Government Actuary's Department

Investment News

Monthly Bulletin from the Insurance & Investment Team

April 2017

Last Month in Brief

On the 29th of March, Theresa May officially triggered Article 50 of the Lisbon treaty in a letter hand-delivered to Donald Tusk, the president of the European Council. This move had been planned for some time and so market reaction was limited.

Philip Hammond, the Chancellor of the Exchequer, presented his Spring Budget to Parliament on the 8th of March. In the budget, he announced a raised 2017 economic growth forecast of 2%, higher than the 1.4% previously predicted by the Office for Budget Responsibility. The UK Government forecasted that they would borrow £51.7 billion during the financial year ending March 2017, £16.4 billion less than previously predicted. Among the headline measures were the announcement of an additional £216 million to be spent on improving schools and an extra £2 billion to be invested into social care with the intention of easing pressure on the NHS.

In the USA the Federal Reserve lifted the range for its benchmark interest rate by a quarter of a percent to between 0.75% and 1%, and more rises are expected later this year. The decision of Fed officials to raise interest rate was supported by continued strong economic data, including a dip in unemployment to 4.7%. The US economy added 242,000 jobs in February, far better than the 190,000 expected by economists, whilst wages were up by 2.8%.

Chart 1: Equity Indices

Equity markets rose slightly over the month

Chart 2: Sterling Credit Spreads

Credit spreads were stable over the month

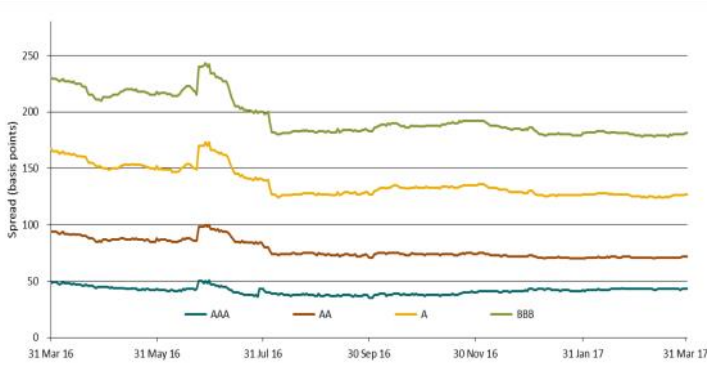


Chart 3: Gilt Yields

Nominal gilt yields *were stable over the month*

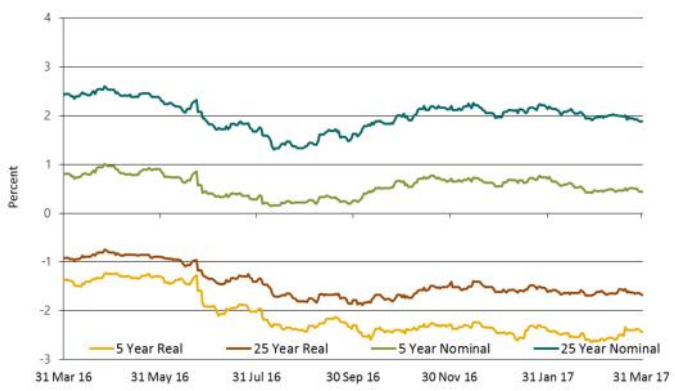
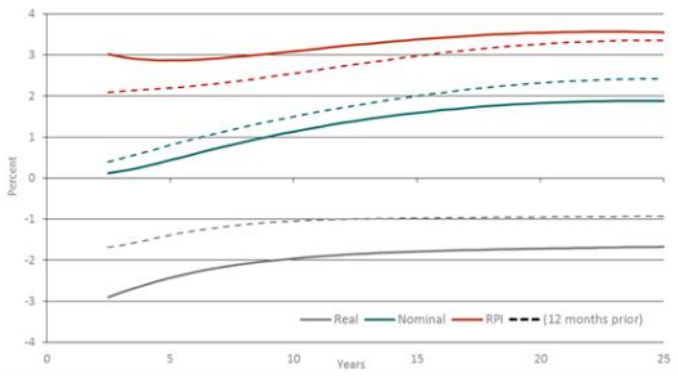


Chart 4: Gilt Spot Curves

The yield curve remains upward sloping



Source: Financial Times, MSCI, Merrill Lynch Bank of America, & Bank of England

	Latest	Previous		Latest	Previous
CPI increase (annual change)	2.3%	1.8%	**Base rate**	0.25%	0.25%
PPF 7800 funding ratio	86.2%	88.2%	**$/£ exchange rate**	1.25	1.24
Halifax house prices (monthly change)	+0.1%	-0.9%	**VIX (volatility) index**	12.37	12.92

For monthly published indices "Latest" and "Previous" refers to the two most recently published statistics, otherwise numbers are quoted as at the month end.

Robotic Revolution

In the recent spring budget, the Chancellor of the Exchequer announced an investment of £270 million in the Government's Industrial Strategy Challenge Fund which will, in part, be used to develop "cutting-edge artificial intelligence and robotics systems that will operate in extreme and hazardous environments, including off-shore energy, nuclear energy, space and deep mining".

This investment was indicative of the technological advances that are taking automated robotic machines into every corner of the global economy. But what does this revolution mean for the economy and for investors?

What is the robotic revolution?

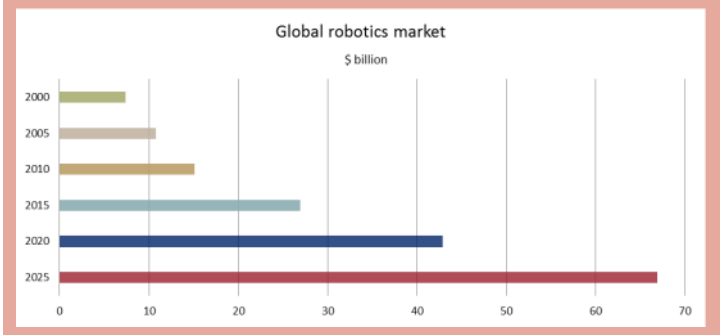
The robotic revolution, or the "fourth industrial revolution", is the process of automation that is predicted to happen over the next twenty years. The key feature of this process is the increasing use of intelligent robots in place of human labour. This has the potential to boost productivity, increase global living standards and present great opportunities to investors. However, there are some who claim that it could have a negative impact on human employment.

International sales of robotics have reached record levels in recent years and are projected to continue growing rapidly (see Figure 1). There are an average of 66 robots per 10,000 workers worldwide, however in the Japanese car sector there are 1,520. As such the key industry for industrial robots is currently the automotive sector. However healthcare is considered one of the biggest potential markets.

The development of artificial intelligence means that robots will increasingly be able to carry out tasks that require thought and analysis, roles which have historically been thought of as reserved for human labour. Organisations and governments may need to respond rapidly in order to adapt to these changes.

Figure 1: Growth in the robotics market

Data Source: BCG (November 2015). Note that 2015 to 2025 are estimated figures.



In addition, increasing automation introduces new problems in defining legal responsibility. According to the New York Times "robots have caused at least 33 workplace deaths and injuries in the United States in the last 30 years". Clarifying whether it is the operator or manufacturer who is liable, and the availability of appropriate insurance, will be essential for the deployment of autonomous vehicles.

Which companies will benefit?

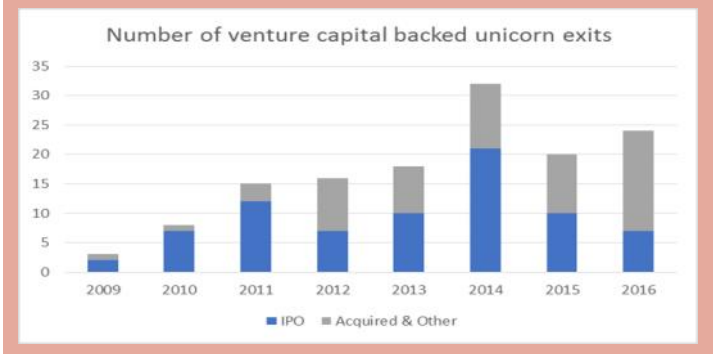
Of late there has been much discussion about "technology unicorns", which are private companies who have managed to achieve a valuation of more than $1 billion. These companies, such as Uber, have avoided the traditional need to launch an initial public offering in order to raise capital. Instead, start-ups have used funding from venture capital firms to rapidly grow their businesses with "Get Big Fast" strategies (see Figure 2). These strategies aim to capitalise on their initial advantage to drive away other rival competitors.

So far "technology unicorns" have generally been software companies who are able to exploit social media to gain significant market share and economies of scale. Where hardware companies have earned the coveted "technology unicorn" title they are often aimed at consumers. However, there may be an increasing emergence of business-to-business hardware companies if there is a shift towards industries introducing more automation and robotics.

The robotic revolution has the potential to impact on sectors as diverse as healthcare, agriculture and consumer goods. To benefit from the cost reductions that robotics can bring, significant investment in machines, as well as their installation, maintenance and repair, will be required. It will be those companies who can find their niche in their sector and are able to utilise the rapidly developing technology to its full extent who will benefit from the changes.

Figure 2: Growth in the number of technology unicorns

Data Source: CBINSIGHTS



Impacts on investors

There are an array of investment products focussed on this area from Exchange Traded Funds which passively track an index of technology stocks to venture capital trusts which try to spot the next big thing. The valuation of large publicly traded technology companies, such as Alphabet (Google's owner), will no doubt reflect growth in this area. However, they may not show the full story with investments also being made through venture capital funds, crowd funding sites and within companies outside of the technology sector.

The robotic revolution is not only changing what people invest in but also how they invest. "Robo-advisors" are becoming an increasingly popular way to provide financial advice to retail investors in the UK. These use a series of questions to help recommend an appropriate portfolio. By removing the requirement for human interaction these companies can provide advice at a lower cost and can target those traditionally unwilling to pay Independent Financial Advisors' fees.

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