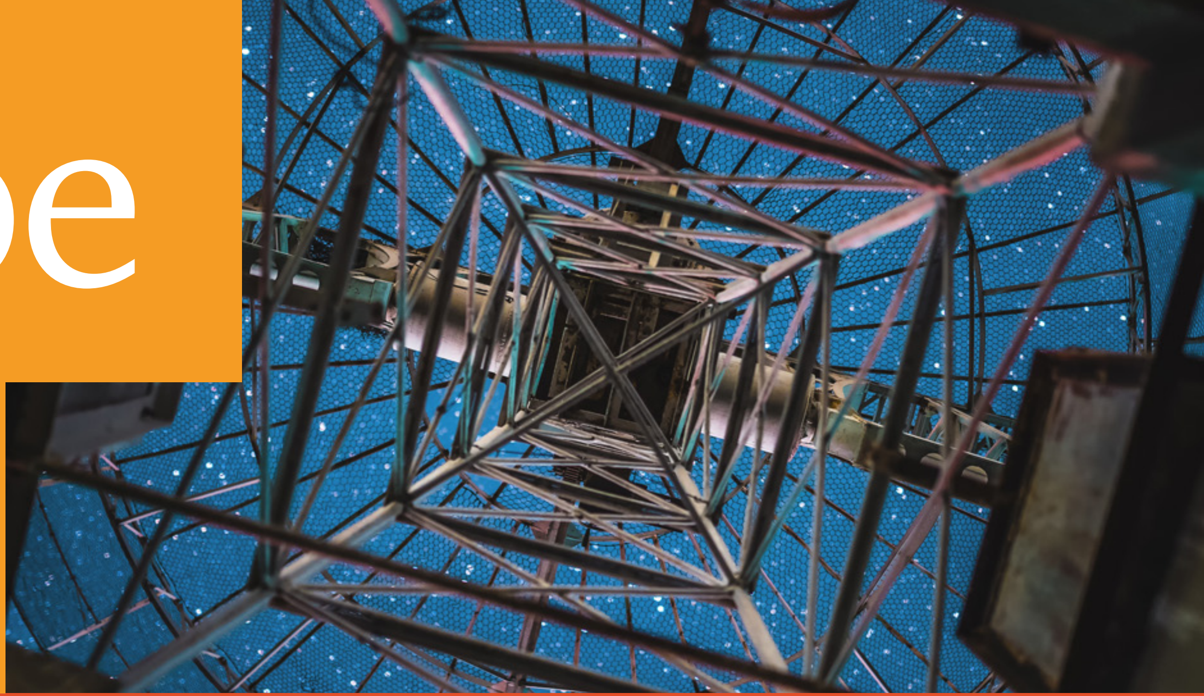
# Europe monitor



**Drive or be driven** Industry convergence

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# Drive or be driven

## Understanding the third wave of industry convergence

**We are in the midst of an unprecedented era of digital disruption, one which is characterised by the blurring of boundaries between traditional industries. Digitisation and improvements in technologies, such as artificial intelligence (AI) and cloud computing, have created a foundation for companies to harvest synergies that would previously have been out of reach. The possibilities opened by digitisation have encouraged companies to enter seemingly unrelated industries, and challenge existing industry conventions. The future of traditional industries will be shaped by these 'new entrants' as we know them today.**

Although all industries are faced with this new competition, the intensity of its impact may differ per industry. In this article, we will examine the convergence trend in several sectors and determine how it has grown over the years[1]. We will also dig deeper into the cause and effect of convergence waves in the past. Will industry convergence continue to grow at the current pace, and what is the likely effect on existing industries?

### Who are the new entrants?

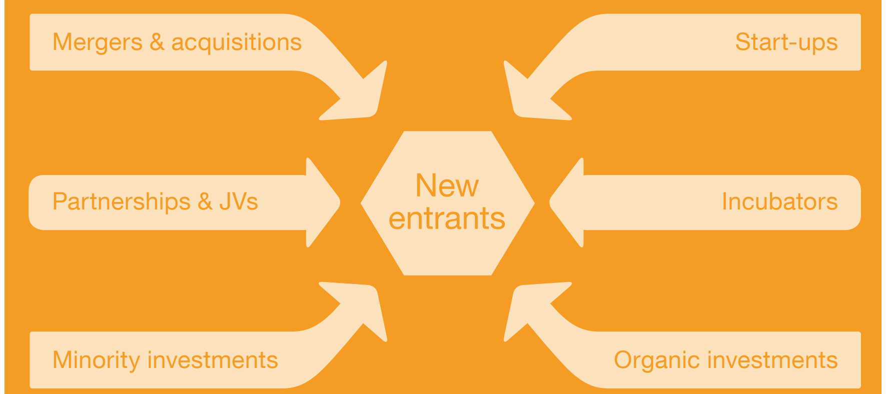
Companies expanding their scope of operations from their core industry to apparently unrelated sectors are referred to as 'new entrants'. These companies could be following one of many new entrant strategies, such as acquiring targets in other industries, forming partnerships or joint ventures to capture new domains, or bringing new business models to established industries.

In order to assess how new entrants have behaved over the past two decades, we analysed mergers and acquisitions by incumbents, as well as partnerships and joint ventures between industries and minority investments. We also looked into the causes and effects of such changes on industries as a whole. Other channels used to enter unrelated industries, such as organic expansion or start-ups, were not analysed.

### A fast-growing cross-industry world

If we look around these days, we can frequently spot examples of retailers acquiring technology companies or technology companies collaborating

**New entrant models**




1 This article is an excerpt of the full-report "Drive or be driven" from PwC, which can be found on: *https://www.pwc.nl/nl/actueel-publicaties/assets/pdfs/converging-industries-drive-or-be-driven.pdf*.

**Figure 1** Cross-industry activity is cyclical

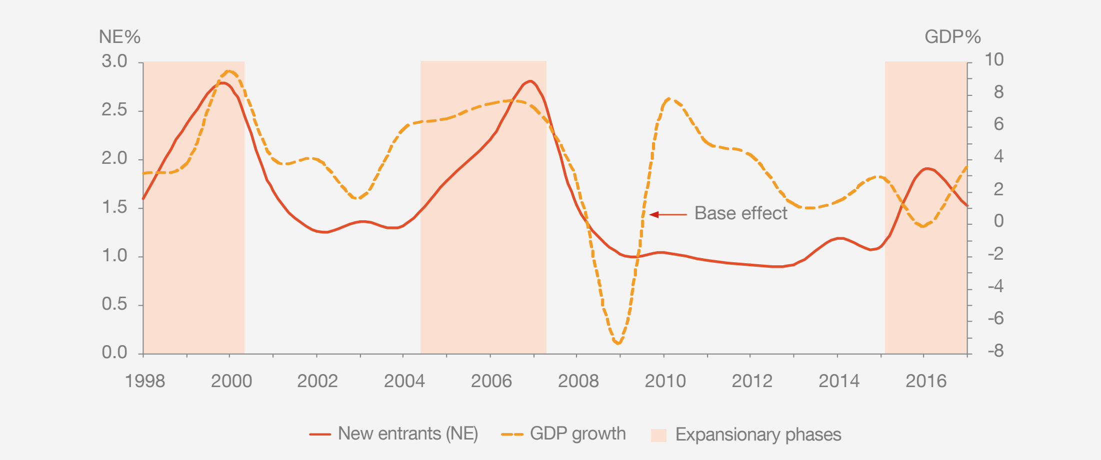
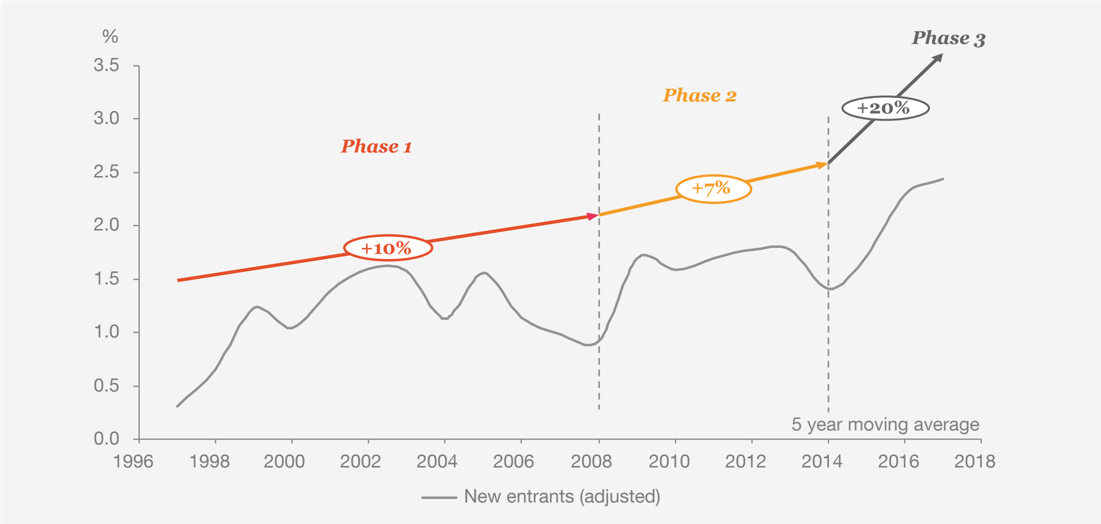



**Figure 2** New entrant activity in Europe is rising exponentially




2 New entrant activity is measured in terms of transaction value as a percentage of industry size.

with automotive players or financial institutions. The world seems to be moving towards cross-industry value propositions. Yet this is not the first time that industries are expanding beyond their core businesses. Like all investments, cross-industry investments are sensitive to economic cycles *(figure 1)*. Europe has seen three major periods of economic expansion over the past 20 years, and, not surprisingly, cross-industry activity has grown each time.

If we ignore the effect of economic cycles, we get a clearer perspective of the increasing pace with which industries have been converging over the years. In Europe, the number of new entrants has grown exponentially over the past four to five years[2], resulting from the ever stronger tendency of companies to explore new technologies and create customer-centric business models that are not restricted by traditional industry definitions.

Looking at the past twenty years, we can distinguish three phases, each driven by a different factor and affecting different industries. The first phase started at the beginning of this century and mainly involved the media and telecommunications industries. Digitisation of music and the proliferation of peer-to-peer file sharing platforms significantly disrupted the media and entertainment industry, while the telecoms sector was affected by the rapid rise in wireless services. Other industries were also dislocated in the early 2000s, be it to a much lesser extent.

**Figure 3** Comparison between phase 1 and phase 2 of new entrant activity

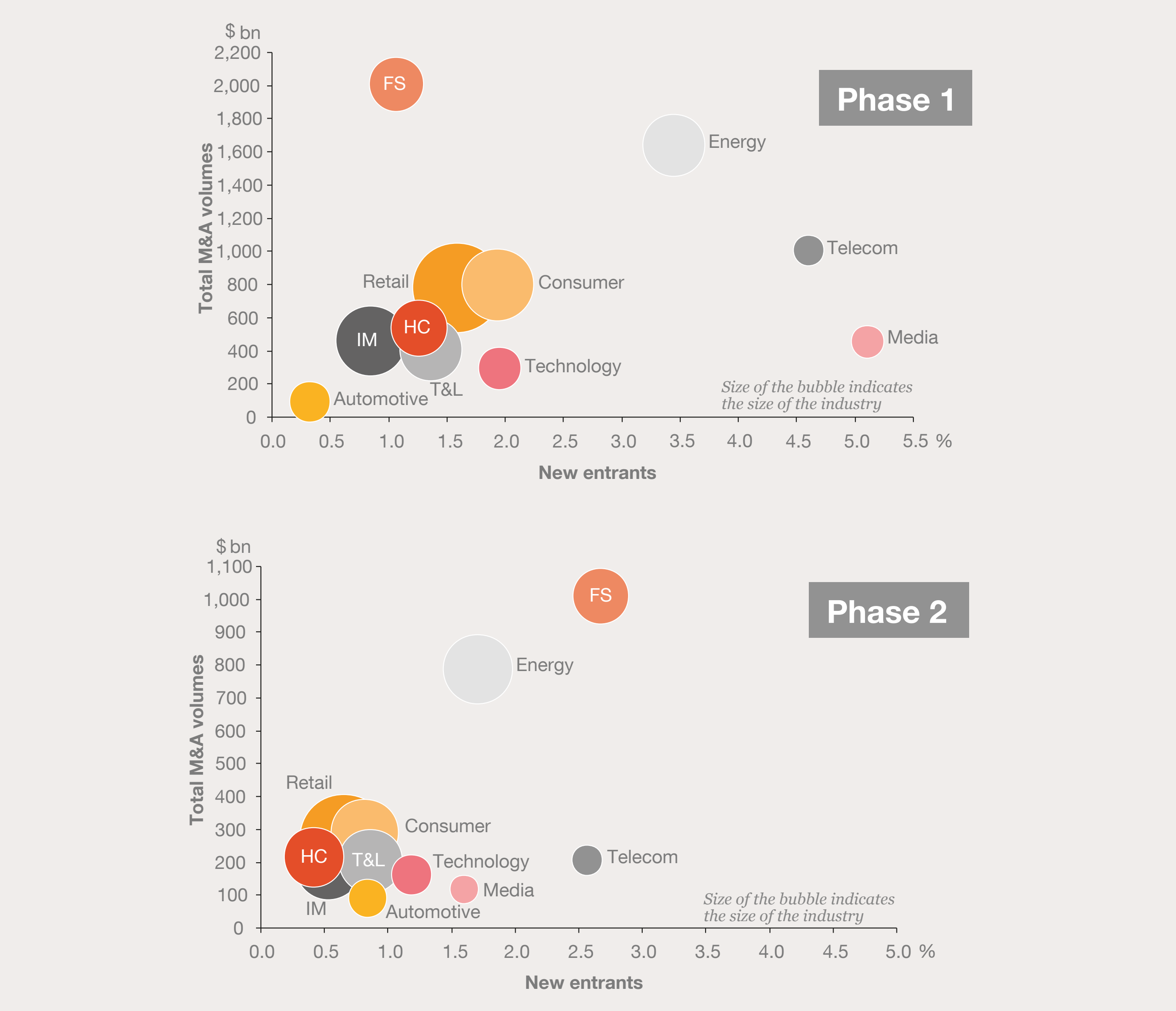
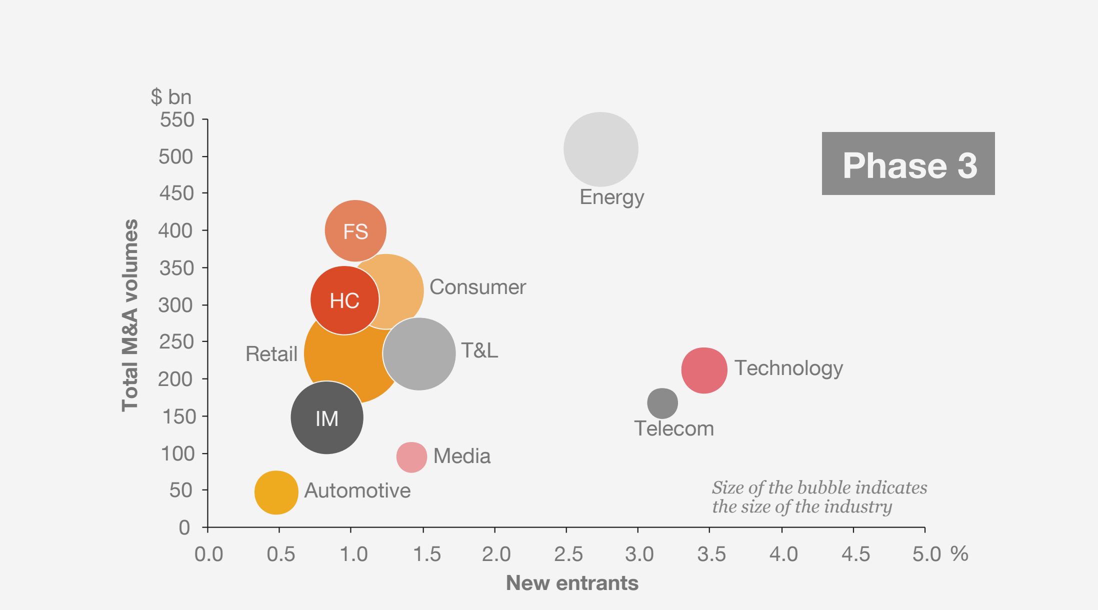


**Figure 4** Technology has been the most targeted sector for inbound activity during this phase




The second phase of new entrant activity, following the economic crisis of 2008, was largely the result of government investments flowing into the financial services industry (and to a lesser extent the automotive industry). In the aftermath of the crisis, governments made significant asset purchases in fragile banks to save jobs and prevent bank runs or collapses. This wave of new entrants was obviously quite exceptional in nature and not related to a strategic agenda of expanding into new markets.

The current and third phase is the most interesting, and not only because of the sharp rise in new entrants. Unlike the previous two phases, this wave of disruption is affecting multiple industries. All sectors we analysed, have faced a steep rise in new entrants over the last four to five years. The intensity of disruption differs per industry, but the unprecedented nature of this new wave is beyond dispute.

**Adoption of new technologies is the dominant trend of the latest phase**

The current wave of new entrants is fuelled by technological developments and the drive to capture cross-industry value propositions. The spike in the number of entrants in the technology industry, emphasises the change brought about by rapid digitisation. There is now an ever-increasing need, also felt by other industries, to invest in technology companies, not merely to innovate but also simply to remain competitive.

The intensity of change differs considerably. Telecommunications, closely trailed by technology as the most disrupted sector, followed by energy, transport & logistics and media, are all experiencing a great deal of emerging competition. New business models have materialised in most industries, notably affecting transport & logistics. The fact that this phase is evident in so many sectors implies that all these industries will be redefined in the future, their value propositions spreading out and interlinking to create new value networks.

# Transcending boundaries continues, but decelerates

**Driven by technological innovations and customer centricity, new entrants will continue to find synergies and to encroach on traditional industry boundaries. The size and number of new entrants will probably keep on growing, but at what pace? The overall macroeconomic scenario is expected to still have a strong bearing on the level of investments and the speed with which industries will converge.**

Although tech innovations will continue to help new clusters expand, the evolution of enabling technologies coupled with the effect of economic cycles, will probably cause a slowdown in new entrant activity. As emerging technologies mature, companies are likely to grow capabilities organically, as opposed to acquiring them externally or through partnerships with other industries. It is important to note that forecasts based on long-term trends can be affected by nonlinear events, which are quite probable in fast-changing environments. Rapidly developing commercial applications of AI for example, could lead to a longer period of new entrant disruption.

### The efficiency effect

New entrant activity frequently leads to a rise in the intensity of competition and declining average profitability in the industry. When driven by technology and new business models, new entrants do not just bring more competition e.g. due to lower costs or better customer service, they also have a fundamental impact on how industries generate output.

Industry convergence has a clear positive correlation with the real value added generated by industries. The more external competition an industry faces, the more added value it may to generate. This relationship also extends to employment. More companies operating in an industry are likely to generate more output, and to employ more people. Further, more competition makes industries more efficient, pushing them to increase production with fewer resources.

### Productivity is key

Assessing the impact of new entrants on productivity is crucial, not in the least because productivity is a major driver of economic growth. For businesses, increased productivity brings higher profits and the opportunity for more investment. For workers, increased productivity can translate into higher wages and better working conditions. In the longer term, increased productivity is key to job creation. For governments, increased productivity results in higher tax revenues[3]. By encouraging new competition, regulators can stimulate the value creation in industries and increase productivity across the board.

Our model points towards a causal relationship between the number of new entrants and the productivity of industries. It is important to note

3 Source: ILO.

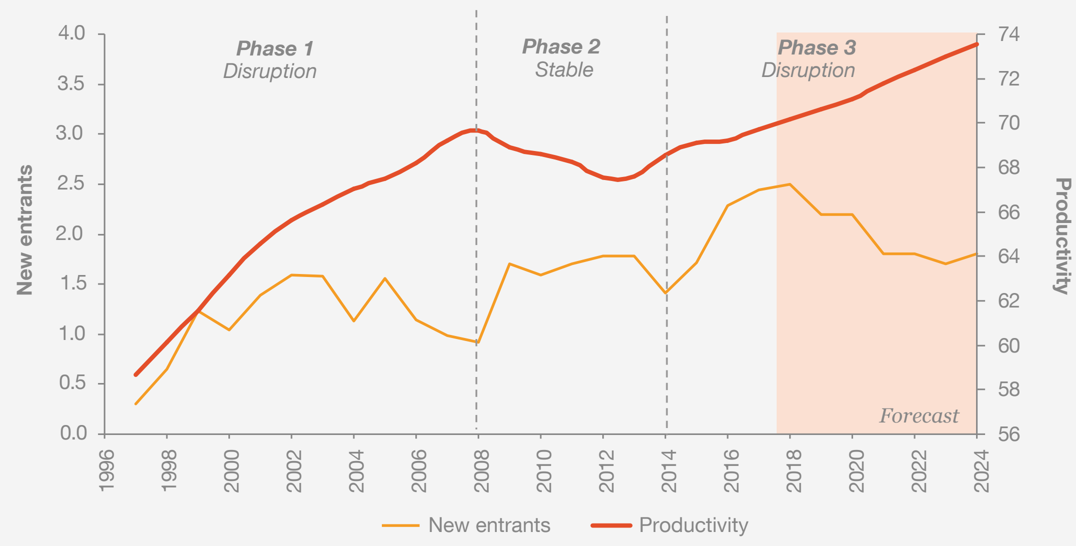
that there is considerable diversity in the industries analysed, and the effect each one experiences because of new competition. The strongest impact of new entrants is seen in technology, media and telecoms, which are likely to see the most positive effect on productivity as a result of increased competition. Industries that closely follow technology, media and telecoms, include financial services and industrial manufacturing.

**Rise in convergence could cause large-scale productivity improvements**

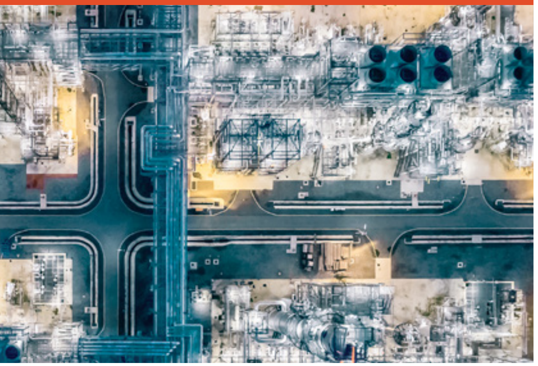
Our analysis indicates that productivity improvements revived about five years ago and has continued to increase since, as more and more new entrants started flowing into traditional industries, bringing innovative technologies and models with them.

Our forecast suggests that the wave of new entrants might currently be at its inflection point and may cool down over the next four years. However, this is expected to have little effect on productivity, the increase of which is projected to continue in the coming years. This because productivity gains from disruption, can foster sustained improvements in demand and boost overall economic growth.

**Figure 5** New entrants have set off a persistent improvement in productivity of industries



# Staying ahead



**A more efficient future is certainly something to look forward to. It will mean better utilisation of resources and improved performance of industries. As productivity grows in one industry, the overall profit pools available to players evidently increase, but the same cannot be said of profit margins.**

This does not imply that the profitability of all companies will shrink. Instead, declining average profitability will conceal winners and losers. Backed by better products and synergies, some parties will improve their margins, while others will suffer. This raises an important question: will new entrants perform better in the long term than companies that choose to focus on their traditional businesses?

While it may be too soon to answer that question empirically, we know that the right strategy and investment decisions can help incumbents retain their leadership positions regardless of disruption. However, this is easier said than done. The rapid pace of technological change highlights the fragility of incumbents' positions in the face of disruption. Here are some aspects that businesses should carefully keep track of.

**Maintain a laser focus on technology developments**
In other research, we found that companies which are technology leaders in their industries are twice as likely to achieve rapid revenue and profit growth as laggards[4]. Much of the gain for such leaders originates in eight essential emerging technologies i.e. artificial intelligence (AI), augmented reality (AR), blockchain, drones, internet of things (IoT), robots, virtual reality (VR) and 3D printing.

**Identify expansion approaches**
Incumbents will need to devise strategies to expand their value propositions, while keeping their core strengths at the centre of these strategies. A range of strategies have proved to work, and will continue to work, for incumbents. These strategies include expanding applications of the core technology or product (when technology is at the centre of the expansion strategy), focusing on seamless customer experience by integrating vertically (when the acquired customer base is at the centre of expansion strategy) or developing new business models, while retaining industry focus.

**Identify collaborators among competitors**
Incumbents will need to identify opportunities to convert disruptors into collaborators when assessing partnership and joint venture opportunities. Within their core industries, incumbents will need to consider the potential to develop communities of shared interest with competitors.

4 PwC, Global Digital IQ Survey, 2015, p. 10.

# Macroeconomic Update Europe
Outlook 2019

**While the European economy is still going strong, 2018 brought many unexpected challenges for the European economy. We were confronted with a drop in the euro exchange rate against the US dollar, and elevating trade tensions between the US and EU led to newly imposed import tariffs. Both caused import prices to rise. Italy's struggle with the rest of the Eurozone for a higher budget deficit, and the steep depreciation of the Turkish lira, led to market volatility, while the second half of 2018 saw significant declines in oil and commodity prices. These are all impactful factors that are going to touch upon the direction in which the European economy is going to proceed in the upcoming year.**

## GDP

The waning momentum of foreign trade, due to weakening global economic activity, growing trade tensions and increased uncertainty, underlying a less dynamic economic growth. Consequently, economic activity in Europe will come to depend heavily on the fundamentals behind private consumption and investment. These include continued employment growth supporting domestic demand, low interest rates and improved profitability.

Despite the slowdown in economic growth, Luxembourg and the Netherlands will continue to outperform their peers in Europe, with projected real GDP growth in 2019 of 3.5% and 2.6% respectively. Luxembourg is reaping the benefits of its domestic demand driven economy, being less affected by global trade tensions. The Netherlands' higher private and public spending, in addition to a very high trade surplus, is still supporting its growth, although the contribution of trade is expected to decline.

Austria and Spain will continue to grow above the European Union average of 2.0%, both forecasted at 2.2% in 2019. On the other hand, Italy will still be classified as an underperformer, with an estimated 1.0% real GDP growth in 2019. Turkey will go through a rough patch, growing at a projected 0.4% in 2019, much lower than the expected 3.5% GDP growth in 2018, and 7.4% in 2017.

We expect the slowdown in Italy and Turkey to continue. Elevating concerns regarding the Italian government's budget may trigger a potential crisis, pushing for early elections in 2019, and increased instability. In Turkey, the economic slowdown will become clearer in 2019, due to a drop in demand following the sharp depreciation of the Turkish lira and high inflation resulting from this. The current account balance is expected to improve as a result of these developments. After the local elections of March 2019, Turkish authorities will likely take additional measures to deal with the challenging conditions. Turkish banks may choose to protect their capital positions and ability to pay back foreign currency denominated debt, leading to a tightening of credit conditions. Although a new government credit program will provide some relief.

**Private Consumption**
In the coming quarters, the expansion of private consumption in Europe should get support from higher disposable incomes, which will also sustain consumer confidence. Total income will increase mainly as a result of a rise in wages and salaries, rather than by additional workers joining the labour force, as employment growth in the Eurozone is expected to slow down. With a slowing job creation, the momentum in consumer spending will depend more strongly on the extent to which wages will rise. Overall, household nominal gross disposable income is forecast to expand by 3.2% in 2018, up from 2.9% in 2017, and peaking at 3.6% in 2019.

Germany is still performing relatively well, despite the decline in economic growth, and has one of the lowest unemployment rates in Europe, projected at 3.4% in 2019. Low unemployment contributes to private consumption and GDP growth, with the latter projected to be 1.8% in 2019. New fiscal policy measures in 2019, i.e. higher family benefits, are also going to benefit household spending.

**Capital Investments**
In 2019, investment is estimated to grow with 3.9% and 3.8% in Spain and the Netherlands respectively, which is higher than the average of the Eurozone at 3.0%. In Germany and France, investments are projected to grow at a lower rate of 2.9% and 2.3% respectively.

Both in 2018 and in 2019, public investment in the Eurozone is expected to grow at rates of 3.3% and 3.0% respectively.

The financing of private investment, bank lending to firms and other funding for companies, will continue to be supported by relatively low interest rates and favourable credit standards. It is anticipated that interest rates will increase gradually, in response to a tighter monetary policy and rising risk premiums.

**Net Exports**
Several factors are expected to dampen export growth. Increased uncertainty with respect to trade policies will lead to a reduction in global trade activity. The impact of the euro's appreciation, especially against several emerging market currencies, is deteriorating the price competitiveness of Eurozone companies and constraining their ability to compete. Moreover, in some countries and sectors, supply constraints limit the room for further increases in export volumes, particularly where companies tend to prioritise domestic customers.

Accordingly, Eurozone export growth is forecast to remain at around 3.5% in 2019 and 2020. At the same time, Turkey has a relatively high export growth rate, projected at 7.8% in 2019. Increasing price competitiveness resulting from the sharp depreciation of the Turkish lira, is one of the main factors behind this. On the other hand, exports from the UK will grow at a relatively slow rate of 1.2% in 2019. This is related to concerns regarding trade relations between the EU and UK post-Brexit.

As domestic demand is anticipated to remain relatively strong in the Eurozone, import growth is expected to overtake export growth in 2019 and 2020, leading to a broadly neutral growth contribution from net exports.

**Government Expenditure**
Government spending growth remains largely stable in the Eurozone, and both the EU 28 and Eurozone government budgets look more robust. In the Eurozone, the deleveraging of the government sector is supported by low interest rates paid on debt, and stronger nominal GDP growth, resulting in lower debt service costs and lower debt levels versus GDP.

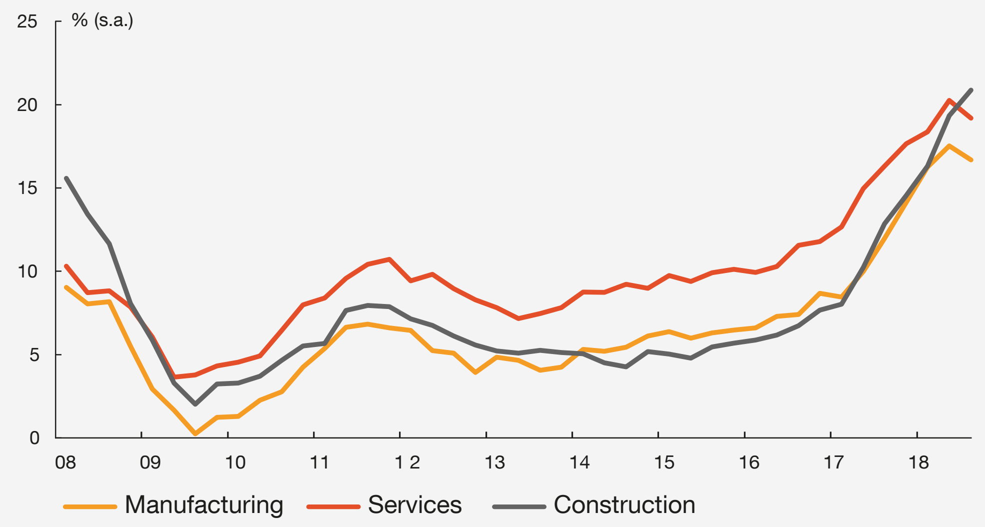
Despite the fact that budget deficit levels have been decreasing for several consecutive years, high government debt is still a common phenomenon in various countries. Italy remains a concern, with the highest debt to GDP ratio after Greece.

**Labour Markets**
In the second quarter of 2018, the number of people employed in the Eurozone was 2.4% higher[5]. This employment growth was realised because of ongoing economic expansion, modest wage growth and structural reforms in some countries.

Simultaneously, labour supply has expanded over the past few years, also compared to population growth. This is mainly due to higher participation rates and net migration into the EU. The Commission's quarterly surveys indicate that firms are facing challenges from a tightening labour market. The share of Eurozone and EU firms mentioning the availability of labour as a factor limiting production in the industry has increased rapidly over the past two years, especially in the construction, manufacturing and services sectors.

Labour market conditions are projected to improve further over the next two years, but at a more moderate pace than in the previous years, due to slowing growth and a relatively high level of employment already attained. Unemployment in the EU is forecast to decline from 6.9% in 2018 to 6.6% in 2019[6].

**Figure 6** Labour seen as limiting factor of activity in the Eurozone




Source: European Commission.

**Inflation**
Inflation rose in the first half of 2018, mainly because of increased energy prices and a lower euro exchange rate versus the US dollar. This upward trend for headline inflation will however be disrupted by the strong decline in oil prices at the end of 2018. Core inflation, which excludes energy and food prices, has remained subdued. The pass-through of higher wage growth to underlying price pressure is foreseen to be gradual, and take longer than expected. As such, inflation in the EU is expected to be approximately 2% in 2019, almost unchanged from 2018. In Turkey inflation is not foreseen to fall below ten percent until 2020, partly due to price rigidity.

**5** European Commission, European Economic Forecast Autumn 2018, page 44.
**6** European Commission, European Economic Forecast Autumn 2018, page 45.

**Figure 7** Key economic indicators, selected European economies

| | GDP growth (% change) | Industrial production (% change) ^ | Consumer spending (% change) | Capital investment (% change) | Unemployment rate (%) ^^ | Consumer prices (% change) ^^ |
|---|---|---|---|---|---|---|
| Eurozone | 1.6 | 1.2 | 1.0 | 3.1 | 7.9 | 1.9 |
| Austria | 2.3 | 0.3* | 1.7 | 4.0 | 4.7 | 2.3 |
| Belgium | 1.6 | -1.2* | -0.9 | 1.2 | 5.6 | 2.9 |
| France | 1.4 | -0.6 | 1.6 | 2.8 | 8.9 | 2.2 |
| Germany | 1.2 | 1.0 | 4.1 | 3.0 | 3.3 | 2.2 |
| Italy | 0.7 | 1.0 | -1.4 | 2.5 | 10.5 | 1.6 |
| Luxembourg | 3.1 | 0.8 | 2.8 | -2.4 | 5.0 | 2.6 |
| Netherlands | 2.3 | 0.7 | 3.9 | 3.3 | 3.5 | 1.8 |
| Spain | 2.4 | 1.0 | 1.0 | 5.5 | 14.7 | 1.7 |
| Switzerland | 2.2 | -0.4* | 0.7 | 1.2 | 4.7** | 1.0 |
| Turkey | 2.1 | -6.5*^ | 1.5 | -3.8 | 11.5 | 20.3 |
| United Kingdom | 1.5 | -0.8 | -1.7 | -0.3 | 4.1* | 2.4** |

NB: Figures are the latest available values i.e. the third quarter of 2018, unless specified differently. Figures are further reported quarterly, unless otherwise stated, and on basis of year-on-year change (where applicable). Consumer prices are reported according to the HICP methodology, except for Turkey.
^ Monthly, October 2018
^^ Monthly, November 2018, Turkey is December 2018
* September 2018
** October 2018
*^ November 2018, Calendar adjusted

Source: Thomson Reuters, Eurostat, Turkstat.

# Country Update: Switzerland

**The Swiss economy is booming, with GDP growth expected to have reached around 3% in 2018. GDP has risen rapidly over the last quarters and unemployment is falling as a result. Manufacturing has enjoyed a particularly strong growth, with capacity utilization now at a level not seen since 2011. Reports from the service sector also indicate that business is doing very well overall. Exports should continue to provide a substantial boost to growth. Although there was a noticeable upturn in the Swiss franc in the wake of increasing international uncertainty over the summer months, the exchange rate nevertheless remains favourable in comparison to the past three years.**

In light of high international demand, Swiss companies are increasingly expanding their production capacity. At the beginning of 2018, capacity utilisation was well above 80% according to KOF Swiss Economic Institute. This stimulated companies to alleviate capacity restraints. Since 2017, earnings of Swiss industrial companies have increased, providing the financial means to expand activities or to upgrade existing production facilities. As a result, investment in equipment grew at a relatively high rate in 2017 and 2018. This investment dynamic will remain solid going into 2019, but will gradually weaken, as capacity utilisation already peaked in mid-2018. Although rising vacancy rates in certain segments indicate a saturation of the housing market, commercial construction is anticipated to grow further over the next few quarters, as companies invest in buildings. Overall, investment will continue to support economic growth in 2019.

At the same time, Swiss companies are planning to recruit more staff. This not only due to more favourable economic conditions, but also because the factor price of capital has increased relative to the price of labour. After about 2% growth in 2018, employment is likely to continue to grow at a rate of around 1% in 2019 and 2020. Consequently, unemployment will also decline to approximately 4% in 2019. However, the benefits to private household consumption will initially be limited, since growth in individual income is dampened by weak nominal wage increases, and a somewhat higher inflation in 2018 compared to the previous year. This is due to higher import and energy prices. The inflation rate of about 1% on average in 2018 is still low, even in comparison to that in the Eurozone. Inflation will decline again somewhat as of 2019, because of lower energy prices. This will benefit disposable income.

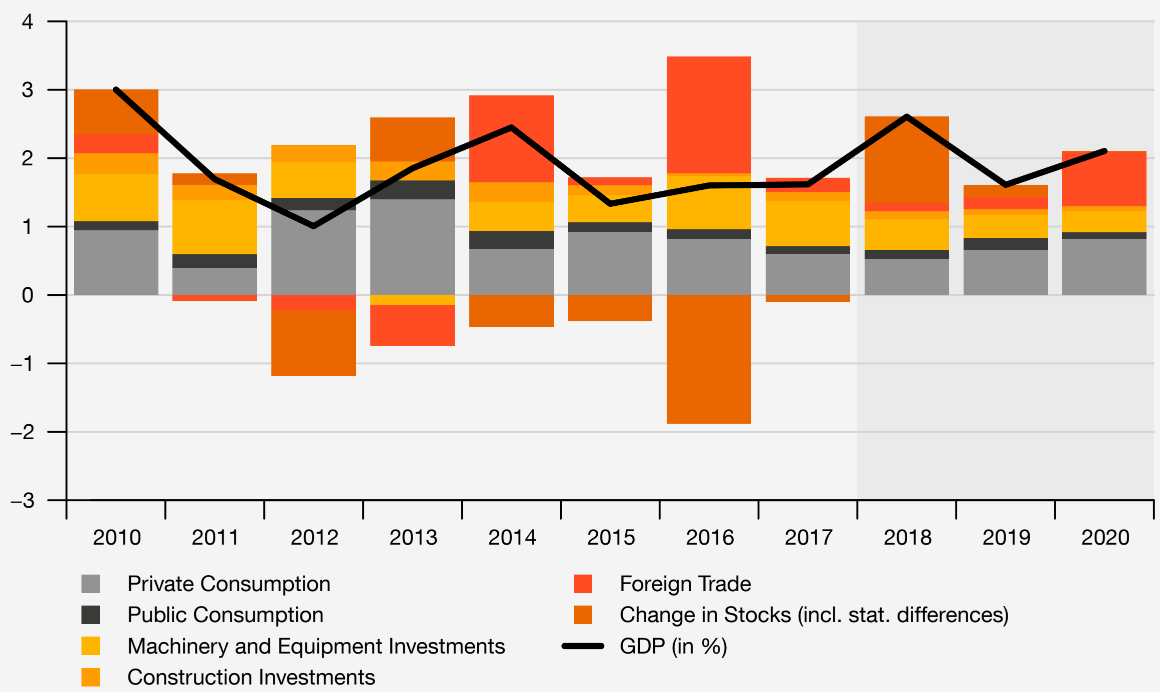
Growth in domestic demand will likely become more important compared to investment, government consumption and foreign trade in the course of 2019. Private consumption is likely to become a stronger contributor to growth, as real incomes are expected to grow moderately. Because the global economy is likely to lose further momentum going forward, the impulses for Swiss foreign trade will be lower, whereas government expenditure is restricted due to debt limits and conservative budgeting. Overall, GDP growth in 2019 is forecast to be approximately 2%.

### Economic risks

Key negative risks for the global economy have intensified over the past few months. In particular, the international economy could slow down faster than assumed in this forecast. This will be most likely if the trade disputes between the US and other major economic areas were to escalate further. Overall, global trade and Swiss foreign trade could be severely affected, leading companies in Switzerland to cut back on their investments or expansion plans.

Political unpredictability in Europe remains elevated. In particular, the lack of clarity on the Italian government's plans causes uncertainty. At the same time, it also remains unclear what the relationship between the EU and UK will look like once Brexit comes into force in late March 2019. What is more, some emerging economies experienced major exchange rate turbulence and capital outflows in the summer months. Should the fluctuations, which are currently still limited to a handful of countries, spread to other economies or if the political risks mentioned come to fruition, the Swiss franc might come under stronger upward pressure as a safe-haven currency. This would have a considerable curbing effect on Swiss' trade competitiveness and economic growth in the country.

**Figure 6** Growth Contributions GDP: Expenditure Side - (in percentage points of GDP)




Source: KOF Swiss Economic Institute.

# Contacts

**Jan Willem Velthuijsen**
Chief Economist, PwC Europe
T: +31 88 792 75 58
M: +31 6 2248 3293
E: jan.willem.velthuijsen@pwc.com

**Başar Yıldırım**
Chief Economist, PwC Turkey
T: +90 212 326 6716
M: +90 530 370 5736
E: basar.yildirim@pwc.com

**Gisela Kramer**
Partner Economics Advisory,
PwC Germany
T: +49 69 95855 862
M: +49 170 8591 290
E: gisela.kramer@pwc.com