FUNDAMENTALS

When I'm 64

US trend growth has probably halved to around 1½% due to an ageing population. Although reported GDP growth is modest by historical standards, it's enough to tighten the labour market. This implies a drag on profitability and a cyclical rise in inflation.

In this edition, LGIM Economist James Carrick considers what an ageing population implies for the tightness of the US labour market.

It is 50 years since the Beatles wondered what happened when they retire ("When I'm Sixty-Four"). Since then, the US economy has grown by an average of 3% per annum. But there is a sharp difference between the last decade (1½%) and the previous four (3¼%). We have previously suggested that statisticians are underestimating output and overstating inflation for digital services ("Bean Counters", Fundamentals, March 2016). But this doesn't change the fact that nominal growth is historically weak, hindering the ability of firms, households and governments to pay off debts. It seems demographics are to blame.

Demographics affect GDP growth in two ways: the number of people willing to work and their productivity. As people age they are less likely to work, particularly as they approach 'retirement' age. Moreover, academic research suggests most people's productivity peaks in their late 30s. So a very young or very old population is less productive than a middle-aged one.

BABY BOOMERS ARE RETIRING

The US birth rate peaked in the late 1950s. These workers are dropping out of the labour force as they reach retirement. The natural change in the labour force (school leavers minus retirees) was running at 1.25 million per year between 2000 and 2010 (just under 1% of the labour force), but is close to zero at present.

The growth in the labour force at the moment is therefore driven entirely by immigration, a political hot potato. If current immigration trends continue, the labour force should grow by just ¼% in coming years, almost 1½% less than the four decades prior to the financial crisis

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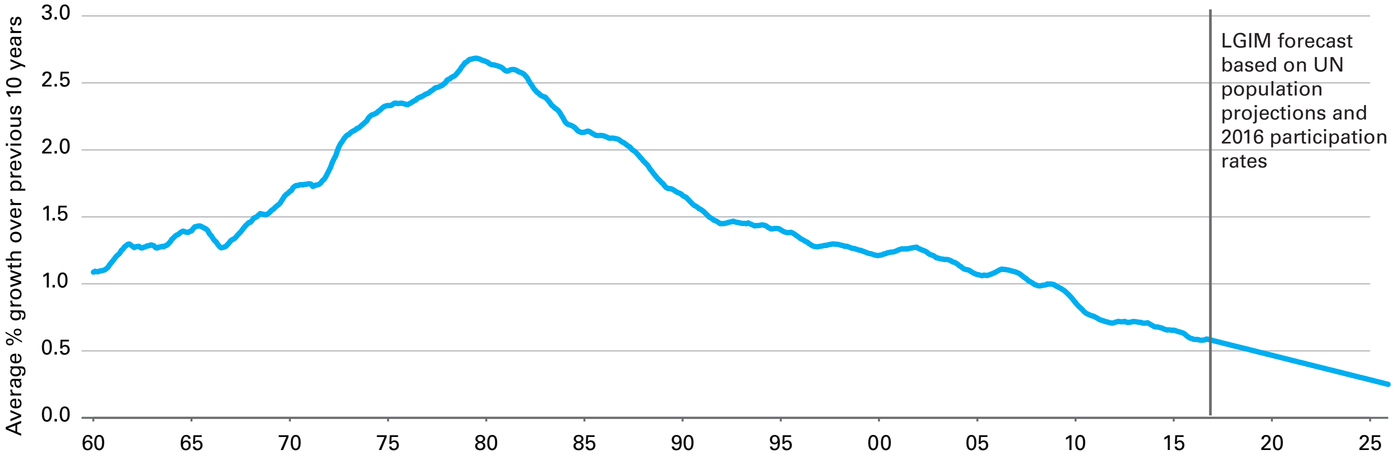
Figure 1. The US labour force is barely growing



Source: Macrobond and LGIM estimates

(Figure 1). Apart from immigration and births, the labour force was boosted in the 70s and 80s by a sharp one-off rise in the female participation rate.

PRODUCTIVITY AND AGEING

Academic research suggests most workers' productivity follows an inverted U-shape with regards to age. Raw physical and mental ability peaks around 30. But productivity peaks a bit later as workers gain experience. However, as workers get into their 40s/50s, productivity generally declines. This is reflected in a typical person's wages, which rise rapidly during their 20s, but plateau by the age of 40 and gently decline thereafter.

Given the peak birth rate was in the late 1950s, the average level of worker productivity would have been dragged down in the mid-1970s as these inexperienced workers entered the labour force. But the level of productivity would then have risen rapidly in the 1980s and 1990s as they matured. Unfortunately, these workers are now in their late 50s and their productivity is declining, dragging down the average.

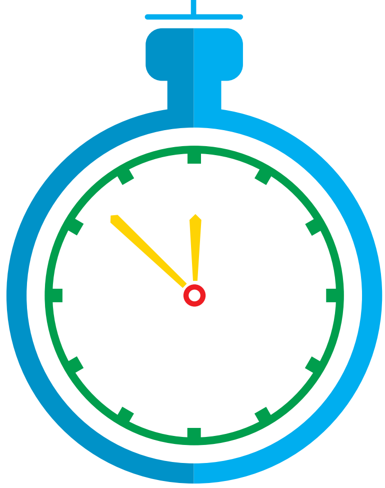


Figure 2. US trend growth has probably halved

Date	Growth	Labour force	Ageing	Residual
1956-1965	3¾	1¼	-¼	2½
1966-1975	3	2¼	-½	1¼
1976-1985	3½	2	0	1¼
1986-1995	3	1¼	½	1
1996-2005	3½	1	0	2¼
2006-2015	1½	½	-¼	1
2016-2025	**1½**	**¼**	**0**	**1¼**
Avg 1966-2005	3¼	1¾	0	1½

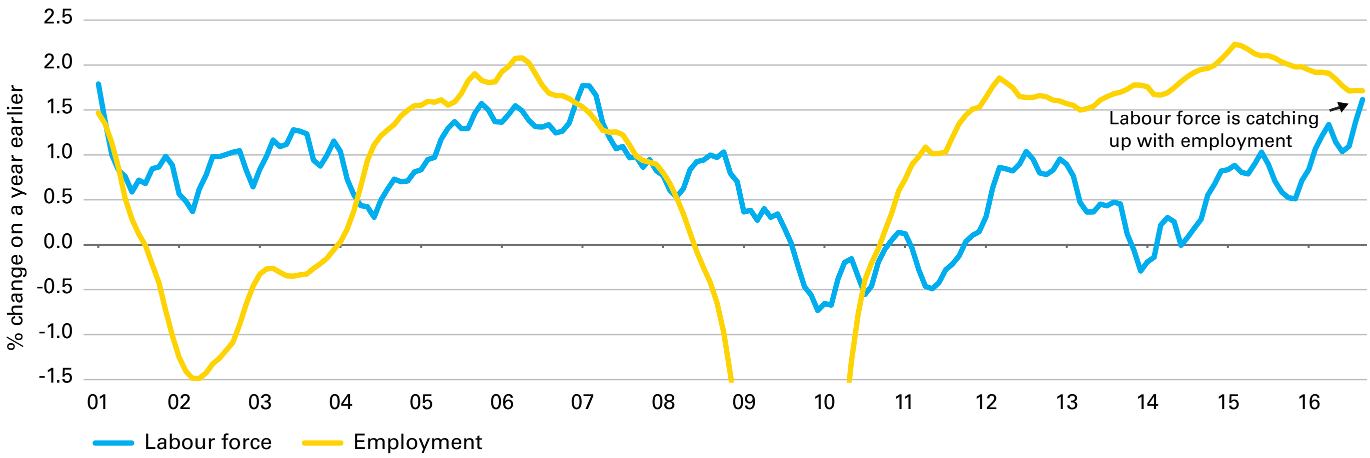
Source: Macrobond and LGIM estimates

We estimate these effects in Figure 2 (using wage data as a crude proxy for productivity, as per a recent NY Fed blog). When we take out both the growth in the labour force (2nd column) and the impact on productivity growth from ageing (3rd column) from overall GDP growth (1st column), we can estimate a residual of underlying productivity growth which should be related to technological progress, structural reform and trade liberalisation (4th column).

For most decades, this estimate of underlying productivity was running around 1¼%. The 1990s were a clear exception, which should reflect a combination of trade liberalisation (see "Peak of Globalisation, Fundamentals, May 2013) and statisticians making significant revisions to inflation data to capture the IT hardware revolution ("Bean Counters").

If we assume underlying productivity remains at 1¼%, then with the labour force growing by ¼% and the ageing effect on productivity turning neutral, we get an estimate of 'trend' US real GDP growth of around 1½%. The peak of globalisation points to downside risks to this figure, but we also believe statisticians are currently underestimating the real growth of IT services, e.g. data usage is rising by 33% per year but there is no deflation in data service prices. Regardless, it is fair to say that US trend growth is much weaker than the four decades prior to the financial crisis – indeed, it has probably halved.

Figure 3. US labour force has caught up with robust jobs growth



Source: Macrobond and LGIM estimates

SLACKING OFF

What does this mean for monetary policy going forward? From a long-term perspective, weaker trend growth means that long-term interest rates should be much lower than before, particularly given the amount of outstanding debt. But from a cyclical perspective, the US economy has consistently generated job growth of around 1¾% in recent years, far outstripping our estimate of the natural trend in the labour force (Figure 3). Moreover, our lead indicator suggests strong job growth should continue given corporate bond yields have fallen since the spring on the back of easier global monetary policy (see "Stressed out", LGIM Fundamentals, February 2016). So we worry that the US economy is running out of excess capacity, or slack.

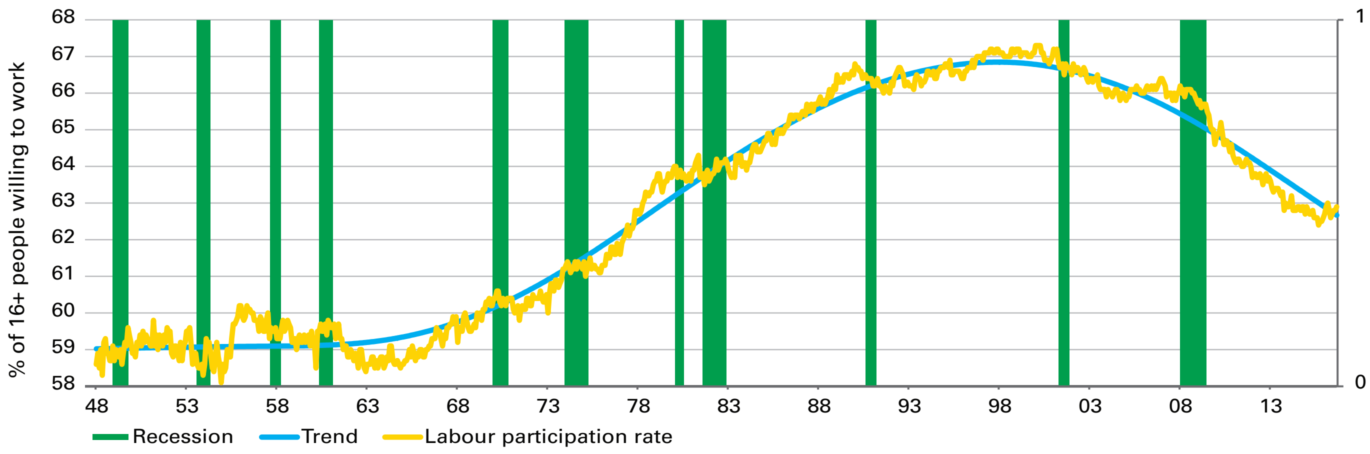
By contrast, Fed chair Janet Yellen believes there is still ample slack in the US economy, despite a low unemployment rate. In particular, she believes there are a lot of 'discouraged' workers who can re-enter the labour market. There are also a large number of part-time workers who would prefer to work full time.

CYCLICAL INCREASE IN MARGINAL WORKERS

To be fair, we have seen a sharp rise in the US labour force over the past year (Figure 3). But our analysis suggests this happens late in every cycle. When the labour market tightens and wages begin to rise, marginal workers are drawn back into the labour force (Figures 4 and 5). While this is a welcome development that extends the length of the economic cycle, we find these marginal workers don't really prevent wages from picking up. Instead, they are a symptom of rising wage inflation.

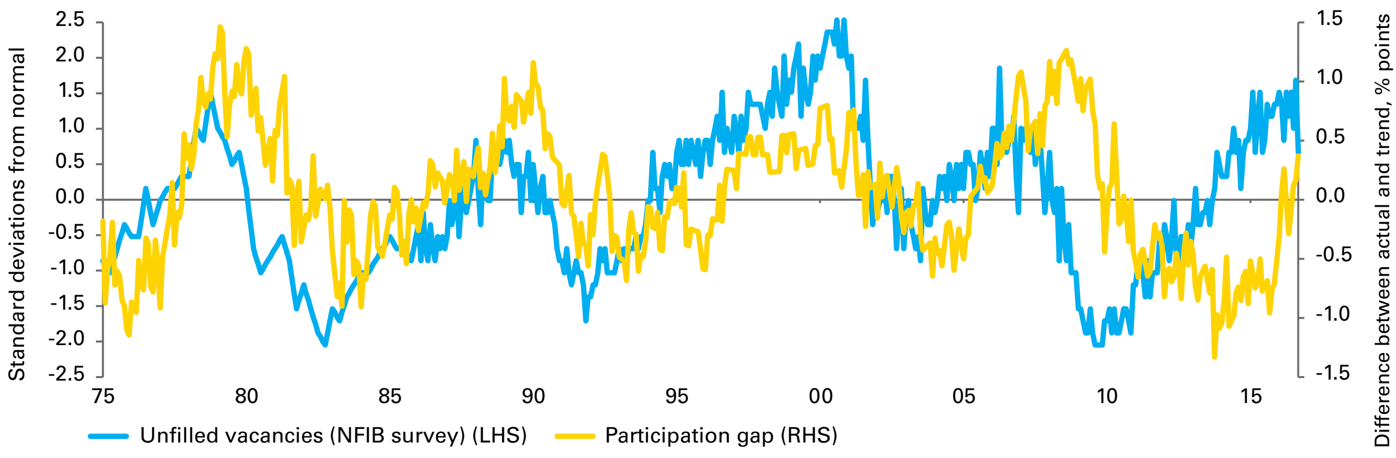
An analogy is your mobile phone battery. When your battery runs low, your phone alerts you and automatically dims the display. This extends the life of your phone, albeit at reduced functionality. You can continue to make phone calls but cannot finish watching that movie, particularly at full brightness. The charge in the battery has not increased.

Figure 4. US labour force falls after recessions but recovers during booms



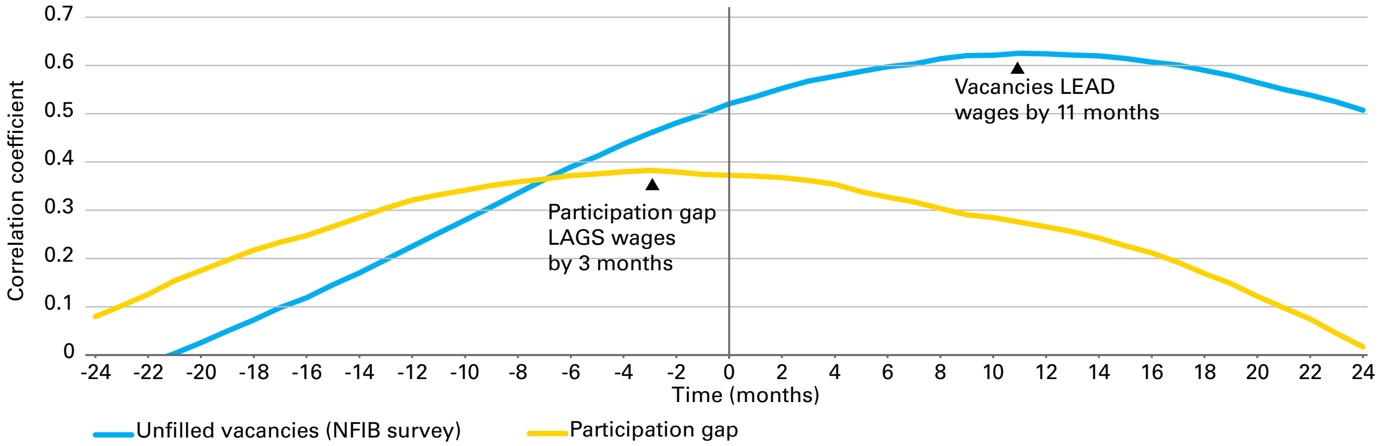
Source: Macrobond and LGIM estimates

Figure 5. US labour force tends to expand in response to the number of job vacancies



Source: Macrobond and LGIM estimates

Figure 6. The participation gap tends to lag changes in wage inflation



Source: Macrobond and LGIM estimates

The good news is that there is scope for the labour force to expand rapidly for another year or so, keeping the unemployment rate stable. But we don't think this will prevent wage inflation from rising. Instead, history tells us that it is rising wages that encourages workers back into the labour force (Figure 6). So inflation pressures are bubbling in the background.

PART TIME WORKERS TRAPPED BY "OBAMACARE"

Similarly, we're less optimistic than the Fed that the large number of involuntary part-time workers represents slack in the economy. Academic research suggests they are concentrated in three low-paying, flexible sectors (retail, food and accommodation services) and their employers have reduced their hours worked below the 30-hour threshold to avoid having to subsidise their health care (following the Obamacare reforms).

Given the number of unfilled job vacancies remains at record highs, if these part-time workers wanted to work full time, they could perhaps work two part-time jobs. But the share of people working multiple jobs has fallen.

COST PRESSURES

A tighter labour market should lead to higher wage inflation. The evidence here is mixed. Average hourly earnings growth remains low, but numerous Fed papers point to compositional effects at work. In particular, the pay of workers continuously employed has recovered significantly. So pay growth is being dragged down as new jobs created are concentrated in low paying, low productivity sectors. This is consistent with the surprisingly robust employment data.

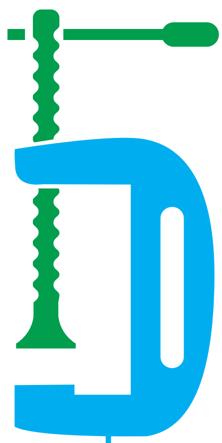
If we combine employment growth and wage growth, we get total compensation growth. The difference between this and real output growth is unit labour cost growth. Measured unit labour costs are in line with their long-term average and have crept up of late.

This is consistent with the slight rise in US core inflation over the past year, despite the lagged effects of weaker commodity prices and the strong dollar. The bubbling of US labour-cost pressures should become more apparent from the second half of 2017 when the drag from lower commodity and import prices washes out.

MARGIN SQUEEZE

The rise in unit labour costs has also squeezed firms' profit margins. While firms' profits should get a cyclical boost from the rise in commodity prices and an anticipated recovery in the global manufacturing cycle over the next year, these factors should also encourage the Fed to hike rates.

So as we head towards the end of 2017, we foresee a tight US labour market pushing up core inflation. The Fed will then be caught between trying to raise rates to dampen inflation without wishing to squeeze the indebted corporate sector too much. Just as baby boomers are coming to the end of their working lives, this economic cycle is getting closer to the end too.



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