Wealth and Investment Management

Compass

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Variation on a major theme

Macro update: weather report

EUR/USD: End of the pain trade?

China reforms: a progress report

Demographics: Greyer needn't mean poorer

Cattle to coins: the evolution of modern money

A manifesto for individual investors

Contents

Variation on a major theme 2

Macro update: weather report 3

Business cycle: upswing intact ... 3
Investment conclusions ... 5
Barclays' key macroeconomic projections ... 6

TAA: as we were 7

EUR/USD: End of the pain trade? 8

EUR crisis no longer the fundamental driver of EUR/USD performance ... 8
Resilience driven by different factors in Q4 13 and Q1 14 ... 8
USD strength, rather than EUR weakness will weigh on the cross… ... 9
… but a lack of EUR strength will help too ... 10
Gradual EUR/USD downturn still our core view ... 10
Weaker EUR/USD. But what about sovereign bond markets? ... 10

China reforms: a progress report 11

Financial reforms ... 11
SOE reforms ... 11
Fiscal and administrative reforms ... 12
Environmental protection ... 12
Urbanization and Hukou reforms ... 12
Free Trade Zones ... 13
Managing the credit situation ... 13
Growth expected to be slower…but not much ... 14
Conclusion ... 14

Demographics: Greyer needn't mean poorer 15

Demography needn't mean dependency ... 15
Portfolio implications ... 17

Cattle to coins: the evolution of modern money 20

What is "money"? ... 20
The evolution of money ... 20
A new form of money: virtual currencies ... 21
Bitcoin: De-coded ... 23

A manifesto for individual investors 24

A. Create a safe environment for investing ... 24
B. Determine how much you can invest, and put it to work ... 24
C. Remove unnecessary risks and invest efficiently ... 24
D. Stay invested and do not meddle ... 25

Interest rates, bond yields, and commodity and equity prices in context 26

Global Investment Strategy Team 29

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Variation on a major theme

"I keep thinking there's bound to be something else… I could hear it sometimes, but I couldn't play it" – Charlie Parker

Dear clients and colleagues,

We sometimes think there must be something obvious to be said about an important topic, only to find that when we try to say it things are actually a little more complicated than they seem. Our aging populations are a case in point: surely there must be some clear-cut implication for investing? But there isn't: there are simply too many moving parts even for the brightest and best to disentangle (if Bird couldn't play something, it wasn't playable). The best advice is to keep an open mind: an aging population needn't be poorer, and its investment portfolios needn't be any smaller (which is not necessarily the same thing).

The welcome measures in the UK budget have put pension funds themselves back on the front pages, and prompt us in this Compass to remind readers of the extent to which the "demographic timebomb" is nowhere near as scary as it is sometimes made to seem. Financial flows – whether capitalised or annuitised – actually have less to do with the collective resourcing of pensions than you might think. But if you're going to accumulate a pension pot, stocks remain the most obvious way of growing its value (for a defined contribution fund) and of backing any long-dated nominal promise it makes (for defined benefit schemes), whatever the strange world of pension accounting may say. This is provided, of course, that those stocks are not prohibitively expensive to begin with, which they still aren't in our opinion.

Indeed, whether investing with a specific nominal target in mind, or simply to maximise risk-adjusted returns, developed stock markets in particular still look to us to be the most attractive asset class strategically and tactically. Geopolitical risk in the Ukraine, and increasingly visible interest rate risk in the UK and the US, does seem to threaten some renewed stock market volatility. So too does the slowdown in China, though, as we note below, the Chinese government is both able and willing to do a lot to prevent it from turning into the hard landing and financial disruption that many fear. Until the next US recession looms more visibly, we continue to view such volatility as a likely opportunity for under-invested clients to add to their positions – risk appetite and financial circumstances permitting, of course.

Kevin Gardiner,
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Macro update: weather report

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Geopolitical risk has become more visible in the last month, but the West's recovery looks more resilient and emerging economies continue to expand solidly. We still expect a slightly faster-growing and more synchronised economy in 2014, and see this – together with relative valuations – favouring stocks ahead of bonds. Tactically, developed markets still have the edge, but this is likely a good long-term entry point for emerging markets, particularly those in Asia.

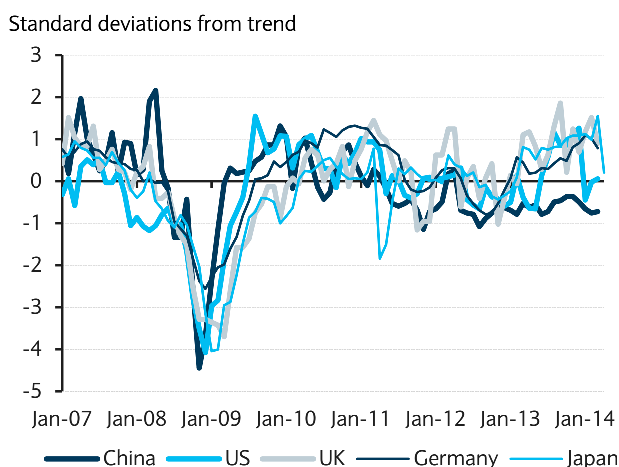
Business cycle: upswing intact

Surveys mostly point to above-trend growth; UK retail sales and employment data hint at interest rate risk

The sharp fall in the new orders component of the US ISM Manufacturing Index has been partially reversed, suggesting – as we'd thought – that the decline had a lot to do with severe New Year weather (Figure 1). Business surveys from the UK and continental Europe continue to show manufacturers' order books at above-trend levels. Manufacturers' optimism in Japan has taken a dive, likely reflecting the higher consumption tax, but it remains above trend and experience suggests that such tax-related effects even out eventually. China's order books tell a different, below-trend story, but the shortfall is not dramatic and the trend there is, of course, much stronger to start with. On balance, the business cycle still looks to be in an upswing: we think global growth will be slightly faster, and more synchronised, in 2014.

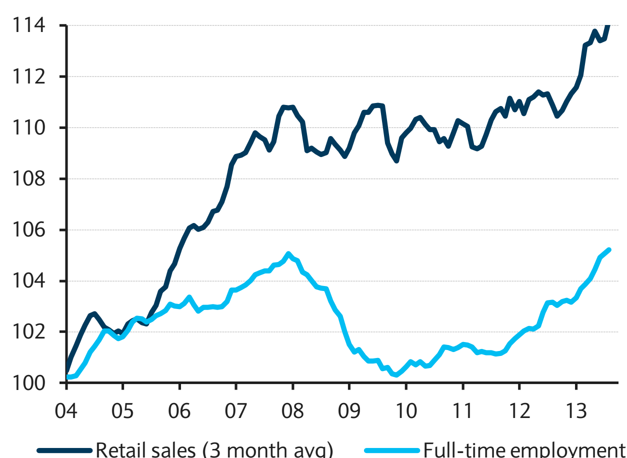
Of course, Russia's threats to the Ukraine, and the possibility of more severe Western economic reprisal, represents a very obvious source of near-term risk. Our advice there has been to eschew the analysis of the armchair warriors, and avoid the temptation to become an instant expert in the politics of the region (which have been complex for many decades, if not centuries). Even the principal protagonists do not know how things are going to turn out, not least because the actions of paramilitaries are unpredictable, as will be the protagonists' own responses to as yet unknown events. Instead, we'd suggest that there is a dominant strategy for both sides – namely, not to escalate things militarily, because the possible costs so hugely outweigh any gains – and that this logic will likely and eventually prevail. Of course, in this centennial year above all others, we are aware of the limits of logical analysis.

Figure 1: Selected business surveys (manufacturing)



Source: Datastream, Bloomberg, Barclays Research

Figure 2: UK retail sales, full-time employment: indices



Source: Datastream, Barclays Research

A more fundamental risk – in economic terms – is the slow normalisation of the monetary climate. This is a process that we welcome as a sign that the US and Western economies are now generally (as we've long believed they would be) more able to stand on their own two feet. But the process still has the potential to unsettle markets for a while at least. Many investors are complacent in their assumption that central bankers' forward guidance counts for much beyond the next month or two – as indeed may be some of the central bankers themselves, even after they have already had to back-track so visibly in the UK and the US. In the UK, some unexpectedly good inflation data have been more than countered by some remarkably robust retail sales and employment reports (Figure 2), and if rates have to rise unexpectedly quickly – possibly even this year – this is perhaps where the risk is greatest.

A financial accident in China is a risk – but one we think its government can deal with

China is another source of risk, not so much because of the current below-trend readings from its manufacturing surveys (as noted its trend has been a remarkably strong one), but instead because of the possibility of a sudden lurch lower, sparked by a financial accident. As we discuss in the special essay below, however, the government's hands are far from tied: it has the potential – and the balance sheet – to respond aggressively should dramatic action be needed. And we remain unconvinced that it will be.

The shadow banking sector is the focus of many investors' concerns, but as Joe Zhang notes in *"Inside Shadow Banking: The Next Subprime Crisis?"*, it may be only a symptom. The underlying problem is the lack of a fully functioning capital market, and what it has become fashionable to call 'financial repression'. Until China's interest and exchange rates are determined more decisively by market forces, and less by administrative fiat, China's massive flows of household savings will be allocated inefficiently and potentially riskily. Incremental liberalisation has long been underway (the essay below provides more detail). Recent weeks have, for example, seen the country's first default on an onshore corporate bond, and a widening of the renminbi's trading bands against the dollar. The process is slow, and room for an accident remains. But, as noted, we doubt that a systemic threat will materialise: household and government balance sheets are unremarkable, and the government has massive foreign exchange reserves available for any necessary recapitalisation of banks.

We see few signs yet of US economic excess

For the time being, then, we continue to give economic growth the benefit of the doubt. The US recovery is now mature at 57 months (NBER data show the average post-war upswing to have been 59 months), yet we still see few signs of the sort of excesses that might call time on it. The private sector's free cashflow remains firmly in positive territory, and a big surge in cyclical spending – new houses and business capital expenditure – may still be yet to come.

Figure 3: Developed stocks: forward PE ratio and trend

Source: MSCI, Barclays Research

Figure 4: Developed stocks: price/book and trend

Source: MSCI, Barclays Research

Investment conclusions

On this reading, we are still in the stock-friendly phase of the business cycle, though it is not the easy call that it has been for most of the last five years. Stocks are no longer cheap, and on some measures are looking a little expensive (Figure 3). Analysts' earnings-projections revisions are not yet being boosted by improved growth prospects – indeed, they have just fallen markedly. Moreover, rising interest rates and bond yields, as noted, have the potential to unsettle markets.

Other assets look more expensive than stocks

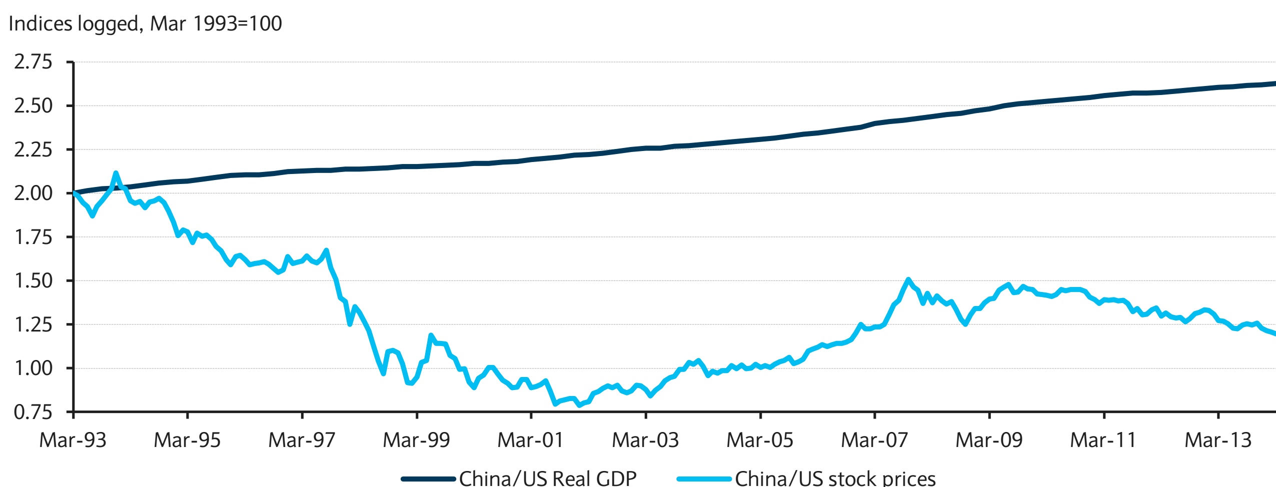
Nonetheless, other valuation measures are less elevated (Figure 4), and other large asset classes look more expensive. Government bonds and investment grade credit are the two most expensive of the nine asset classes in our balanced portfolio. High yield and emerging market bonds, and cash, also look more expensive than developed stocks, while emerging stocks are now the cheapest of the nine. Analysts' forecasts, as we've regularly noted , often take on a life of their own, falling much more often than they – and earnings – rise. And volatility inspired by monetary normalisation is likely, in our view, to be short-lived. This is partly because the recovery in stocks has been soundly based, and is *not* simply a product of central banks' quantitative easing (QE) and low interest rates (the rebound in profits has been too big, and too predictable, for it to have been simply a result of QE).

The most pressing question is not whether to bail out of stocks, but whether to tactically tip emerging markets

Indeed, the most pressing question tactically may be not whether we should switch from stocks to other asset classes, but whether it is yet time to turn more positive on emerging stocks relative to developed markets. We continue to think it may be premature to tactically overweight emerging markets. They have started to outperform in the last month or so, but the trend is tentative, and it is perhaps the capital market that is most exposed to those monetary nerves. We think that most of the footloose international capital will have been repatriated by now, but we'd feel happier with an overweight call if we could see more of that normalisation priced into the US bond market itself – a 10-year Treasury note yield holding above 3%, say.

In the meantime, our optimism on emerging stocks is more strategic (five years) than tactical (3-6 months). We know that economic growth is not enough, but it helps. Figure 5 reminds us that China has been a fantastic economy but a disappointing investment in recent years, and US investors especially would have done far better to stay at home. However, if the government means what it says about market forces playing a more decisive role across the economy, and if those financial reforms continue (discussed in more detail below), we might yet see China's structural slowdown coinciding with improved stock market performance. There may be less prospective GDP growth in China, but what there is may be more valuable to investors if more of it makes its way to the corporate bottom line.

Figure 5: China's relative GDP and stock market performance



Source: FactSet, MSCI, Barclays

Barclays' key macroeconomic projections

Figure 6: Real GDP and consumer prices (% y-o-y)

	Real GDP			Consumer prices		
	2013E	2014F	2015F	2013E	2014F	2015F
Global	2.9	3.4	3.8	2.6	3.0	3.1
Advanced	1.2	2.1	2.1	1.3	1.6	1.8
Emerging	4.8	4.7	5.4	4.9	5.4	5.3
United States	1.9	2.7	2.6	1.5	1.7	2.1
Euro area	-0.4	1.3	1.5	1.4	0.9	1.1
Japan	1.5	1.0	1.2	0.4	2.8	2.3
United Kingdom	1.8	2.7	2.5	2.6	1.7	1.9
China	7.7	7.2	7.4	2.6	2.7	3.5
Brazil	2.3	1.9	2.4	6.2	5.9	5.9
India	4.6	5.3	6.4	6.3	5.4	5.6
Russia	1.3	0.7	1.4	6.8	6.7	5.7

Source: Barclays Research, *Global Economics Weekly*, 28 March 2014
Note: Arrows appear next to numbers if current forecasts differ from previous week by 0.2pp or more. Weights used for real GDP are based on IMF PPP-based GDP (5yr centred moving averages). Weights used for consumer prices are based on IMF nominal GDP (5yr centred moving averages).

Figure 7: Central bank policy rates (%)

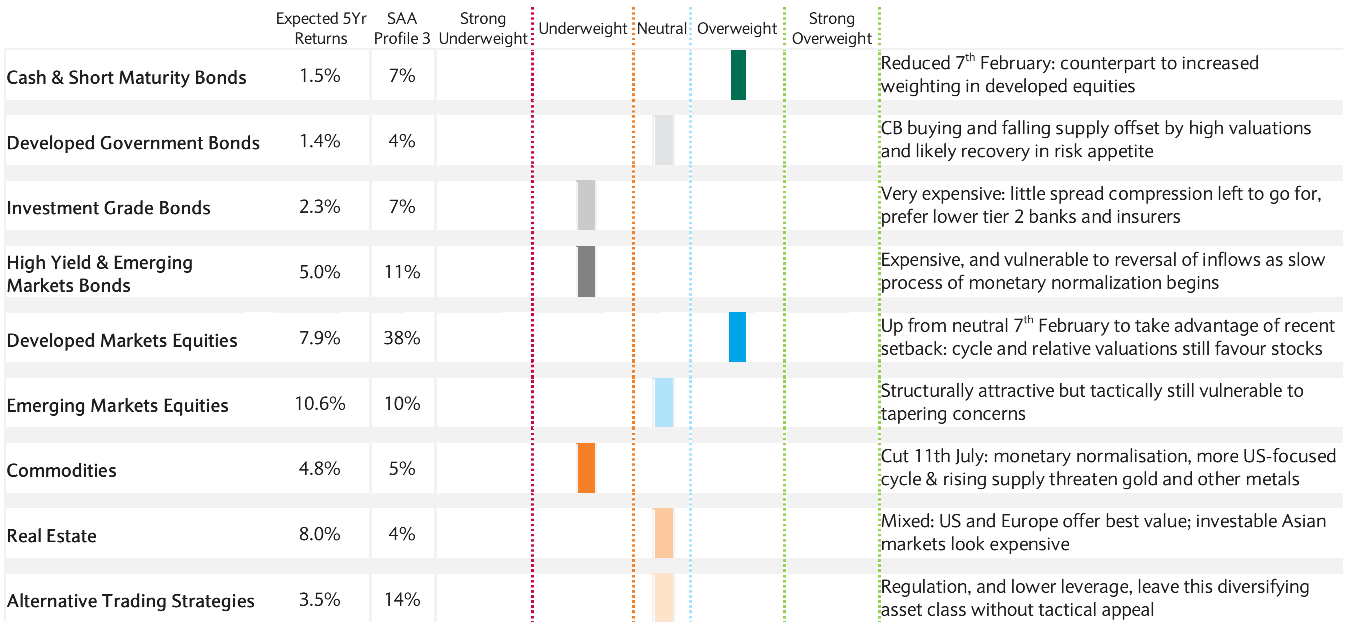
Official rate % per annum (unless stated)	Current	Forecasts as at end of		
		Q2 14	Q3 14	Q4 14
Fed funds rate	0-0.25	0-0.25	0-0.25	0-0.25
ECB main refinancing rate	0.25	0.25	0.25	0.25
BoJ overnight rate	0.10	0-0.10	0-0.10	0-0.10
BOE bank rate	0.50	0.50	0.50	0.50
China: 1y bench. lending rate	6.00	6.00	6.00	6.00
Brazil: SELIC rate	11.00	11.00	11.00	11.00
India: Repo rate	8.00	8.00	7.75	7.50
Russia: Overnight repo rate	7.00	8.00	8.00	8.00

Source: Barclays Research, *Global Economics Weekly*, 28 March 2014
Note: Rates as of COB 2 April 2014.

TAA: as we were

We have made no further tactical changes since our Tactical Allocation Committee in early February took advantage of the modest setback in developed stocks to reverse a mid-November move and restore developed stocks to a tactical overweight, from neutral. It was funded by cutting cash from an opportunistic strong overweight to overweight. As we note above, this is still the stock-friendly phase of the business cycle, and valuations are not prohibitive. We stay tactically neutral on government bonds (at a low strategic weighting, reflecting high valuations there). We stay underweight commodities, investment grade credit and high yielding fixed income (specifically, emerging market bonds). We still feel it is too soon to turn more positive on emerging stocks.

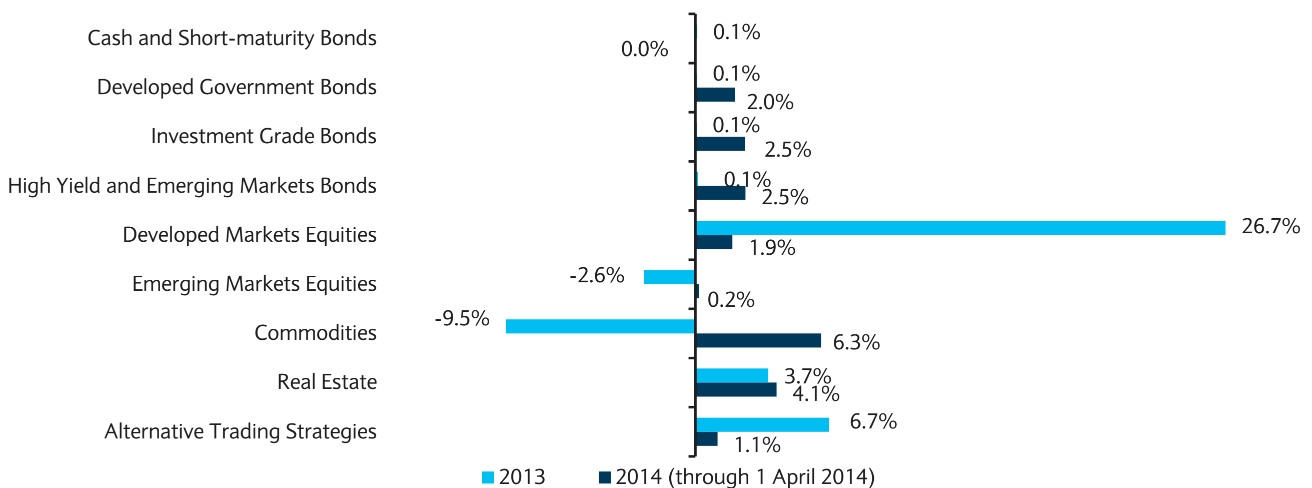
Figure 1: Tactical Asset Allocation tilts and Strategic Asset Allocation Benchmark (moderate risk profile)



	Expected 5Yr Returns	SAA Profile 3	Strong Underweight	Underweight	Neutral	Overweight	Strong Overweight	
Cash & Short Maturity Bonds	1.5%	7%						Reduced 7th February: counterpart to increased weighting in developed equities
Developed Government Bonds	1.4%	4%						CB buying and falling supply offset by high valuations and likely recovery in risk appetite
Investment Grade Bonds	2.3%	7%						Very expensive: little spread compression left to go for, prefer lower tier 2 banks and insurers
High Yield & Emerging Markets Bonds	5.0%	11%						Expensive, and vulnerable to reversal of inflows as slow process of monetary normalization begins
Developed Markets Equities	7.9%	38%						Up from neutral 7th February to take advantage of recent setback: cycle and relative valuations still favour stocks
Emerging Markets Equities	10.6%	10%						Structurally attractive but tactically still vulnerable to tapering concerns
Commodities	4.8%	5%						Cut 11th July: monetary normalisation, more US-focused cycle & rising supply threaten gold and other metals
Real Estate	8.0%	4%						Mixed: US and Europe offer best value; investable Asian markets look expensive
Alternative Trading Strategies	3.5%	14%						Regulation, and lower leverage, leave this diversifying asset class without tactical appeal

As of July, we use qualitative descriptions of our Tactical positions relative to their Strategic benchmarks, ranging from 'strongly underweight' to 'strongly overweight'. This is a shift away from the percentage-based reporting method we used in the past. Our **Strategic Asset Allocation (SAA)** models offer a mix of assets that over a five-year period will in our view provide the most desirable mix of return and risk at a given level of Risk Tolerance. They are updated annually to reflect new information and our evolving outlook. Our **Tactical Asset Allocation (TAA)** tilts these five-year SAA views to reflect our shorter-term cyclical views. For more detail, please see our *Asset Allocation at Barclays* white paper and the February 2013 edition of *Compass*. Source: Barclays

Figure 2: Total returns across key global asset classes



Note: Past performance is not an indication of future performance. Index Total Returns are represented by the following: Cash and Short-maturity Bonds by Barclays US Treasury Bills; Developed Government Bonds by Barclays Global Treasury; Investment Grade Bonds by Barclays Global Aggregate – Corporates; High-Yield and Emerging Markets Bonds by Barclays Global High Yield, Barclays EM Hard Currency Aggregate & Barclays EM Local Currency Government; Developed Markets Equities by MSCI World Index; Emerging Markets Equities by MSCI EM; Commodities by DJ UBS Commodity TR Index; Real Estate by FTSE EPRA/NAREIT Developed; Alternative Trading Strategies by HFRX Global Hedge Fund. The benchmark indices are used for comparison purposes only and this comparison should not be understood to mean that there will necessarily be a correlation between actual returns and these benchmarks. It is not possible to invest in these indices and the indices are not subject to any fees or expenses. It should not be assumed that investment will be made in any specific securities that comprise the indices. The volatility of the indices may be materially different than that of the hypothetical portfolio.

EUR/USD: End of the pain trade?

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EUR/USD's price action over the past quarters surprised many. While the cross' resilience can be attributed to various factors, we think that most of them have now faded. Once the market starts pricing in tighter US monetary policy more aggressively, EUR/USD is likely to start depreciating on a sustained basis. We retain a bullish USD view.

Since summer 2012, the performance of EUR/USD has constantly defied expectations. Since its trough of close to 1.20, it has appreciated by around 14%, currently trading just below the psychological 1.40 level. What has caused this appreciation and where we do see the cross going forward?

EUR crisis no longer the fundamental driver of EUR/USD performance

In October's Compass essay *"EUR/USD: Good things come to those who wait (eventually)"*, we discussed in detail the reasons driving EUR/USD's resilience at the time, namely a material correction in the EUR risk premium (as the euro area existential crisis began to fade) and stable short-end interest rate spreads between the US and the euro area (thanks to the Fed managing to decouple expectations of QE tapering from rate hike expectations on the one hand, and the passive tightening of euro area monetary conditions as a result of LTRO repayments on the other).

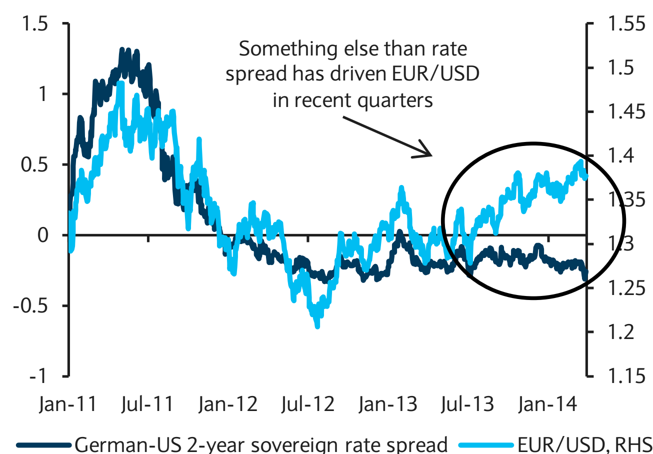
However, given that the stabilisation of the EUR risk premium was the story of late 2012 and the first half of 2013, and that rate spreads suggest flat, rather than strong, EUR/USD (Figure 1), other factors must have driven EUR/USD higher in recent quarters.

Bank's deleveraging and indecisive Fed supported EUR/USD in Q4 13 …

Resilience driven by different factors in Q4 13 and Q1 14

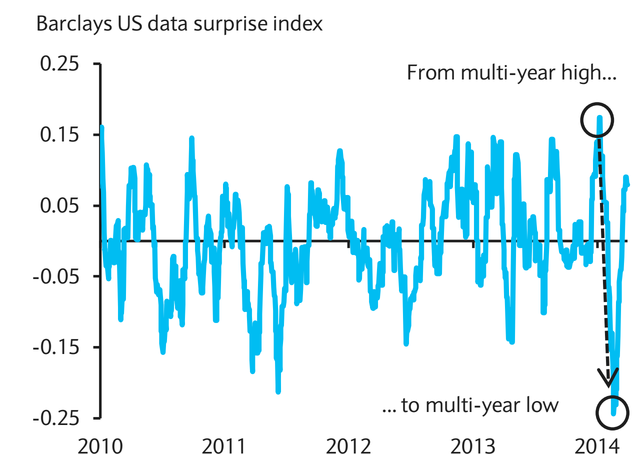
It appears that euro area bank deleveraging supported EUR during late 2013. Banks sold their foreign holdings/assets and repatriated the proceeds back into EUR (while restricting overseas lending) in an effort to strengthen their balance sheets in preparation for the upcoming Asset Quality Review, leading to increased flows into EUR assets. Further, the Fed's mixed messaging on the timing of QE tapering helped to weaken USD (the prime

Figure 1: EUR/USD decoupled from rate spreads



Source: Barclays, EcoWin

Figure 2: US data surprises reversed markedly this year



Source: Barclays

example being the September 2013 FOMC meeting, when the committee, against market expectations, did not announce a start to QE tapering, leading to pronounced USD weakness).

However, with the repatriation story for euro area banks largely having played out over the last year (as the ECB's AQR has been based on the state of banks' balance sheets at the end of 2013), EUR resilience (and further modest appreciation) during the first quarter of this year is likely to have been attributable to other factors: a weak USD and a less dovish ECB.

… but a weak USD and a less dovish ECB helped the cross this year

The pronounced weakness in US data at the start of this year (due to the extraordinarily cold weather), coupled with high market expectations going into the new year, sharply weighed on USD. As Figure 2 shows, the Barclays US data surprise index moved from multi-year highs at the start of the year to multi-year lows – clearly, the extreme moves in actual US data outturns vs market expectations weighed on USD. Indeed, the dollar was not only weak against EUR, but across the board in trade-weighted terms (Figure 3). This, coupled with the ECB's less dovish stance (despite euro area inflation at record lows, the latest estimate currently at 0.5%, the ECB has been reluctant to ease monetary policy further, pointing at anchored medium-term inflation expectations) has been supportive for EUR/USD.

USD strength, rather than EUR weakness will weigh on the cross…

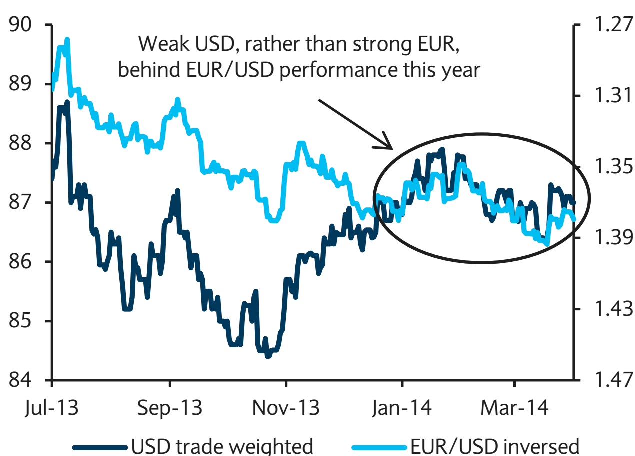
Going forward, it will be primarily about the USD part of the equation and rate hike expectations

We continue to hold the view that it will be the US dollar part of the equation that will drive the cross lower going forward. Specifically, a rise in US short-end rates (which so far have remained anchored unlike longer-term rates) stemming from market expectations of more imminent Fed Funds rate hikes should be a key driver of EUR/USD. These expectations are likely to gain traction as we get beyond the effects of cold weather, leading to "cleaner" US data which should point towards a strengthening economy.

Moreover, core PCE inflation is likely to gain further importance in the light of the Fed's recent adjustments to its forward rate guidance. Although inflation pressures have remained muted so far, our economists expect this to change and prices to rise closer to the Fed's 2% target, driven by factors such as rising wage growth and continued increases in housing-related inflation.

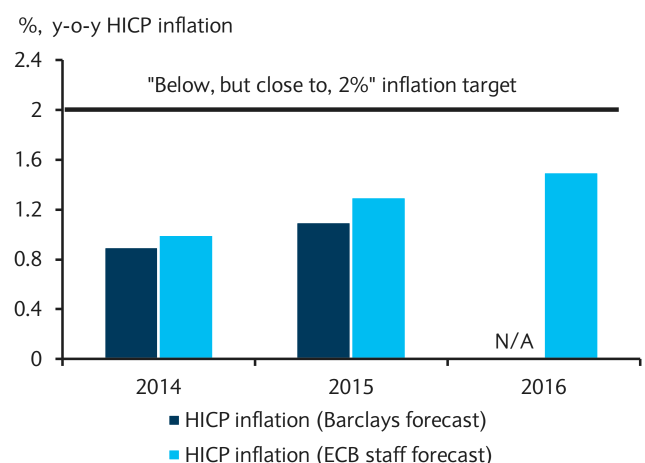
A recovering economy and labour market, coupled with rising inflation, is likely to bring the Fed closer to rate increases. But while actual rate increases are likely to be a story for next year (our economists expect the first rate hike to occur in Q2 2015), the market, being forward looking, is likely to start pricing in such an outcome earlier. Hence, we expect USD strength to take hold during the second half of this year.

Figure 3: Weak USD, rather than strong EUR



Source: Barclays, Bloomberg, BoE

Figure 4: Euro area inflation to remain low for some time



Source: Barclays, ECB

… but a lack of EUR strength will help too

However, it always takes two to tango. When talking about EUR/USD, the outlook for EUR is equally important. While we do not expect EUR to collapse (as the euro area existential crisis appears well behind us), we anticipate euro area monetary policy will lag the US. As argued in our 2014 FX Outlook (*FX 2014: The start of the "GMD"*), we think that monetary divergences will be the crucial determinant for FX crosses in quarters to come. On this criterion, EUR clearly lags USD. While further easing by the ECB does not look imminent, the current historically low levels and likely future path of euro area HICP inflation (based on forecasts from both ourselves and the ECB – Figure 4) suggest policy will remain accommodative for an extended period of time. This should limit EUR upside.

Gradual EUR/USD downturn still our core view

But as seen over the past quarters, accommodative policy by the ECB is not on its own sufficient to weaken EUR/USD. The USD part of the equation also needs to take effect. Unless this happens, one should not expect material moves in EUR/USD. As per the above, we see scope for the market to begin pricing in a more hawkish Fed stance later in the year. This is reflected in our EUR/USD forecast, which points toward gradual EUR/USD depreciation: to 1.35 in 3 months, 1.30 in 6 months and 1.27 in 12 months.

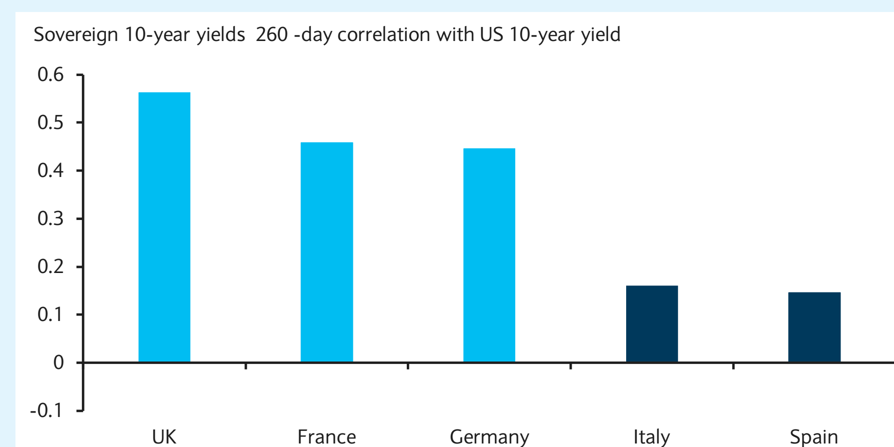
While EUR is to underperform USD, European sovereign bonds look better placed

Weaker EUR/USD. But what about sovereign bond markets?

As per the above, the primary driver for our expectations of a weaker EUR/USD is the prospect for earlier than expected monetary policy normalisation by the Fed. This would mean that yields in the US (particularly those on the short-end) should rise faster than those in the euro area (we expect the ECB to remain on hold for a very long time). This, coupled with a stronger and improved US growth and inflation outlook, should cause US Treasuries to underperform European sovereign bonds.

Not only should the wider euro area sovereign bond benchmark benefit from a dovish ECB (vis-a-vis the Fed), but the fact that peripheral bonds such as Italy and Spain have been trading as pro-cyclical assets (as Figure 5 depicts, they exhibit low correlation with US Treasuries, compared to their regional peers) is a further supportive factor for the benchmark given the stabilising growth environment - Italy and Spain account for 36% of the Barclays Global Aggregate Treasury Euro Area bond index. Indeed, improving growth prospects are supportive for these bonds as they lead to a reduced credit risk premium (the key concern regarding peripheral assets during the euro area crisis).

Figure 5: Peripheral bonds exhibit different characteristics



Source: Barclays, EcoWin

China reforms: a progress report

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China's leadership continues to demonstrate its commitment to reform, and progress in several key areas is now increasingly visible. While short-term pains may be inevitable, policymakers can, and almost certainly will, adopt the necessary measures to keep the economy afloat amid the uncertainty of reform.

The Chinese government endorsed a range of reform initiatives that were detailed in the *Decision Report* published in the wake of last November's Third Plenum. At the National People's Congress (NPC) in March this year, the government reiterated that reform remains its top priority. In our view, the commitment of China's leaders to rebalancing the economy and improving the quality and sustainability of growth is positive. So far, we have witnessed progress in several key areas including i) financial reforms; ii) state-owned enterprises (SOEs) reforms; iii) fiscal/administrative reforms; iv) environmental protection; v) urbanization and *Hukou* reforms; vi) free-trade zones.

Financial reforms

Moving towards interest rate liberalization and a more freely convertible Chinese Yuan

In an NPC press conference, Zhou Xiaochuan – Governor of the People's Bank of China (PBoC) – surprised markets by stating that, in his personal view, the liberalization of deposit rates could be achieved within the next 1-2 years. While the timeframe is significantly shorter than the market expected, the rapid growth of money-market funds and other internet-related finance products (which offer higher returns to depositors) have already and indirectly accelerated the liberalization process. The effect of achieving this goal sooner than expected could increase funding costs of banks and adversely affect the sector's earnings in the short term. However, the move is in line with the government's long-term goal of deregulating the financial sector to reflect the true cost of capital.

Another area of significant progress relates to the PBoC's widening of the USD/CNY daily trading band to +/-2% (from +/-1%). The move is part of an effort to generate greater exchange-rate flexibility. The move came about as the PBoC reiterated its intention to "exit day-to-day FX intervention, allowing market supply and demand to determine the exchange rate." The purpose of widening the trading band is two-fold. In the near term, the central bank aims to create two-way expectations on the yuan (CNY) and curb speculative inflows. From a longer-term point of view, the initiative is designed to create a more flexible, market-driven exchange rate. This latter objective is part of a broader process of making the currency more freely convertible, therefore encouraging its international use.

SOE reforms

Potential positives from SOE restructuring and opening up to private capital

During the NPC, the government confirmed its intent to open up sectors to private capital investment. These sectors include: finance, petroleum, electricity, railway, telecom, mining and public utilities. Previously, these industries were restricted to state-owned enterprises (SOEs) only. Over recent months, the government has approved the establishment of five new, privately owned banks to encourage greater competition and efficiency in the country's largely state-operated financial system. One of China's state-owned oil companies also is planning to divest a 30% share of its retail distribution business to private investors. More recently, a state-owned conglomerate announced its intention to inject a range of businesses (covering financials, resources and industrial construction and manufacturing) into its Hong Kong-listed subsidiary to create a more diverse ownership structure.

Investors have reacted largely positively to the SOE reform plan, in view of its potential benefits. For instance, the railway sector could gain access to additional sources of funding, which would support new investment and development. Having more private sector involvement also could lead to more efficient business management and deployment of capital for the SOEs. Selected local governments also could divest part, or all, of their stakes in local SOEs, and then use the proceeds to repay their surging debt, if necessary. While few details were discussed during the NPC, we may well hear more on this issue in due course, which could lead to acceleration in SOE restructuring activities.

Fiscal and administrative reforms

More balanced growth targets for local governments

Since China's new leaders took charge last year, they have worked aggressively to improve controls and transparency across public services. Government offices are now required to make their spending and budgets available to the public. Lavish spending and gift-giving also have been prohibited. Meanwhile, a study has been commissioned to examine the inclusion of local government debt in the management of budgets. The central government also is looking at giving local governments the ability to issue new bonds directly as part of measures intended to curb the build up of local government debt. More encouragingly, the evaluation of local government performance is now less focused on economic growth and more concerned with the quality and sustainability of growth: governments are paying attention to debt, overcapacity, the environment, technology innovation and social welfare.

Environmental protection

The fight against pollution is not likely to end overnight

"The way the economy grows must change, and all industries must eliminate waste, reduce consumption of energy and raw and processed materials, and use resources more efficiently, to develop production and consumption patterns that conserve resources and build a conservation-minded society."

The above quote comes from former Premier Wen Jiabao's speech to the NPC in March 2004. Today, ten years later, current Premier Li Keqiang's work report identifies pollution as "nature's red-light warning against the model of inefficient and blind development". Various initiatives and targets have been adopted, highlighting the government's commitment to tackle environmental issues. For instance, the authorities now conduct PM2.5[1] monitoring in 161 cities to control air pollution. Firm targets for cutting their PM2.5 levels by 2017 also have been given to respective provinces, self-governing municipalities and autonomous regions. (Source: Ministry of Environmental Protection). The government is aiming to reduce its coal usage to <65% of its total energy consumption this year (Source: Bloomberg). It will also continue to invest in environmentally sustainable infrastructure, such as the addition of water treatment capacity.

The fight against pollution in China is not new, and the implementation of these particular reforms will be as drawn-out as it will be complex. With the country continuing to balance its need for stable economic growth with environmental protection, it is clear that drastic change on the issue of pollution is unlikely to come about overnight. While the focus on pollution has spurred interest in the environment-related sectors (e.g. clean energy, water treatment), we would caution against blindly investing in "green" companies, particularly those with a poor track record. Instead, fundamentally sound companies that were deemed as contributing to pollution (e.g. coal producers) may be worth revisiting, especially if they had been sold down unjustifiably.

Urbanization and Hukou reforms

China announced its 'New Style Urbanization Plan' with the aim of increasing the urbanization rate from 54% (2013) to 60% by 2020 (Source: Xinhuanet). A higher level of urbanization could help raise the average income of the population (rural residents, in

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[1] Particulate matter, or PM, is the term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets. Particles less than 2.5 micrometers in diameter (PM2.5) are referred to as "fine" particles and are believed to pose the greatest health risks. Because of their small size (approximately 1/30th the average width of a human hair), fine particles can lodge deeply into the lungs. (Source: www.epa.gov)

particular) and promote consumption growth. It also could bring about demand for public infrastructure, as well as housing investment, to support economic development, especially in smaller cities. To facilitate the urbanization process, the reform of the household registration system (or *Hukou*) remains critical. With its new urbanization plan, the government aims to make it easier for rural migrants to obtain residency status in urban cities and so enjoy the basic services and benefits afforded to existing urban residents. The unification of pension schemes for urban and rural residents is a good start – and we expect there will be further initiatives aimed at enabling China to achieve its urbanization objectives.

Free Trade Zones

We have witnessed developments in the Shanghai Free Trade Zone (SFTZ) since its establishment in September 2013. In January this year, the State Council issued revised regulatory rules for foreign direct investments (FDI), and relaxed restrictions on foreign access to selected service sectors. Detailed rules on the implementation of the free trade account system that enables full convertibility of the CNY, and allows offshore financing in the SFTZ, also are expected to be rolled out by the end of June.

Proposals for establishing FTZs in other provinces – including Guangdong, Zhejiang and Fujian – also have been floated, although no clear timeline for approval has been indicated. As highlighted in our article *It's another FTZ? No, it's SFTZ!* (published in our *Asia Compass, November 2013*), the FTZ concept may be a good testing ground for major reforms as well as for innovative investment and services-trade liberalization. The jury is still out on the effectiveness of FTZs, but we remain cautiously optimistic that something good will emerge.

A summary of the key reform developments discussed can be found in Figure 1.

Figure 1: Key reform developments

Reform Areas	Notable developments
Financial reforms	• Acceleration of deposit rate liberalization • Widening of CNY trading band limit to +/-2% • Commitment to implement deposit insurance scheme by 2014 • Approval for establishment of 5 new privately-owned banks
SOE reforms	• Opening up of selected sectors to private capital investment • Partial divestment of stake in previously restricted business activities • Injection of assets into listed entity to create more diversified ownership
Fiscal and administrative reforms	• Government offices required to make available their budget/spending to the public • Study initiated on the inclusion of local government debt in budget management • Local governments evaluated less on economic growth • Lavish spending and gift-giving is now strictly prohibited
Environmental protection	• Active monitoring of air pollution levels and specific reduction targets by 2017 • Reduce coal usage to <65% of total energy consumption
Urbanization and Hukou reforms	• Increase urbanization rate from 54% (2013) to 60% (2020) • Unify the pension schemes for both urban and rural residents
Free Trade Zones (FTZ)	• Relax restrictions on foreign access to selected service sectors in Shanghai FTZ • Implement rules for free trade account in Shanghai FTZ by Jun 14 • Develop proposals for establishing FTZs in other provinces

Source: Barclays Research, Ministry of Environmental Protection, Bloomberg, Xinhuanet

Managing the credit situation

While China is making steady progress with its reforms, investors are becoming increasingly nervous about the country's rising leverage. Shanghai Chaori Solar Energy's failure to meet interest payments on its debt made it China's first onshore corporate bond default, and prompted fears of further defaults across the country. The near-default of troubled trust

products, such as China Credit Trust, raised further concerns about potential liquidity pressure. Unsurprisingly, policymakers are paying very close attention to financial and debt risk. Trust products running into trouble are not new; there have been at least 22 cases reported since 2012. However, compared to previous years, the sector is witnessing a significant increase in the number of trust products maturing in 2014.

That said, it is premature to conclude that China is in line to experience a "Lehman moment". During the NPC, Premier Li acknowledged that some defaults are probably unavoidable, but these are unlikely to present systemic risks. Arguably, some defaults could be positive, as they would relieve the government of the burden of implicitly guaranteeing trust products. Over time, this would lead to more disciplined pricing and greater differentiation. At the same time, it is unlikely that the government would allow a default that could give rise to systemic risks, and we believe it has the ability to prevent that situation from occurring.

Growth expected to be slower…but not much

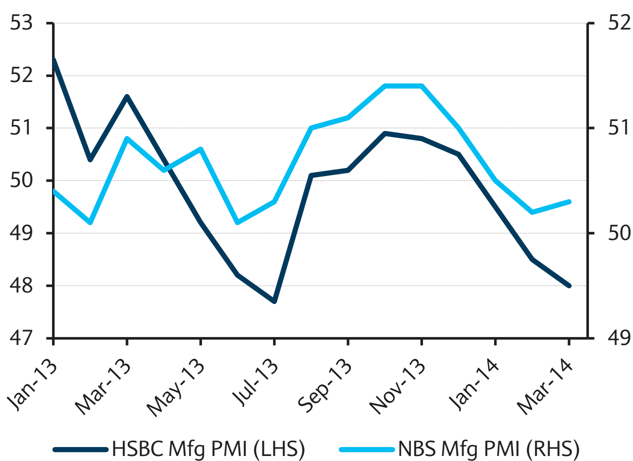
Apart from credit default risks, growth concerns have been raised by softer macro data such as the manufacturing PMI (Figure 2). Our economists expect growth to slow from 7% in 4Q13 to 4.9% in 1Q14 (on a q/q seasonally adjusted annual rate). Premier Li's comment that the 2014 GDP growth target of 7.5% remains "flexible" reflected the government's tolerance of slower growth if it means longer-term reforms can be implemented.

Premier Li also indicated that the government has the capability to keep growth within a reasonable range, and has, in hand, policies to counter any volatility this year. While we do not expect any large-scale stimulus, we do believe the government will introduce fiscal and/or monetary measures to support growth when necessary. Our economists maintain their growth forecast of 7.2% for 2014 – which they believe is the bottom of the range for policymakers – with an expectation for growth to pick up in 2H14.

Conclusion

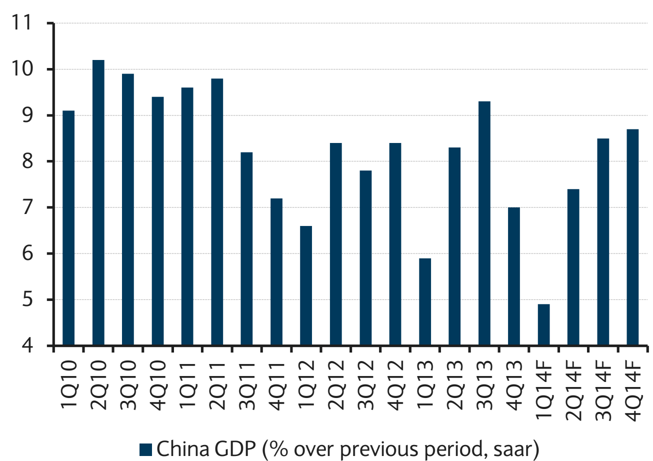
China has made some progress with its reforms, but the job is far from finished. Investors may want to see more progress – not just in the areas discussed – but also on such themes as land reforms, tax reforms, and healthcare reforms. However, the government will take a measured approach in an effort to balance its commitment to reform with its need to maintain stable growth. Although the task is anything but easy, we remain optimistic that Chinese leaders will be successful in their reform endeavours.

Figure 2: PMI downtrend in recent months



Source: Barclays, Bloomberg

Figure 3: China GDP Quarterly Growth



Source: Barclays, Bloomberg

Demographics: Greyer needn't mean poorer

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The UK Budget has put the pensions debate back on the front pages. However, while the changes to the way in which defined contribution pension funds can be used are welcome, they don't really affect the collective resourcing of our pensions. We needn't worry about that: received wisdom is far too pessimistic. Here we remind readers why our greyer society can easily afford its collective pensions; why financial assets – capitalised or annuitized – have less to do with it than you might think; and why an explicit demography 'theme' should not feature prominently in investment portfolios. Valuations permitting, a substantial holding in equities remains the best way of acquiring the long-term cashflow that finances individual pensions.

Demography needn't mean dependency

There are few things that can be predicted 30 years ahead with any confidence, but a greyer population is one of them. Most of the people who will be alive then are already born. Life expectancy is rising while birth rates have been declining, and the result is that the over-65 group is poised to almost double, from 8% of the population to around 15%. The trend will be most pronounced in the BRIC quartet and Japan, but Europe faces big increases too.

The resultant 'demographic time-bomb' has long been worrying economists. How can aging societies maintain living standards? How will they pay for their collective pensions? But the worries are overdone.

Societies will get greyer – but economists may be worrying too much

Economists have form here. They have often proclaimed – prematurely – that the world is about to run short of a key resource. Malthus worried that a growing population would not be able to feed itself. The Club of Rome worried we'd run out of oil. Fears about the aging population are driven by just such a concern, although this time the idea is that we are about to run out of workers. They are likely just as premature.

Before explaining why, there is a conceptual point to clarify first, and it relates to the role played by savings in "funding" pensions.

The pensions debate has been given added urgency by the financial crisis. Not only are we set to run out of labour, but our cumulative savings, and the income from them, seem disappointingly small, hence the UK chancellor George Osborne's decision to liberalise the way in which pensions can be taken. However, in aggregate, financial markets and savings do not directly make available the real resources that pay for society's collective pensions.

Financial markets don't fund pensions – the economy does

Forget something you may take for granted at the personal level: the idea that a pool of savings directly provides your pension. For society as a whole, this is not the case. There are no collective stockpiles to be consumed in retirement – no warehouses full of tinned food and clothing. What pensioners consume is made shortly beforehand by those still in work. Pensions in aggregate are resourced on a pay-as-you-go basis by the productive capacity of the economy. That capacity is linked to past aggregate saving and investment decisions, but only indirectly and loosely. Imagine what would happen if we all tried to double the amount we save (or Google 'The paradox of thrift'). The economy would shrink, because the immediate result of us spending less would be that business dried up

and total incomes would fall – and with them, most likely, the actual flow of savings (hence the paradox).

The collective picture is thus more subtle than realised. If there is nothing in the shops, our carefully accumulated investment portfolios will be of little use. Ownership of financial assets gives us a place in the queue for a share of that production, but for society as a whole it doesn't change what's available for distribution between those in work and those not.

How does this help with the demographic problem? Because it focuses attention on what is important. Economic growth matters most, and the obstacles to growth posed by an aging society are routinely and materially overstated, for three main reasons:

(1) The elderly are not the only dependents

For the UK, the ratio of elderly to working-age people is poised to rise by almost one-half in the next 30 years. For some other countries, the increase is even more dramatic: roughly two-thirds in France, Germany, Italy and the US; a doubling in Japan and Russia; a more-than-doubling in India and Brazil; and a more-than-trebling in China.

Demography is not the only driver of economic dependency

The pessimists assume that this is a good guide to the increase in economic dependency, the burden carried by the working population. But it isn't. The output of those in work has to support all those who are not working. Pensioners are not the only non-working age group. More importantly, not everybody of working age is in work.

Time-bombers routinely overlook both the unemployed (people of working age who are part of the workforce, but can't find a job), and the economically inactive (people of working age who are not looking for work, and so not participating in the workforce, for whatever reason). When we allow for the wider non-working population, the increase in total dependency ahead is much smaller than the age mix alone suggests. The UK experienced a bigger burden back in the early 1980s: there were fewer pensioners then than there will be, but unemployment was very high, and participation rates were lower – which brings us to…

(2) Labour utilisation can change

It gets better (or worse, if you worry about the quality of the public debate in this respect). Time-bombers don't simply forget to place pensioners in their wider economic context, they also ignore the possibility that the context can change. This is perverse. Why rush to worry about a shortage of labour when we're so visibly not using what we've got to begin with?

Worry about running out of labour when we're using fully what we've got to begin with

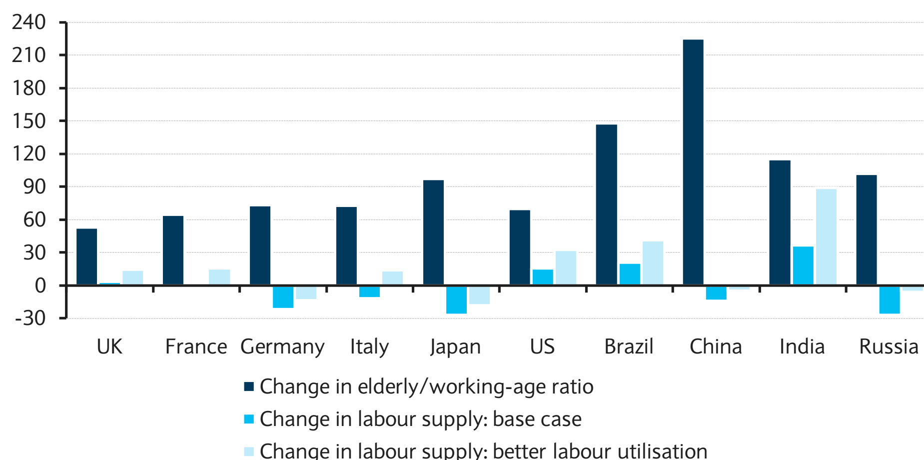
Most people who are unemployed would like a job if one were available. So too would many people who are economically inactive and not looking for a job, such as 'discouraged' workers, early retirees, family carers and some students (circumstances permitting, of course). Lower unemployment and higher participation can make a big difference. Compared to the naïve 'time-bomb' analysis, the proportionate impact of more older workers in the numerator of the dependency ratio is diluted by the inclusion of the other dependents; then, over time, moving adults out of unemployment and non-participation, and into employment, further cuts the numerator and raises the denominator. Plausible changes in labour utilisation could even deliver lower dependency, suggesting that current pensioner living standards could be financed at lower average taxes than today! For some countries, a prospective fall in total labour supply could become an increase (Figure 1).

This is not the end of the story. If they need to, pension ages and working hours can rise a little. For some, this is an admission of economic failure, but a retirement age fixed when life expectancy was much shorter – and when physically demanding manual work was more prevalent – is an expensive anachronism.

Today's retirees typically have a quarter of their lives still ahead of them, in contrast to those (for example) in Victorian times for whom retirement amounted to a few insecure and unhealthy years after a lifetime of hard, industrial effort. This assumes of course that older

Lower unemployment and higher labour force participation can sharply reduce the prospective burden posed by demography: in many cases labour supply can rise

Figure 1: Older workers and labour supply: prospective changes to 2041 (%)



Source: US Bureau of the Census; Eurostat; World Bank; Barclays Research

workers can play a productive role; and why shouldn't they? If the average person is living for longer, and more healthily, they may be willing and able to work an extra year or two. Similarly, the length of the working week has been falling steadily. Professor David Miles has noted that the proportion of a typical male's waking hours spent at work has fallen by three-fifths in the last century and a half. Slightly longer working hours now may not be that contentious – particularly since more jobs are part-time in nature.

What should governments do to help all this happen? They should pursue policies aimed at promoting labour market flexibility – as opposed to, say, raising the aggregate savings rate, which on its own could be counterproductive, as noted above.

(3) Growth is not driven by labour alone

Much growth comes from new technology and learning by doing, not labour input

What if changes in the labour market fail to occur – or if their impact is offset by a declining population – and total supply falls anyway? It may not matter as much as you might think.

Labour is not the only input. And much growth comes not from extra input, but from total factor productivity (TFP). It sounds too good to be true, but an estimate from the National Institute for Economic and Social Research suggested TFP accounted for most UK GDP growth in the second half of the twentieth century. Technology is a big source of such gains: life without spreadsheets (and IT generally) was less productive. More prosaically, think about a task done for the first time. Do it a second time and it's faster; a third time and it's faster still. You are moving up the learning curve. These changes are going on all the time across the economy, and can deliver more from less for as long as invention and learning are possible.

Portfolio implications

An older population need not be a threat: we are not fully using the labour we've have to begin with, and prosperity is, in any case, not dependent solely on labour input. The room for manoeuvre is greatest in the developed West; in China and Japan the aging is particularly pronounced and there is less slack in their labour markets. In the case of Japan, this is probably more important than the deflation that currently has so many pundits worried, and the likely result is that, in many ways, the Japanese economy will become more like the West – not the other way round, as many seem to think. But I digress.

As noted, pensions worries have been amplified of late by the poor investment performance of many formal pension schemes. Individuals with money-purchase schemes retiring recently have been disappointed by investment returns and by historically low annuity rates. UK Chancellor George Osborne's 2014 Budget has provided a welcome attempt to increase the

flexibility of defined contribution schemes in this respect, by relaxing the requirement to buy an annuity. However, individuals still have to decide how best to accumulate and then disinvest their funds from here.

As noted, the financial assets held by pension funds don't directly provide the real resources consumed by pensioners. They do however offer one mechanism (the tax and benefit system is another) for redistributing resources away from workers and towards pensioners: members' spending power gives them a place in the collective checkout queue at the supermarket, as it were. They decentralise administration, and create a link between individual contributions and the financial benefits paid on retirement. Some economists suggest they can also foster better-functioning capital markets, but the evidence is mixed.

You might think that since economic growth ultimately pays for pensions, the most natural pension asset might be equities, which share directly in that growth. For defined benefit pension plans, where payouts are fixed in advance, stock ownership has been made difficult by accounting policies introduced – with the best of intentions – in recent years, and most such schemes are closed to new entrants. Those accounting policies, and the 'liability-driven investment' they have fostered, favour bonds ahead of stocks. But for defined contribution plans, in which the value of pensions depend on the investment portfolio (and, until the 2014 Budget, annuity rates) on retirement, a more growth-oriented approach is feasible.

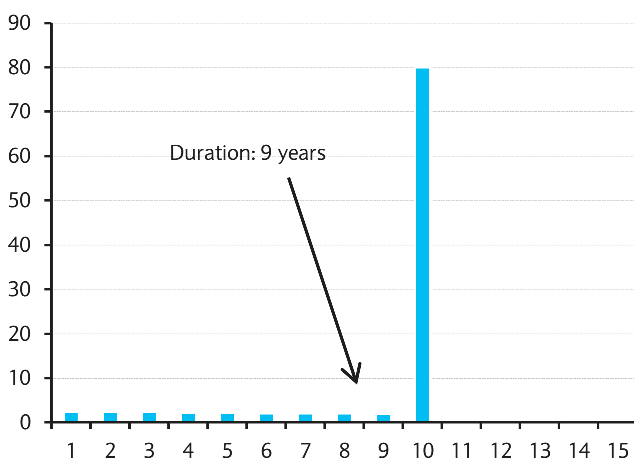
Stocks offer longer-duration cashflow than bonds

The growing cashflow generated by a diversified portfolio of stocks is contrasted with that available from a long-dated bond in Figures 2 and 3. A basket of typical stocks has longer duration than a basket of typical bonds, which might, ironically perhaps, make them a better match for the liabilities of defined benefit funds too if accounting guidance was altered.

We think today's low interest rates are unlikely to be permanent; yield curves have been pricing-in a substantial rebound, and annuity rates might well rise alongside other longer-dated bond yields from here. Stock market returns have rebounded – and more importantly, valuations and prospective earnings growth suggest to us that further positive risk-adjusted returns are still likely on a tactical and strategic time horizon. Stocks are volatile, of course, and the older a particular individual's fund is, the more it might make sense to allocate a higher proportion to more stable bonds. But stocks' dividends are less volatile than their prices (Figure 4), and with no pressing need to purchase an annuity it may make sense, if risk appetite and financial circumstances permit, to continue to favour stocks for longer.

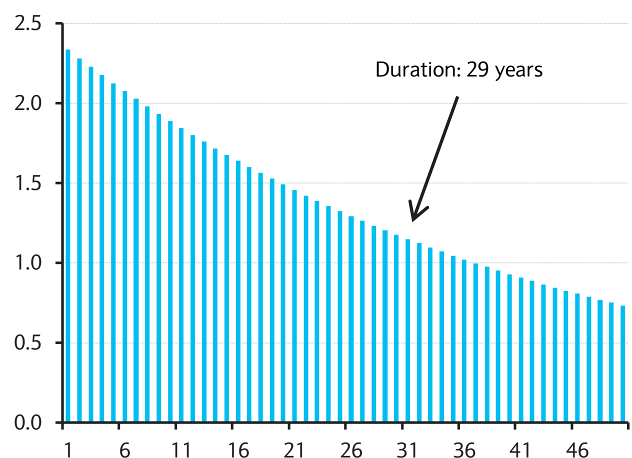
There are, in fact, few investment implications of an aging population, other than the general advice to keep an open mind about growth, and to avoid allowing today's gloom to suck you into expensive bond markets. Almost everything that can affect security prices and interest

Figure 2: Present value of cashflow: conventional 10-year bond, price 100, discount rate 2.5%



Source: Barclays Research

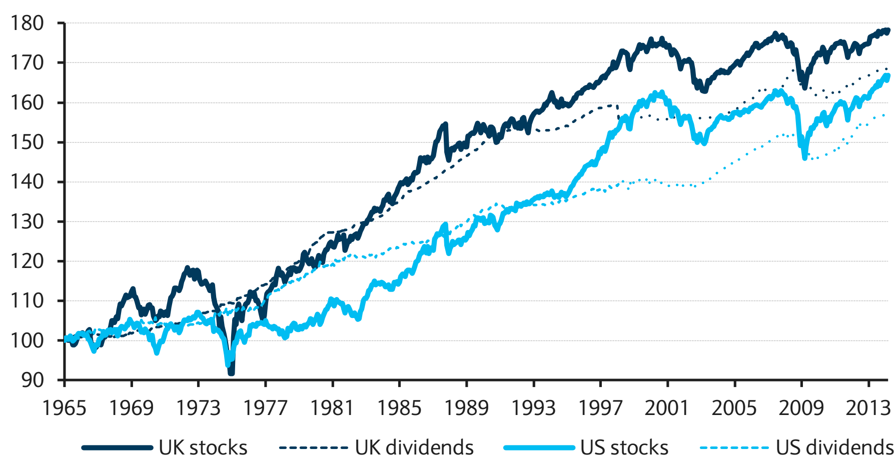
Figure 3: Present value of cashflow: equity index, dividend growth 4.5%, price 100, starting yield 2.5%



Source: Barclays Research

Dividends are less volatile than stock prices, and a valuable long-lived source of income for individuals' pension funds

Figure 4: US and UK stock prices and dividends, logged & indexed: 1965-2013



Source: Datastream, Barclays Research

rates is in play in the longer term. A confident forecast for one projected trend is of much less use than you might think, because there are so many other moving parts. Moreover, the fact that this trend has been visible for so long means that any specific investment conclusions that could have been drawn are likely long since priced into forward-looking markets.

Demographic data can be correlated with stock market valuations. Some conclude that baby boomers' savings were responsible for a big surge in stock prices, and that, as the boomers retire, lower valuations and poor performance is likely. Many funds do switch their members into more stable bonds as retirement dates approach, as noted. But this analysis ignores all the other drivers of stock market value, including growth, profitability and real interest rates – each of which could move unpredictably and markedly, and *independently of demography*, in the next 30 years. And if stocks are inexpensive to begin with, other investors may be happy to step in. You might think too that an older population will squeeze interest rates higher simply because it is less willing to wait: time gets more precious as you get older. This might lead to higher real rates, because collective 'time preference' is one of the underlying long-term drivers of interest rates. Again, however, there will be many other influences on rates. If real rates do go up – but partly because corporate profitability is strong – then the investment conclusion would be different (and might favour stocks ahead of bonds).

The most important investment 'theme' should be the maximisation of risk-adjusted returns – not demography

Convincing investment ideas are hard to find even at the sector level. An older population will favour healthcare, and leisure and entertainment sectors, but this has been largely priced into company valuations for a while. And the beneficiaries' relative performance might yet be undermined by new, as yet unknown, industries and ideas. Remember, 30 years back, few pundits were tipping mobile telephony, digital media or China's economic surge. More subtly, labour-intensive companies will benefit from more flexible labour markets as participation rates and retirement ages adapt to the altered pattern of labour supply. This is a less widely appreciated point, and so stands a chance of moving security prices, but it may do so across such a wide range of industries that it may not be of much practical use.

Bear these points in mind when you are offered the opportunity to invest in any 'theme' other than that of maximising risk-adjusted returns. For example, climate change, inflation or disinflation, emerging market growth and Western lifestyle worries, are, like demography, just some of the many influences that will shape investment performance – and they are not new ideas.

Cattle to coins: the evolution of modern money

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There is one thing that today's global, tech-savvy economy cannot function without: money. Though modern currencies would be unrecognizable to past generations, the need for and purpose of money are unchanged. From commodities to bitcoins, currencies have evolved throughout the ages. But new forms of money come with new problems. A lesson in the history of money provides useful context for evaluating the benefits and limitations of new currencies.

What is "money"?

Money is not defined by its physical form

In the *Ascent of Money*, Niall Ferguson[2] defines money as trust inscribed, whether on metal or paper. Its worth is derived from its scarcity and the belief in its exchangeability for desired goods and services. Money has taken many forms throughout the centuries from commodities, to coins, to bills and bonds, but its three main functions, as a medium of exchange, a unit of account, and a store of value, have remained the same.

- *Medium of exchange*: People accept money in trade for goods and services.
- *Unit of account*: The value of a good or service can be measured with money. For example, a car with a price of $2,000 is worth twice as much as a car with a price of $1,000.
- *Store of value*: Money can be saved and used in the future.[3]

But must money be tangible to have value? The emergence of virtual currencies, such as bitcoin, is challenging the traditional concept of money as a *physical* medium of exchange. Bitcoin cannot be held or touched, yet it has considerable worth. Investor exuberance surrounding this new currency is reminiscent of bubbles past, when a herd mentality drove asset prices beyond fundamental justification. A consideration of the evolution of money provides valuable lessons to consider when assessing the value and viability of new-age currencies.

The evolution of money

The shape of money has changed significantly throughout the ages

The shape of money has transformed considerably over time from cattle to virtual coins. The world's first currencies were exchangeable commodities, ranging from livestock and crops to precious metals. The need for a more efficient medium of transfer gave rise to the use of coins and sundry assets as "money", or representations of value, eliminating the need for barter. Around 500 B.C., the Lydians, a group of seafaring people, were the first in the Western world to make coins out of precious metals. Their coinage techniques were adopted and refined by the Greek, Persian, Macedonian, and later, the Roman empires.[4] Unlike modern-day cash, the value of coins depended on the value of precious metal contained in it. The first known paper currency appeared in China during the Tang Dynasty (A.D. 618-907), and subsisted for more than five hundred years. During this time, the production of banknotes grew significantly, resulting in a massive rise in inflation, halting the use of paper money in China for several hundred years. It was not until the 17th century that the use of bills caught on in Europe.[5]

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[2] Niall Ferguson, MA, D.Phil., is a Professor of History at Harvard University
[3] Definitions from The Federal Reserve Bank of Minneapolis, The History of Money
[4] PBS.org, The History of Money
[5] Time Magazine, Money Facts

It was not until 1970 that the gold standard was replaced with today's fiduciary system

Early paper currency represented a specified amount of a precious metal. From 1792 to 1862, the United States had a bimetallic standard, in which gold and silver were used to define the monetary unit. The first government notes not backed by the metals, known as "greenbacks", were issued in 1862, as fiscal pressures from the Civil War mounted. After the war, Congress was determined to restore the metallic standard, and succeeded in doing so by 1879, but this time with a single metal: gold. The gold standard ended in 1933, after a series of bank runs and subsequent bank failures during the prior 3 years. The Federal Reserve was unable to provide sufficient liquidity to enable banks to meet their customers' demands. This was, in part, because of the gold standard, which limited its ability to create more money. A quasi gold standard was introduced in 1944 at Bretton Woods. This was an international monetary agreement that created a system of fixed exchange that allowed governments' central banks to sell their gold to the United States Treasury at a fixed price. This system eventually became impossible to maintain as countries struggled to maintain the value of their currencies relative to the dollar and gold. Finally, in 1971, under the Nixon Administration, the link between major world currencies and gold was severed.[6]

Modern currency operates on a fiduciary system, meaning that the value of a dollar is derived either from government fiat or from the belief that the paper will be accepted by another party in exchange for goods and services. There is risk to a faith-based system: changes in beliefs in the authority of the government or the transferability of currency may have dramatic impacts on value. After all, trust is fragile. Government regulation helps ensure that money is a consistent standard and store of value. The U.S. Constitution gives Congress the power "to coin Money, regulate the Value thereof, and of foreign Coin, and fix the Standard of Weights and Measures." To this end, one of the Federal Reserve's responsibilities is to maintain the integrity of the US currency by setting monetary policy to keep prices stable. Modern-day cash, therefore, represents trust that dollars held in hand today can be used to purchase a similar amount of goods and services in the future.

A new form of money: virtual currencies

Is bitcoin a real currency?

The involvement of central banks in the monetary system provides protection and stability, but comes with a loss of freedom and confidentiality. With this in mind, the creators of bitcoin set out to develop an anonymous, unfettered exchange system. While bitcoin is a medium of exchange, it clearly does not possess the other two properties of money (unit of account and store of value). Some well-respected investors, including Warren Buffet, and even the Internal Revenue Service, argue that bitcoin should not be considered "money" at all. Unlike traditional currencies, bitcoin's intrinsic value is difficult to define. It is not a commodity; it is not a precious metal; it is not necessarily trust inscribed, either. Bitcoin is intended to function as a fiduciary currency; however, the absence of governance weakens confidence in its enduring representation of value. The value of virtual currency is dependent on controlling its creation and preventing duplication and double-spending. Instead of a central bank, bitcoin has a self-regulating, universal ledger of transactions, which starts with the currency's creator and ends with the current owner. The fact that all potential recipients can verify past transactions and validate new ones is the source of confidence in bitcoin as a store of value. But faith in this system can easily be broken, especially as it is new and poorly understood. Hackers have been able to exploit loopholes in the technology, leading to massive theft, and ultimately bankrupting Mt. Gox, a leading bitcoin exchange.

Bitcoin's rapid price appreciation is reminiscent of tulip mania

Curiously, news of colossal theft at Mt. Gox only moderately shook the price of bitcoins, adding to the conundrum of valuing this elusive currency. Unlike its counterparts, bitcoin is an asset without fundamentals, which puts a rational pricing model out of reach. Professor David Yermack, of NYU Stern School of Business agrees, drawing a parallel to financial assets:

[6] Congressional Research Service, "Brief History of the Gold Standard in the United States"

"If you invest in a stock, there is a company paying dividends that supports the value of a stock. If you invest in a government bond, you have the government's promise to pay interest; with bitcoin, all you really have is hope."[7]

If history is any guide, there is danger in irrational pricing for intrinsically worthless assets. Recall the tulip mania in the 1630s, the first asset bubble, when the value of a single tulip bulb plummeted from the equivalent of an entire estate to that of an onion. Behind this hysteria was the concept of scarcity. A limited supply has underpinned the value of money in all its forms, and bitcoin is no exception. Similarly, bitcoins are created through a complicated process called "mining", which involves using computers to solve a difficult mathematical problem to add coins to the system. A limit of 21 million coins has been set, which is expected to be reached by 2040.[8] But scarcity is not the only reason for the wild fluctuation in bitcoin prices. (Figure 1) The price of bitcoin is driven largely by speculation about its potential to become a broadly accepted currency.

Are bitcoins the next gold coins?

It can be argued that bitcoin is similar to one of the longest-standing speculative forms of money: gold. Bitcoin is difficult to "mine", can't be replicated, and has experienced sentiment-driven price appreciation. Just as the gold standard failed due to supply constraints, bitcoin's strict limit of 21 million coins may make it impossible to keep up with a growing economy. Also, similar to gold, bitcoin's price fluctuations make it an unstable unit of account. (Figure 2) While no longer the base of the US monetary system, gold has survived as a store of value and perceived safe-haven asset for investors. So, are bitcoins the next gold? Not necessarily; there are several crucial differences between the virtual and metallic coins. Gold can be stored and transported, while bitcoin could easily disappear due to a technological glitch. Gold at least has some inherent value – for jewelry and industrial purposes – albeit not in line with its price; bitcoin is merely a string of numbers in cyberspace. Finally, gold has gained investors' trust over the years as a durable representation of value, whereas bitcoin is a new phenomenon with no such track record.

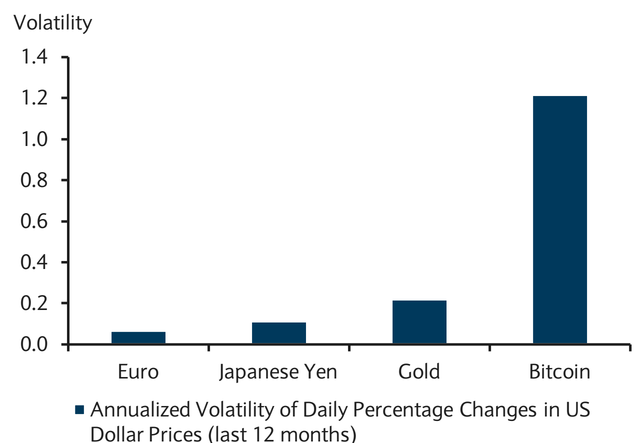
Virtual currencies are likely here to stay

The viability of virtual currencies is subject to much debate. While there are many kinks to iron out, ranging from regulation and fraud prevention to valuation and taxation, it appears we are on the precipice of another revolutionary change in money. Looking back in history, we reasonably can surmise that the concept of paper money, backed by trust instead of gold, was difficult to fathom. Today's digital currencies are complex and ripe with risk, but they arguably are the start of a new end state in the long term. The money of tomorrow will more likely exist in cyberspace than in our pockets.

Figure 1: Bitcoin's rapid price appreciation is reminiscent of bubble's past

Source: Blockchain, as of April 2, 2014

Figure 2: Bitcoin's extreme exchange rate volatility diminishes its usefulness as a currency



Source: Bloomberg, Blockchain, David Yermack (NYU Stern School of Business) as of April 2, 2014

[7] CNC World, March 5, 2014
[8] For further detail on how the 21 million bitcoin limit is calculated, see The Federal Reserve Bank of Chicago, *Bitcoin: A primer*, page 2.

Bitcoin: De-coded

What is it?

Bitcoin is a digital currency that was launched in 2009. Unlike minting coins or printing banknotes, a list of the registration numbers of each of the "coins" is kept and a record of ownership is maintained. This virtual currency is not supported by any country's government or central bank.

There are currently approximately 12.5 million bitcoins in circulation. On average, there are 30 bitcoin transactions per minute (vs. 200,000 Visa transactions per minute).

Who created it?

So far, it has been impossible to identify the creators of bitcoin. It's known that the founder is called "Satoshi Nakamoto", which is a Japanese name, but it could be a person or a group of people anywhere in the world.

How does it work?

Bitcoin transactions are performed by swapping heavily encrypted hash codes across a peer-to-peer network which verifies the transfer among transaction participants. The system is anonymous, which means it is extremely difficult to track who owns what amount of digital currency. The system is limited to 21 million registration numbers, and it has the capability to regulate itself and, therefore, control inflation.

What are the risks?

Bitcoin is subject to extreme volatility and safety concerns. In December 2013, the currency plummeted almost 30% in just two days.

Also, since the currency is not traceable, it could attract crime. People can buy and sell illegal items with much less risk of getting caught by authorities.

A manifesto for individual investors

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We published, at the start of the year, our *Investment Credo* (see *Compass, February*), laying out what we believe are the fundamental truths of good investing. Naturally, one must now ask what investment rules these beliefs give rise to? And, ultimately, how should an investor act if they are to put the *credo* into practice?

Here, in our *Investment Manifesto*, we seek to answer these two questions with a set of rules designed to help individual investors make the most of their portfolios over time. These rules are the building blocks of our Investment Philosophy and, although there are exceptions for specific circumstances, readers should beware that some rules are easier to follow than others! For the vast majority of investors, however, we believe that by following these rules they will increase the efficiency of their portfolio overall.

A. Create a safe environment for investing

1. Only spend what you can afford to, and save where possible.
2. Pay off expensive debt like credit cards and personal loans before investing.
3. Insure against negative events (e.g. loss of income) that could force unplanned sales.
4. Ensure you have sufficient accessible/liquid capital to cover unexpected expenses.
5. Beware of borrowing to invest, and do not use investments to secure borrowing.
6. Get specialist or professional advice when you need it.

B. Determine how much you can invest, and put it to work

1. Define your spending goals so you know how much you will need and when.
2. Don't invest what you need to use in the near future.
3. Having determined what you can afford to invest, put it to work as soon as possible.
4. Set up regular contributions if possible, planning to increase the amounts whenever you can.
5. If you're a UK-based investor, you should use your annual ISA allowance before investing in a taxable account.
6. Before setting up a personal pension, make sure you're paying enough into your company one to get the full employer contributions.

C. Remove unnecessary risks and invest efficiently

1. Only hold shares of the company that pays your salary if there are incentives to do so (though make the most of good incentives).
2. Understand the appropriate level of risk considering your personality, finances, and goals; manage all investments to a target diversified asset allocation suitable for this risk level.
3. Don't deviate from your simple, static diversified portfolio allocation unless you really know what you are doing, and then do so with caution and to a limited degree.

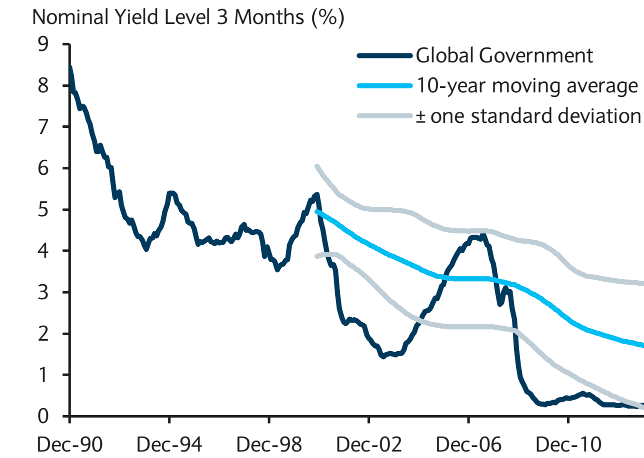
4. Only move away from cheap passive investments if you have good and well-considered reasons to, and understand the fees if you do.
5. Consider both the value of your investments as well as their income; it is the combined total returns that matter.
6. Do not concentrate your portfolio into local assets, popular names or past performance: convincing stories reduce anxiety, but are seldom the same as good investments.

D. Stay invested and do not meddle

1. Reinvest income and dividends wherever possible.
2. Regularly rebalance how your money is spread across investments to stay diversified.
3. Don’t over-monitor your portfolio; focus on the big, long-term picture, not on the details.
4. Make fewer changes to your portfolio than you are tempted to.
5. Focus on long-term absolute performance, not short-term relative performance. It is growing your wealth and meeting your goals over time that ultimately matters.

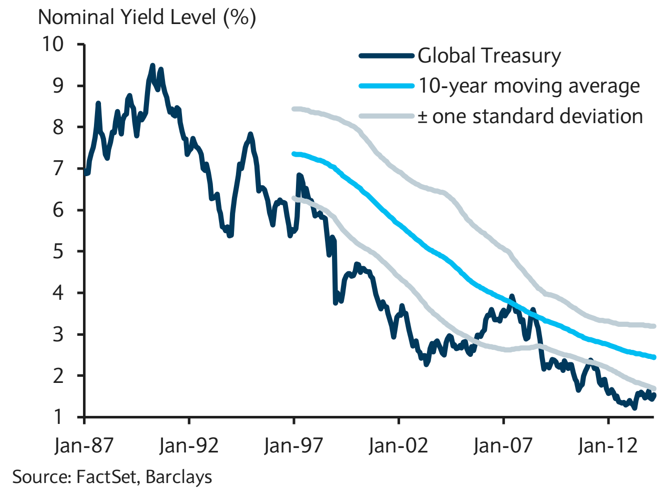
Interest rates, bond yields, and commodity and equity prices in context*

Figure 1: Short-term interest rates (global)



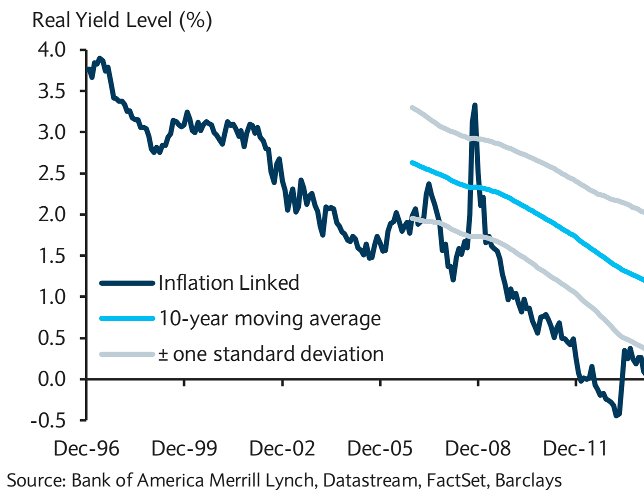
Source: FactSet, Barclays

Figure 2: Government bond yields (global)



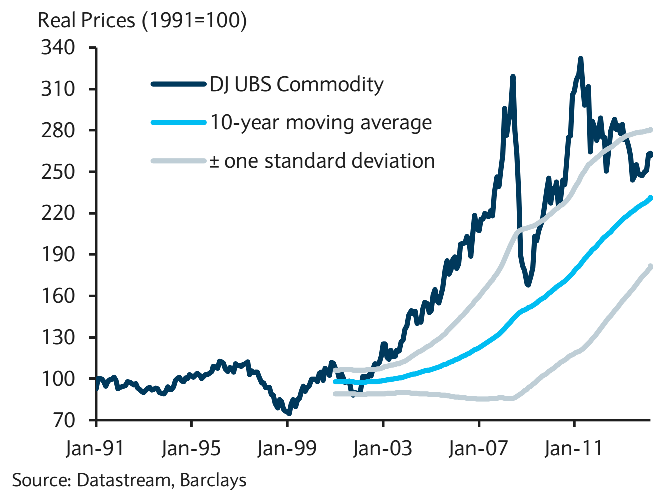
Source: FactSet, Barclays

Figure 3: Inflation-linked real bond yields (global)



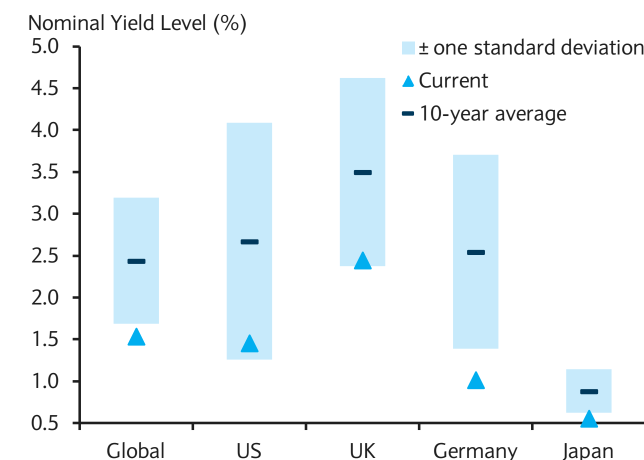
Source: Bank of America Merrill Lynch, Datastream, FactSet, Barclays

Figure 4: Inflation-adjusted spot commodity prices



Source: Datastream, Barclays

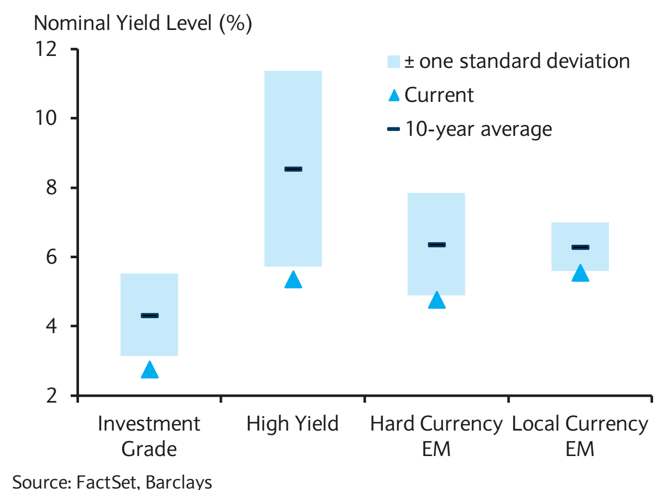
Figure 5: Government bond yields: selected markets



Source: FactSet, Barclays

*Monthly data with final data point as of COB 1 April 2014.

Figure 6: Global credit and emerging market yields



Source: FactSet, Barclays

Figure 7: Developed stock market, forward PE ratio

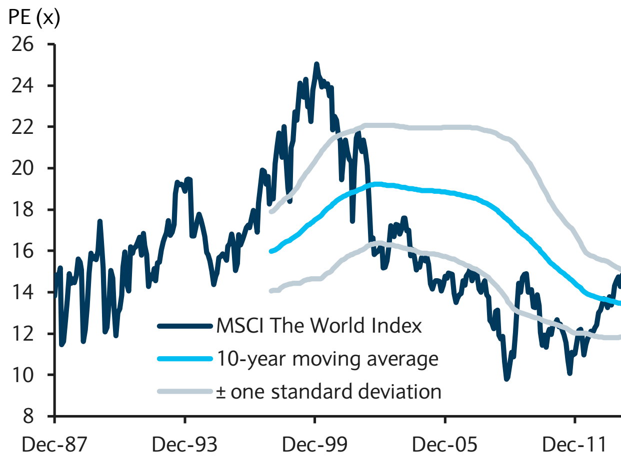


Figure 8: Emerging stock market, forward PE ratio

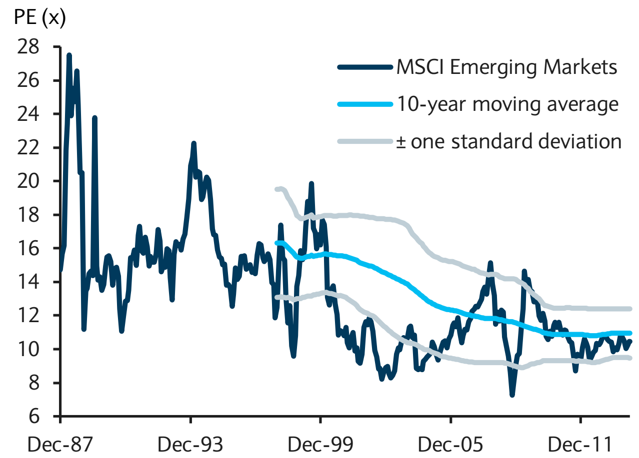


Figure 9: Developed world dividend and credit yields

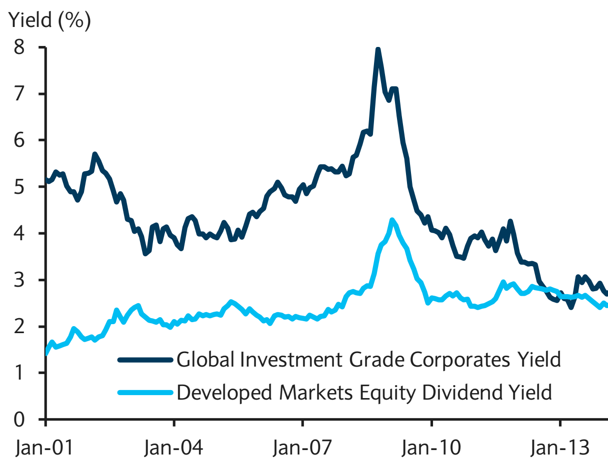


Figure 10: Regional quoted-sector profitability

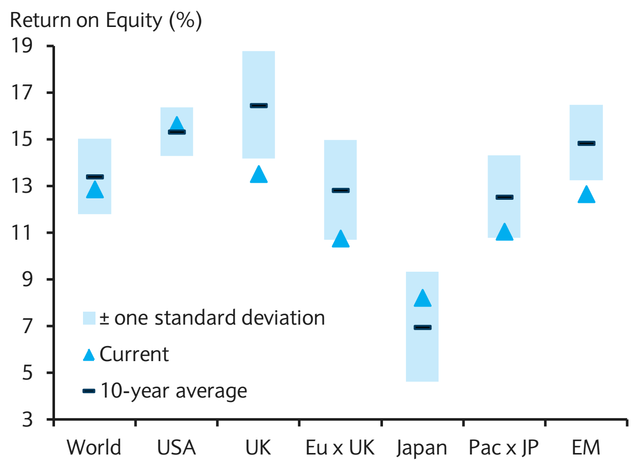


Figure 11: Global stock markets: forward PE ratios

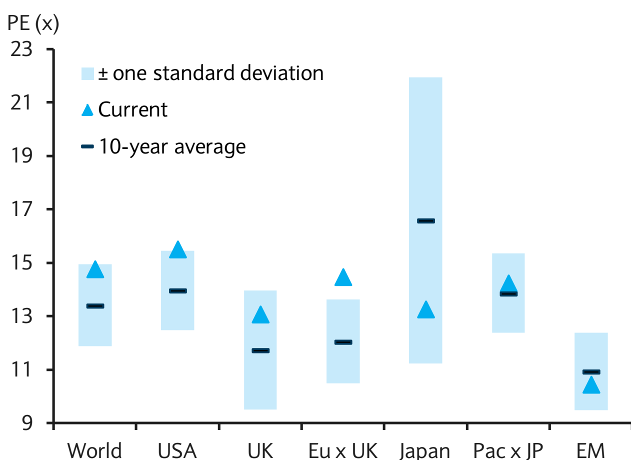
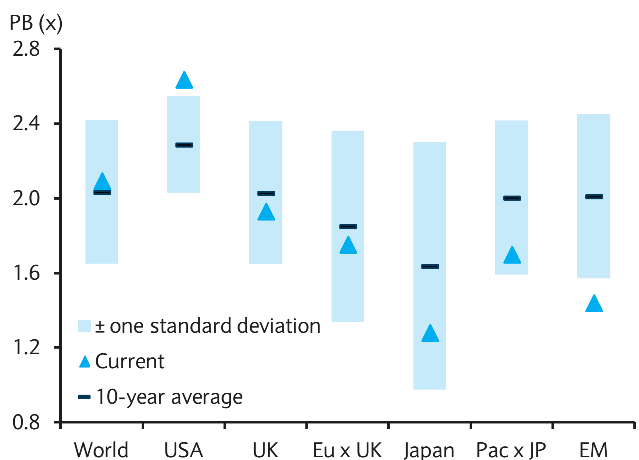


Figure 12: Global stock markets: price/book value ratios



All sources on this page: MSCI, IBES, FactSet, Datastream, Barclays

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