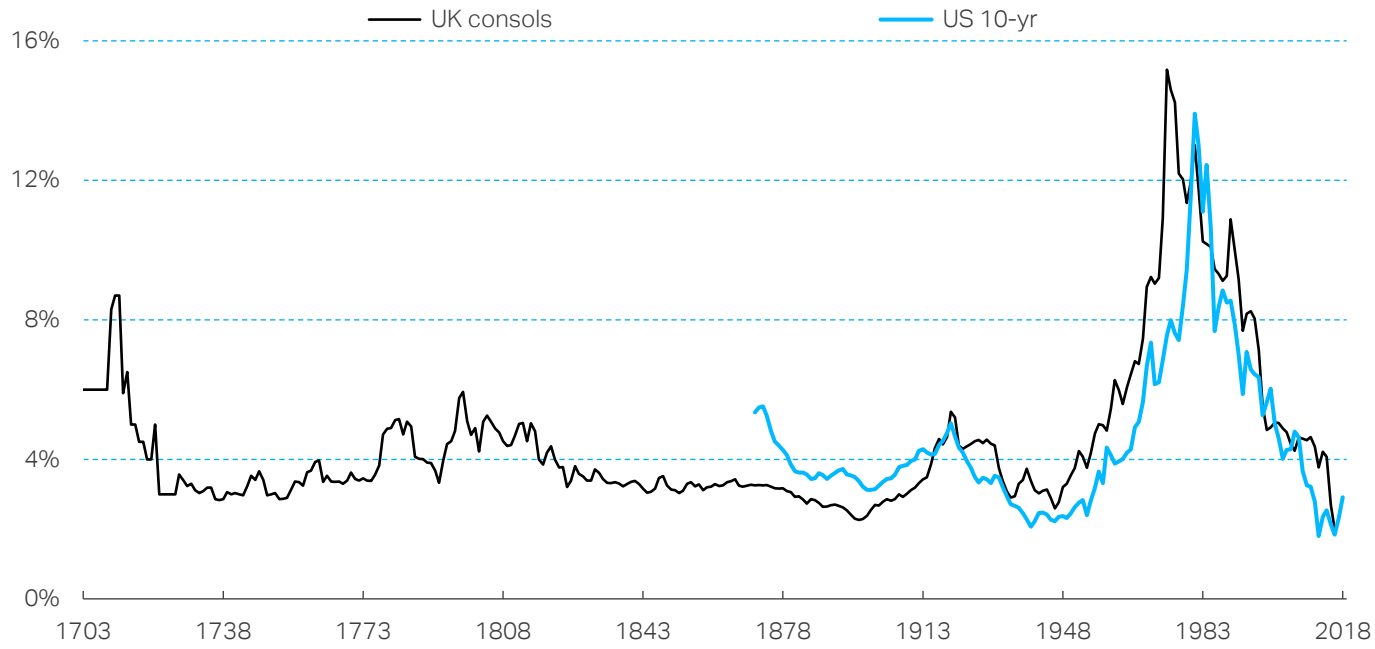
LSR View

INTEREST RATES' LONG-CYCLE UPSWING

Charles Dumas

- Nominal bond yields' long cycles last 60+ years & typically include …
- Two real-yield cycles, closely matching stock-market cycles
- 2012 and 2016 were twin recent troughs, driven by QE, EM weakness
- Rate cycle now rising – increasingly driven by rising dependency ratios
- US$ yields to respond to upward drag from EMs, lesser savings glut
- Rising yields to erode premium rating of stocks in medium term

Chart 1 Long-term UK & US government bond yields, % (see text for log scale)



Source: Bank of England, St Louis Fed

Contents

Summary

This View looks at bond yield cycles going back to the mid-19th century, with a transition from British to US dominance around the time of the First World War. Subsequent cycles have been:

Period	Stock market	Real 10-yr. yld.	Nominal yld.
1921-29	Strong	Up	Down
1929-late '40s	Weak	Down	Down
Late '40s – mid '60s	Strong	Up	Up
Mid '60s – late '70s	Weak	Down	Up
Early '80s – 2000	Strong	High	Down
2000-09	Weak	Down	Down
2010 onward	Strong	Low	t.b.d.

The typical nominal-yield long-cycle has lasted about 60 years, getting slightly longer recently. It may simply reflect the length of typical conscious adulthood – longer life expectancy accounting for the cycles lengthening. Each nominal long cycle contains two real-yield long cycles, whose periodicity is close to that of the stock market cycles, as shown in the table above. The regular short economic cycles have averaged just under eight years in length since the end of the Korean war; we typically see four such economic cycles in each stock-market/real-yield cycle.

The spectacular downward long-cycle of nominal yields since the early 1980s reflects:

- Strong monetary action by the Volcker Fed to curb spiralling inflation in 1980-82. The share of labour income in gross domestic income topped out well before this.
- Effective quintupling of the global, free-trading labour force around 1990, with the collapse of communism and the Soviet Union, the revival of China's market orientation after the Tiananmen trauma, and the pivot to free markets in India and Latin America
- Downward pressure on wages and prices as globalisation and hi-tech had full play
- Rising shares of working-age adults in the population of most DMs and China.
- Chronically weak domestic demand in Japan and Europe, accompanied by beggar-my-neighbour cheap-FX policies, predatory on domestic demand in deficit countries

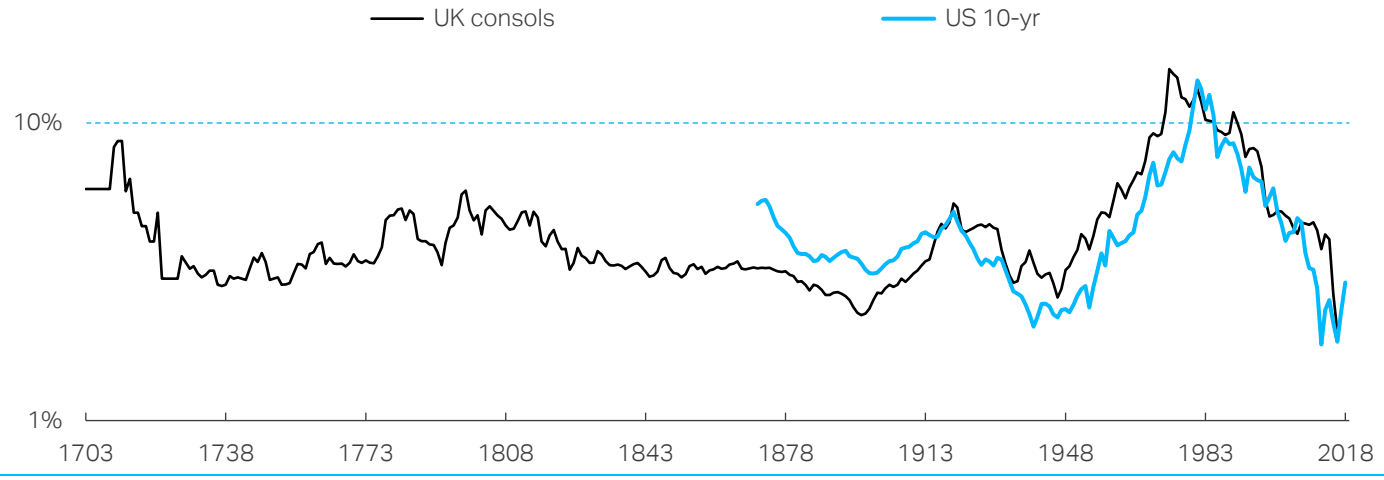
The average yield of the US 10-year note bottomed out at 1.8% in 2012, with a similar average yield repeated in 2016. Higher yields are likely in future, though with a cyclical pattern:

- Dependency ratios are now rising in DMs and China, and the working-age ratio is topping out in S-E Asia, and rising much more slowly in India. Workers being more scarce implies rising wages and capex, with supply relatively weaker vis-à-vis demand.
- DM economic policies could shift towards fiscal deficits rather than monetary stimulus.
- The savings glut in Japan and Europe is shrinking fast, and they are a rapidly declining part of the world economy. China, with a current-account surplus of 10% of GDP in 2008, is now in deficit and could remain so. The downward drag on US rates from these countries' 'exported deflation' could yield gradually to an upward drag from the rates prevailing in the large range of EM deficit countries that will still have to attract capital.
- Trade war risks include a degree of the stagflation that characterised the 1970s
- The most powerful downward pressure on inflation from hi-tech is now in the past

The conclusion starts with the current economic slowdown, worse globally than in 2016, though less so in the US. Yet bond yields are some 1% above 2016 lows. They should trend upward for the foreseeable future, both in nominal and real terms, though with the usual short cycle effects. After the 2019-20 strength we are expecting for stocks, a nasty bear market is likely.

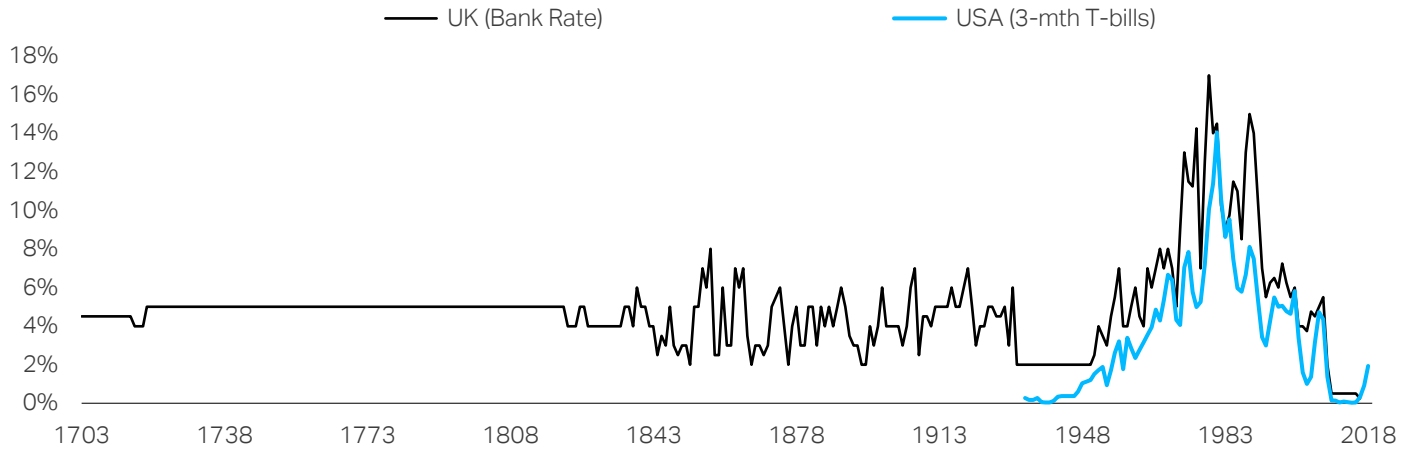
Introduction – the 60-year cycle

Chart 2 Long-term UK & US government bond yields, % (with log scale)



Source: Bank of England, St Louis Fed

Chart 3 Short-term official UK & US interest rates, % (not log scale, as too close to zero)



Source: BoE, St Louis Fed

The long-cycle for interest rates has a length of about 60 years. A quick scan of the charts above will indicate that the cycle is more visible in bond yields than short-term rates. The UK experience can be regarded as dominant until the First World War, with US yields dominant thereafter. Prior to the end of the Napoleonic Wars in 1815, the UK rate cycle was driven by the ups and downs of wars, which were almost continuous from the early 18th century.

The early Victorian growth patch, culminating in the railway boom, peaked in the mid-1860s, with Consols (undated UK government bonds, which promised only to pay the annual interest) at a 3.4% yield. The next peak was 55 years later in 1920. The most recent peak was 61 years later in 1981. Troughs for bond yields were in 1896-98 (Consols at 2.3%) and then for a prolonged period during and after the Second World War, with the US 10-year at 2.1-2.3%. That relatively short trough-to-trough cycle of about 50 years was followed by a longer one of 75-80 years lasting until the recent double-trough at 1.8% in 2012 and 2016.

It would be perfectly reasonable to say there is no long-cycle for rates, since the causes of the long-run fluctuations of bond yields vary over time, and seldom repeat themselves. For example, the post-WW1 peak for rates contrasts with the post-WW2 trough. This might be put down to

poor economic policies, except that US inflation also peaked in 1920 at nearly 15% on a five-year moving average (far above the 10-year yield of 5%) whereas the post-WW2 financial markets remained scarred by the trauma of deflation in the Great Depression, so that once the Korean war was over inflation was minimal.

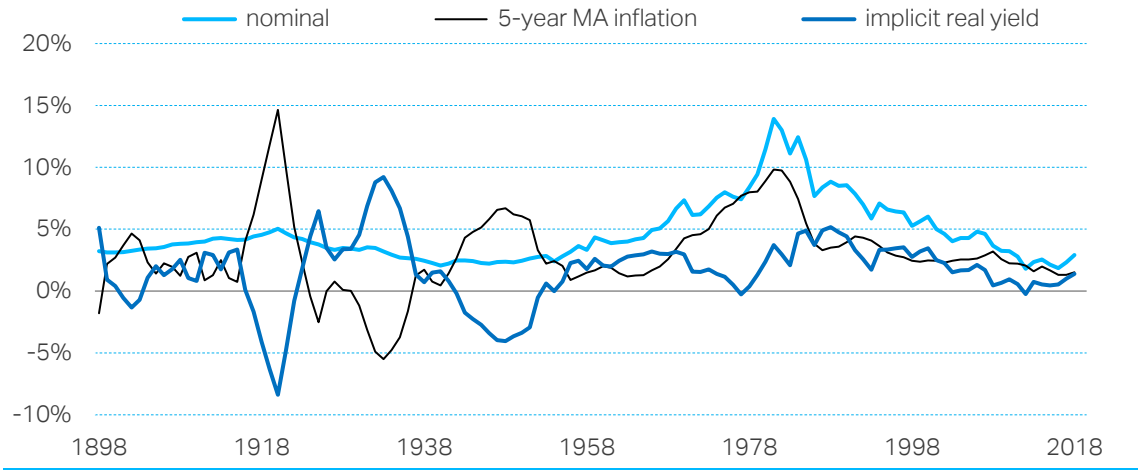
So the existence of deeper long-run cyclical influences in the economy and financial markets is plausible. The latest cycle since the 1950s has been dominated by the Great Inflation of the 1970s, and its subsequent suppression. We shall see that:

- the cycle for real long-term yields is only loosely related to the nominal-yield long cycle
- one factor underpinning the long-run rate cycle is the demographic dependency cycle, which turned decisively a few years ago
- the decline of US economic dominance – despite US dollar financial markets continuing to be dominant – has spawned a Eurasian savings glut that has held back a return to 'normal' yields
- this savings glut – which by definition only exists relative to investment opportunities – is also (arguably) now augmented as much hi-tech advance is of a capital-saving type
- the increasing global dominance of EMs, especially east and south Asia, will tend over time to outweigh the downward pull on interest rates from Japan and Europe, whose economic and financial significance is shrinking

Real-yield cycles are shorter

Real yields are heavily affected by the short-run cycle. Between 1954 and 2008, both recession years, the US had seven recessions in 54 years, implying a typical cycle of just under eight years, though varying a lot. The current cyclical upswing started in mid-2009 and remains in place after nine years.

Chart 4 US 10-year Treasury yields, nominal & real



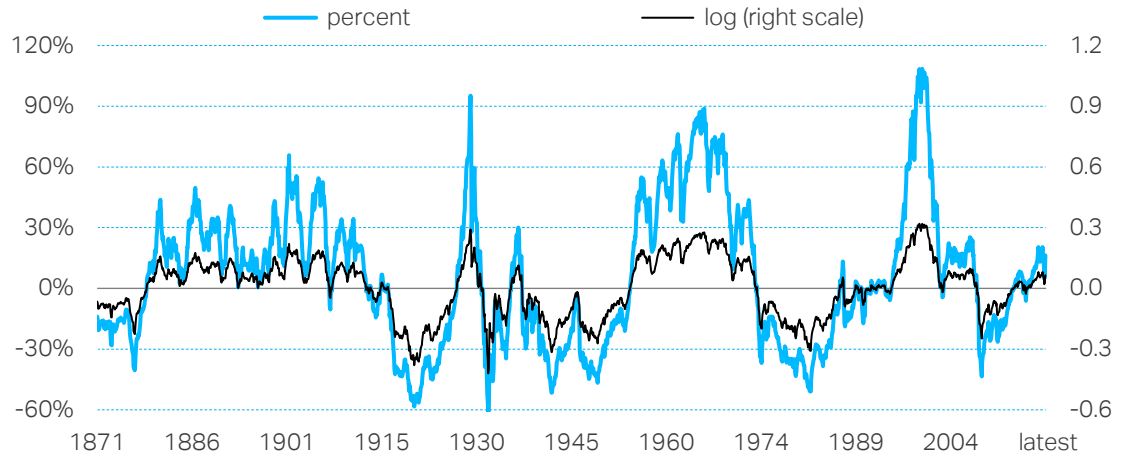
Source: US Fed, St Louis Fed, Datastream

The longest cycle since the end of the Korean war lasted 12 years, between the recessions of 1958 and 1970, with the growth patch more than eleven years from 1958 Q1 to 1969 Q3. This was the 'guns and butter' economy of the Vietnam war and the swinging '60s. Payback was the

1970s inflation, and two short cycles, with a two-year recession after the first oil crisis in 1974-75, and a double-dip recession in 1980 and 1982 as Paul Volcker's Fed crushed the Great Inflation. Similarly, the 1990s cycle that lasted ten years, with only a modest 2001 slowdown and then another six years' advance to 2007, led to payback in the form of the two-year recession in 2008-09, with the subsequent recovery, though prolonged, the weakest on record.

Leaving aside the cyclical response of real yields in these shorter cycles, averaging just under eight years, we can see cyclical troughs, low points for real yields in Chart 4 above, in 1920, 1948, 1977 and 2012. Interestingly, the first three of these were caused by an upsurge of inflation that the bond market quite correctly assumed to be temporary; as the inflation shown here is the five-year moving average (of the CPI) this means the market was able to sustain a very long view. (So much for complaints about short-termism!) The recent low point for real yields on this basis was caused by nominal rates slumping as the post-crisis recovery proved disappointing – 5-year average inflation was a restrained 2.1%.

Chart 5 Deviations of S&P real-value index* from long-run 6.6% ROI trend



Source: Professor Shiller, S&P, Datastream, TS Lombard

* Real-value index is the S&P index with dividends re-invested and corrected for CPI inflation

A curious feature of this real rate cycle is how its length is almost exactly half that of the nominal rate cycle, and corresponds closely with the roughly 30-year long-cycle in the stock market. Thus we have:

Period	Stock market	Real 10-yr. yld.	Nominal yld.
1921-29	Strong	Up	Down
1929-late '40s	Weak	Down	Down
Late '40s – mid '60s	Strong	Up	Up
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These past trends and cycles seem to have a pattern, implying there is a reason for them. The importance of demographics and various current contingent factors like the Eurasian savings glut will be examined below. But one feature of the long-cycle of nominal interest rates worth noting is that it roughly corresponds to an average person's adult life expectancy. (Hence, amongst other things, the fact that the cycles seem to have been getting a bit longer.) On the principle that once everybody's gone that might remember an earlier boom/slump/disaster or whatever it is time for it to be repeated, this may explain the length of the cycles: 60-plus years for the long-cycle, 30-plus for the stock-market cycle (and real bond yields), just under 8 for the regular boom/bust cycle.

Watch that dependency ratio

The strongest reason for expecting higher interest rates in future is the soaring ratio of dependents to workers. The logic behind this is the reversal of what we have seen in the (nearly three) decades since the fall of the wall in 1989, and of the Soviet Union in 1991.

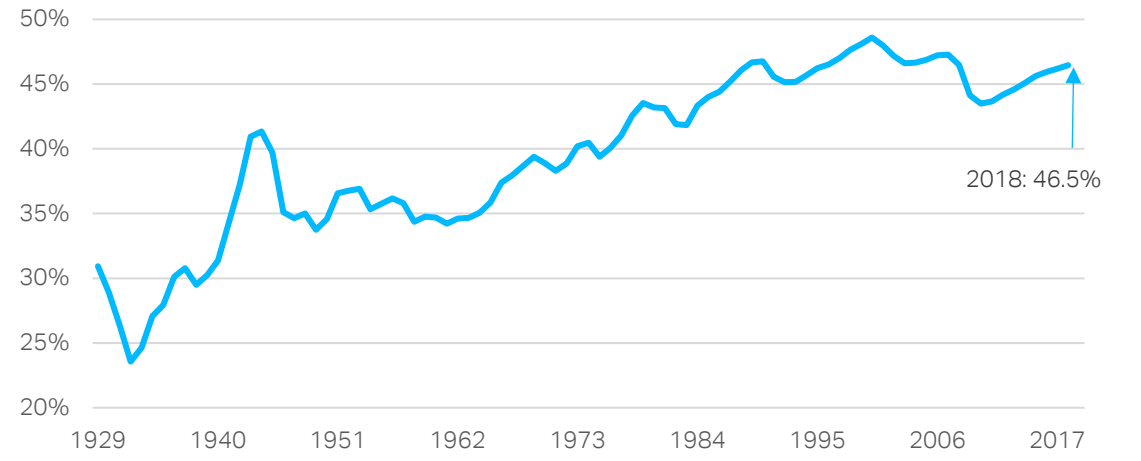
In 1989-91, the effective free-market labour force was in a sense quadrupled:

- central and eastern Europe broke free of the Soviet Union
- the Soviet Union itself dissolved into its constituent states, and gave up on communism
- India shifted decisively to free-market economic policies, having already in the 1980s sharply increased its growth owing to the 'green' revolution in agriculture
- China, though threatened with a relapse into hard-line rule after the Tiananmen Square 'events', reverted to free-market economic policies with Deng Xiao Ping's 'southern tour'
- These four developments raised the population of countries espousing free-market policies from about one billion to about four, initiating the most intense globalisation since before WW1
- In Latin America and elsewhere, the discrediting of socialism turned policies in the free-market direction, in sharp contrast with the 1970s and (resultant) debt-crippled 1980s

The consequences of this huge increase in the available labour force, with little change in the capital assets at its service, included soaring values for existing assets (notably in the stock market) a boom in capital spending, and, crucially, weakening bargaining power for labour in advanced countries. Simultaneously, the hi-tech revolution both enhanced the pace and scope of globalisation (relocation of tech jobs to Bangalore, for example) and added to the downward pressure on wages paid for conventional jobs in advanced countries.

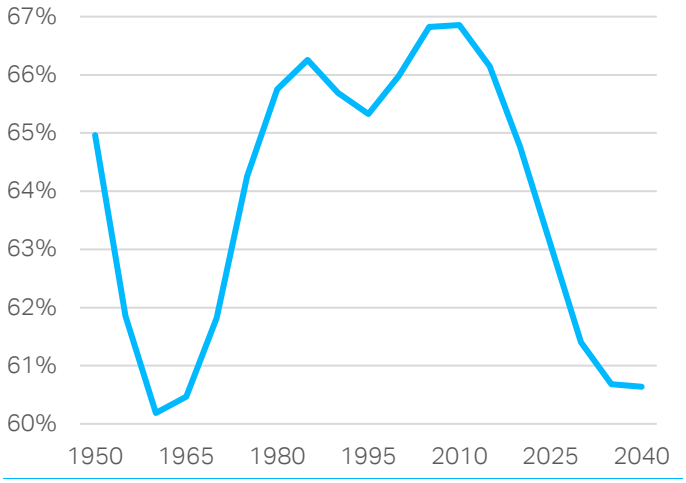
Alongside this dramatic burst of globalisation effects – outlined in two books by this author and in detail by Charles Goodhart for Morgan Stanley – the position of advanced-country labour was further undermined by a falling dependency ratio. A rising share of both the total and the adult population in most advanced countries, and also China, was in the labour force – either actually or potentially. Aside from shifts in patterns of child-bearing and women becoming ever more important in the labour force, this partly reflected the movement of the super-sized baby-boomer generation into late-career, partly improvements in health and life expectancy that led to working age expanding, and partly the fact that the generation reaching retirement was (at least in Europe) shrunk by having been a relatively small population 'cohort' born in and immediately after WW2.

Chart 6 US employment, % of total population



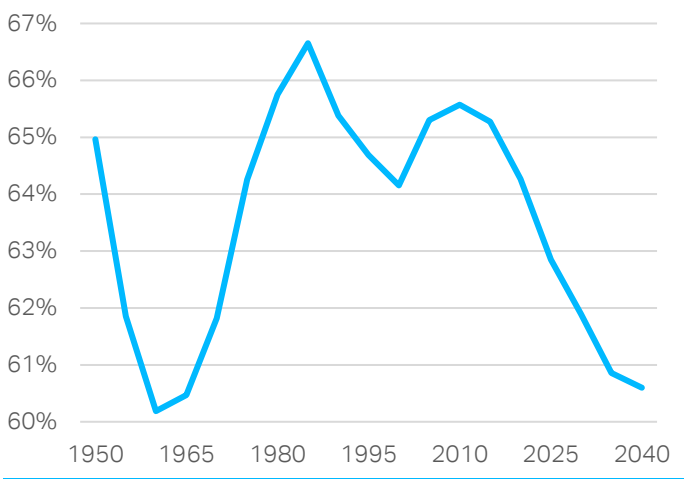
Source: US BEA & Census, TS Lombard

Chart 7 US population: aged 15-64 as % of total



Source: UN projections, TS Lombard

US pops: 'working-age redefined', % of total



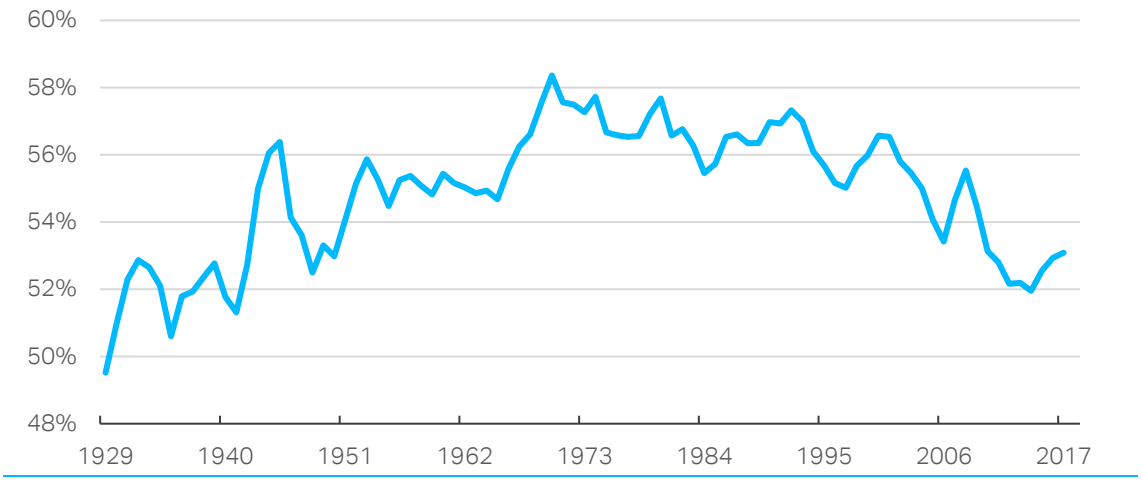
Source: UN projections, TS Lombard

The charts above show the scale of the reversal of the long-run labour-market shares in the US. Chart 6, showing US employment as a share of the total population, peaked in 2000 at 48.6%. Its progress since then has been strongly affected by the economic cycle, with a sharp drop from 46.5% in 2008 to 43.5% in 2010 – but the salient point is that the ratio was gradually declining even before that: eg, from the 2000 peak to 2007's cyclical peak of 47.3%.

The dip in the 1930s in chart 6 corresponds to the post-Depression generation of the low point in the long-run rates cycle. Wartime controls and finances kept yields low through to the end of the 1940s, with the employment ratio rising sharply and then falling back (partly in the military, partly as the economy boomed). The sharp drop of the working-age section of the population in the 1950s (baby-boomtime – Chart 7) was offset by higher participation rates. From 1960 on, female labour-force participation and strong growth – artificially stimulated from 1965 by 'guns and butter' in the Vietnam war – combined to drive the employment ratio rapidly upward. The price of oil got 'left behind' by the upsurge of inflation until 1973; the first oil crisis saw it quickly rise four times. The notoriously weak Fed chairmanship of Arthur Burns until 1978 saw policies that largely accommodated the inflationary spiral. Similar policies in other advanced economies

created the conditions for a second oil crisis in 1979-80: by spring 1980 the crude oil price was up ten times from 1973 in real terms, even after adjustment for the rapidly inflating US CPI.

Chart 8 US labour income, % of GDP



Source: US BEA, TS Lombard

Chart 8 shows the cycle of the labour income share of GDP, which peaked in 1970 at 58.4%. In the 1970s, prices and wages chased one another up the spiral, so the 1980 cyclical peak for the labour income share was only a little lower at 57.7%. These peaks tend to come in recession years, as profits are more volatile than wages, and are therefore hit harder in a recession. But the severe 'double-dip' recession of 1982 did not see this pattern repeated. Likewise, the initial recession of ten years ago in the financial crisis saw the labour-income share jump to 55.5% in 2008, but in the more severe recession-year 2009 the labour income share headed down again.

With allowance for the short-term economic cycle, the pattern of the labour share of GDP shown above corresponds well to the long-run (nominal) rate cycle, with the labour share in 2012-14 about the same 52% as in the mid-1930s. The sub-50% ratio recorded for 1929 is an outlier, but such evidence as exists on wages for that year show very little increase, while real GDP boomed, and with it profits.

In fact the labour share of GDP rose from around 1900 to twin peaks in 1914-15 and 1921-22; the first of these peaks reflected the US boom at the start of WW1, before the US entered the war (which was in 1917) and the second represented a natural increase as the post-WW1 recession hurt profits more than wages. As shown above (Charts 1 and 3)) 1921 was also the peak for the long-run nominal interest rate cycle, the previous low point having been 1900-01. So the share of labour income does seem to be a genuine factor driving the long-run nominal rate cycle. The low points after 1900-01 were the mid to late 1940s, reaching into the early 1950s, and then the 2012-16 period. So for these two cycles the average length was 56-58 years, with the latter cycle longer than the former. The high points after 1874 were 1922 and 1981, with a similar average and pattern of the latter cycle being somewhat longer.

The 1981 turning point in the nominal rate cycle arose from the determination of Fed chairman Volcker to use monetary restraint to curb inflation, which had reached 10% in the late-1970s. Initially, the bond market responded by raising yields, especially after the 1980 recession was followed by a rebound in 1981, when the annual average yield of the 10-year bond was 13.9%. From 13% in 1982 it fell to 7.7% in 1986, the oil price having come down by 75% in real terms.

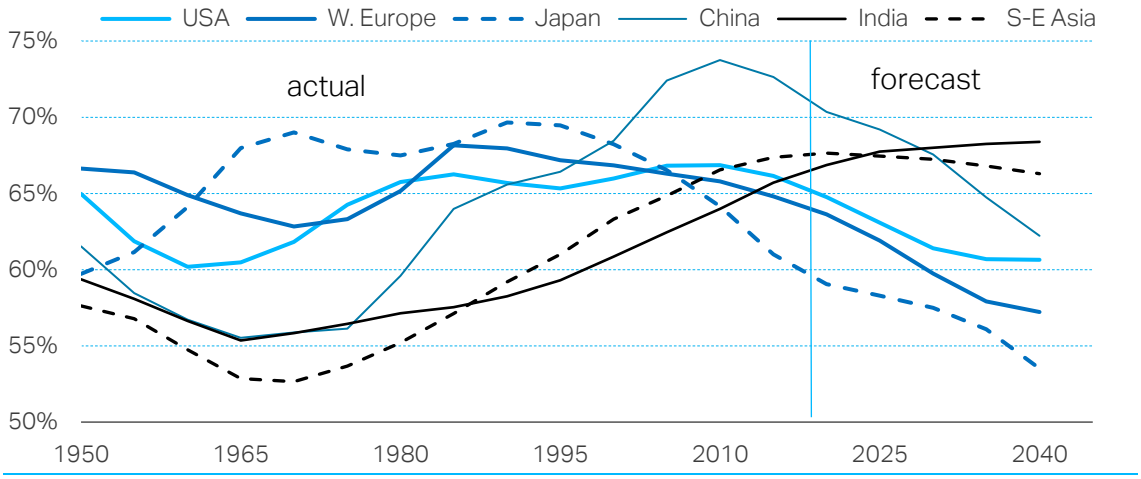
The late 1980s saw a return to debt-driven growth, led by the business sector. It was aided by the collapse of the dollar that had been driven to a high peak in spring 1985 by the combination

of Reagan's deficit budgeting and Volcker's monetary restraint. Greenspan took over the Fed from Volcker in 1987, and the combination of much cheaper oil and an increasingly undervalued dollar encouraged the 'high leverage' boom. (Debt levels had been increasing rapidly in the high-inflation era, but were matched by the inflation of incomes.) The real 10-year yield reached a peak of more than 5% vis-à-vis 5-year average inflation. As the Fed tightened policy, the yield curve went negative in 1989 (3-month bills yielding more than the 10-year note) and recession ensued in 1990s as lending became unprofitable, and the Savings & Loan lenders were in any case bust.

The financial shake-out of the early 1990s coincided with the onset of globalisation and the tech boom. Inflation continuously undershot expectations, and both nominal and real bond yields fell back. At the same time, the employed share of the population was rising to its 2000 peak. This reinforced the disinflationary effects of globalisation and hi-tech, but strong recovery and the euphoria of the stock market's tech bubble led to booming capital spending. When the tech bubble burst from late 2000 to mid-2002, the economic slowdown was mild, with two negative quarters for real GDP in 2001 but no recession as they were not successive.

By this stage, US financial markets were entering the era of Greenspan's 'conundrum' of persistently low bond yields, which from autumn 2004 this author ascribed to the Eurasian savings glut – of which more below (p.13). From the standpoint of demographics, the key point is that the 15-64 age-group peaked as a percent of the population in 2005-2010. In chart 6 above an alternative 'working age' is redefined for recent and future decades, adjusting steadily downwards the share of the 15-19 age-group and upwards that of the 65-69s, and in future decades even the 70-74s. But on either basis, the proportion of the population available for work declines precipitately after 2015.

Chart 9 Population aged 15-64, % of total



Source: UN, TS Lombard

Chart 9 puts the US employment ratios in a broader context, including the 15-64 ratio for Western Europe, Japan, China, India and south-east Asia. The key point here is the very large increase in available labour in the EMs included here (China, India and S-E Asia) and the fact that the maxing-out of China's ratio in 2010 means that this group's overall ratio is now declining slowly, even though for India it is still growing and for S-E Asia it is now stagnant, though starting to decline. For this EM group, the total 15-64 ratio falls from 69% in 2015 to 2040's 66%.

It is worth noting that this will dominate the future, as 2015's actual number of 15-64s in the DMs charted above totalled 414 million, whereas for the EMs above it was 2.3 billion (yet excluding

Latin America, Africa, the Middle East and ex-Comecon). As the total population of the US is still rising, for the DMs the cut in the actual number of 15-64s between 2015 and 2040 is only 11 million (to 403 million). But by the same token, over those 25 years the projected increase of 15-64s in the EMs above is nearly 200 million (to 2.49 billion), though the total population is increasing faster so the ratio falls back a little.

The bulk of future growth, both in population, labour forces, and also output/worker is likely to be concentrated in EMs. And the concentration of EM success in eastern and southern Asia means that currencies there, such as the yuan and rupee, may come to play an important role in global finance. But the role of the dollar has become even more dominant since the financial crisis than it was already. This View is about the long-run interest rate cycle in the dominant currency, which is likely to remain the dollar for the next quarter century.

This point is worth making as it is tempting to say that we should be looking at global ratios to judge the impact that changes in the working-age population may have on the long-run rate cycle. In principle the rapid projected fall in the DM workforce share of the population should imply a shortage of labour developing over time – or, looked at another way, a simple shift upward of demand relative to supply: this would either cause inflation or greater capex and demand for capital, either way pulling up interest rates. Because of the dollar's dominance, its long-run rate cycle is likely to continue to reflect US domestic factors, and as regards the workforce share of population this could be reinforced by the sharp projected downswing of China's ratio – China being much more important for US financial markets than India or S-E Asia.

Even allowing for the heavy weight to be attached to US (and Chinese) demographics, this argument still has to be handled with caution. In particular, the European and Japanese ratios have been falling for 30 and 25 years, respectively, without preventing the major downswing of bond yields. How come?

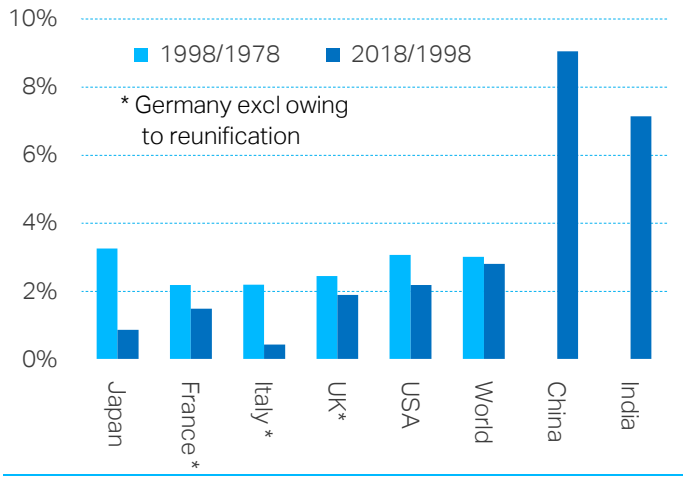
One point is that growth in Europe and Japan has weakened significantly, as it has in the US, though by less. Japanese real GDP growth averaged 4-5% in the years from the first oil crisis until 1990. But since then it has been down to about 1%. In Europe, the euro has hobbled growth as imbalances have resulted from Germany's 2002-05 austerity, followed by 'pass the parcel' of austerity from one euro-crisis country to the next. Over the life of the euro, growth has averaged 1.4% a year, about 1% less than was prevalent before; the decline in Britain has admittedly been less, from 2.5% in 1979-98 to 1.9% in 1999-2018. In the US growth averaged 3-3¼% in the latter half of the 20th century, but has fallen to 2¼% in the last 20 years, with the growth rate in the recovery from the financial crisis a little over 2%. Some data are shown in Chart 9 below.

This shortfall of growth by past standards is a reason for interest rates to have fallen (in real as well as nominal terms) – and is unlikely to persist. While the various DMs cited above saw large falls in growth, the world at large saw only a small dip – from 3.0% in 1979-98 to 2.8% in 1999-2018. The reason, of course, is that EMs did much better. In the latter 20 years, for example, China's average growth rate was 9%, India's 7.1% and the Asian Tigers' 4½% (despite any hangover from the 1997-98 Asian crisis). As a result, the share of just these EMs rose from under 6% of world GDP in 1998 to 22% last year. EMs in total account for 40% of world GDP. While troublesome cases will continue to plague the headlines, their aggregate growth outlook potentially implies a return to 3% world growth, or even more, despite the slowing of growth in China to far below the 9% number cited above.

The second reason why the relatively long decline in the workforce ratio of Japan and Europe is not relevant is their savings glut. The effect of the savings glut on the long-run rate cycle is analysed in the next section of this View, but one result of it is that domestic demand in Japan

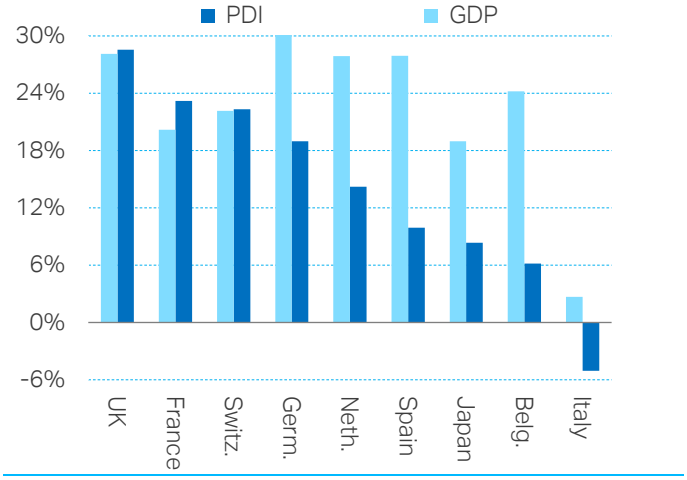
and Europe has been a lot weaker than is implied by the GDP numbers. In France the UK and Switzerland, the growth of real disposable income the aggregate growth of real disposable income per head has slightly exceeded that of GDP (Chart 10, right-hand side) but in Japan and Germany it has fallen short of GDP by more than 10%, with the disparity even greater in Spain, Belgium and Holland. In Italy the disparity is less, but overall performance has been dire: real GDP per head in 2018 was only up 2.7% from 20 years earlier, while real disposable income was down by a vicious 5%.

Chart 10 Real GDP growth, % pa



Source: OECD, TS Lombard

Real growth per head, 2018/1998, %



Source: OECD, TS Lombard

This shortage of domestic demand in Japan and Europe meant that the fall-back of workforces relative to total population did not create any shortage of supply that might raise inflation or capex, and thus interest rates. In fact they depended on ultra-easy monetary policies with low (going on negative) interest rates just to generate enough foreign demand to offset the domestic deficiency.

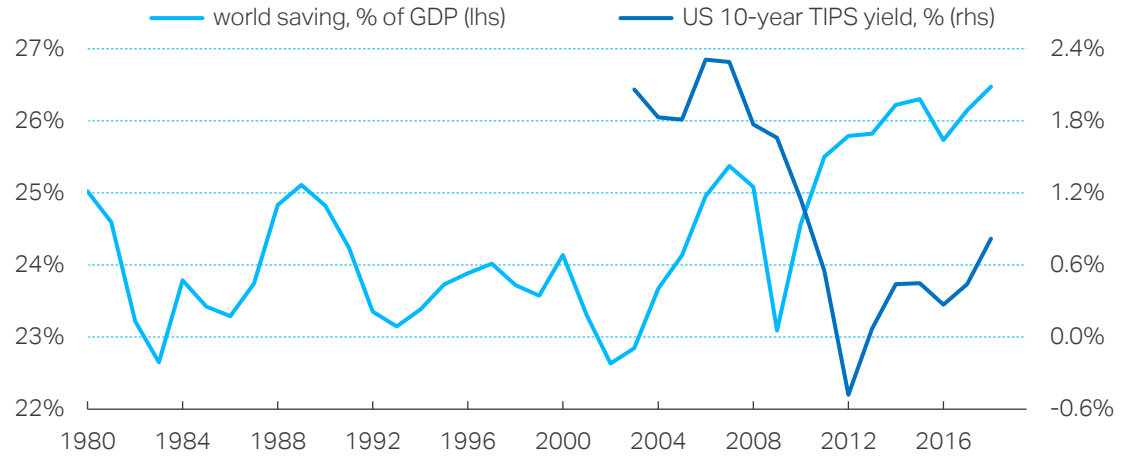
It might be argued that China and the Asian Tigers were major contributors to the savings glut, and so the prospective fall in China's workforce could be similarly offset. But while this is a fair point vis-à-vis the Tigers, it is not for China, whose current account surplus has fallen from $420 billion in 2008 (over 10% of GDP) to just under $50 billion in 2018 (less than 0.4% of GDP) with a deficit likely this year. The glut of saving vis-à-vis the rest of the world has disappeared. Asian Tiger economies are less than 40% of China in GDP, so their continued large structural surpluses, though 5% of their GDPs, are little more than Japan's and less than half Europe's.

A deeper point is that China's national savings rate remains a massive 46% of GDP, so that 'using this up' with excessive capex lowers the return on capital, and has required artificially low interest rates. This ties in with the more general effects of the Eurasian savings glut, to be examined below. But the fall-back in the relative size of the Chinese workforce seems likely, as in the US, to entail either inflation or capex to substitute for labour supply – in either case suggesting higher interest rates.

Savings glut effect to lessen

A major source of downward pressure on US interest rates since the 2004-05 'conundrum' – and especially those of other DMs – has been the savings glut. This consists of a structural and a cyclical portion. The structural portion arises from high savings rates, relative to investment needs in Japan, Asian Tigers, China and north-central (German-centred) Europe (Germany itself plus Scandinavia excluding Norway, Benelux and Switzerland & Austria). The cyclical portion will be treated for the purposes of this View as the current-account surpluses of oil exporters (OPEC, the former Soviet Union, and Norway).

Chart 11 World saving and US real bond yields



Source: IMF, Bloomberg, TS Lombard

Global savings can only constitute a glut in relation to investment needs, but the slowdown in world population growth in recent decades implies a lesser need for 'extensive' capex, to cater for the needs of the increment of population. The IMF only gives data for the world savings rate back to 1980, but from then until 2004 the trend of capex – which at the world level, equals saving by definition – was mildly downward, as suggested by the slowing population growth. For a thorough description of the savings-glut effect on the world economy over the past 15 years, readers should go to my recent book, '*Populism and Economics*' (July, 2018).

Japan has had a savings glut for decades. The other structural-glut countries arose from varied conditions. The Asian Tigers responded to the 1997-98 Asian crisis with an orgy of reserve accumulation, with undervalued currencies and a build-up of large trade and current-account surpluses. The euro system, yoking together countries within a single currency despite their very varied needs, led to German-centred Europe becoming very undervalued, and also generating large surpluses. Finally China, after overheating in 2004, constrained domestic demand against the background of a world boom in 2005-07.

Already, before the financial crisis, this excess of saving was spilling over into the US, Britain and Ireland, Mediterranean Europe and elsewhere (eg, Australia), holding down real and nominal interest rates. Thus, the US 10-year, inflation-protected TIPS averaged a yield of 2.06% in 2003-07, versus the long-run real-yield average of 2½% for long-dated US government bonds. These relatively low yields persisted despite the unrestrained carnival of dubious pre-crisis financial activity, over-leveraging not just the US household sector, but the global financial system as well.

Subsequent to the (inevitable) financial crisis, the saving glut has continued to hold down rates – as much by hobbling the recovery as by the direct effects of excessive saving and consequent

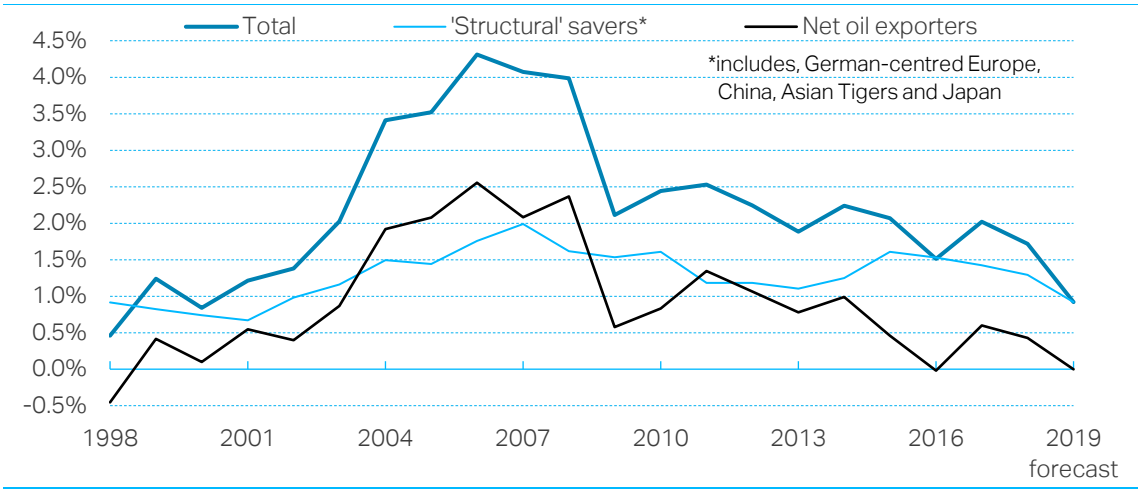
low-yield investment. Excess borrowers in the crisis – the deficit countries mentioned in the previous paragraph – necessarily had to curb consumption. It followed that sound recovery would require greater consumption by savings-glut countries. The Keynesian response would have been large and sustained budget deficits. But Keynesians remained discredited by their failures in the 1970s' Great Inflation, and fears of excessive debts added to the desire to avoid too much deficit budgeting.

Amongst the structural savers, neither was consumer growth forthcoming. Broadly speaking, amongst the DMs, Japan 'would but couldn't' boost consumption, while Germany 'could but wouldn't'. China did decide to spend, but by boosting already excessive capex, rather than lowering its absurd, 50%-of-GDP, national savings rate. It also permitted an upswing of the real value of the yuan that shifted China from undervalued until 2009 to overvalued from 2011-12 onward. Together with temporary Keynesian deficit stimulus in many countries in 2009-11, this was the full extent of direct recovery policies.

For the rest, the world has relied on monetary stimulus, meaning low interest rates. The US supplemented ultra-low interest rates with quantitative easing in several bouts from late-2008 onward, ending only in 2014. Japan and the euro area were chronically short of domestic demand – as usual in Japan, and in response to aggressive budgetary deflation in the EA. Both adopted predatory devaluation by means of negative interest rates. Emerging markets, China, the US, Britain accepted sustained trade deficits that were, indeed, easily financed by a world of investors desperate for yield.

For US yields, the low point in real yields was 2012; for nominal rates, given much lower inflation after the oil price slump in 2014-15, it was a 'double bottom' in 2012 and 2016. What next?

Chart 12 Savings-glut current-account surpluses, % of world GDP

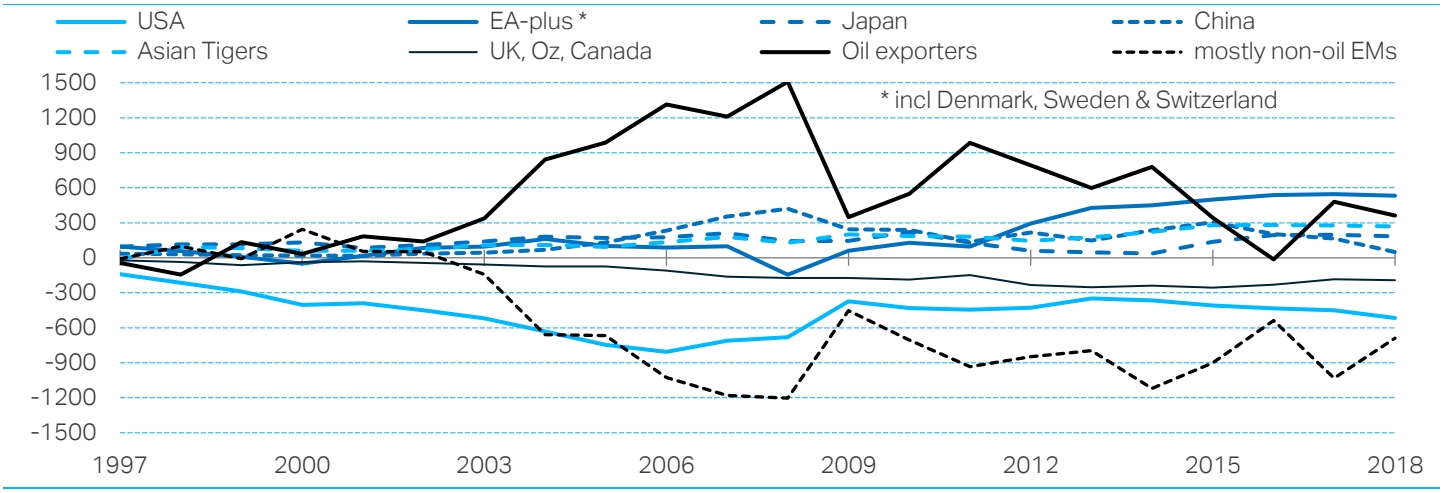


Source: IMF, TS Lombard

The basic point, and a pointer to rising real and nominal bond yields in future, is that the savings glut is mostly disappearing, and in any likely future scenario will be less important. A major point is that the oil countries' surplus has gone, probably for good. The collapse of oil prices in 2014-15, combined with inevitably slow budgeting reactions, led to the surplus being eliminated in 2016. Then there was a false dawn for oil prices that lasted until autumn, 2018, when they collapsed again, as the combined forces of demand weakness, given slow growth and the mid-2018 global slowdown, and incremental shale fracking costs well below current oil prices took their toll. The chart above has a forecast for oil exporters of zero for 2019's current account balance, but a deficit is more likely than a surplus.

As well as the elimination of oil exporters' cyclical savings glut, the structural glut is also falling, both in cash terms and as a share of world GDP. The most important point is that China is now in deficit, a huge transition from its 2008 peak-surplus of $420 billion (10% of its GDP). The surpluses of Asian Tigers, Japan and German-centred Europe are likely to shrink in 2019, as the global slowdown has particularly hurt export-dependent countries, ie, savings gluttons. China's shift into deficit from its $50 billion surplus in 2018, with reduced surpluses in the other structural glut countries, could cut the structural surplus from $1.1 trillion in 2018 to $850 billion in 2019, less than 1% of world GDP.

Chart 13 Current account balances, $ billion



Source: IMF, CEIC, TS Lombard

The distinctive feature of recent and current world imbalances is the deficits of non-oil EMs (excluding Asian Tigers) that have been consistently larger than that of the US since 2006. Their typical $800 billion deficits have built up over a dozen years to some $10 trillion of debts. In the post-crisis world dominated by deflation and inadequate demand, the spectacular weakness of domestic demand in Japan and continental Europe has been a major factor holding down dollar interest rates. Hidden behind this, emerging markets outside east Asia were able to finance themselves and their deficits as investors reached out for yield, despite the deficits averaging more than 5% of their GDPs – much more in the worst cases.

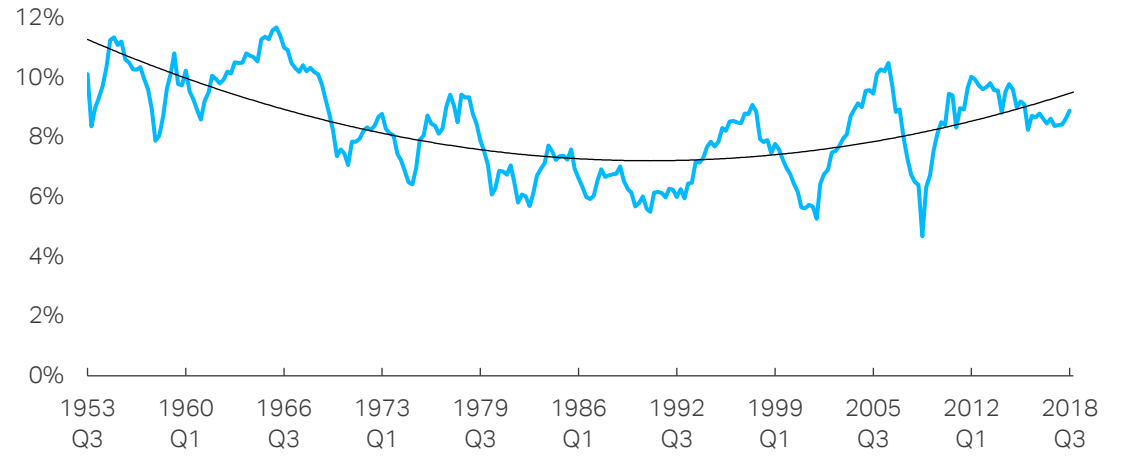
When the US-China trade-war threat became clear and immediate last May, the soaring dollar (worsened in effect by oil prices rising to their autumn peak) and slumping yuan imposed severe pain on non-oil EMs, as well as the export-dependent savings gluttons. Imports suddenly cost more just as exports became less remunerative owing to China's cheap yuan and domestic slowdown. For non-oil EMs it was a financial bloodbath. Their 40% of GDP (24% excluding China) turned down sharply, precipitating the current global slowdown. The austerity programmes adopted as a consequence mean their trade accounts should improve their trade balances in 2019, just as export weakness is reducing savings-glutton surpluses.

As the surpluses of Japan and Europe fall somewhat, while the EMs increase their share of world population and, especially, GDP, the balance between Japanese/EA weakness holding down US rates and EM strength pulling them up should shift in favour of EM influence. The downward pressure on rates from Japanese/EA output weakness, population decline and excessive saving must shrink in importance. Also, at least in Europe if not Japan, economic policies may follow the US lead in accepting more budget deficits, offsetting the savings glut directly in Keynesian style.

Trade-war threat => a degree of stagflation

The threat of trade war has receded over the past month or two, but it may still have an effect on business decisions. (See The View by Larry Brainard and Charles Dumas, 'From trade war to trading blocs', September 21, 2018). In principle, the risk of tariffs or other trade restrictions being introduced creates a home-country bias to investment decisions. While an investment in China (say) might achieve the lowest-cost source for some input, the chance that such a decision will be invalidated by future trade restrictions will bias the analysis of the investment. Only if the saving is particularly great will the source be China, otherwise it will be the home country, typically the US.

Chart 14 US companies' pretax profits, % of GDP



Source: US BEA, Datastream, TS Lombard

The second-order polynomial trend drawn by Excel through the chart (above) of US companies' profits as a percent of GDP is more or less the inverse of the long-run interest rate – as would be expected as the profit share of GDP is more or less the inverse of the labour income share (Chart 8 above). The suggestion that higher interest rates are associated with lower profits, and *vice versa*, is not just a direct reflection of interest payments being a deduction from profits. The surging labour share of total incomes until the 1970s led to the inflationary spiral that was simultaneously damaging to profits and driving up interest rates. The reverse has been true with inflation curbed.

The trade-war risk is that a bias towards home-country investment, resulting from the risk of tariffs on a lower-cost investment abroad, will lower the productivity of capex, and as a second-round effect create a degree of bias towards use of labour rather than capital. This implies both lesser efficiency of the economy, compared to the pure globalisation model, and probably higher costs – a combination christened stagflation when it was at its most pernicious in the 1970s. It would not be right to make too much of this – it is a minor, not a major, reason why the interest-rate cycle may now point upwards.

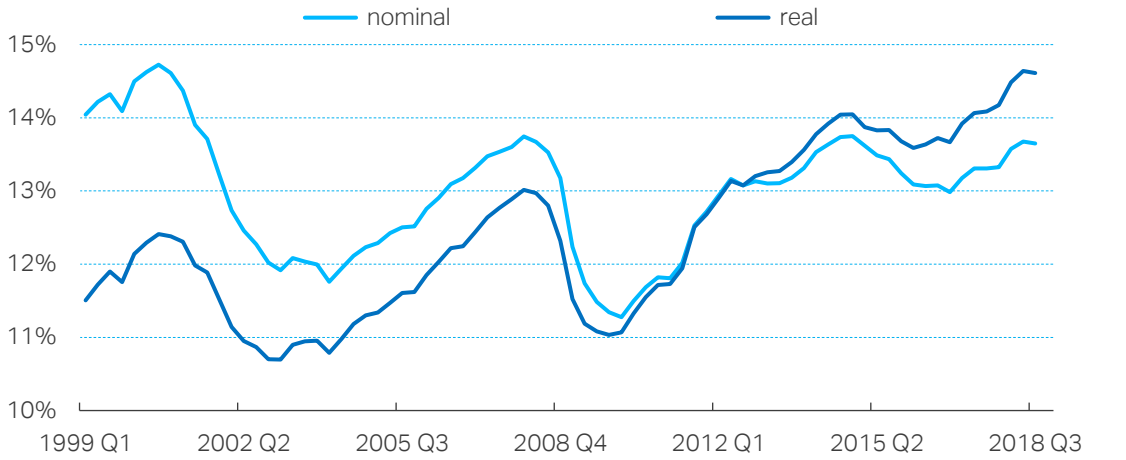
An indication that the trend of US domestic corporate profitability may now be downward is anyhow provided by the modest downward drift of the profit ratio since it most recent peak in 2012. Generally, periods of recovery and growth see the profit ratio increasing – profits are more volatile in response to activity than labour incomes, for example. A six-year downward drift in the profit ratio is not as bad as the slumps associated with recessions. But it is reminiscent of 1970-80s experience, when profitability was poor and stagflation a problem, and it has some similarity

with the late 1960s when the profit ratio fell despite good economic growth between the mid-1966 peak and the end of 1968 (after which profits slumped in the recession that kicked off the 1970s). In retrospect that was the turning point towards inflation – the 'guns and butter' boom.

Will cheap capital hold down rates

One factor pointing in the opposite direction – in favour of interest rates staying low – is the apparently greater efficiency of capital in the new, hi-tech world. For detail on this, a recent piece by Joachim Fels of Pimco is recommended, but the argument takes many forms.

Chart 15 US business capex as % of GDP



Source: US BEA, Datastream, TS Lombard

The difference between the horizontal to declining trend in the nominal business capex ratio and the rising trend for the 'real' (price adjusted) ratio makes the point. Capital is getting cheaper, or a dollar buys you more in terms of effectiveness than it did before. The inflation rate of business capex over the period of the chart has been 0.6% a year, versus 2.0% for GDP. If anything this understates the case, for a variety of reasons:

- Estimates by David Byrne of the Fed suggest that the tech portion of business capex (about half of it) has in reality seen deflation at a rate 6% a year greater than the official estimates (which also show slight deflation for this portion of business capex). If this is correct, or partly correct, then the real ratio of business capex in the chart above would slope upward more strongly
- A large amount of tech activity is capital sharing or saving, rather than capex in tech products. Thus Uber and Airbnb generate value in the economy by means of lower capex than would occur otherwise in cars (taxis) and hotels, respectively. Like the point above, this has downward implications for interest rates, and may be part of the reason real rates have stayed so low for so long.
- The most powerful form of capital saving is, arguably, online shopping. US buildings capex in the distribution sector is much reduced by the simple use of computers – by consumers to search for the best deal, and by the likes of Amazon to make the sale without the need for a shop.

- 'True' GDP growth has been understated by an estimated ¼% a year as a result of the siphoning of royalty payments to tax havens, and there are varying estimates of the 'welfare value' of such largely free services as Google searches, email and the like. To the extent inclusion of these effects would increase the value generated in the economy it makes the continued sustenance of low interest rates more impressive.

While these points are very strong in helping to explain what has happened, they may not be so forceful in relation to future prospects. The nature of future growth, whether tech-derived or from other forces, cannot be known – and this is an area where simple projection of past trends is unlikely to provide the right answer.

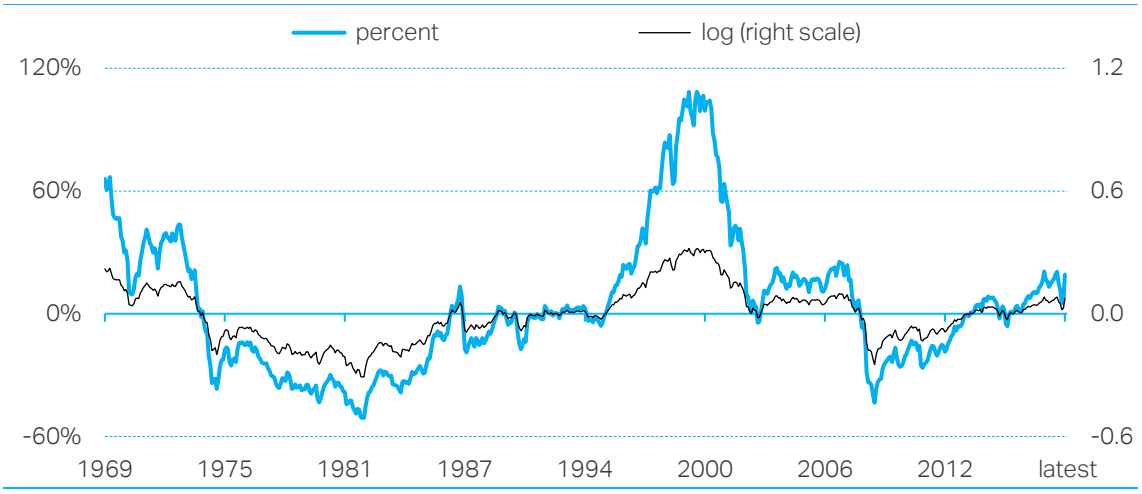
Financial market consequences

The balance of the argument in this View is that US bond yields are now starting a long-term upswing, both in nominal and real terms. Effectively, this implies that each cycle will see higher troughs and peaks of the 10-year yield than the previous one. Already we have seen this start. The annual-average lows for the 10-year in 2012 and 2016 were 1.8%, but yields as low as 1.4% were seen in both years. Yet now, with a distinct slowdown in the US and a stock-market shake-out at the end of last year – while the world economy is much closer to recession than in 2016 – the 10-year yield remains comfortably 1% or more above its 2012 and 2016 lows.

The judgement here is multiple: first the increasing importance of the US, China, and other EMs, vis-à-vis the depressed DMs of Japan and Europe, will create an upward impulse to the world economy; second, that the increase of dependency ratios in all DM populations and in China will bias economies towards inflation of wages and greater capex; and third, that the downward pull to bond yields from the savings glut will lessen and increasingly be outweighed by the upward pull of higher rates in the large raft of deficit-EMs needing financial inflows.

Chart 5 showed the S&P real value index (RVI: S&P with dividends re-invested and inflation-adjusted) for the 148 years since 1871. To see the peculiarity of the current cycle, the chart below shows it for the past 50 years, since 1969:

Chart 16 Deviations from trend of the RVI



Source: S&P, Datastream, TS Lombard

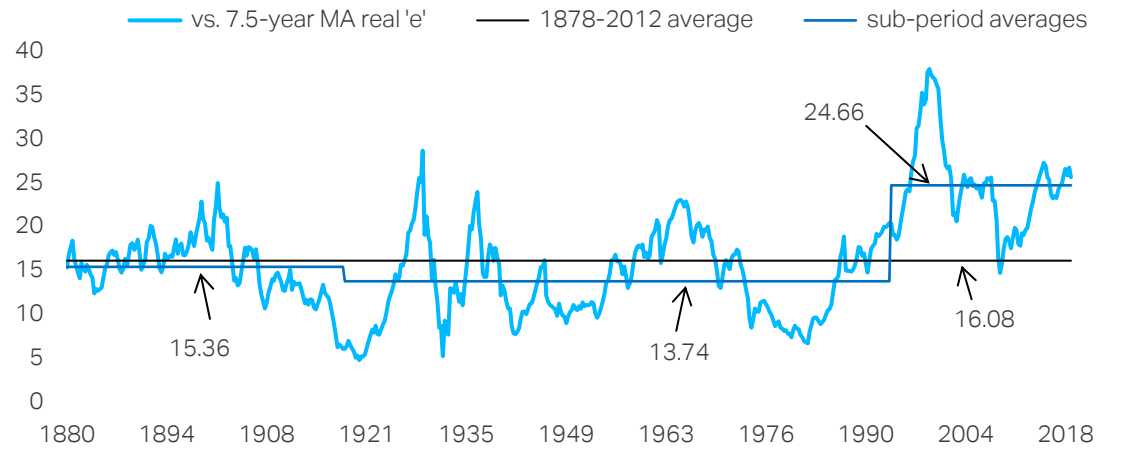
The reversion to mean of the RVI's deviations make it the best indicator of where the market stands vis-à-vis its long-run trend of a 6.6% all-up real return. The log scale illustrates this best,

as it is visually symmetrical around zero. The cycle has a typical length of about 30 years, so the natural expectation is that in a typical cycle the deviation will be above and below trend for about a dozen years each, with half a dozen years roughly on-trend. So it proved from the shift below trend in 1974; the RVI came back to trend in 1987, and then again in 1989, after the October, 1987, sell-off. From then it was roughly on trend until early 1995. From then it was above-trend until mid-2008, another 13-year spell, save for a few months in 2002.

After the shock of the financial crisis and the relatively feeble recovery, both globally and in the US, a long below-trend patch might be expected for the RVI. Yet it was back on trend in early 2014, and has been above-trend for most of the past five years. The latest level of the S&P is 19% above trend, not far from the 25% peak positive deviation in May, 2007. How come?

The answer, as everybody knows, is low interest rates. Monetary stimulus is precisely designed to front-end value in real assets, notably stocks. It has been successful in this – though not so much in generating economic recovery. Notably US households, sellers of stocks for most of the post-WW2 era, have been buying stocks for yield in recent years – the rate on bank deposits being zero! High stock market values are one of the chief distortions arising from the ultra-easy money of the post-crisis period. The shortness of the below-trend, post-crisis patch of the RVI is one result. A return to an on-trend RVI within five years would require an all-up real yield below 3%, versus the 6.6% trend. Somewhere in there probably lies a bear market.

Chart 17 US CAPE with long-run & sub-period averages



Source: Professor Shiller, S&P, Datastream, TS Lombard

In last September's View on trade war by Larry Brainard and myself (see p.16 above) the risks – war, depression, inflation and communism – dismissed in 1989-91 in favour of full globalisation were analysed. Similar geopolitical risks could partially return in response to apparent willingness to pursue trade war. Yet the current level of the cyclically adjusted p/e ratio (CAPE) remains above the average level since the end of the Cold War, and close to twice its level in the 'short 20th century' (1914-91 – from WW1 to the end of the Cold War). (The cyclical adjustment in chart 16 uses a 7½-year moving average for real earnings, not the ten years adopted by Professor Shiller, to reflect the fact that the US short cycles have averaged 7½-8 years in length, not ten.)

Any long-run shift in stock market performance will occur within the context of normal short cycles. The conclusion from this analysis is that the above-trend RVI will give way to a period below trend. We do not expect this in 2019 or 2020, which should be a recovery year. (See the Dumas/Blitz View of a month ago, 'Trade war damage to trigger Fed rate cut'). But at some stage in the next five years, we could see a sharp bear market as bond yields return closer to normal.

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