerns over the economy and whether the authorities are attempting to export overcapacity to the rest of the world. Emerging markets may well suffer in this environment.

It is possible that a selloff in markets then drives the Fed back and it stays on hold. Markets could then rally again, a re-run of the first quarter. However, this is not sustainable in our view given the very low level of US interest rates and the late stage of the economic cycle which argues for some normalisation of policy.

Equity allocation

Investors have tended to respond to this environment by avoiding US equities and focusing on parts of the world in an earlier phase of the cycle for inflation and monetary policy. In the past, this has led us to tilt our portfolios toward Europe and Japan.

However, three reasons have led us to take a more defensive tack this time around.

First, although the ECB and BoJ are easing policy, many investors are driven by dollar interest rates and liquidity. The Fed sets the tone in global markets.

Second, rate cuts by the ECB and BoJ have become less effective now that they are in negative territory. Indeed, it can even be argued that negative rates are counterproductive partly because they hit bank earnings and hence risk a restriction in credit, and partly due to the dire message they send to the private sector about the state of the economy.

Third, recent easing by the BoJ and ECB has been followed by an appreciation of their respective currencies. This may not persist, but it removes one of the main channels of monetary easing and supports for activity. In this environment, global equity investors would be better off favouring the less volatile US market.

We recognise that corporate profits remain under pressure in the US. Updating our top-down model we see economic profits and operating earnings per share (EPS) for the S&P500 falling in the current calendar year by around 5%. However, this forecast is significantly affected by a drop in profits at the end of last year which is largely related to the energy sector and makes for a negative base effect on whole year earnings. Looking at the end year figure, we would see growth of around 4% as companies eke out EPS gains in line with nominal growth in the economy and helped by buy-backs.

Table 3: US profits outlook

US	2015	2016f	2016 Q4	2017f
Economic profits				
y/y%	6.0	-5.0	4.1	4.3
Non-financial share % GDP	9.3	9.1	8.6	8.6
S&P 500 EPS				
Operating	\$100	\$95	\$24	\$99
y/y%	-11.1	-5.6	4.1	4.3
Reported	\$86	\$83	\$22	\$87
y/y%	-15.5	-4.2	17.0	4.7

Source: Thomson Datastream, Schroders Economics Group, 1 April 2016.

Reported earnings are forecast to bounce back more significantly in 2016 after falling sharply in 2015 as write-offs in the energy sector stabilise with the result that we could see EPS rise 17%. Note though that this would only bring us back to 2015 levels and is conditional on a steady recovery in the oil price in line with the forward futures curve (our baseline assumption).

As monetary easing becomes less effective, we have moved away from European and Japanese equities

Earnings remain under pressure but could benefit from the base effects of lower write-offs if commodity prices stabilise

Strategy (continued)

The global earnings outlook is very influenced by the US, but looking at the wider picture it is worth flagging a couple of points. In terms of the choice between Europe and Japan, the earnings numbers are likely to be better in the former given better growth and a more helpful tailwind from the exchange rate. Emerging markets may see an improvement in 2016 if we get stability in activity and a firming in commodity prices (table 4).

Table 4: Global EPS forecasts for 2016 (year-on-year %)

	Consensus	Forecast
US	1.5	-4.2
Europe ex UK	2.8	4.7
Japan	6.0	-3.0
BRICs	7.7	4.8
Global	2.8	-1.4

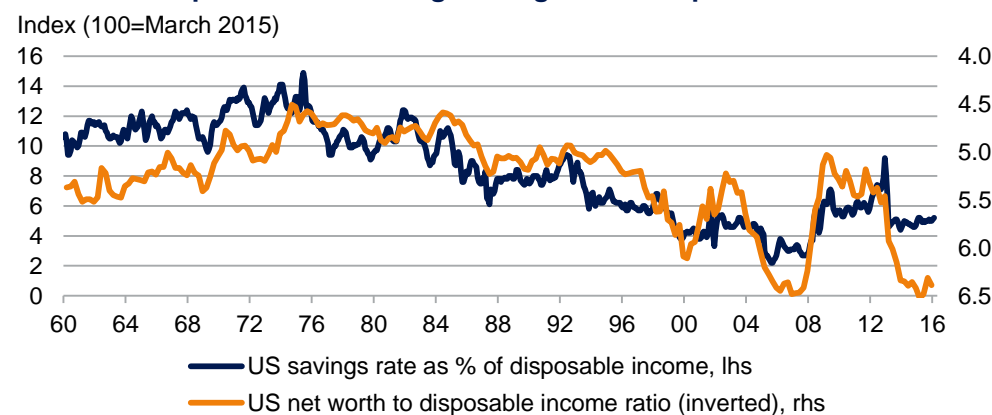
Source: Thomson Datastream, IBES, Schroders Economics Group, 1 April 2016.

Give current valuations this suggests that equity markets will be stuck in a trading range in the near term. Could we be surprised on the upside?

For this we would look to scenarios where growth is stronger than expected allowing profits and EPS to be revised upwards. One such would be where the lags from the fall in oil prices continue to feed through and support consumer spending. It should not be forgotten that these lags are long as consumers take time to recognise when a change is permanent rather than temporary.

We would also note that the savings rate in the US remains high and whilst this might be a permanent feature of the post-crisis world, the improvement in wealth suggests that consumption could get a boost from lower savings in 2016 (chart 10).

Chart 10: Scope for lower saving/ stronger consumption in the US



Source: Thomson Datastream, Schroders Economics Group, 31 March 2016.

Another scenario would be one where government's recognise that monetary policy has run its course and that other means of stimulus need to be deployed. This could result in a co-ordinated expansion of fiscal policy (as in our global deflation scenario described above).

In general, these demand-driven scenarios would mean stronger global GDP and hence should trigger upgrades to EPS forecasts. Such an outcome would support equities in the long run, but would also bring interest rate increases back into play in the US. The ideal scenario would be for stronger growth combined with low inflation which is certainly possible in parts of the world at an earlier stage of their cycle, such as Europe and China. More generally though we would need to see an improvement in productivity combine with stronger demand to produce upgrades without the concern of higher rates. At this stage such a scenario looks rather remote given the deterioration in productivity in recent years.

Upside risks centre on the consumer, but without an improvement in productivity could also bring concerns over higher interest rates

Long run asset class performance: 30-year return forecasts (2016 – 45)

Craig Botham
Emerging Markets
Economist

Cash returns likely to be negative in the near term, owing to the deleveraging process

Sovereign debt should outperform cash, but returns still muted

Schroders Economics Group produces thirty-year return forecasts, on an annual basis, for a range of asset classes. Here we outline the methodology used, which is based on a series of building blocks and estimates of risk premia, and surmise the key conclusions from our analysis.

Cash

One of the key building blocks for our long-run forecast is our assumption regarding the returns on cash, which are almost entirely driven by movements in key policy rates (Bank of England base rate, the Federal Funds rate etc.).

The methodology we use is a multi-stage approach- in the initial stage (duration dependent on the region) we forecast the real return on cash to remain negative, as the de-leveraging of both private and public sector balance sheets in the developed world keeps monetary policy extremely accommodative, and negative real rates remain an attractive way of ameliorating the debt burden.

The second stage of our cash forecast is a simple normalisation in cash rates, expected to start as soon as next year in the US, before we reach the third and final stage, with positive real cash rates. This terminal value of real cash returns is based on an historic average, to which we make adjustments to reflect our views going forward about the strength of trend growth. This year, we have made downward adjustments to the historic average for the UK, due to central bank guidance on lower rates, and Japan, owing to poor demographics suggesting an anaemic growth outlook.

Table 5: Real cash returns assumption (% per annum)

	US	UK	Eurozone	Japan
De-leveraging phase	-1.5	-0.2	-0.9	-1.5
Long run	1.0	0.3	0.2	-0.5
Overall (2016-45)	0.66	0.13	-0.01	-0.76

Source: Schroders Economics Group, February 2016

Cash return forecasts have seen largely downward revisions, thanks in part to the downward adjustments made to terminal rates, with the exception of the US which sees upward revisions as the deleveraging process is almost over, and normalisation (and a return to positive rates) is much closer. Returns generally though remain very low, and negative in the case of Japan and (just) the Eurozone.

Inflation

Our preferred approach is to formulate our views on the real returns of the major asset classes and then add our inflation assumptions to give the expected nominal return. Our inflation forecasts follow a multi-stage approach, using consensus forecasts for the initial ten years and our own forecast for the latter twenty.

Sovereign bonds

Our return assumption on sovereign debt builds on the return we have for cash, adding a term premium to forecast the returns to longer maturity (10-year) bonds. As with our cash methodology, we estimate the maturity premium from historical averages (in this case twenty years) and make an adjustment to reflect our own views. Using the historical average maturity is a sensible base, as there is a maximum steepness a yield curve can reach before the carry and roll becomes too attractive for investors to ignore, thus encouraging them to buy long-dated bonds and flatten the curve again. We maintain, from last year, a 40% discount to the historic steepness of the yield curve for all countries, to reflect the view that yield curves are likely to be flatter going forward than they have been since the early 1990s, as a result of loose monetary policy and a weak growth outlook.

Long run returns (continued)

For the UK and US, we also forecast the returns on inflation-linked government debt, by applying a discount to the returns on the nominal bonds. It is to be expected that inflation linked bonds offer a lower return than nominal, owing to the insurance they offer against rising prices. The reason for the greater yield discount applied to UK linkers than US TIPS is due to technical market reasons, related to the relative liquidity of the two markets and the structure of the market.¹

Table 6: Cash, sovereign bonds and linkers

	US	UK	Eurozone	Japan
2016 – 45 (% p.a.)				
3 stage model	0.7	0.1	0.0	-0.8
Cash real return	0.7	0.1	0.0	-0.8
Inflation	2.1	2.3	2.0	1.8
Nominal cash return	2.8	2.5	2.0	1.0
Bond maturity premium	1.1	0.5	0.7	0.7
Bond return	3.9	3.0	2.7	1.7
Inflation insurance premium	0.5	1.0	n/a	n/a
Inflation linked bonds	3.4	2.0	n/a	n/a

Source: Schroders Economics Group, February 2016

In line with the cash returns, many government bonds have seen their expected returns shaved down this year, with the exception of the US thanks to the upward lift to its cash returns. Australia and Singapore received the largest upgrade, of 0.3 percentage points, while Hong Kong has the highest expected returns of the bond markets we cover at 1.5% per annum (table 9 on page 21).

Credit

Our credit returns are forecast using the excess return of credit (both investment grade and high yield) over sovereign bonds for the respective market. The two key drivers of credit's excess return are the changes in spreads and the expected loss through defaults, both of which are closely linked to the economic cycle. For this reason, we combine regression analysis of spread changes and default losses with our long run US growth forecast to forecast the excess return of US high yield and investment grade credit over Treasuries. Using regression analysis again, we use the excess returns of US credit to estimate the excess returns of UK and European credit over UK Gilts and German Bunds respectively.

Credit returns are estimated as the excess over sovereigns

Table 7: Credit – Investment grade (IG) and high yield (HY)

2016 – 45 (% p.a.)	US IG	US HY	UK IG	Euro IG	Euro HY
Spread	1.0	5.4	0.7	0.5	6.3
Default loss	0.1	3.7	0.1	0.1	3.7
Return over 10-year govt.	1.0	1.7	0.7	0.5	2.6
10-year govt. return	3.9	3.9	3.0	2.7	2.7
Nominal return	4.8	5.6	3.6	3.2	5.3

Source: Schroders Economics Group, February 2016

¹ UK linkers make up a bigger share of the total Gilt market (roughly 20%) than TIPS do of the Treasury market (less than 10%). Thus, *relative to their main market*, TIPS are less liquid than UK linkers, and thus have a price discount (e.g. lower prices, thus higher yield and smaller differential between nominal and TIPS yield)

Long run returns (continued)

Equity return forecasts show disparity between EM and DM, particularly Japan

Credit returns have all been revised downwards with the exception of the US. A combination of lower yields on government bonds (with which we assume credit exhibits some relationship) and higher inflation has hurt expected real returns. In the US, higher government bond returns (resulting from an uplift to cash) see a marginal upgrade to our forecast for credit.

Equities

Our equity return assumptions use a Gordon's growth model approach, in which returns are generated through the initial dividend yield and the growth rate of dividends (via earnings growth). We have made a change this year to our forecasting methodology for productivity. We now make explicit productivity forecasts, using historical averages and our own outlook. For example, EM productivity growth is assumed to be lower in the future as the scope for technological "catch up" recedes.

This forecast for productivity is the basis for our earnings and dividend growth assumptions, though we make adjustments for areas where earnings and trend productivity have not tended to grow in line. This is the case in the emerging markets, where productivity gains have historically not translated fully into earnings growth, hence we scale earnings growth downwards, and Europe where earnings growth has tended to exceed productivity growth (hence an upward scaling).

Table 8: Expected returns from equity markets

	US	Japan	UK	Eurozone	Pacific ex Japan	Emerging	Switzerland
2016 – 45 (p.a.)							
Dividend yield	2.2	1.8	3.7	2.7	4.4	3.3	3.0
Projected dividend growth	1.5	1.5	2.0	1.8	2.2	3.3	1.3
Expected real return	3.7	3.3	5.8	4.6	6.7	6.7	4.4
Inflation	2.1	1.8	2.3	2.0	2.7	3.3	1.2
Expected nominal return	5.9	5.1	8.3	6.7	9.6	10.2	5.6

Source: Schroders Economics Group, February 2016

Mainly negative changes to our outlook for equities, with the exceptions of the UK, Singapore, and Pacific ex Japan, where higher yield expectations were the key driver. The largest downgrade was for Emerging Markets, closely followed by the US, on downward revisions to productivity expectations, which hits earnings growth.

We find the highest returns in UK small cap and Singapore at 7.2%, followed by EM and Pacific ex Japan at 6.7%. High productivity growth is a key driver for the EM market, while the UK small cap index benefits from a premium relative to its large cap counterpart, which itself has a high current dividend yield. The worst performing market is expected to be Japan, delivering just 3.3% p.a. over the forecast period in real terms, though even Japan offers a premium over bonds and cash.

Summary

Our forecasts suggest that the long run real returns on cash will be extremely poor, and especially so in the next ten years, during which they are likely to be negative for most developed markets. Further out, for the UK, US and Europe

Long run returns (continued)

Strongest returns found in equities, particularly EM and UK small cap, while cash returns are atrocious

the real return on cash should normalise and become positive, but over the entire forecast horizon cash will do little better than beat inflation.

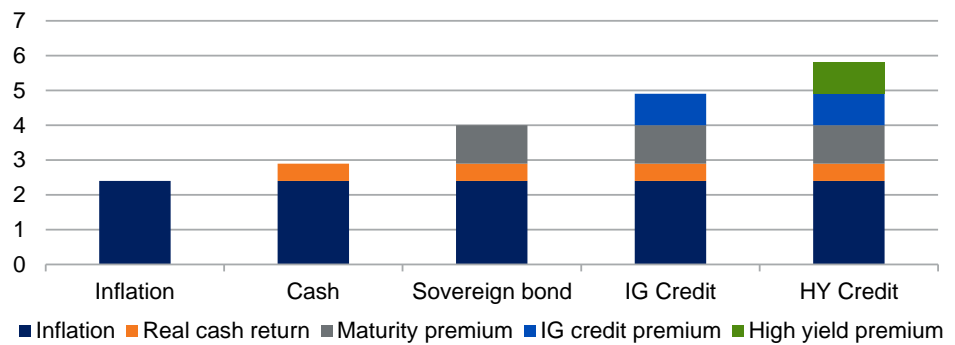
We would expect longer dated sovereign debt to outperform cash over thirty years, but returns in real terms are still likely to be disappointing, particularly in the near future. The current valuations of bonds considered “safe assets” are unattractive and suggest low returns.

Of the riskier assets, we expect both credit (particularly high yield), property and equities to outperform sovereign bonds, though some investment grade credit offers similar returns to US sovereign debt. Equities remain the asset class offering the greatest potential for returns. On a regional basis, we believe equities will deliver an attractive return (both real and nominal) across the board, with EM this year finally ceding their highest return crown to UK small cap equities, though they remain one of the best expected performers.

Emerging market equities, however, are more prone to periods of crisis than their developed peers, and we would expect the more generous potential return to be accompanied by greater volatility and sharper drawdowns. Elsewhere, equity returns are lowest in Japan, thanks to a sub-par dividend yield in comparison with its peers. Meanwhile, the deflationary environment explains the relative underperformance of both the Japanese cash and JGB markets.

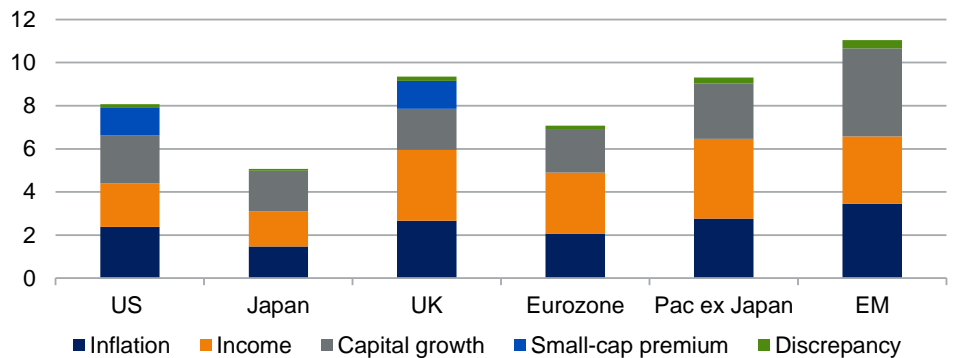
Chart 11: US nominal asset returns – build up approach

Nominal return (% p.a.)



Source: Schroders Economics Group, February 2016

Chart 12: Nominal equity returns breakdown



Source: Schroders Economics Group, February 2016

Long run returns (continued)

Table 9: Long-run return assumptions (2016 – 45)

	Currency	Yield	Capital gain	Nominal return	Inflation	Real return
Cash						
USD cash	USD	2.8	-	2.8	2.1	0.7
GBP cash	GBP	2.5	-	2.5	2.3	0.1
EUR cash	EUR	2.0	-	2.0	2.0	0.0
YEN cash	JPY	1.0	-	1.0	1.8	-0.8
Australia	AUD	3.3	-	3.3	2.6	0.7
Hong Kong	HKD	2.8	-	2.8	2.2	0.6
Singapore	SGD	1.7	-	1.7	1.3	0.4
G4 cash	<i>Local</i>	2.3	-	2.3	2.0	0.3
Government bonds (10-year)						
US Treasury bond	USD	3.9	-	3.9	2.1	1.7
UK Gilt	GBP	3.0	-	3.0	2.3	0.6
Eurozone (Germany)	EUR	2.7	-	2.7	2.0	0.7
JGB	JPY	1.7	-	1.7	1.8	-0.1
Australia	AUD	3.5	-	3.5	2.6	0.9
Hong Kong	HKD	3.9	-	3.9	2.2	1.6
Singapore	SGD	2.6	-	2.6	1.3	1.3
G4 bond	<i>Local</i>	3.2	-	3.2	2.0	1.1
Inflation-linked						
Barclays 7–10 year IL Gilts	GBP	2.0	-	2.0	2.3	-0.4
Barclays 7–10 year TIPS	USD	3.4	-	3.4	2.1	1.3
Credit						
US IG	USD	4.8	-	4.8	2.1	2.7
US HY	USD	5.6	-	5.6	2.1	3.4
UK IG	GBP	3.6	-	3.6	2.3	1.3
Euro IG	EUR	3.2	-	3.2	2.0	1.1
Euro HY	EUR	5.3	-	5.3	2.0	3.2
Property						
UK Commercial	GBP	4.9	0.5	5.4	2.3	3.0
EUR Commercial	EUR	5.1	0.8	5.9	2.0	3.8
Equity markets						
US	USD	2.2	3.6	5.9	2.1	3.7
US small cap	USD	2.2	5.0	7.3	2.1	5.1
Japan	JPY	1.8	3.3	5.1	1.8	3.3
UK	GBP	3.7	4.4	8.3	2.3	5.8
UK small cap	GBP	2.9	6.6	9.7	2.3	7.2
Switzerland	CHF	3.0	2.5	5.6	1.2	4.4
Europe ex.UK	EUR	2.8	3.5	6.4	1.9	4.4
Eurozone	EUR	2.7	3.9	6.7	2.0	4.6
Singapore	SGD	3.7	4.8	8.6	1.3	7.2
Pacific ex Japan	USD	4.4	5.0	9.6	2.7	6.7
Emerging markets	Local	3.3	6.7	10.2	3.3	6.7
Global (AC) Equity	Local	2.5	4.0	6.7	2.2	4.4
Global (AC) Equity Risk Premium			<i>vs. G4 bonds</i>	3.4		3.2
			<i>vs. G4 cash</i>	4.3		4.1

Note: UK Index-linked returns use RPI inflation for the nominal return. Source: Thomson Datastream, Schroders Economics Group, February 2016

Research note: Is the risk of a US recession high?

Tina Fong, CFA

Analyst

The return of the “R” word

Markets are more pessimistic than justified by fundamental measures

Introduction

Early in the year, investors’ concerns over the state of health of the US economy turned to the dreaded “R” word and this was reflected in market indicators such as credit spreads. Our base case is that the US is expected to grow at a modest pace and to avoid a recession this year. Here we focus on whether the risk of a US recession is high by reviewing our recession indicators.

In the past, the US yield curve was considered a good recession predictor. In 2006, the flattening of the curve meant that our recession indicator at that time pointed towards a high probability of 50%. A year or so later, along with the US subprime crisis and the bankruptcy of Lehman, activity collapsed in the world’s largest economy.

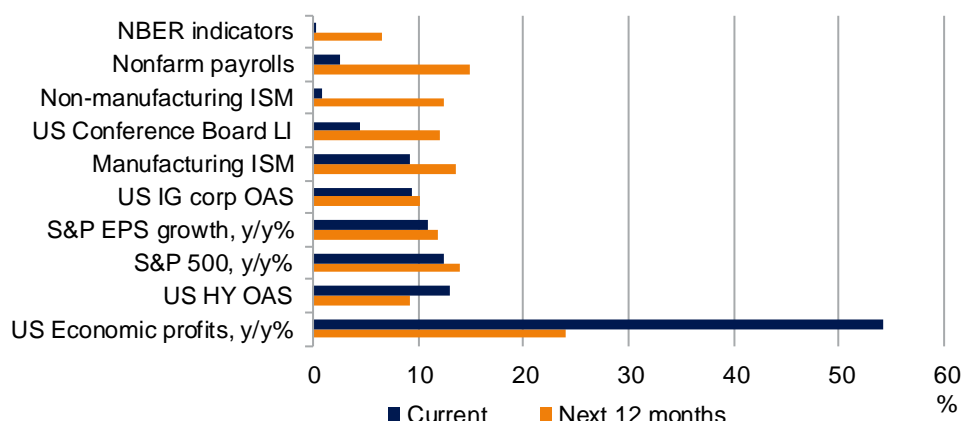
In a world of ultra-low rates and QE, the US yield curve lost its recession predictive powers and was replaced with a host of other macro and market variables to estimate recession risks. During the European sovereign debt crisis period in 2011, compared to the macro data, US asset prices were discounting a more pessimistic outlook on the economy. The US did not enter recession, although the Fed eventually announced QE 3 towards the end of 2012.

Today, these recession indicators have come back into the spotlight given worries over the US’s growth prospects. While there are many ways that can be used to measure the likelihood of a recession, the probabilities discounted by key asset prices and macro indicators have broadly fallen since the start of the year. With the exception of the US energy high yield market and economic profits, recession risks are generally low by historical standards. Overall, asset markets are currently more pessimistic on the US economy than justified by fundamentals but this divergence has narrowed.

Measuring recession probabilities

We have used a probit-based model to infer the different likelihoods of a US recession, as discounted by macro indicators, fundamental measures (such as corporate earnings and profits) and asset prices (such as equities, credit, bonds, and commodities). Our probit indicator assigns a probability to the economy being in recession now or at a date in the future (e.g. in 12 months) using the National Bureau of Economic Research’s (NBER) definition of recession. Note that with these models, the results are sensitive to the statistical assumptions.

Chart 13: Recession probabilities – macro indicators and asset markets



Note: NBER monitors industrial production, real personal income ex transfers, employment and sales (manufacturing, wholesale and retail). Variables shown here have an r-square of around 0.3 or more. Source: Thomson Datastream, Schroders Economics Group, 4 April 2016

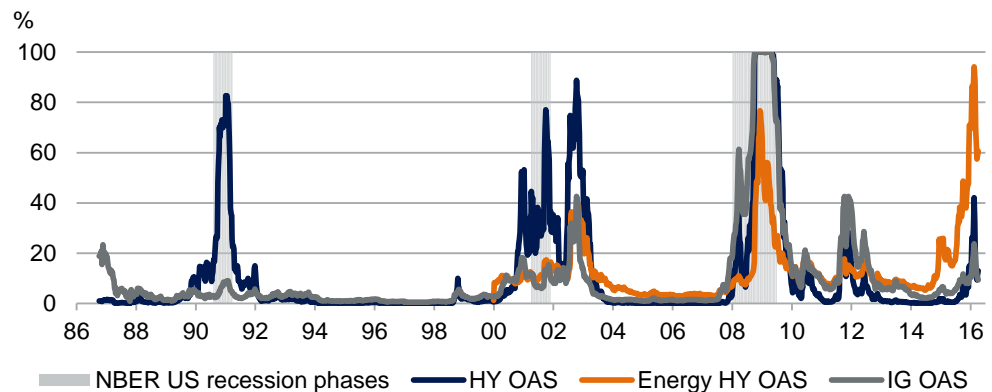
Research note (continued)

Energy segment of HY more bearish than the broader market...

Presently, the energy segment of the high yield (HY) complex is pricing in the highest risk of recession followed by the equity market with the macro indicators generally discounting a lower risk of recession in the US (chart 13). More details are shown in table 10 in the appendix section.

According to the energy complex of the high yield market, which represents over 10% of the universe, the US is already in recession although the risks have receded from highs seen in the early part of February (chart 14). Importantly, energy HY spreads tend not to be a good recession predictor compared to the overall HY and IG credits, as this sector lagged the rest of the market in signalling the recession of 2001. The recent tightening in corporate spreads also experienced by the broader HY market has meant that this asset is now discounting less than a 15% chance (previously over 40%) of a recession scenario for the US.

Chart 14: US energy HY discounting a bearish outlook

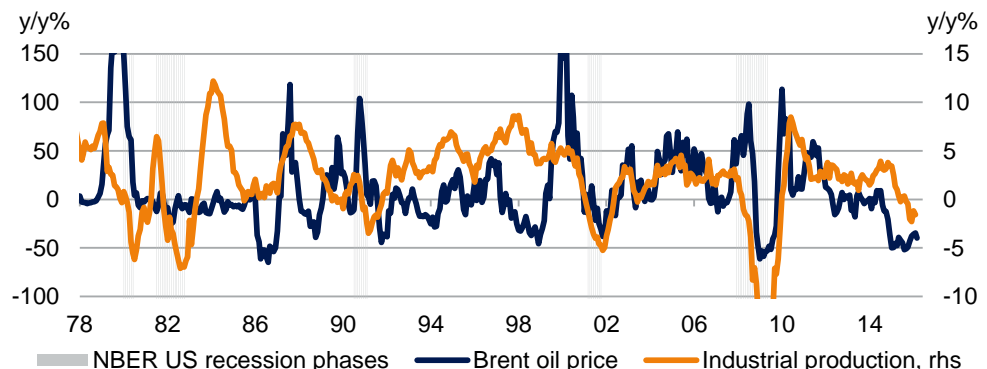


Note: Based on Merrill Lynch option-adjusted spreads (OAS) for US IG, HY and energy HY. Data from 1986 except energy HY from May 1996. Source: Thomson Datastream, Schroders Economics Group, 4 April 2016.

..but it is a poor predictor of recession along with the oil price

With the low oil price being the concern for markets, some argue that a depressed energy price points towards an increasing likelihood of a recession in the US as it is indicative of the lack of global demand. However, this time around, the decline in the oil price has been driven by supply factors. Moreover, the coefficient for oil in the model is positive whereby recession risks decline with the drop in prices. Instead, downturns and the fall in US activity tend to be preceded by oil price spikes given the hit on consumer spending and the pick up in inflation leading the central bank to tighten monetary policy (chart 15).

Chart 15: US industrial production and the oil price



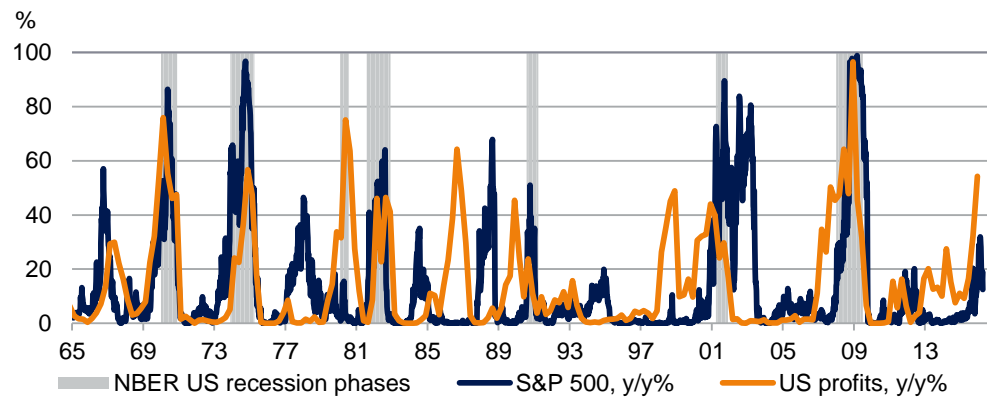
Source: Thomson Datastream, Schroders Economics Group, 4 April 2016.

Recession risk discounted by the equity market remains low by historical standards

Meanwhile, US equities are currently discounting a probability of recession at relatively similar levels to the HY market. Since the 1960's, there have been 3 occasions when equities provided false recession signals and the readings surged above 40% (chart 16 on next page). By contrast, over the same period, US profit growth has been a better recession predictor bar one episode in 1986 when the US economy experienced a soft patch but avoided a deeper slump in output.

Research note (continued)

Chart 16: Recession risks based on US economic profitability and the S&P 500

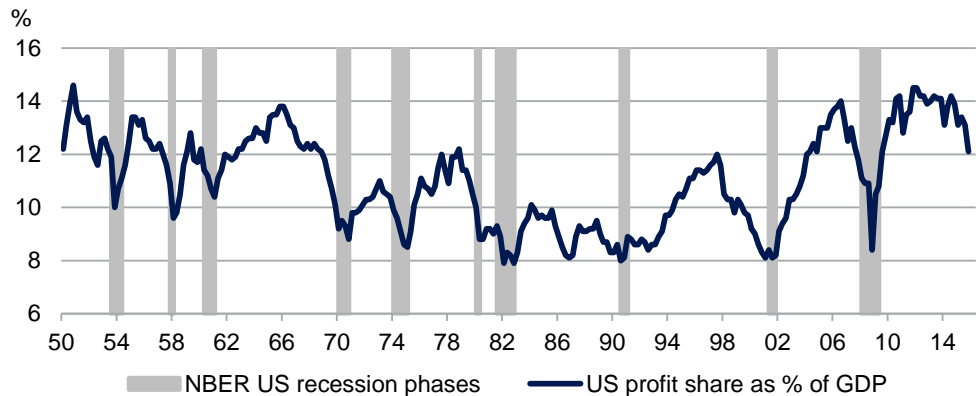


Note: Source: Thomson Datastream, Schroders Economics Group, 4 April 2016.

Fall in profitability signals recession but margins have been driven by the lack of corporate pricing power

A more worryingly development is the recent deterioration in profits growth, which has meant that this measure is now pointing towards a US downturn. While the profit share has fallen, the tightening in the labour market is likely to put further pressure on margins (chart 17). However, this time around, the decline in profitability is not being driven by the Fed tightening but corporates' lack of pricing power. Hence, the weakness in profitability does not necessarily translate into an imminent recession in the US.

Chart 17: US corporate profit margins have fallen



Source: Thomson Datastream, Schroders Economics Group, 4 April 2016.

In comparison to other asset markets, the US yield curve (10-year minus 3 month) is not registering any significant recession risk currently and in the next 12 months. Although the optimistic outlook priced in by the yield curve cannot be discounted given the decline in its predictive powers post financial crisis given a backdrop of low US rates and QE.

Some comfort from the macro data

On the macro data, this area provides some degree of comfort in suggesting that recession risks are generally low. Earlier in the year, on our estimates, the deterioration in the manufacturing ISM index pointed towards a 20% probability of recession but the recent improvement in the survey has halved these odds. In terms of the reliability of this indicator, there have been at least 6 occasions out of 16 episodes since the 1950's when the ISM dipped to current levels and a US recession did not materialise such as the Asian financial crisis of 1997 and the bursting of the tech bubble in 2001. Historically, three months after the survey weakened below the 50 threshold, the US entered recession. Instead, given the importance of the service sector in the US, we would pay more attention to the non-manufacturing ISM survey, which is not registering any recession risk.

Research note (continued)

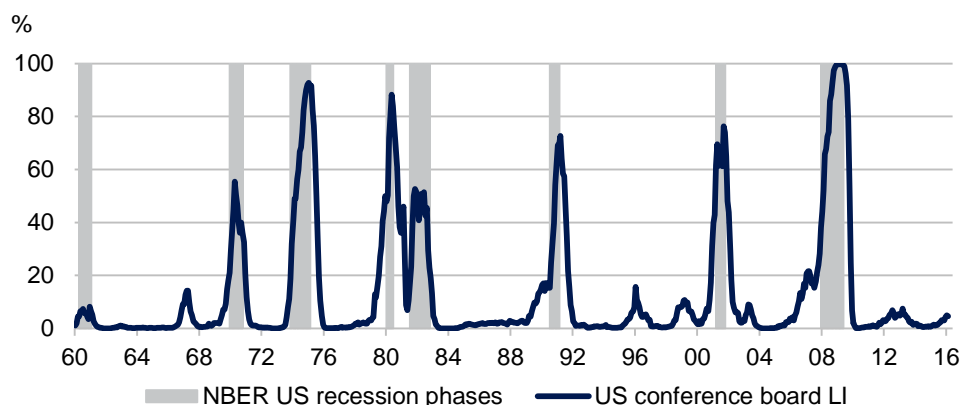
Chart 18: Manufacturing ISM more downbeat than their service peer



Source: Thomson Datastream, Schroders Economics Group, 4 April 2016.

Even the macro indicators (such as industrial production and employment) monitored by the NBER's Business Cycle Dating Committee are signalling a low probability currently and the next 12 months. Similarly, a GDP-based recession indicator, from the Atlanta Fed, which assigns dates to when recessions begin and end based on the observed dynamics of real GDP growth, is currently pointing to a 10% chance of recession. Finally, a combination of macro and market indicators such as the US conference board leading indicator (LI), which has been a good predictor and the best of both worlds, is barely indicating recession risk (chart 19).

Chart 19: US conference board LI not registering any recession risk



Source: Thomson Datastream, Schroders Economics Group, 4 April 2016.

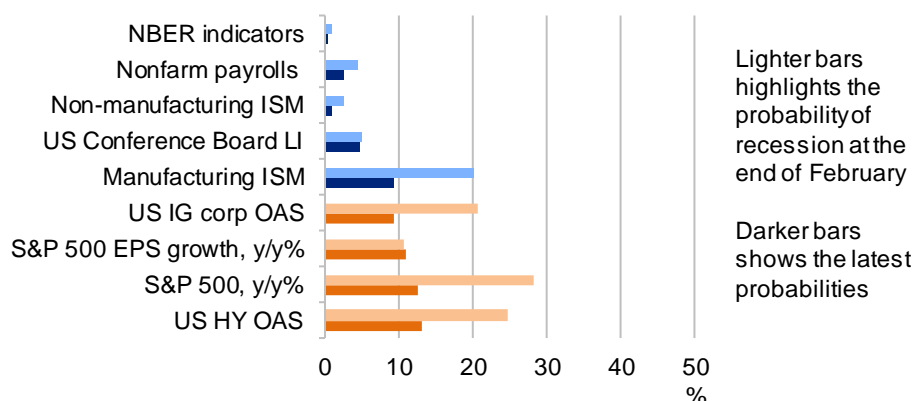
Conclusion

Compared to earlier in the year, investors have become more concerned over the US falling into recession. To some extent this has been reflected in the performance of risk assets, particularly in US energy HY, which is pricing in a more bearish scenario for the economy. Although, the recent stabilisation in the oil price along with the further stimulus by the ECB and dovish comments from the Fed have prompted spreads to narrow. Meanwhile, equities and other asset prices are discounting a greater probability of recession relative to last year, but they are still low by historical standards and have recently fallen (chart 20 on next page).

Research note (continued)

Reassuringly, key economic indicators are suggesting that recession risks are low. Overall, markets are currently more pessimistic on the US economy than justified by the fundamentals. However, the probabilities based on the former have moved more in-line with the latter. Finally, to answer our initial question, is the risk of a US recession high, not at the moment.

Chart 20: Recession odds discounted by the markets moving more in-line with fundamentals



Note: NBER monitors industrial production, real personal income ex transfers, employment and sales (manufacturing, wholesale and retail). Variables shown here have an r-square of around 0.3 or more. Thomson Datastream, Schroders Economics Group, 4 April 2016

Appendix 1

Table 10: Recession probabilities based on macro and market indicators

Indicators	Latest release	Current probability	Model fit (r-square)	P-value
Non-manufacturing ISM	54.5	0.8	0.6	0.000
Combination of NBER indicators	-	0.4	0.5	-
US Conference Board LI	2.3	4.5	0.5	0.000
ML US HY OAS	705.0	13.0	0.5	0.000
Manufacturing ISM	51.8	9.1	0.4	0.000
Manufacturing ISM new orders	58.3	2.2	0.4	0.000
Philly Fed	12.4	14.2	0.4	0.000
Nonfarm payrolls	215.0	2.6	0.4	0.000
ML US Corp OAS	169.0	9.3	0.4	0.000
S&P 500 returns, y/y%	0.6	12.4	0.4	0.000
Chicago PMI	53.6	10.7	0.3	0.000
S&P EPS, y/y%	0.3	10.9	0.3	0.000
US Economic profits, y/y%	-11.5	54.2	0.3	0.000
ML US Energy HY OAS	1290.0	60.6	0.2	0.000
Oil (Brent), y/y%	-32.2	7.8	0.1	0.000
GSCI commodity	-21.4	12.3	0.0	0.183
Next 12m probability				
US Yield curve (10s vs. 3m), bps	158.0	6.0	0.3	0.000

Note: NBER monitors industrial production, real personal income ex transfers, employment and sales (manufacturing, wholesale and retail). P-value where anything above 0.05 is insignificant at 95% level. Data from 1950s onwards. Source: Thomson Datastream, Schroders Economics Group, 4 April 2016.

Market Returns

	Total returns	Currency	March	Q1	YTD
Equity	US S&P 500	USD	6.8	1.3	1.3
	UK FTSE 100	GBP	1.8	0.1	0.1
	EURO STOXX 50	EUR	2.1	-7.7	-7.7
	German DAX	EUR	5.0	-7.2	-7.2
	Spain IBEX	EUR	3.2	-7.9	-7.9
	Italy FTSE MIB	EUR	2.8	-15.4	-15.4
	Japan TOPIX	JPY	4.8	-12.0	-12.0
	Australia S&P/ ASX 200	AUD	4.7	-2.7	-2.7
	HK HANG SENG	HKD	9.2	-4.7	-4.7
EM equity	MSCI EM	LOCAL	8.4	2.8	2.8
	MSCI China	CNY	11.7	-4.7	-4.7
	MSCI Russia	RUB	4.4	7.9	7.9
	MSCI India	INR	9.4	-2.4	-2.4
	MSCI Brazil	BRL	16.3	15.2	15.2
Governments (10-year)	US Treasuries	USD	-0.3	4.8	4.8
	UK Gilts	GBP	-0.6	5.2	5.2
	German Bunds	EUR	-0.4	5.3	5.3
	Japan JGBs	JPY	-0.1	3.2	3.2
	Australia bonds	AUD	0.8	5.5	5.5
	Canada bonds	CAD	0.0	2.0	2.0
Commodity	GSCI Commodity	USD	4.9	-2.5	-2.5
	GSCI Precious metals	USD	0.4	16.0	16.0
	GSCI Industrial metals	USD	0.1	1.9	1.9
	GSCI Agriculture	USD	3.4	-0.9	-0.9
	GSCI Energy	USD	8.3	-6.2	-6.2
	Oil (Brent)	USD	9.7	11.9	11.9
	Gold	USD	0.1	16.2	16.2
Credit	Bank of America/ Merrill Lynch US high yield master	USD	4.4	3.2	3.2
	Bank of America/ Merrill Lynch US corporate master	USD	2.7	3.9	3.9
EMD	JP Morgan Global EMBI	USD	3.3	5.2	5.2
	JP Morgan EMBI+	USD	3.2	5.9	5.9
	JP Morgan ELMi+	LOCAL	0.4	1.2	1.2
Currencies	EUR/ USD		4.6	4.5	4.5
	EUR/JPY		4.5	-1.9	-1.9
	JPY/ USD		0.0	6.6	6.6
	GBP/USD		3.2	-2.6	-2.6
	AUD/USD		7.4	5.5	5.5
	CAD/USD		4.1	6.4	6.4

Source: Thomson Datastream, Bloomberg, 31 March 2016.

Note: Blue to red shading represents highest to lowest performance in each time period.



For professional investors and advisors only. This document is not suitable for private customers. This document is intended to be for information purposes only and it is not intended as promotional material in any respect. The material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The material is not intended to provide, and should not be relied on for, accounting, legal or tax advice, or investment recommendations. Information herein is believed to be reliable but Schroder Investment Management Ltd (SIM) does not warrant its completeness or accuracy. No responsibility can be accepted for errors of fact or opinion. This does not exclude or restrict any duty or liability that SIM has to its customers under the Financial Services and Markets Act 2000 (as amended from time to time) or any other regulatory system. Schroders has expressed its own views and opinions in this document and these may change. Reliance should not be placed on the views and information in the document when taking individual investment and/or strategic decisions. Issued by Schroder Investment Management Limited, 31 Gresham Street, London EC2V 7QA. Registration No. 1893220 England. Authorised and regulated by the Financial Conduct Authority. For Bermuda Clients only: Schroders (Bermuda) Limited is an indirect wholly-owned subsidiary of Schroders plc and is licensed to conduct Investment Management business by the Bermuda Monetary Authority. For your security, communications may be taped or monitored. w48270