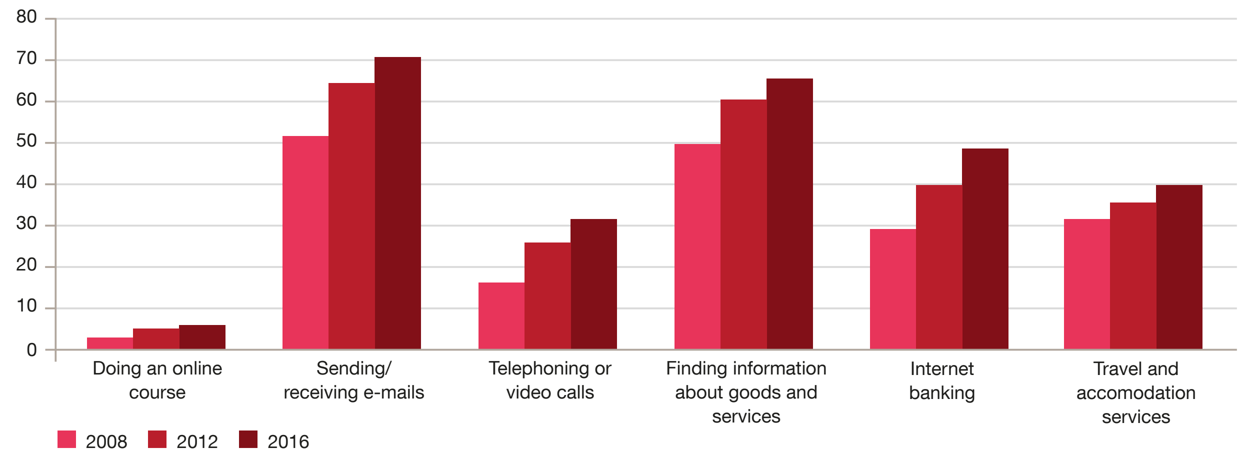
Europe Monitor

The Economics of Digital

The ongoing digital revolution has created a level of connectivity that has redefined how people communicate and how companies conduct business. By altering behaviours, digitalisation is reinventing how markets and economies function, and is creating new challenges in every sector.

Figure 1 Internet usage: % of people in the EU-28 using the internet for selected activities



Source: Eurostat

pwc

Redefining markets

Digital is impacting all aspects of traditional markets. On the demand side, consumers' influence is no longer restricted to consumption decisions, but consumers can now participate in all stages of the production of goods – from idea and design to crowdfunding and production, through cheaper prototyping tools, such as 3D printing, and online retail (figure 2). This creates a category of well-informed "prosumers", which are assisted by the digital revolution.

On the supply side, many companies' processes have evolved from being simply efficient to now being fully automated. We have entered the age of customisation, where companies are able to deploy the power of information and advanced algorithms to target the right consumers, at just the right time, using the right persuasion techniques.

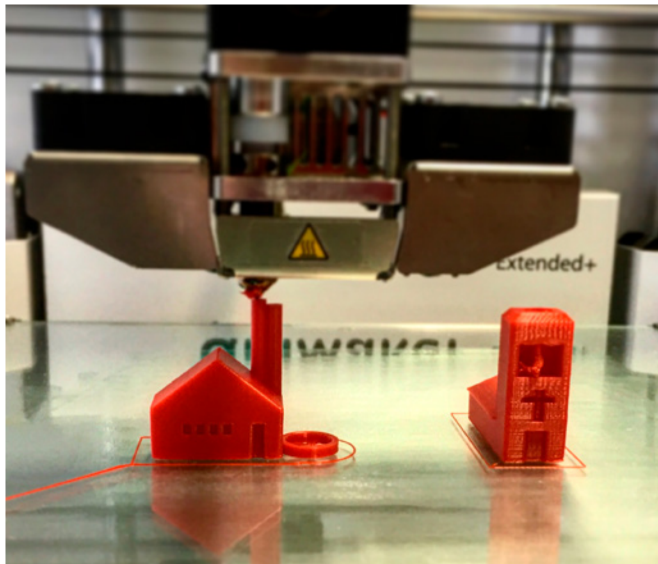
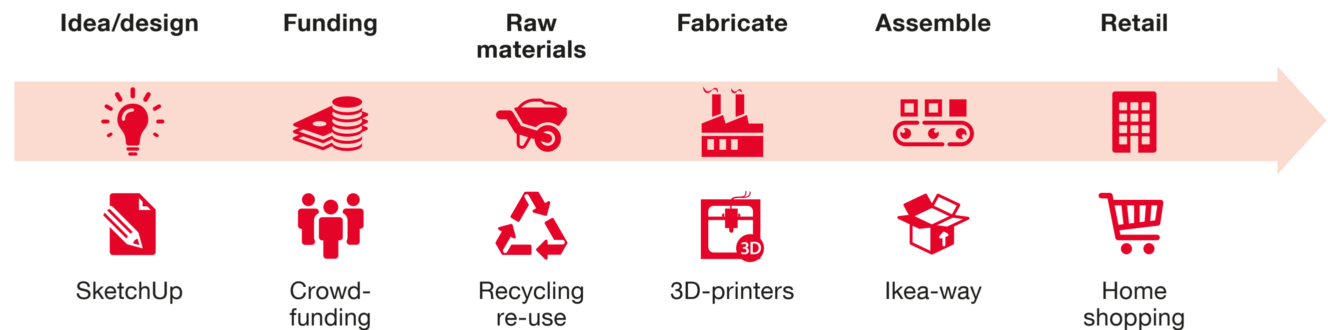
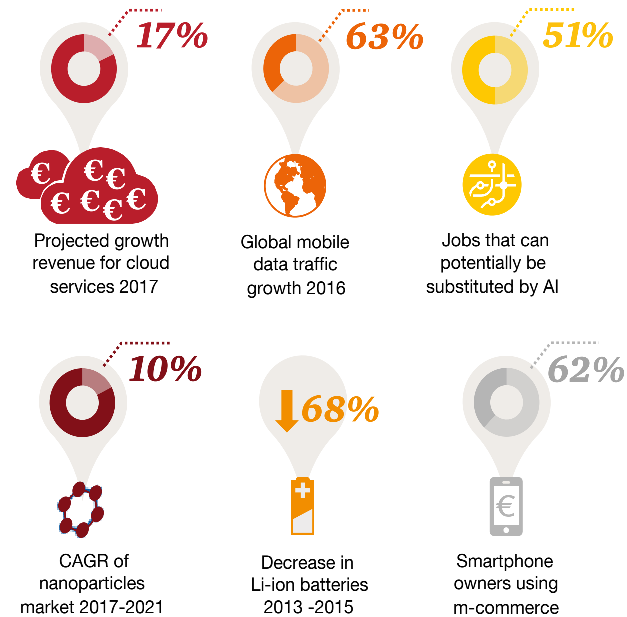


Figure 2 Prosumers: consumers evolve from empowered to involved

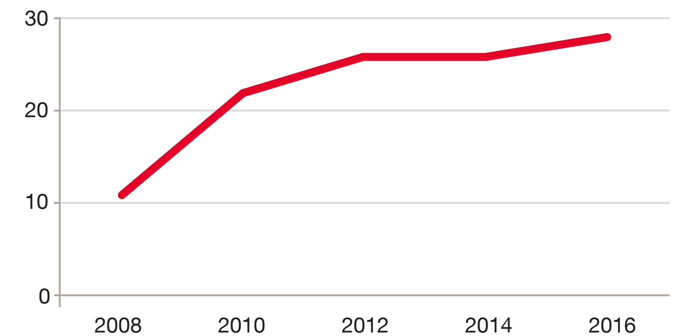


Source: PwC analysis



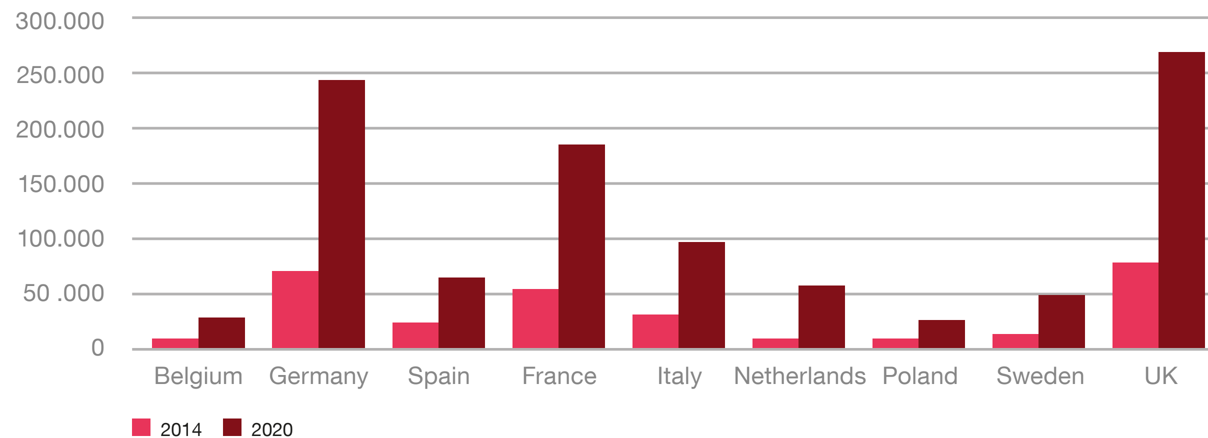
Sources: Comptia, Cisco, McKinsey, Cisco, PwC, Businesswire

Figure 3 Self-created content: % of people uploading self-created content to any website to be shared (EU-28)



Source: Eurostat

Figure 4 The Internet of Things: market size and forecast in million € for selected countries



Source: International Data Corporation, European Commission

Yet, all these changes are dwarfed when we consider the single biggest manifestation of the digital revolution: the creation of new industries revolving around innovative technologies that did not exist in the past. Think of now essential technological segments like drones, the Internet of Things (figure 4), artificial intelligence, robotics, virtual reality, augmented reality and more. The world is facing rising adoption rates, strong multiplier effects, and a global reach, backed by lower costs and higher affordability.

Keeping businesses on their toes

The digital revolution and the speed of this process bring many challenges for organisations – from adopting an organisation-level digital focus and rebalancing man and machine skills, to understanding customer psychology and shifting demand trends. It has also exposed companies to far more scrutiny and threats. Over 70% of the CEOs in the 20th PwC CEO Survey[1] told us that they were concerned about the speed of technological changes as a threat to their organisation's growth prospects.

Technology start-ups have penetrated traditional sectors, reshaping the markets in the process. One can think of the multiple online delivery services threatening traditional fashion retailers, and apps forcing conventional businesses in the hospitality industry to reconsider their strategies. Businesses need to be acutely aware of digital trends, not just in their industry domains, as innovations continues to transcend industry borders. This means, for example, that producers in the automotive industry should not only be looking at their peers, but also at the advances of tech giants. Companies will need to identify changes in consumer psychology and assess patterns of behaviour well before these become apparent. Lest the speed of digitalisation will throw them off balance.

Winners and losers

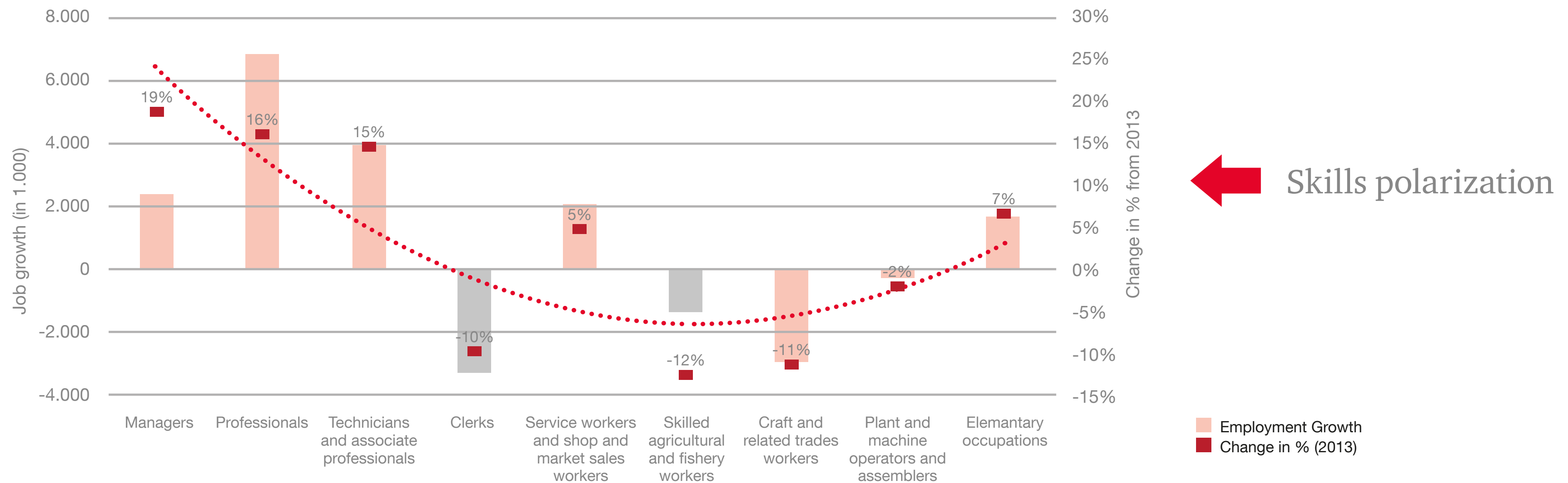
Consumers emerge as clear winners, irrespective of how disruptive digitalisation will be for other players. Although there are concerns that need to be addressed properly, such as privacy issues, digitalisation has given consumers a voice that cannot be ignored. It gives consumers the ability to control more aspects of their consumption choices – from product development to consumer feedback. Moreover, they benefit from more choice in products, and lower prices resulting from efficiency gains in production and intensified competition due to greater transparency.

However, on the other side of the spectrum digitalisation blurs the lines between sectors, creating challenges for governments and regulators that try to bring order to new markets and products. As an example, many of the emerging business models are aimed at exploiting network effects, which means that a service or product becomes more attractive as the total number of its consumers grows. Industries characterised by such dynamics tend to be highly concentrated, and require regulators to prevent the abuse of market power at the expense of the consumer.

1 *http://www.pwc.com/gx/en/ceo-agenda/ceosurvey/2017/gx.html*

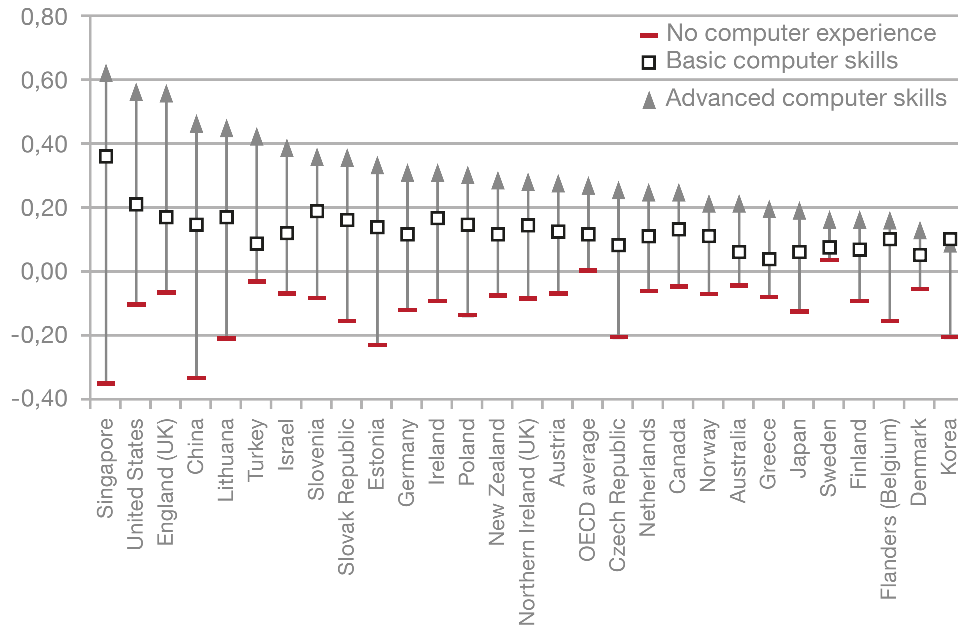
Another major challenge of the digital revolution is its impact on job creation. Though the overall impact is yet unclear, technological advancement is known to reduce the employment share of medium wage jobs, while increasing the share of high and low wage jobs. This creates a "hollowing out" effect on the labour market (figure 5), which tends to result in higher levels of income inequality. For governments and companies, this brings to the forefront a classical moral dilemma of trading middle income jobs for technological advancements.

Figure 5 Hollowing out of the labour market: Employment growth and replacement demand according to occupational groups (EU-28, 2013 to 2015)



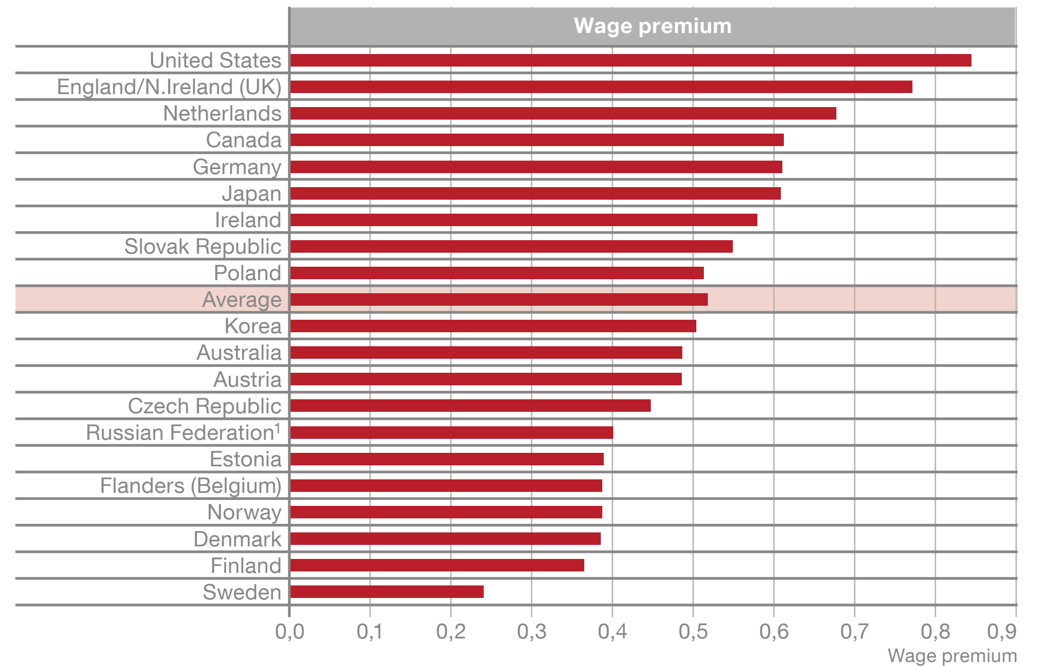
Source: European Centre for the Development of Vocational Training (Cedefop)

Figure 6a Wage premium for computer proficiency



Source: OECD

Figure 6b Wage premium associated with frequent professional e-mail usage



Source: OECD

The only way is forward

It is undeniable that technological progress breeds winners and losers. At the same time, it creates a scenario where there is more for everybody, as the economic pie gets bigger. The digital revolution has delivered pioneering products and services that have improved people's lives and raised overall living standards. For policymakers, a key challenge will be to ensure that the benefits of digitalisation are channelled through to all segments of society, and not just a highly concentrated group of technological savvy entrepreneurs. During the Industrial Revolution, a group of artisans, called the Luddites, desperately tried to stop technological progress by burning down steam mills and demolishing weaving machinery. Yet their efforts were in vain, as the wave of industrialisation proved unstoppable. Today's situation is no different. The digital genie is out of the bottle, and we cannot put it back in.

In this context, it is imperative that businesses adequately prepare to withstand the challenges and reap the benefits of digitalisation. Continuous analysis is needed to monitor and address the multitude of factors which effects the bottom line. Whether businesses rise or fall depends on their ability to turn the digital revolution to their advantage.

To read more, please see
www.pwc.nl/en/topics/digital/digital-transformation.html

Macroeconomic Update Europe

A breeze of optimism

Ten years after the onset of the most severe economic downturn in decades, Europe appears to finally have embarked on a path to economic recovery. Hard economic indicators justify cautious optimism, with Eurostat reporting a growth rate of 1.9%[2] for the Eurozone in the first quarter of 2017. Some countries performed particularly well, such as Spain (3.0%), Germany (2.9%) and the Netherlands (2.6%).

Slightly subdued economic growth in France (1.0%) is most likely a consequence of the political uncertainties around the presidential elections earlier this year. A surprising 1.2% growth rate was recorded in Italy where lagging structural reforms still hinder a return to robust economic growth.

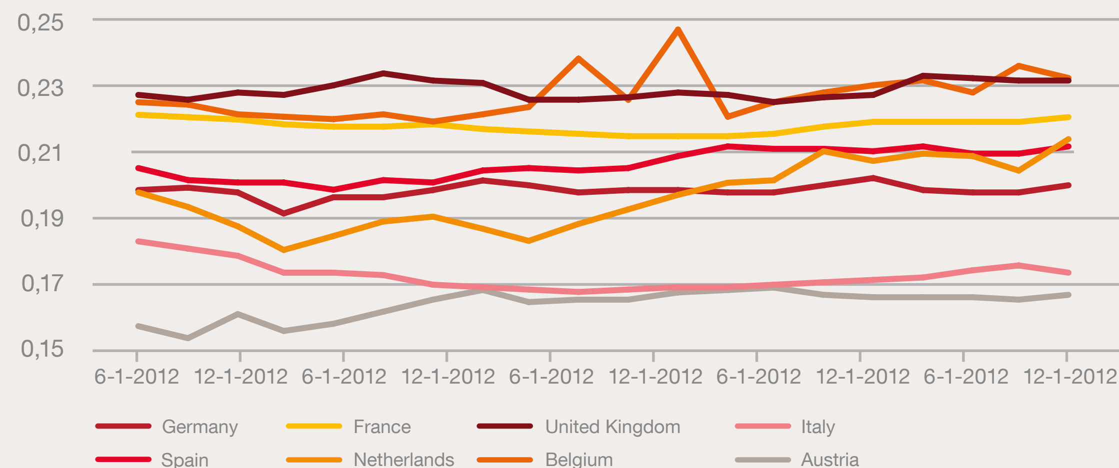
The European consumer – a main contributor to growth

Consumer spending again served as the principal driver behind European growth rates (1.6%). In many countries it grew at a considerable pace (figure 8). Moreover, aggregate Eurozone retail sales rose by 2.5% (not seasonally adjusted). With the increase in consumer confidence at its highest level since July 2007 (-3.3)[3], these figures did not really come as a surprise.

Investment level grew, but remains relatively low

In addition to the positive developments in consumer spending, there has recently been a notable uptick in the level of private investment in Europe. The number of loans issued to facilitate capital investments increased substantially, contributing to a growth rate in fixed capital investments of 6.0%.

Figure 7 Gross Fixed Capital Investments as a percentage of GDP



Source: Thomson Reuters, PwC analysis

The high degree of uncertainty related to elections in Europe has largely evaporated. While the full implications of Brexit remain unclear, it does not appear to have deterred European consumers and investors. Instead, the focus shifted to Italy, where the bailouts of Monti dei Paschi di Siena and the Veneto banks have alleviated some of the immediate risk, but the banking system still has structural flaws. As such, for the time being, the internal risks to the European economy seem to have diminished. For now, the risks to watch are those that come from outside the European Union.

2 All figures are reported on a year-on-year basis, in constant prices and seasonally adjusted, unless specified otherwise
3 As reported by the European Commission

Macroeconomic Update

Figure 8 Key Economic Indicators

Change YoY	GDP	Industrial production, index, % change YoY	Consumer prices, % change YoY	Unem-ployment % level,	Current account, change YoY as % of GDP	Budget balance[4] % of GDP	Consumer spending	Capital investment	10-year gov't bonds, interest rates %, most recent
Overall Eurozone	+1.9	+1.4 Apr	+1.3 Jun	9.3 May	+0.2 Q1	-1.4	+1.6 Q1	+6.0 Q1	
Germany	+2.9	+4.7 May	+1.6 Jun	3.7 May	-0.6 Q1	+0.5	+1.3 Q1	+0.7 Q1	0.37
United Kingdom	+2.0	-0.3 May	+2.9 May	4.6 Mar	+3.0 Q4	-3.6	+2.5 Q1	+2.2 Q1	1.06
France	+1.0	+3.2 May	+0.8 May	9.6 Mar	-1.3 Q1	-3.1	+1.0 Q1	+2.1 Q1	0.72
Italy	+1.2	+1.2 Apr	+1.2 Jun	11.1 Apr	-0.1 Q1	-2.3	+1.4 Q1	+2.3 Q1	2.02
Spain	+3.0	+3.0 May	+1.5 Jun	17.8 Apr	+0.7 Q1	-3.3	+2.5 Q1	+3.8 Q1	1.45
Netherlands	+2.6	-1.6 Apr	+1.1 Jun	5.1 May	+2.4 Q4	+0.7	+1.7 Q1	+5.6 Q1	0.54
Turkey	+4.7	+6.7 Apr	+10.9 Jun	11.5 Mar	-0.4 Q1	-2.4	+5.1 Q1	+2.2 Q1	10.52
Belgium	+1.6	+2.2 Apr	+1.6 Jun	6.8 Apr	-2.3 Q4	-2.3	+1.8 Q1	+2.7 Q1	0.71
Austria	+2.3	+3.5 Apr	+2.0 May	5.5 Apr	-0.7 Q4	-1.3	+1.5 Q1	+4.2 Q1	0.63

Pressure on government budgets alleviates

For many Eurozone members, the public debt to GDP rate has decreased significantly. However, concerns still linger regarding the sustainability of the public finances in some countries, most notably Greece, Italy, Spain and France. Future interest hikes, although unlikely in the immediate future, would put the sustainability of the public finances in the aforementioned countries under additional pressure.

Trade picks up in spite of substantial external risks

European trade relations with the rest of the world intensified, a development which is likely to persist. Exports grew by 4.6%. Yet, the future performance of European exporters hinges on a number of external developments. The U.S. Federal Reserve's interest rate hike may reduce the global growth rate slightly. Likewise, if China's growth disappoints due to its government's attempt to rein in the high level of debt taken on by state owned enterprises, European firms will be affected. Meanwhile, the imports in Europe rose by 7.1%, but the overall current account balance continued to expand as exports grew from a higher base level. Germany remains the principal contributor to the European trade surplus.

Slack below the surface - European labour markets

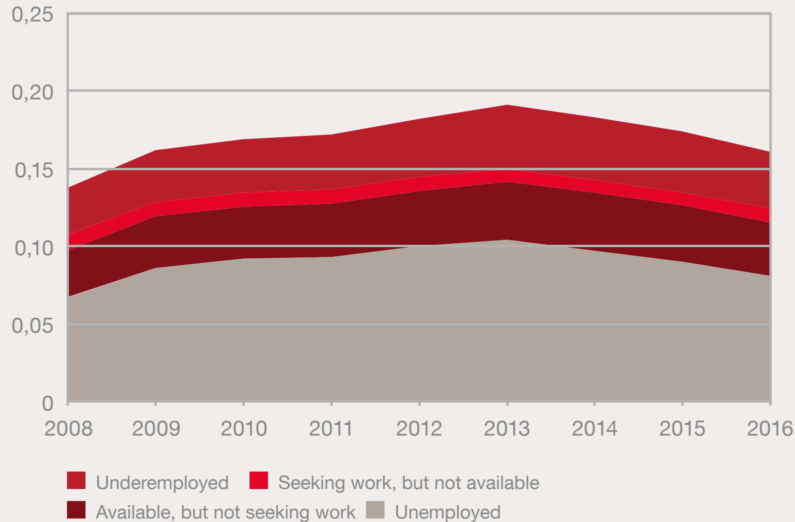
The reported increase in consumer confidence was partially caused by a pronounced drop in unemployment. However, to date, the marked decline has not resulted in upward wage pressure. Even in Germany, where unemployment rates have been at a historical low for quite some time (5.7%, or 3.7% by ILO standards), wage increases have remained largely subdued.

The absence of notable upward pressure on wages is predominantly due to the persistent underutilisation of production capabilities in many countries (figure 9). Despite recent improvements on European labour markets, the European Central Bank (ECB) estimates that 3% of the working age population can still be described as 'discouraged' workers, who ceased their active search for employment (which means that they are no longer included in the official unemployment figures). Furthermore, another 3% is estimated to work fewer hours than they desire.

Counting both those groups of workers, the current labour market slack (underutilisation) affects 16.1% of the Eurozone work force. In Italy and France, this measure has been increasing throughout the economic recovery. In Spain, despite a recent reduction, the current level remains high. Only the German labour market is exhibiting the first signs of tightening. Moreover, the persistent high levels of youth unemployment in some EU member states continue to be a reason for concern. In Greece, Italy, Spain, Portugal, Slovakia and Belgium youth unemployment rates were still above 20% in 2016.

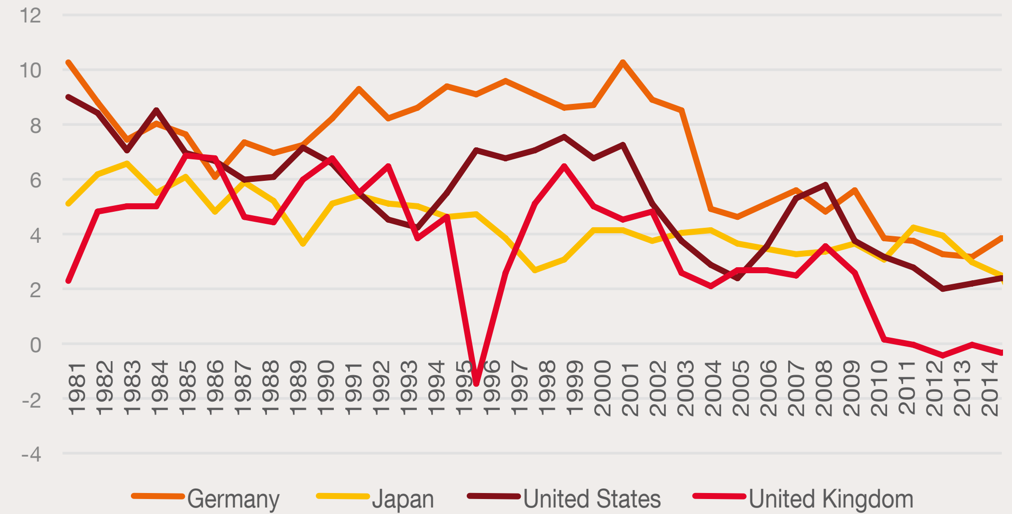
4 Economist Intelligence Unit forecasts

Figure 9 Slack in the labour market: Percentage of the extended labour force



Source: ECB

Figure 10 Decline in the real interest rate



Source: IMF

Living in a low interest world

In the wake of low wage increases, inflation has also remained subdued. Recently, prices have been creeping up slowly, mainly due to the stabilisation of energy prices. As such, the direct risk of deflation has disappeared, but core inflation, which disregards product categories characterised by volatile prices such as energy and agricultural goods, is persistently low. Nonetheless, in light of the recent economic recovery, the ECB has ruled out further interest rate cuts. Considering this, it is improbable that nominal interest rates will turn negative. However, given the intention of the ECB to address the low inflation rate, a prompt rise is equally unlikely.

A global shift in savings and investment behaviour, has led to a structurally lower cost of capital (figure 10). This new economic reality has benefited some. The interest payments on mortgages have fallen, it alleviated the burden of interest payments on government debt and the costs of attracting financing have fallen for large enterprises. However, for SMEs, the effect was largely offset by financial institutions tightening their conditions for the provision of credit.

However, others have been less fortunate. Pension funds and insurance companies have been forced to adjust their discount rates downwards, which increased the present value of their future liabilities. This is likely to lead to higher pension contributions or lower pay outs in the future.

Macroeconomic Update

Moreover, prolonged spells of low interest rates have an effect on bank profitability. Smaller banks, which are more reliant on retail deposits for funding, tend to be most severely affected. This is a direct consequence of the convergence of interest rates payable on deposits and those received on credit. Larger institutions are generally less impacted because they can diversify their sources of funding more easily due to their greater access to international capital markets.

The current economic environment poses a challenge to financial regulators, who have to ensure that financial stability is not jeopardised by financial institutions assuming additional risks in their search for yield. However, if prudential frameworks are implemented, the low interest rates may still result in overall welfare gains, as banks are incentivised to streamline their operations and non-viable institutions may be forced to exit.

Smooth sailing ahead, but no time to grow complacent

Despite the presence of various potential threats to growth, the European economy currently appears sufficiently robust to weather upcoming challenges. However, businesses should continue to strive towards greater efficiency and innovation in order to ensure their relevance should an economic downturn emerge.

Turkey: Significant growth in Q1 2017

The Turkish economy grew by a surprising 4.7% in the first quarter of 2017, the best y-o-y rate since Q4 2015 in calendar adjusted terms. On a quarterly basis, Turkey showed its highest growth since Q2 2015 (seasonally and calendar adjusted growth came in at 1.4%). Although leading indicators and some incentives to raise spending have been improving for some time, bottom-line GDP growth still exceeded expectations. In particular, private spending and export performance surpassed projections and contributed to the high GDP growth number.

Given the encouraging precursory economic activity data (industrial production, PMI, export and tourism revenues among other), the Q2 figures are forecasted to be rosy as well. In addition to this, the Turkish credit guarantee fund[1] will bolster GDP growth further since enhanced loan growth will allow SMEs to prosper. Thus, the government's medium term program target of 4.4% GDP growth is within reach if the current momentum is maintained and supported by solid economic policies.[2]

In terms of central bank policy, better than expected GDP growth figures enable the Central Bank of the republic of Turkey (CRBT) to keep to its tight monetary stance. The central bank is struggling to control inflation, and the consumer price index (CPI) reached 11.9% in April 2017 but then declined to 10.9% in June 2017. The recent figures show that cost pressures are slowly coming down and core inflation indicators also showed a relatively better view.

In the coming period, a decline in the pace of producer price inflation will be positive for CPI in terms of pricing behaviour. However, it is still too early for policy makers to rest on their laurels. The CBRT's tight monetary stance must therefore be complemented by further policy measures to reduce the upward inflationary pressures. Even so, a year-end annual inflation of 10% is expected at the end of 2017.

1 The credit guarantee fund provides access to finance for those Small and Medium Sized Enterprises (SMEs) that cannot benefit from bank loans due to insufficient collateral by assisting them as a 'joint guarantor'. As of June 20, the amount of loans within the context of the credit guarantee fund reached TL 192 billion (€46 billion), 10% of the loans in the Turkish banking sector.
2 Sustaining a healthy growth level in Turkey is in fact very much dependent on the right policy mix/incentives.

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