

Debt wish

For more than a decade cheap money (low interest rates) and easy access to loans have caused us to take on more and more debt in order to purchase everything from our home to our car or the latest appliances. From an economic perspective, debt represents borrowing from the future to facilitate spending today. Given how elevated the total level of debt in our economy is now, LGIM Economist James Carrick argues in this edition of Fundamentals that it is unreasonable to expect debt to continue to move higher. In fact, the positive factors – falling interest rates, demographics, credit availability and sub-prime lending - which enabled the massive build up of debt, are starting to fade. This threatens to undermine the strength of the economic recovery in the developed world.

Policy makers are concerned about the lack of bank lending. Despite their best efforts, the total level of US household debt is falling for the first time since World War II. While lower debt levels may appear sensible given the recent financial crisis, authorities are concerned that this total decline of debt may actually threaten the economic recovery.

This dates back to Economist John Maynard Keynes and his theory, the 'paradox of thrift'. Essentially, Keynes argued that if we all attempt to save more at the same time, the total level of savings actually falls. This is because by saving more (or paying down debt), we are spending less. Lower spending reduces the incomes of others and their

ability to save. If everyone saves more, the economy may get trapped in an ever-downward spiral of falling spending and incomes.

This is what we saw during the Great Depression of the 1930s and recent data show the level of household debt is falling now as it did back then.



Inside:

Market Overview

Snapshot: US non-residential investment slow to recover

Forecasts: Rates on hold, pace of recovery uncertain

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Fearing a repeat of the Great Depression, politicians and central banks have taken desperate measures to encourage banks to lend again. Interest rates have been slashed to zero, public funds have been used to recapitalise their balance sheets and moral suasion has been applied. But so far it seems these measures are not working.

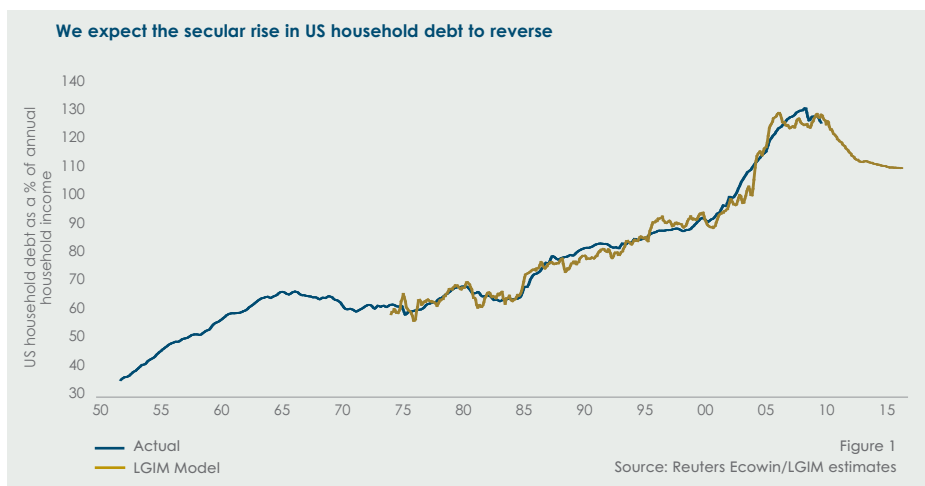
We believe politicians may fail in their aim to get banks to lend more. Our analysis suggests US household debt as a share of income could fall from 130% in 2008 to 110% by 2014 (Figure 1). The need to keep repaying debt for a sustained period of time should hinder the economy from expanding at an above trend pace, keeping unemployment high. Previous economic recoveries have been vigorous because households have been able to take on more debt, bringing forward consumption from the future.

Consumption smoothing

The belief that everything can return to 'normal' and household debt can continue to rise on the same trend path it has taken for previous decades is too optimistic, in our view. To understand why, we need to consider the reasons debt has grown so fast in the past and whether those conditions will repeat themselves.

In theory, households take on debt to smooth consumption. Without debt, people cannot enjoy durable goods like cars, or live in their own home until they are old enough to have saved sufficient funds. Borrowing allows households to enjoy the benefits of car and homeownership when they are young in return for paying the money back when they are older.

This suggests an important role for demographics. A young population will borrow a lot. But as they age, debt should be repaid. This fits with the data. Research by the Bank of England suggests most debt is held by households aged 30-40. The majority of this is secured on their property. Unsecured debt tends to be



held by 20-30 year olds. As households age, the amount of debt tends to fall.

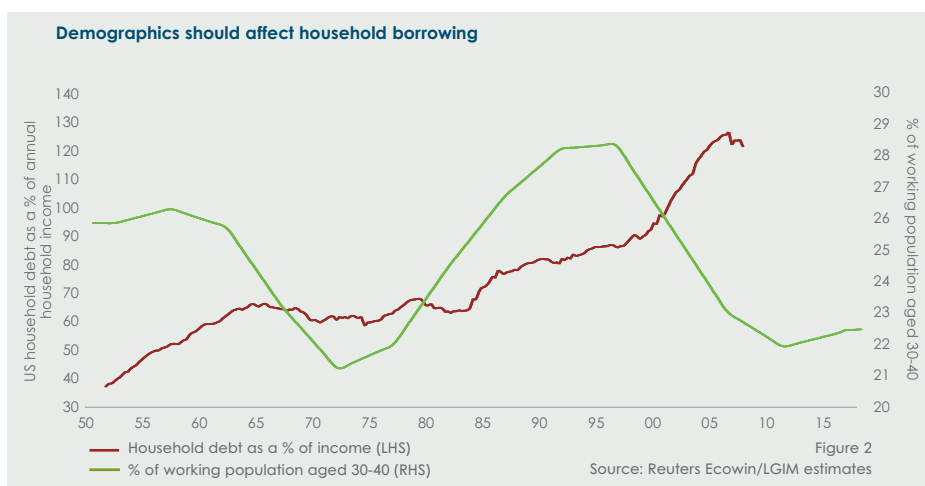
Given the population of the US is aging as the post-WW2 'baby boomers' approach retirement, this suggests debt levels should be falling not rising. Figure 2 suggests there might be some relationship between demographics and debt in the US. The household debt to income ratio fell from the mid 1960s in tandem with the share of the working population aged 30-40. We then saw a reacceleration in debt in the late 1980s as this demographic became more important again. But the relationship is only modest. Clearly there are other factors at work.

Homeownership rates

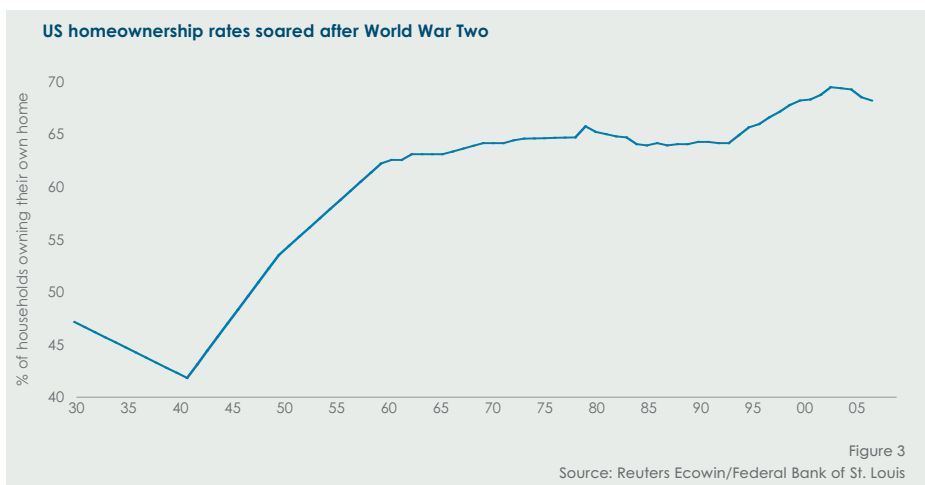
One such factor was the rise in homeownership following WW2. The US government made it easy for veterans to

get a mortgage (no deposit was required). The Federal Reserve Bank of St Louis argues this helped push up homeownership rates from 40% before WW2 to 64% by 1965 (Figure 3). If more people are borrowing to buy a home and fewer people are renting, it stands to reason that debt as a proportion of income should rise. But obviously, there is a limit to this process. Homeownership rates cannot exceed 100%, putting a ceiling on the debt to income ratio.

Another factor driving debt is interest rates. We highlighted earlier that a young person would prefer to enjoy a car or their own home now, rather than later. But the decision depends on the rate of interest. Lower interest rates encourage more people to purchase a property because the cost of borrowing would fall relative to the alternative cost of renting.



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The benefits of saving are also simultaneously reduced when interest rates are low.

Unsurprisingly, there is a strong relationship between interest rates and debt (Figure 4). A lower interest rate allows households to take on more debt yet keep their monthly cash outflows the same. In theory households should care about the repayment of principal over their lifetime too. This should limit the amount of debt taken on if lower interest rates coincide with lower wage inflation. But in practice households have tended to be myopic and only care about monthly outflows. This partly reflects the belief that ever-rising house prices would help them pay off the principal.

Looking ahead we are concerned that mortgage rates are no lower than they were between 2003 and 2005. This is because the Fed Funds rate cannot fall below zero. Therefore households will be unable to borrow more money without increasing debt servicing costs. By contrast, in every economic cycle since the early 1980s, US households have been able to take advantage of ever-lower interest rates and borrow more.

Credit standards

Another concern we have surrounds the limited availability of credit. The amount of money households choose to borrow will also depend on the range of products offered to them. For example, households

can afford to borrow more money if they can repay the debt over 35 years rather than 30 years (maturity of the loan). Similarly, they can borrow more if they need to put down a smaller deposit (loan-to-value ratio) or pay a lower initial fee. In Figure 5 we aggregate these three indicators of credit availability into one series and plot it against the household debt-to-income ratio. Again, you can see that there is some relationship and that since 2007 it has become more difficult to obtain credit.

However these data only cover so called 'conventional' repayment mortgages that meet government guidelines. They do not cover mortgages with non-conventional features such as interest only, less than 20% deposit, large size (jumbo) or households with low credit scores (subprime).

To capture the importance of these effects we've looked at the market share

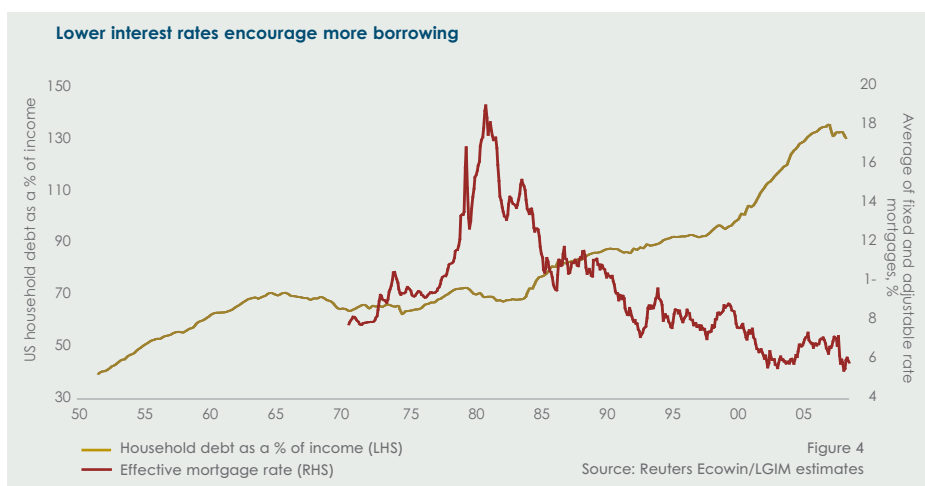
of subprime mortgages. These represented just one in every 66 mortgages in 1998 before soaring to one in seven by 2005. More recently, the share has shrunk to just one in ten. It is likely to keep falling given high foreclosure rates of 15% and banks are no longer offering sub-prime products.

We believe the lack of subprime lending will push the household debt-to-income ratio down in the future. Subprime loans boosted homeownership rates by allowing households with poor credit scores the chance to own their own home as opposed to rent. Going forward, it is more likely that households with similar credit characteristics will be denied the opportunity to get a mortgage and will have to remain in rented accommodation. This, combined with defaults from existing subprime borrowers means there will be less debt outstanding for a given amount of workers.

Continued deleveraging

If we combine all of the above factors – demographics, interest rates, credit availability and subprime defaults – we conclude that household debt is likely to continue to fall in coming years. This is because the positive factors that contributed to the secular rise in debt in recent decades are reversing.

Populations are ageing. Mortgage rates are no lower than they were in 2003.



Article contd.

And subprime lending is over. Instead, households need bigger deposits than in previous years.

The change in debt outstanding is net lending less write offs (defaults). Net lending is the difference between gross new lending and repayments of existing debt. If there was no gross lending, debt outstanding would gradually fall over many years towards zero as households repay the principal of their loans.

We still see positive gross lending. Some people will buy cars and some will buy houses. However, since house prices are lower than before and credit conditions are tighter, fewer people will borrow and the amounts they borrow will be smaller than we saw over the past decade. Therefore, net lending is likely to remain weak.

This suggests the economic recovery will be muted after the temporary boost from the manufacturing inventory cycle fades (see last month's Fundamentals, 'Life After The Recession'). While households have already made significant progress in improving their financial position by slashing spending on housing and consumer durables over the past year, it is possible that saving will need to rise a bit further from here (Figure 6). Households won't be able to spend money they don't have by borrowing from the future, which is what they did in previous economic cycles. This suggests unemployment could remain high for some time.

Households' spending power will be affected by government policy. Tax cuts and spending increases have eased the US household sector's pain over the past year at the expense of soaring government deficits. However, US authorities now face a tricky challenge of trying to support household incomes while maintaining credibility with the bond market. If the bond market were to lose faith in the solvency of the US public finances, mortgage rates will rise,

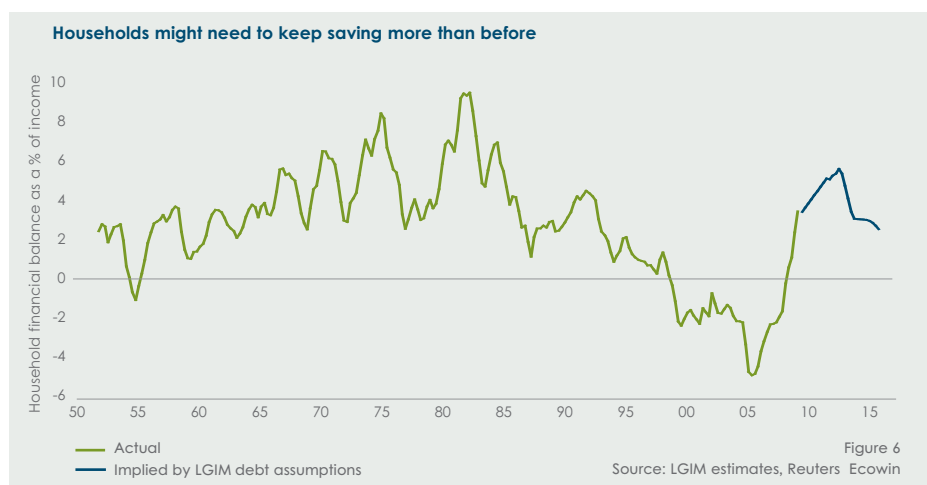


particularly if accompanied by a sharp fall in the exchange rate. But if the authorities tighten fiscal policy too quickly, household incomes will come under pressure. To offset potential fiscal tightening, monetary policy is likely to remain loose – that is the Federal Reserve should be slow to raise interest rates.

Party on

Our analysis of the fundamental drivers of debt – demographics, interest rates and credit availability – suggest US households will continue to pay down debt in coming years. But that doesn't mean the global debt party is over. The volume is being turned up in many emerging markets. Car sales recently reached record highs recently in Brazil, India and China for example. Home sales have also jumped.

In general, Asia and Latin America look best placed for a secular rise in household debt over the next decade. Russia and Eastern Europe look more problematic. Not only are demographics worse, but credit conditions are tighter. Interest rates are actually higher than in recent years because many central banks in the region have had to raise rates to defend their currencies. By contrast, interest rates in Latin America and Asia are generally at record lows. But it remains to be seen how long policymakers in these regions will let the party go on for. Arguably, the US authorities were too slow to remove the punchbowl and the hangover is proving more painful than they hoped.



Market Overview

The combination of higher corporate earnings forecasts, more positive macroeconomic data (particularly from Europe) and investors' growing willingness to take on a greater amount of risk, continued to send equity markets higher last month.

After coming to a standstill during the financial crisis, manufacturing activity is now expanding briskly. In order to cut costs and stay in business, firms ran down their inventory levels during the economic downturn, but now as demand grows, factories are open for business again and global industrial production is rebounding swiftly. Global trade has also bounced back from extreme lows as the economic recovery gains pace, particularly in Asia.

While the fundamentals have improved, equity markets appear to be pricing in a sustained recovery for next year. However, with final demand from consumers likely to remain weak, there is a significant risk that high unemployment and the withdrawal of government stimulus measures will cause the global economy to revert to no better than its long-term average next year. As a result, equity markets may need to factor in a more subdued economic climate.

Equity Overview

UK

A sweet deal

UK equity markets have traded higher as economic data continues to improve. The most recent reports show that house prices in the UK have now recovered to around the levels they were at one year ago and consumer confidence appears to be rising. Despite another slip in manufacturing confidence, on the whole UK economic surveys have continued to improve most recently.

The greatest returns during the past month have come from the food sector with Cadbury's share price moving higher amidst being pursued by takeover bids from Kraft Foods. The market has seen a significant pick up in merger and acquisition (M&A) speculation in general and it appears this theme will continue.

The financial sector has been the weakest link in the UK equity market during the past month as companies within the banking sector in particular continue to work hard on repairing their balance sheets.

After extending their quantitative easing programme by £50bn unexpectedly in August, the Bank of England (BoE) appear likely to keep official interest rates low for the foreseeable future.

EQUITY OVERVIEW

| Total return (denominated in £) | September (monthly return %) | Calendar year-to-date (9 months %) |
|---------------------------------|------------------------------|------------------------------------|
| UK | 4.5 | 19.3 |
| US | 5.8 | 7.5 |
| Europe | 7.5 | 15.2 |
| Japan | -0.7 | -3.5 |
| Asia | 12.3 | 42.9 |

Source: Datastream, FTSE indices shown

Major Equity Markets – Total Returns £ 2008/2009



Figure 1
Source: Datastream, FTSE indices shown

US

Mixed signals

American equity markets have been sent mixed signals by most recent economic data. While retail sales figures for the month of August (released mid September) surprised market participants with their strength, there have also been negative surprises during the month ranging from home sales, car sales, durable goods orders, consumer confidence and job payroll figures.

We anticipate that economic growth during the second half of this year will continue to be almost entirely driven by the effect of companies rebuilding inventory levels which were depleted during the downturn coupled with government spending activity. While inflation has risen slightly, we believe that a more subdued period of economic growth next year will mean that inflation pressures will fail to materialise and the US Federal Reserve will maintain an accommodative monetary policy stance, leaving official interest rates on hold throughout the year.

There has also been a large pick up in IPO and M&A activity in the US in recent months. Adobe Systems Inc was given the all clear by regulators to buy web analytics firm Omniture Inc, Dell has moved to acquire 100% of IT services company Perot Systems and Xerox has launched a \$6.4bn takeover of Affiliated Computer Services (ACS).

EUROPE

In better health

At the end of September, European equity markets are trading approximately 60% higher than the depths reached last year. Most economic surveys have been strong, and much of the economic data are now painting a recovery in the region.

The FTSE Europe ex UK Index posted a capital return in euros of 3.6%, which equated to 7.5% in sterling. The businesses which came closest to reaching insolvency less than a year ago are now leading the market gains. These include the most highly-g geared banks and other financial institutions, as well as the most cyclically exposed industrial companies. Lagging behind the broader market during the month of September were companies such

Equity Overview Contd.

as the oil and gas majors, as well as the autos companies, the latter dragged down by a very weak performance by Volkswagen ordinary shares.

As we enter the final quarter of the year following two exceptionally strong quarters of equity market performance there is a growing body of investors expecting markets to consolidate, concerned that investors have started to anticipate too much in the way of economic recovery. With such low yields available on other investment classes we believe that any pullback in markets will be short-lived.

JAPAN

Yen gains, not appreciated

The Japanese equity market declined in September despite further signs that the economy is recovering. Industrial production rose during the month of August, the sixth consecutive increase. An economic survey of Japanese businesses conducted by the Bank of Japan (BoJ) showed growing confidence during the three months to the end of September. The Tankan survey is an important input into the BoJ's monetary policy decision making process. Monetary authorities in Japan left official interest rates unchanged at 0.1% last month, remaining cautious whilst

recognising that the economy is showing signs of recovery.

The recent election and the strength of the Yen drew most attention over the past month. The BoJ suggested that the stronger Yen was good for Japan's economy in the longer term and after saying currency intervention should be avoided, Japan's new finance minister denied, then later admitted that intervention may be necessary if currency moves become too irregular.

While demand for Japanese exports from Asia is growing steadily and we have also recently seen the first signs of a pick up in demand from the US and Europe, any further appreciation in the yen may weigh on export orientated Japanese firms.

ASIA / EMERGING MARKETS

Double digits

Asian equity markets gained in September with Taiwan (up +14.7%), South Korea (+14.3%), Thailand (14.1%), Australia (13.2%) and India (+11.8%) leading the way. Weaker regions included the Philippines (+1.2%) and Malaysia (+6.1%). China gained 7.8%. In other emerging markets, the Russian equity market soared another +17.6% during the month of September and is almost 100%

higher now than it was at the start of 2009. Brazilian equities have also been strong, up +8.9% for the month, +64% for the calendar year to date.

A strong reporting season has underpinned recent market strength. In Taiwan, strong performance came amidst a recent political cabinet reshuffle and raised hopes that positive cross-strait developments are underway with China, with plans to reduce tariffs and promote mutual investment. Greater political stability, a firm property market and strong loan growth for banks supported Thai equities during the month.

Industrial production and trade continues to rebound strongly throughout emerging markets and this trend looks likely to continue into 2010. While activity is picking up significantly, absolute industrial production levels still have much further to rise before reaching the levels they were at before the collapse of Lehman Brothers. Eastern Europe remains the weakest emerging economic region, with much of the economic data for many countries in the region remaining at similar levels for the past year.

China is in a strong position to sustain a rapid economic expansion. The country has low levels of public debt and its banking sector has not been directly affected by the financial crisis.

Fixed Income

Despite signs that the global economy is moving back towards growth, fresh doubts arose over the pace of the global economic recovery last month, particularly given the prospect that the benefits of stimulus measures will fade during the months ahead. As a result Government bond yields have declined.

The Bank of England extended its quantitative easing programme in August by £50bn, taking the total for gilt repurchases to £175bn. Credit spreads narrowed sharply as investors' appetite for risk rose. Lower-rated issues were among the leading beneficiaries, with many riskier credits delivering double-digit gains during the September quarter. Subordinated financials also delivered very strong returns.

Amidst a tight bank lending environment and with generally low levels of liquidity for buyers in the secondary markets, corporate borrowers continued to capitalise from bond investors looking for healthy yield premiums over government debt.

Major Bond Markets – Total Returns £ 2008/2009

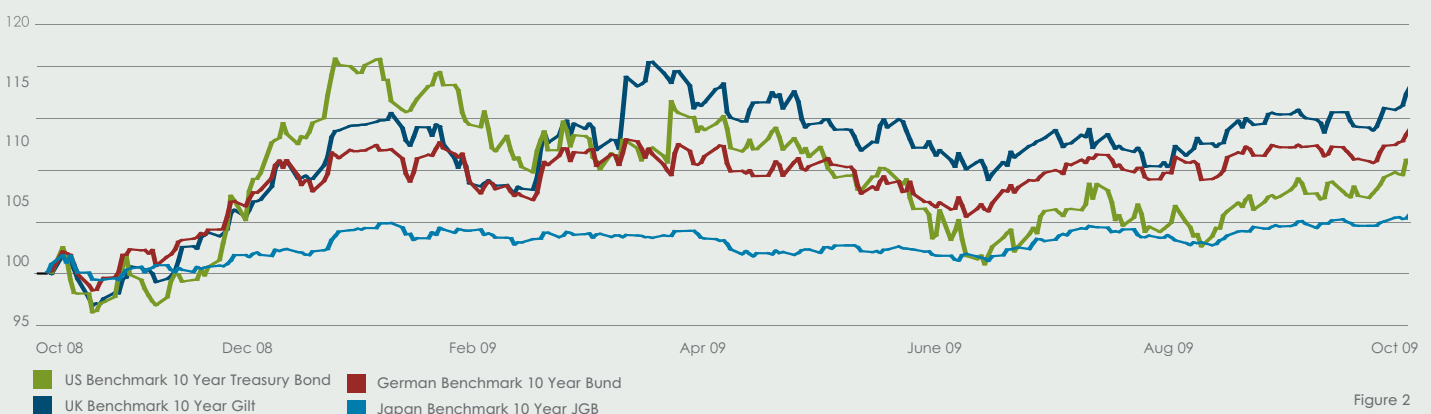


Figure 2
Source: Datastream

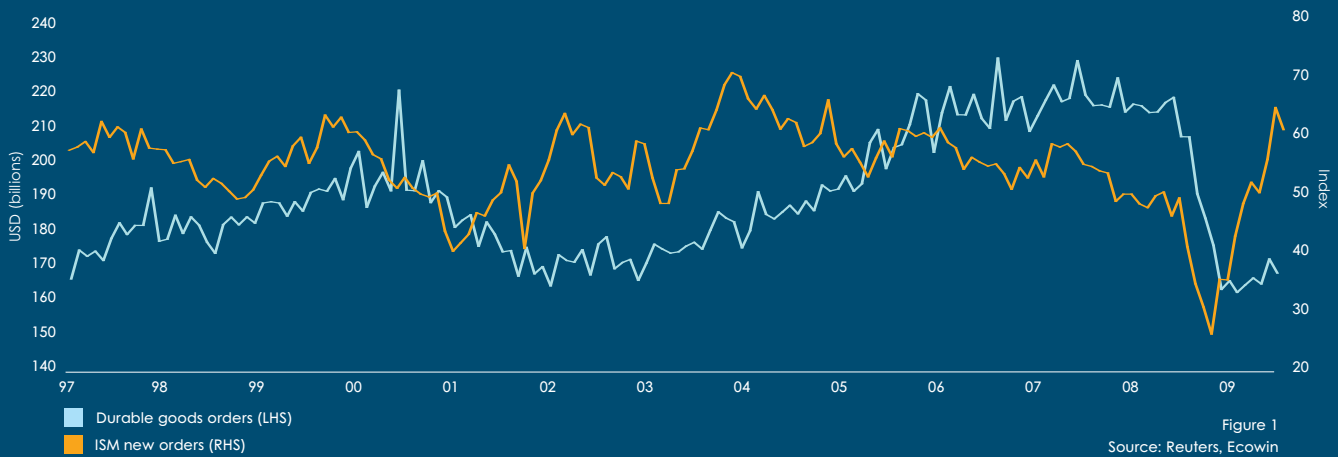
Snapshot

US non-residential investment slow to recover

There is widespread agreement that the strength of the US recovery will hinge on the behaviour of the corporate sector. The consumer is not expected to be the main engine of growth, but if firms invest and hire, this will support incomes and spending. US non-residential investment has plunged during the recession to such an extent that many commentators argue that companies have been too aggressive in their cut-backs. With growth now returning and corporate profits improving, it is possible that investment will rebound strongly.

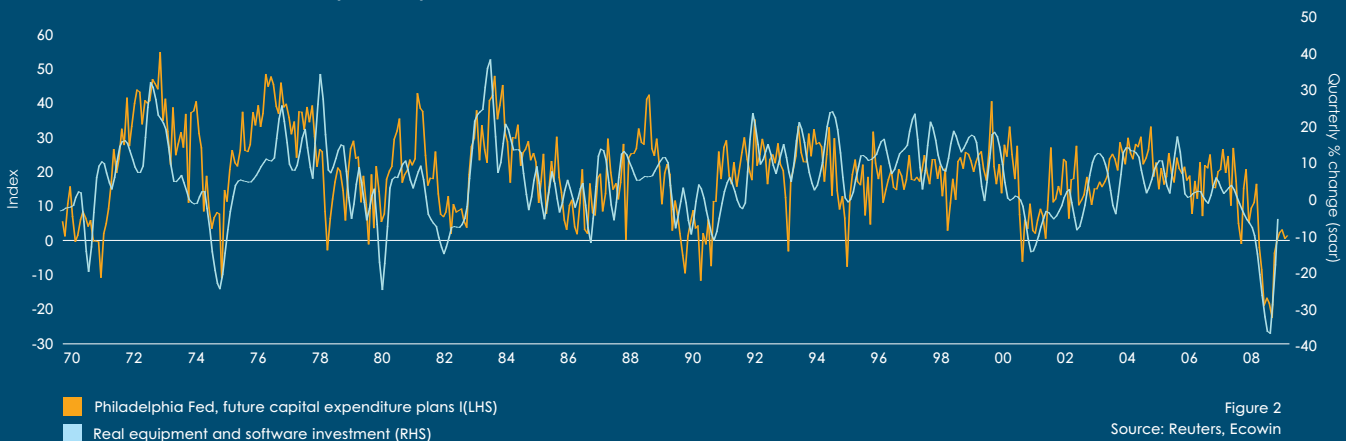
Recent indicators suggest the decline in non-residential investment is now moderating, but there is little evidence of an imminent jump. The ISM new orders balance has improved significantly, but this is more indicative of a turn in the inventory cycle rather than investment growth. Durable goods orders have now stabilised, but in the last cycle they moved sideways during 2002 after falling sharply in 2001 and non-residential investment continued to decline modestly. A sustained recovery was delayed until later in 2003 (Figure 1)

Business investment could remain weak even with a strong rise in ISM new orders



Equipment and software investment, which makes up two-thirds of overall non-residential investment, should recover first, but signs of a revival are not yet evident in the various surveys which ask about investment intentions. One of the most widely followed is from the Philadelphia Fed manufacturing survey (Figure 2). This has a long history and has relatively accurately tracked changes in non-residential investment. Currently it suggests a further decline in equipment and software investment in the second part of this year. The survey will need to rise at least 10 points over the next few months to indicate positive equipment and software investment at the start of next year. Other surveys are even gloomier. The National Federation of Independent Business survey of investment intentions is at a record low. This suggests small businesses are still struggling to access credit for investment.

Business investment intentions surveys do not point to an imminent investment rebound



Investment in structures which is the other third of non-residential investment is likely to lag equipment and software spending. These projects often have long lead times. Many buildings which are currently close to completion would have been approved prior to the recession. Now credit is prohibitively expensive to obtain. Even if financing conditions improve, there is little incentive for companies to invest in new offices and factories when there is so much existing spare capacity.

UK Forecast

Rates on hold, pace of recovery uncertain

| UK Economy | | Price Inflation (HICP) | | GDP (Growth) | | 10 Yr Gilt Yields | | Base Rates | | \$/£ | | £/Euro | |
|---------------------------------------|-------------------|------------------------|------|--------------|------|-------------------|----------|------------|----------|----------|----------|----------|----------|
| | | 2009 | 2010 | 2009 | 2010 | End 2009 | End 2010 | End 2009 | End 2010 | End 2009 | End 2010 | End 2009 | End 2010 |
| Market participants forecasts | | % | % | % | % | % | % | % | % | | | | |
| | High | 2.30 | 2.70 | -3.30 | 1.80 | 4.30 | 5.60 | 0.50 | 2.25 | 1.81 | 1.92 | 0.98 | 1.00 |
| | Low | 1.90 | 1.30 | -4.40 | 0.80 | 3.30 | 4.00 | 0.50 | 0.50 | 1.52 | 1.36 | 0.81 | 0.76 |
| | Median | 2.00 | 2.00 | -4.25 | 1.25 | 3.95 | 4.60 | 0.50 | 1.25 | 1.66 | 1.69 | 0.89 | 0.85 |
| | Last month median | 2.00 | 1.80 | -4.40 | 1.30 | 3.82 | 4.60 | 0.50 | 1.25 | 1.65 | 1.69 | 0.85 | 0.83 |
| Legal & General Investment Management | | 2.00 | 1.70 | -4.10 | 2.10 | 4.00 | 4.50 | 0.50 | 0.50 | n/a | n/a | n/a | n/a |

Source: Bloomberg and LGIM estimates

The forecasts above are taken from Bloomberg and represent the views of between 20-40 different market participants (depending on the economic variable). The 'high' and 'low' figures shown above represent the highest/lowest single forecast from the sample. The median number takes the middle estimate from the entire sample.

Our forecasts are largely in line with last month. We have trimmed our GDP numbers with growth in 2010 now at 2.10%, down from 2.20%. However, we remain far more optimistic on growth than the median market participant (consensus), who sees the UK economy growing at only 1.25% next year.

While the stage may be set for a global economic recovery, with improvements in business surveys starting to be matched by official economic data, the strength of the recovery remains uncertain. As support from government begins to fade later this year and rising energy prices continue to squeeze people's real incomes we remain cautious on the strength of final demand from consumers next year. While we expect employment to stop falling by the end of the year, we don't envisage a meaningful recovery in new jobs. There is also a risk that households choose to save more of their income in order to pay down debt.

It is important to note that while we believe growth may falter in 2010, we do not anticipate a double-dip recession. Rather, we anticipate a relatively subdued period of growth next year. As a result, central banks are likely to keep official interest rates on hold, potentially until 2011.

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