



After May

UK Economic Outlook

Special focus

Inflation indices:
CPI vs RPI

Technology
and UK trade

June 2019

kpmg.com/uk/economicoutlook

Chief Economist's introduction



Recent weeks saw the gathering of clouds over the global economic horizon, with growing talk of a possible recession and a change in tune by major central banks as they gather their depleted arsenal to the rescue. The UK now has to consider the global backdrop a headwind.

Back home, Brexit has not left the top of the domestic agenda, but businesses are at their peril if this is the only issue they focus on. In fact, barring the still less likely scenario of a no-deal Brexit at the end of October, we shouldn't expect much change in practical relations between the UK and the EU for almost three years, if we assume a short delay in exit is followed by a smooth transition period. Businesses will not know the full nature of the future relationship between the UK and the EU for some time. In the meantime, there will be opportunities and risks elsewhere that they must urgently address.

You could argue that the UK economy is currently in a goldilocks state: not too cold, with record low people unemployed; and not too hot, with inflation expected to remain firmly under control. Unfortunately that would ignore the bigger picture. The UK economy faces two urgent challenges it needs to address: low productivity and inequality in opportunity, in addition to the challenges posed by Brexit. These challenges represent a time bomb which, if not defused early, will relegate the UK to the bottom of the league, with long-term mediocre growth and dwindling prospects.

There's a lot to do, and no time to ponder, in what is panning out to be a challenging political and economic environment.

Yael Selfin,
Chief Economist, KPMG in the UK

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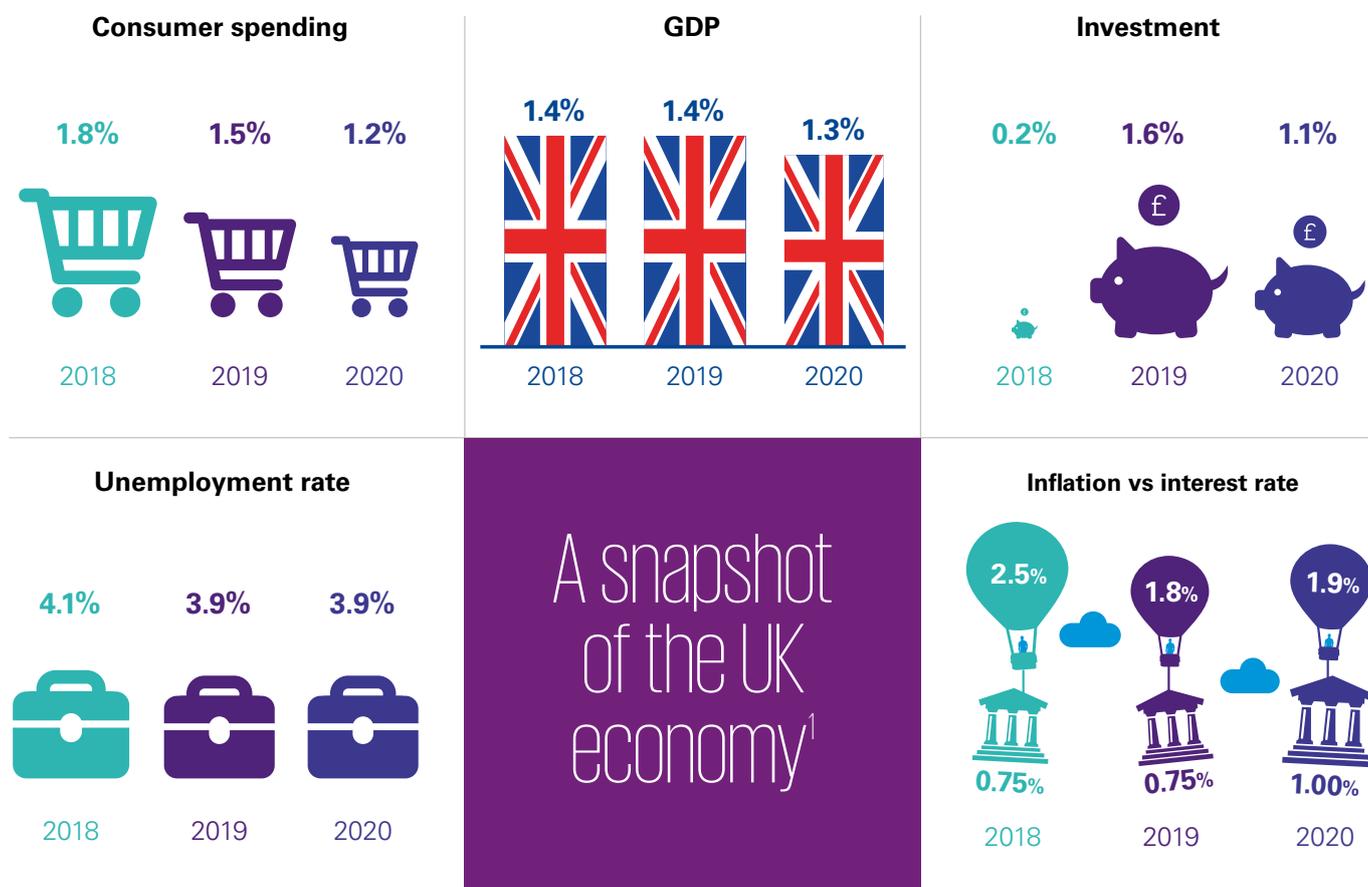
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Current Outlook

Executive summary

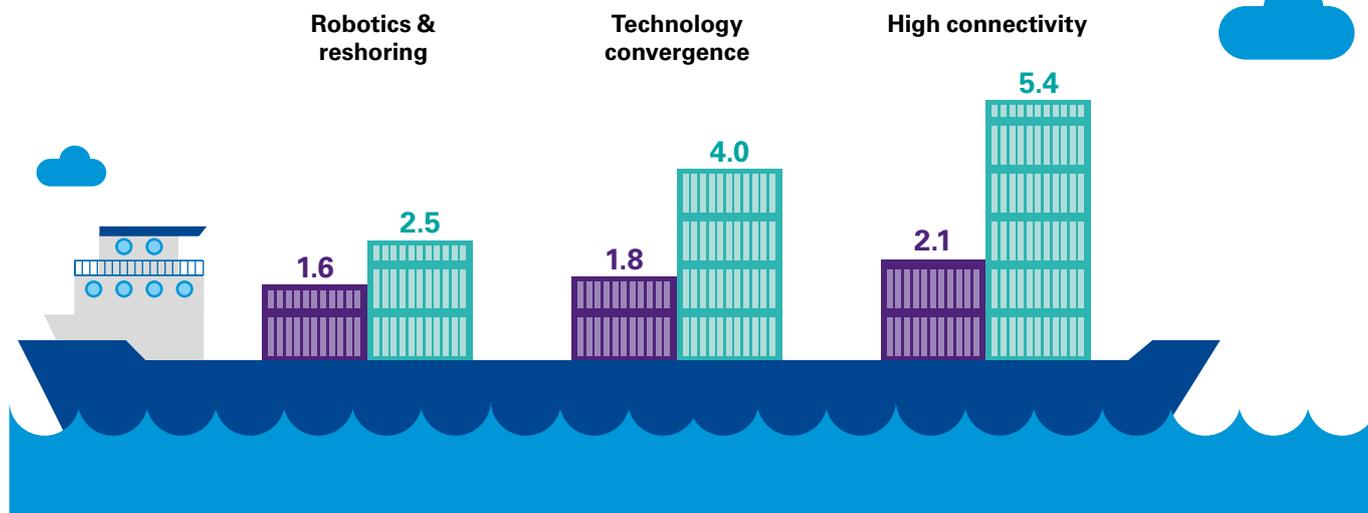
- Prospects for the **global economy** turned more negative in the past few months: there are growing concerns that a recession could be just around the corner.
- A relatively strong first quarter growth in the UK is unlikely to be repeated this year. Short-term indicators point to **weak UK growth going forward** across all sectors and most UK regions. Our forecast, which assumes a delayed smooth Brexit, sees UK **GDP** increase by 1.4% this year and by 1.3% in 2020.
- The **labour market** has remained tight and we expect this to continue as long as businesses prefer to rely on additional labour input rather than capital investment to boost their capacity. We expect the **unemployment rate** to stay at 3.9% on average over the next two years.
- Low unemployment rate and short supply of candidates are pushing up **pay** levels, however we expect **inflation** to stay broadly on target, averaging 1.8% in 2019 and 1.9% in 2020. With October's revisions to the standard tariffs by the regulator Ofgem, we are likely to see a moderate fall in **energy prices** in the second half of the year.
- The Bank of England's concerns of budding domestic inflationary pressures, as a result of the tight labour market, are likely to be put aside in the face of multiple uncertainties, from Brexit to a slowing global momentum. It is unlikely that the Bank will opt for another rise in **interest rates** before the last quarter of 2020.
- A strong labour market and decent earnings growth should see resilient **household consumption** continuing to drive growth. We expect consumer spending to grow at 1.5% this year, slowing slightly to 1.2% in 2020.
- The negative impact of Brexit uncertainty on **business investment** is likely to persist until the main issues are resolved. Cloudy global economic prospects are not inspiring business confidence either. We expect investment to grow by 1.6% this year, thanks to a strong first quarter, and by 1.1% in 2020.
- Brexit-related stockpiling in Q1 propelled trade in goods with EU countries, as well as **manufacturing** output. But these levels are unlikely to persist during rest of the year. **Services** will continue to be the main pillar of growth, although we do not foresee any exceptional strength there either. Financial and professional services, and in particular their export output, are going to be held back until client concerns over the post-Brexit regime can be settled.
- **Inflation indexation** is widely used in taxes, regulations and private contracts to hedge against inflation risk. As the historical measure of inflation, the **RPI** is still widely used despite its acknowledged methodological flaws. Most stakeholders will need to make a decisive switch to the **CPI** in the long run, but the lack of a mature and fluid market for CPI-linked gilts and financial derivatives means that **businesses will need to plan ahead for a smooth transition**.
- The **future of UK trade** in the short term is clouded by the uncertainties of Brexit. However, in the medium to long term, **innovation and technological change** will have a more profound impact. Our analysis shows that the most likely direction of technological change will lead to the UK becoming a more open economy, with **UK trade increasing to more than £4 trillion**. The UK-Asia Pacific corridor will experience faster growth in trade than any other relationship due to the rapidly increasing size of economies in this region.



Potential scenarios of technology impacts on UK volume of trade

Total of imports and exports in 2016 £tn

2030 2050



¹These figures represent our central scenario under which the UK secures a transition agreement after Brexit and a relatively friction-free trade deal after that. Figures for GDP, consumer spending, investment and inflation represent % change on previous year.

The global economic backdrop

Clouds are continuing to gather over the world economy. While the risk of a recession is on the rise in some of the major economies, the current path points at a more modest deceleration.

Since October 2018, the volume of global trade has fallen by 2%, while industrial production has stayed broadly flat, rising just 0.5% over the same period. As Chart 1 shows, this is hardly comparable to the 15% drop in trade seen over the four months following October 2008, the height of the global financial crisis.

Some of the headwinds for the global economy are political. These include continuing trade tensions between the US and China and the uncertainties of Brexit – both highly unpredictable issues that consumers and businesses around the world are finding it almost impossible to plan for.

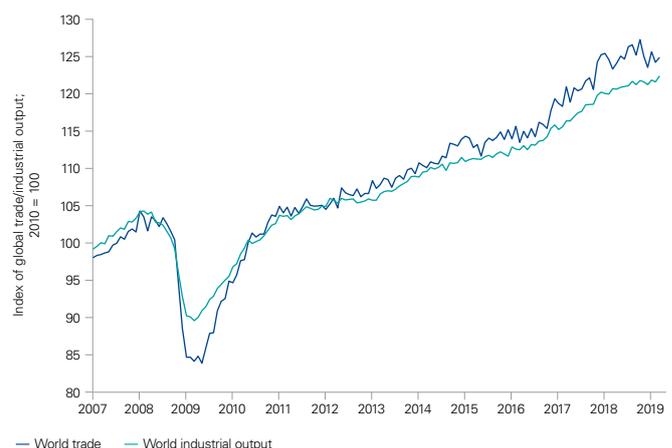
Elsewhere, oil prices have now recovered after the fall seen at the end of 2018. Since hitting a low of US\$50.42 per barrel in late December 2018, the price of Brent crude peaked at US\$75, before falling back to below US\$65 due to softening demand. Continuing volatility in oil prices will play havoc with consumer prices around the world as they are passed to consumers.

In the US, economic growth is expected to ease to 2.7% in 2019, from 2.9% last year. The slowdown reflects the removal of fiscal stimulus that powered growth through 2018 and is likely to lead to further slowing in 2020, to 1.3%.

So far, hopes for a quick resolution to the dispute with China appear remote. In May, the US announced an increase in tariffs on US\$200bn worth of goods from China, prompting China to retaliate with tariffs on US\$60bn worth of US goods. For both sides, the negative direct impacts of these tariffs will be a drag on growth for as long as the dispute continues.

In the meantime, the US economy has already passed a landmark moment, with the inversion of the yield curve on US Treasury bonds at the end of March. In the past, this has proved to be an accurate early indicator of a coming recession and an urgent call to action for policymakers; it reveals that the markets expect lower interest rates in the future, which would be a consequence of deteriorating economic conditions. That said, lower 10-year rates today mean this signal should be treated with caution; these make an inversion of the yield curve more likely.

Chart 1: Volume of global trade and industrial output



Source: CPB Netherlands Bureau for Economic Policy Analysis

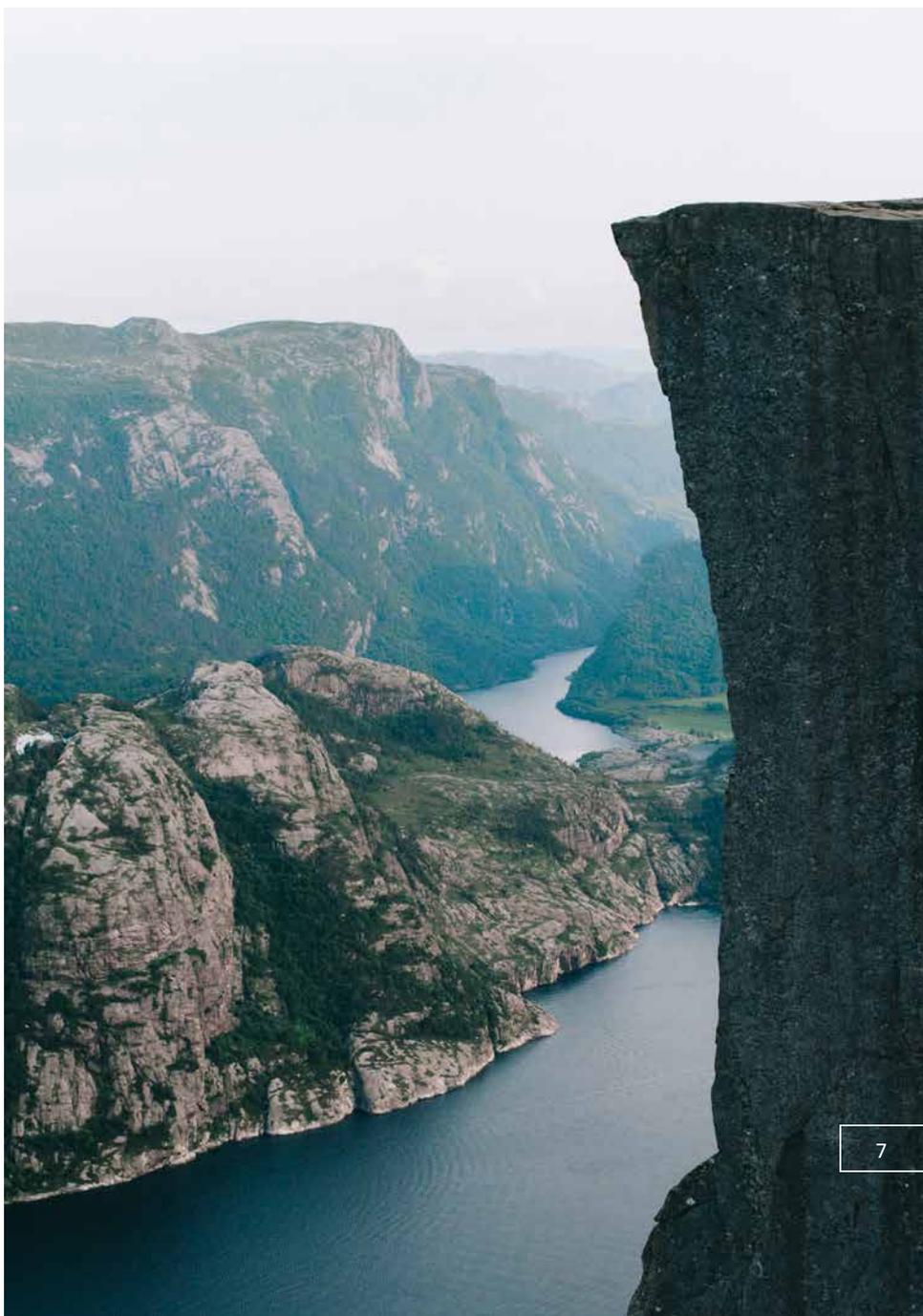
In fact, the US Federal Reserve has already signalled a switch to a more dovish monetary policy. In January's meeting, it stepped back following a series of interest rate increases, instead pausing with the target rate set between 2.25% and 2.5%. Weak employment data in May are cause for some alarm, and further softening in economic data could push the Fed towards a rate cut further down the line.

Across the Atlantic, the euro area is also struggling to make progress. While GDP growth accelerated to 0.4% in the first quarter of this year, growth is likely to remain weak for the rest of the year. The eurozone economy is particularly vulnerable to the trade slowdown, as the capacity of monetary and fiscal policy to offset the drag is limited. With policy rates already at their lower bound, the ECB may have no choice but to resume its programme of quantitative easing.

The German economy is a case in point. Due to the weakness in export performance, the Bundesbank has slashed its growth forecasts for 2019 down to 0.6%, from 1.6% at the start of this year. Meanwhile, the French economy appears to be more resilient, with stronger domestic demand making up for the weakness in exports. The French Central Bank expects growth to reach 1.3% in 2019.

Faced with a slowing economy in China – growth is initially forecast to fall back to 6.2% in 2019 – the authorities have put in place significant stimulus measures. Looser monetary policy measures include lower reserve requirements ratios for banks and a special quota for the issue of local government bonds worth 1% of GDP. In addition, the government has announced a fiscal stimulus worth 2.2% of GDP in the form of lower taxes. These measures should support economic activity and prevent any further deterioration in the short-term outlook.

The slowdown in the global economy, which started at the end of 2018, is significant and has increased the risk of a slide into recession. To add to this there are widespread and significant uncertainties on key policy issues, which could sap the global economy's capacity to weather a negative shock.



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Leading indicators are downbeat

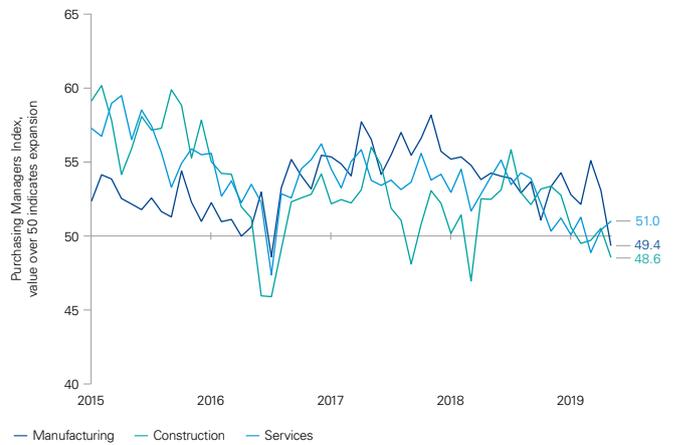
The most recent indicators of economic activity in the UK suggest there's weak growth ahead in the remainder of the year. Continuing Brexit uncertainty and weakening global economy are leading to a widespread slowdown across most sectors.

Surveys of purchasing managers (PMIs), published in May, showed both construction and manufacturing below the 50-mark, indicating contraction in these sectors (see Chart 2). Stronger growth, albeit weak by historical standards, is expected in services, where the index rose to 51.

Short-term prospects were down in two-thirds of regions in May, with a full half of regions stuck below the 50 mark – meaning a fall in output (See Chart 3). Northern Ireland, where the PMI rose slightly after falling for five months in a row, has remained at the lowest level in the UK, and more than 7 points below the Yorkshire and The Humber score, which was the strongest region in May.

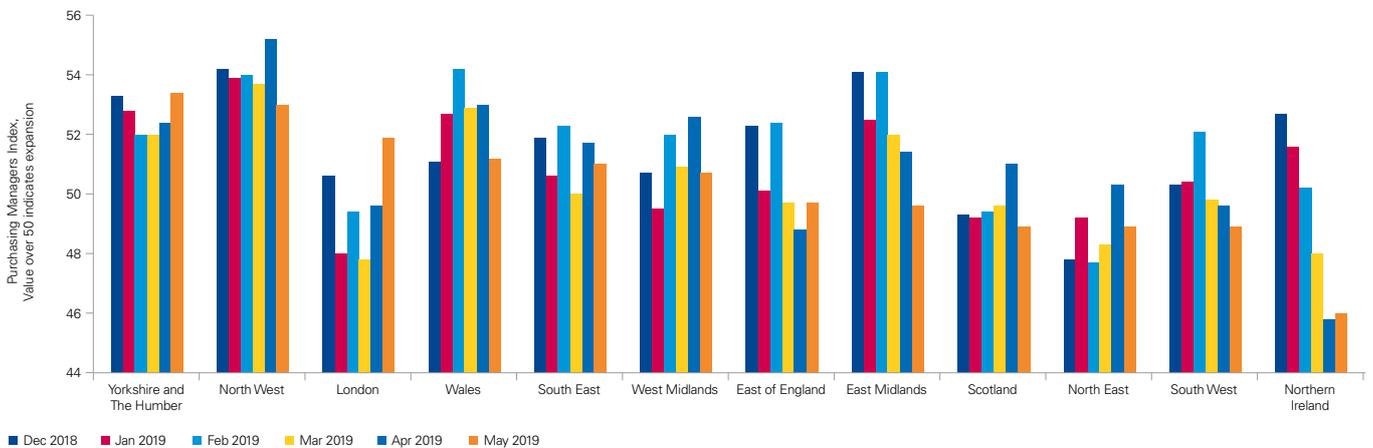
Overall, the PMI surveys signal that the UK is set for more challenging times in the coming months.

Chart 2: Purchasing managers' outlook slides



Source: IHS Markit

Chart 3: Half of regional PMI indices point at a contraction



Source: IHS Markit



Outlook in our central scenario

Brexit uncertainty remains a key feature of the economic outlook for the remainder of 2019. Any potential escalation of conflicts elsewhere, and a backdrop of an increasingly weaker global economic environment, add to the uncertainty. Our central scenario reflects our best judgement about the likely evolution of events over the next two years; it is prone to a wider-than-usual margin of error.

With the Article 50 deadline delayed until the end of October, the peak impact of uncertainty has passed for now. Intense stockpiling boosted activity by consumers and businesses, but this represents a costly insurance premium against a risk that has not materialised. In the meantime, businesses have avoided making commitments to longer-term investments.

For now, the possibility of a no-deal Brexit appears small. However, the forthcoming change of leadership in the UK government could presage a change of approach. Businesses must take account of the additional uncertainty this creates.

We expect overall economic activity to be weak throughout the rest of the year. Given strong GDP growth in the first quarter, growth for 2019 as a whole may reach 1.4% before slowing to 1.3% in 2020.

Depressed investment will be the one source of weakness as businesses respond to Brexit uncertainty by delaying spending. Taking into account data from the first three months, we expect investment to grow by 1.6% this year and 1.1% in 2020.

Spending by consumers will be the main driver of demand throughout the next two years. A strong labour market and rising pay will continue to encourage consumers to spend. Added to this, households' propensity to stockpile ahead of Brexit has already propelled strong consumption growth at the start of the year. Our forecast is for consumer spending to grow at 1.5% this year. In 2020, consumption growth will reach 1.2%, although the slowdown from the year before reflects the timing of the stockpiling surge at the start of this year, rather than a genuine slowdown.

As a partial response to uncertainty, businesses have opted to increase the size of their workforce over other longer-term investments. As this continues, we expect the labour market to remain tight throughout the next two years, with unemployment staying at 3.9%. Increasingly generous pay rises, combined with low productivity growth, will lead to rising cost pressures for businesses. Some may start to pass these on through higher prices, leading to faster inflation.

To head off the threat of rising inflation from an overheating labour market, the Bank of England looks set to continue to gradually increase interest rates. However, with the near-term uncertainty of Brexit and a slowing global momentum the Bank's Monetary Policy Committee is unlikely to act before the last quarter of 2020.

Until then, we expect inflation to stay broadly on target, averaging 1.8% in 2019 and 1.9% in 2020. Falling energy costs are expected to push inflation down in the second half of the year, with October's revisions to the standard tariffs by regulator Ofgem likely to bring inflation down.

Overall, the outlook for the UK economy continues to deteriorate – and continues to be dominated by the uncertain political outlook. A period of steady, albeit unimpressive GDP growth looks set to continue. Meanwhile, the pervasive uncertainty is having a powerful effect on the future potential of the economy. The longer the uncertainty endures, the more severe the level of underinvestment will become and the greater the impact will be on long-term productivity and growth.

Table 1. Our central scenario for the UK economy

KPMG economic forecasts	2018	2019	2020
GDP	1.4	1.4	1.3
Consumer spending	1.8	1.5	1.2
Investment	0.2	1.6	1.1
Unemployment rate	4.1	3.9	3.9
Inflation	2.5	1.8	1.9
Base interest rates (end-of-period)	0.75	0.75	1.00

Source: ONS, KPMG forecasts. Average % change on previous calendar year except for unemployment rate, which is average annual rate. Investment represents Gross Fixed Capital Formation, inflation measure used is the CPI and unemployment measure is LFS. Interest rate represents level at the end of calendar year.

The story so far

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GDP growth boosted by stockpiling in anticipation of Brexit

UK economic growth picked up during the first quarter of 2019, with GDP increasing by 0.5% compared to only 0.2% during the fourth quarter of 2018. The acceleration was at least partly a result of businesses' stockpiling. Firms had expected the UK to leave the European Union on 29 March, potentially without an agreement on the terms of withdrawal.

Initial estimates for the first quarter suggest that businesses increased their inventories by £6.7 billion, which means this factor was the largest single contributor to GDP growth (see Chart 4). The substantial increase in imports (a negative contributor to GDP growth) during the first quarter was also linked to stockpiling.

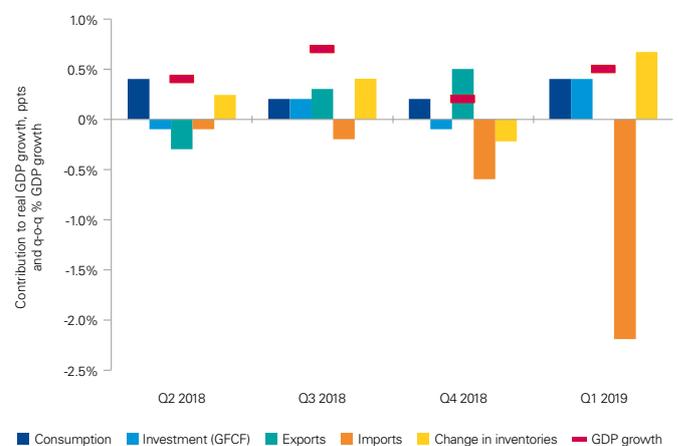
So far, the Brexit cliff edge has been avoided, but uncertainty looks set to haunt businesses and consumers for at least the next few quarters. Still, as businesses build up reserves and fill their warehouses, the positive impact of stockpiling on growth will only be temporary. The strength of first-quarter growth is not likely to be repeated in the short term. In fact the estimate for April GDP of 0.4% contraction month-on-month is already pointing at some slow-down in Q2.

Consumption is resilient ... for now

Household consumption continues to be a resilient driver of growth: consumption growth picked up to 0.7% quarter-on-quarter during the first three months of 2019. Beneath the headline rate, food sales proved more robust than non-food. Concerns that a no-deal Brexit could lead to shortages of medicines or higher prices encouraged patients to stockpile; retail sales of medical goods increased by 21.1% during the first quarter.

Until now, high employment rates and strong earnings growth have supported consumption, but there are reasons to be less optimistic. Earnings growth may show some signs of weakening, and the Bank of England's most recent credit conditions survey noted some tightening of consumer credit. The recent lethargy in retail sales of household goods, furniture and electronic appliances suggests consumers are reluctant to increase spending on durables.

Chart 4: First-quarter Brexit stockpiling prompted a rapid build-up of inventories and rising imports



Source: ONS via Haver. Change in inventories are less alignment and balancing adjustments.

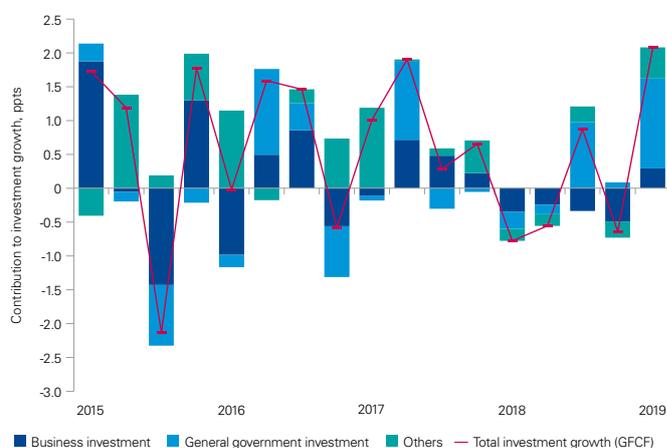
Investment bounces back

Investment bounced back strongly to increase by 2.1% during the first quarter, though most of this growth came from government investment, which tends to be more volatile in the short term (see Chart 5). And while it is encouraging to see business investment growth recovering to a positive level after four consecutive quarters of decline, the rate of growth remains low by historical standards. Investment rose in categories including machinery and equipment, dwellings and buildings, and intellectual property, while transport equipment continued on its general trend of decline, driven by airlines switching from aircraft purchases to operating leases.

The impact of the UK’s anticipated departure from the EU has contributed to the weakness in business investment in recent quarters, with businesses expecting Brexit to take place on 29 March, their natural inclination was to wait and see. To commit to long-term capital expenditure rather than to simply stockpile, businesses need more clarity about the likely returns in the post-Brexit environment.

Still, while new projects can be delayed or even cancelled, there are limits to how much investment in capital replacement can be pushed back because of the political environment. A CBI survey of manufacturers in the first quarter suggested the proportion of these businesses citing replacement as the reason for expected capital expenditure rose to the highest level since 1979. One reason for the first-quarter improvement in investment was that after four quarters of contraction, some pent-up capital replacement needs simply could not wait any longer.

Chart 5: Business investment recovered to positive growth after four quarters of decline



Source: ONS via Haver

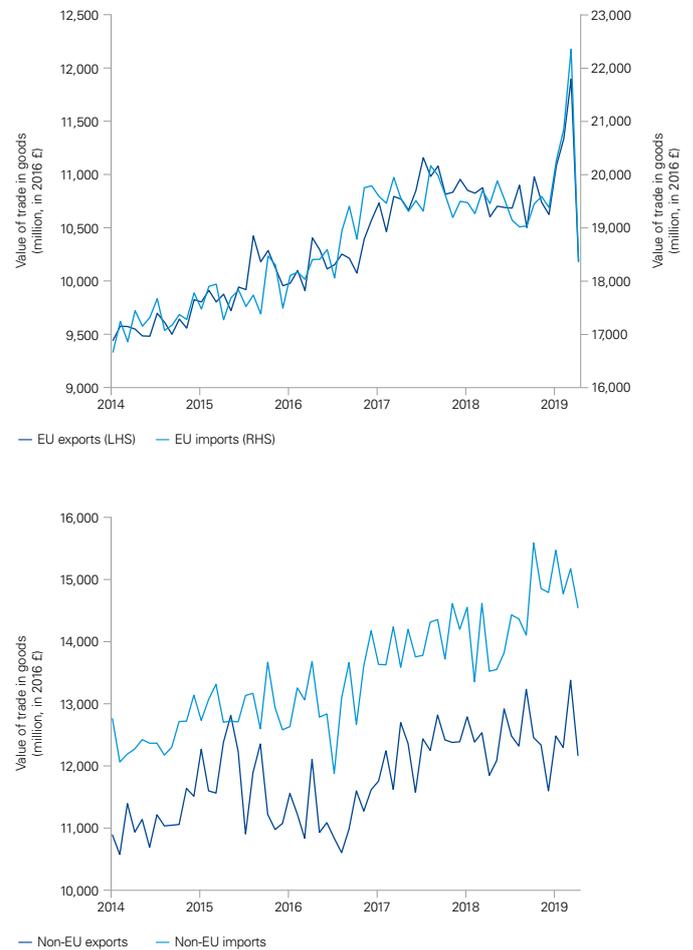
Trade deficit widens under the Brexit effect

Trade made a negative contribution to GDP growth during the first quarter, with exports stagnating and imports recording exceptional strength. The structural make-up of UK trade shifted slightly from services to goods. Both imports and exports of goods accelerated, but the gains from additional goods exports were cancelled out by a contraction in exports of services.

Historically, trade in services has been relatively resilient, but the first quarter saw a notable decline in both imports and exports of services. The rise in goods trade was heavily driven by stockpiling, but the nature of services means that the same Brexit uncertainty does not translate into increased stockpiling demand.

The disparate performance of goods trade with EU and non-EU countries reflects the dominant effect of Brexit on trade in goods (see Chart 6). While trade in goods with non-EU countries was volatile in the first quarter, the level of this volatility was not unusual. By contrast, trade in goods with EU countries in both directions was extraordinarily strong. The trend was dramatically reversed in April, when imports and exports of goods to the EU shrank by -15.8% and -17.6% respectively. Clearly, stockpiling had been taking place on both sides of the channel.

Chart 6: Stockpiling pushed up trade in goods with EU countries to unusual levels in Q1



Source: ONS via Haver
Value of trade in goods excludes oil and erratics.

Sectors: strong start to 2019 short lived

The UK economy posted strong overall growth during the first quarter of 2019. Manufacturing and construction both recovered strongly following contraction in the final quarter of 2018, although services growth was more modest.

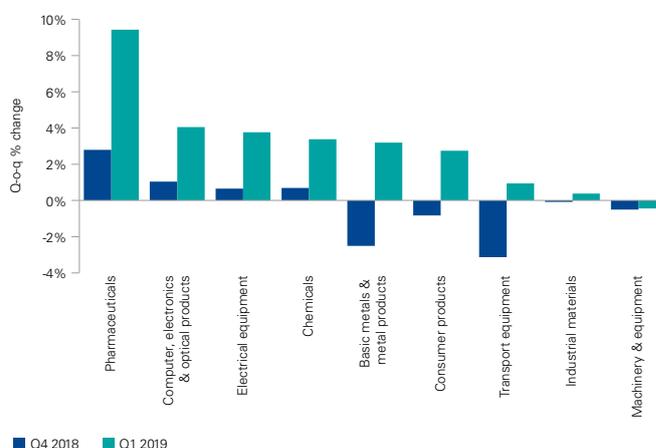
However, the strong growth was partially driven by stockpiling, in preparation for a possible no-deal Brexit at the end of March, and latest surveys are pointing to more muted activity across the economy.

Manufacturing spearheaded growth in Q1

First-quarter manufacturing growth was strong, up 2.2% on the previous three-month period. The surge in manufacturing output was partly driven by stockpiling. In particular, consumer non-durables, which tend to be less costly to stockpile, grew by 4.5% in the first quarter. Pharmaceuticals stood out as an especially strong performer. With trade in chemicals and pharmaceuticals heavily dependent on mutual market access with the EU, stockpiling demand amongst both businesses and consumers rose during the first quarter.

April marked a turn in manufacturing growth, with a strong contraction of 3.9% month-on-month. The forward-looking PMI survey for May points to rapid pull-back of new orders both domestically and internationally given the already high level of inventories. The Q1 CBI Industrial Trends Survey reveals that manufacturers' stock of finished goods has reached the highest level since the financial crisis. In the near future, many firms are more likely to be running down the reserves they build up than continuing to drive positive growth.

Chart 7: Manufacturing performed better in Q1 than the previous quarter, with pharmaceuticals spearheading growth



Source: ONS via Haver
 Consumer products includes two categories under the ONS definition: Textiles, wearing apparel and leather products; food products, beverages, and tobacco. Industrial materials includes: rubber, plastic & other nonmetallic mineral products; wood, paper products and printing.

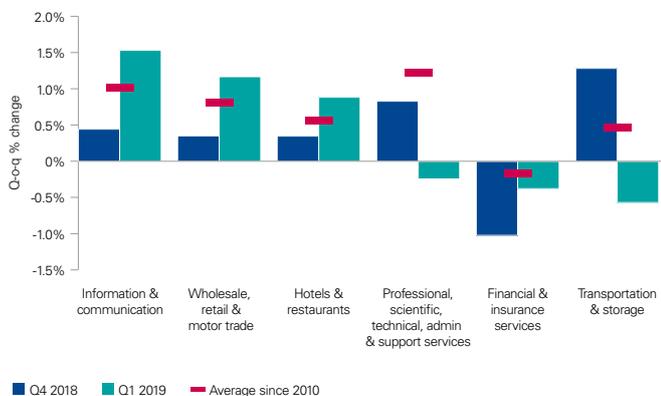
Consumer services thrived, but professional and financial services faced troubles

The services sector extended its steady, but unremarkable, record of expansion during the first quarter; growth slowed marginally, from 0.5% in the fourth quarter to 0.3%. The CBI Services Sector Survey for Q1 also pointed at both consumer and business services experiencing declines in sales volumes and profitability over the three months to May.

Consumers driven growth

Consumer-facing services, including retail trade and hotels and restaurants, boosted growth (Chart 8) in the first quarter. The retail sector was up by 1.6%, with clothing and medical goods the star performers. Again, stockpiling was a part of the story, with concerns about the impact of Brexit on the price and availability of medical goods prompting patients to stockpile medicines and essential medical supplies. Retail sales of medical goods have been increasing at double-digit rates year-on-year since June 2018, well ahead of any other category of retail goods.

Chart 8: Strong consumption supported above-average growth for wholesale, retail & motor trade and hotels & restaurants



Source: ONS via Haver

The latest data do not appear to indicate that the strong growth momentum for retail sales has lasted into Q2. Though the strength in medical goods has clearly continued, clothing sales were hampered by the uninspiring weather in May. Meanwhile, household goods, especially furniture, suffered significant declines in sales both in-store and online at the start of the year, reflecting the cooling housing market.

Wholesale trade, including business-to-business sales and motor vehicles trade, has seen little growth since late 2018. The output of hotels and restaurants also contracted at the start of Q2.

Professional and financial services

Business services, encompassing both professional, technical and support services, as well as financial services, delivered below-average growth during the fourth quarter of 2018, before both contracting in Q1 (see Chart 9).

In financial services, the contraction was moderate, at 0.4% in Q1, although April figures point at a deterioration in Q2. However, such performance has not been unusual since the financial crisis a decade ago, with the industry not experiencing the same consistently stable growth as, for example, professional services.

This is partly because the industry has prioritised tackling regulatory challenges ahead of business expansion. The sector did achieve some momentum during the second half of 2015 and the first half of 2016, but this was curtailed by the Brexit referendum. Since then, financial services businesses have been grappling with Brexit uncertainty, including the regulatory and compliance challenges that Brexit poses.

By contrast, business conditions facing professional, scientific and technical services have not deteriorated dramatically, and the sector experienced steady growth over the past decade (see Chart 9). However, the sector’s output declined by 0.6% during the first quarter, primarily driven by a 2% decline in head office and management consultancy services and a 1.4% contraction in scientific R&D. Accounting and auditing services did manage to register a respectable growth rate of 1.6%.

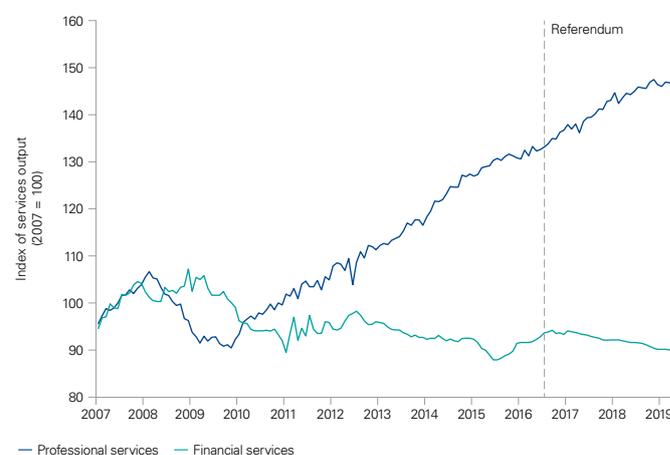
Contraction of professional and technical activities continued into April, as the latest estimate suggests, and there is little reason to expect any significant improvement in the near future. Both business volumes and profitability plummeted in the three months to May, according to the CBI Services Sector Survey, with volumes set to decline further over the three months to August.

Construction struggling to secure new work

The construction sector recovered to post a moderate growth rate of 1% during the first quarter following a contraction during the fourth quarter. However, underlying momentum is less sound: this growth appears to have been entirely driven by a bounce back in repair and maintenance. New work remained stagnant, suggesting that clients are reluctant to commit to new projects in the midst of Brexit uncertainty. April data also show a decline in output at the start of Q2.

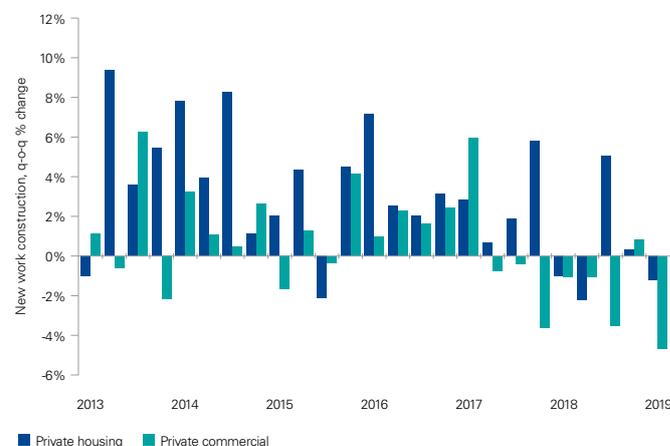
Housing and private commercial property, representing the largest share of new work, both suffered significant declines in Q1, and have been generally weak for over a year (Chart 10). Weak demand, especially from retailers, explains the sluggishness in commercial property new work. Government housing schemes, such as Help-to-Buy, provided support to the housing market, but since 2018 private housing has also started to contract. Brexit uncertainty had a role in the fall in new orders, but concerns about the economic outlook, and falling house prices in some regions, are also to blame.

Chart 9: Financial services have been contracting since the Brexit referendum; professional services have grown steadily until the most recent quarter



Source: ONS via Haver

Chart 10: Weak momentum for new work underpins vulnerability of the construction sector



Source: ONS via Haver

Labour market shows first signs of weakness

The labour market remains tight overall

Brexit uncertainties have yet to take their toll on employment. Supported by strong growth figures at the start of the year, the labour market remained remarkably tight during the first quarter of 2019. The unemployment rate declined further to 3.8% in the January-to-March period and stayed at that level in February to April.

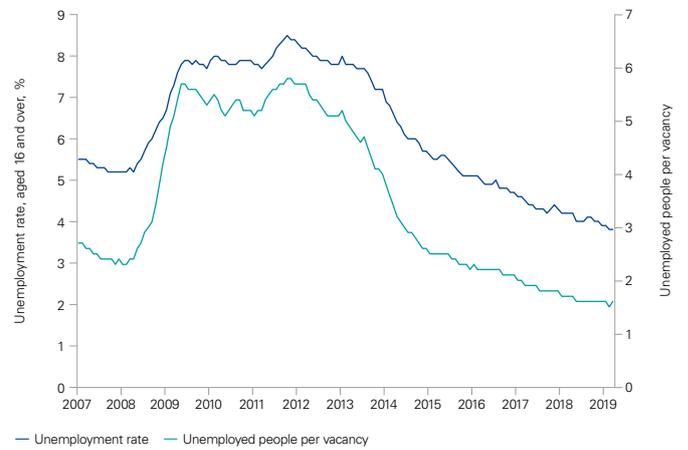
Poor candidate availability lingers on as people become more risk averse when switching jobs. The number of unemployed people per vacancy remains close to the historic low of 1.5 (see Chart 11). The staff availability index in the KPMG-REC UK Report on Jobs shows that, for both permanent and temporary positions, staff availability in May continued on its trend of deterioration, one that has persisted since May 2013.

Employers resort to temporary hires

There are some signs that the labour market tightness has started to ease slightly, with Brexit anxiety encouraging both employers and workers to adopt a wait-and-see attitude.

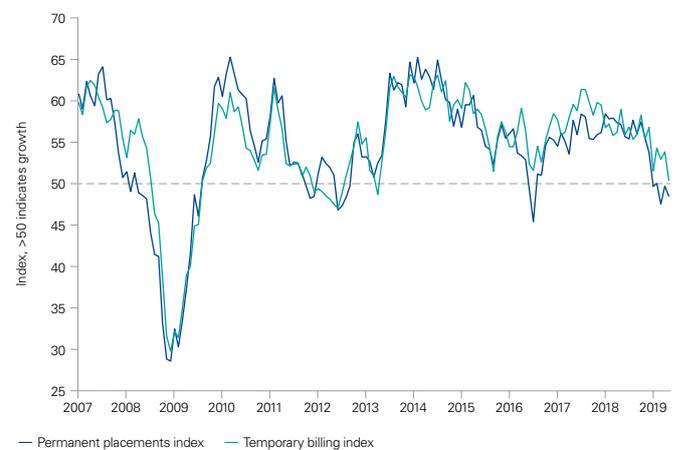
Employers are increasingly turning to temporary contracts to meet their staffing needs. According to the KPMG-REC UK Report on Jobs, the number of permanent placements fell in four out of the first five months of 2019. Over the same period, temporary billing continued to increase, although its growth rate also softened markedly in the first quarter and stagnated in May (see Chart 12). The North was the only region still to see some increase in permanent placement in May among the four regions surveyed (London, the South, the Midlands and the North).

Chart 11: The unemployment rate and the number of unemployed people per vacancy continue to fall



Source: ONS via Haver

Chart 12: Employers turn to temporary hires of staff in early 2019



Source: KPMG-REC Report on Jobs, May 2019

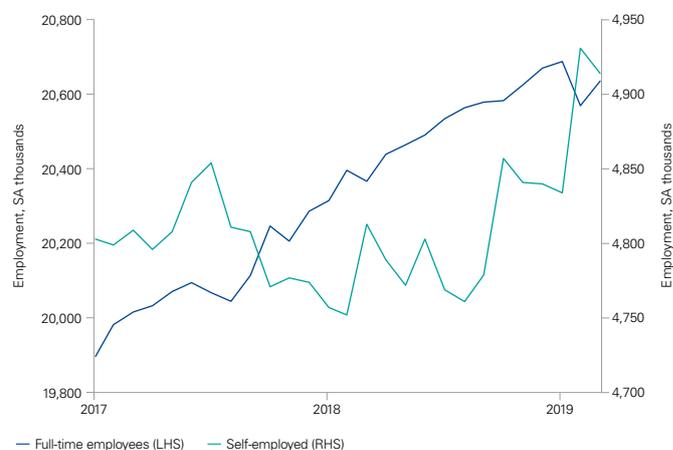
The ONS data illustrate a similar trend. Although total employment has continued to increase in early 2019, the number of full-time employees has not, suggesting that employers are starting to hold back on permanent hiring decisions. Meanwhile, there has been a significant rise in self-employment (see Chart 13).

Earnings remains strong

A short supply of candidates has elevated pressure on pay. Nominal earnings growth (measuring regular pay) reached 3.8% year-on-year in April, the highest level since May 2008.

Employers' propensity to choose temporary contracts over permanent hires is also reflected in the earnings index. The KPMG-REC Permanent Salaries Index, an indicator for starting salaries of permanent workers hired through recruitment agencies, has historically tended to lead the ONS nominal earnings growth data. The Permanent Salaries Index demonstrates the weakening pace of salary increases in the first five months of 2019 (see Chart 14). The Temporary Wage Index, in contrast, still managed to gain some pickup in April and May.

Chart 13: Early 2019 saw the number of full-time employees decline, while self-employment rose significantly



Source: ONS via Haver

Chart 14: Pay growth remains robust but sees signs of weakening



Source: ONS via Haver; KPMG-REC Report on Jobs, May 2019
Nominal earnings figures only account for regular pay excluding bonuses.

Easy credit and steady inflation

Consumer price inflation fell to 2% in May, bringing inflation back in line with the Bank of England’s target. This follows three consecutive months of inflation below the target rate and a brief spell of above target inflation in April.

The energy watchdog Ofgem, which regulates gas and electricity prices, has played a significant role during both these periods. Its introduction of a cap on energy prices in January was a key driver of the fall in headline inflation to a low of 1.8% that month. The cap has since been revised: the higher maximum prices that came into effect on 1 April helped to add 0.2 percentage points to inflation, pushing it above the Bank of England’s target rate. Ofgem’s bases its decisions on a calculation that takes into account wholesale energy costs: as these costs have fluctuated, so the level of the cap set by the regulator has varied.

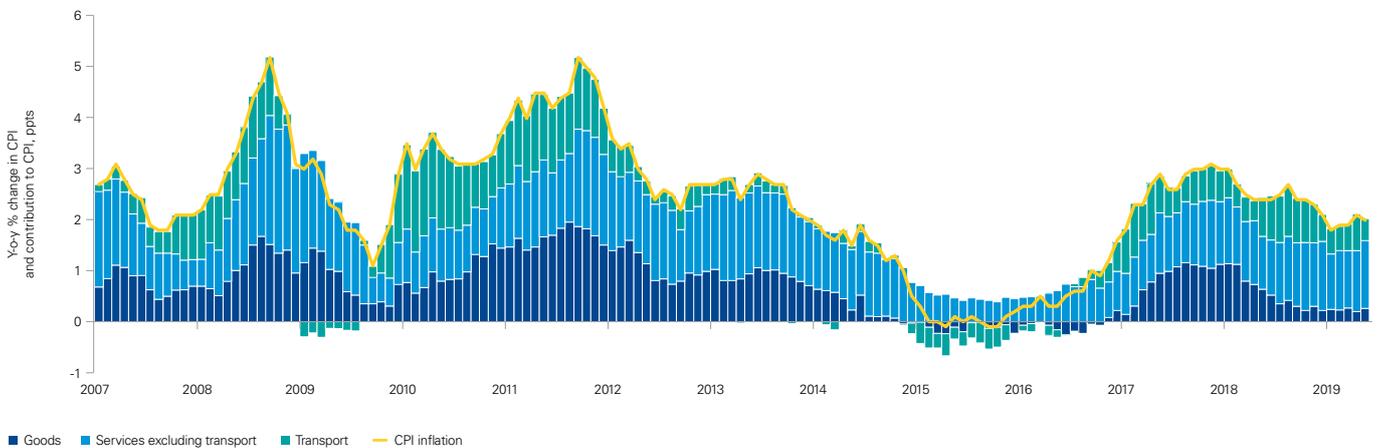
However, other factors are also affecting inflation. For example, the global price of crude oil has added to volatility in consumer prices, rising 30% since late December 2018 when it hit a low of \$US 50 per barrel. The fuels and lubricants component of inflation increased by 1% during March alone and there was a similar increase in April.

The highest contribution to overall annual inflation in April came from transport, where prices were 4.7% higher than the previous year, contributing 0.7% to overall inflation that month. In part, this reflected the increase in rail fares at the start of this year, which averaged 3.1%. As we note in our special focus article, rail fares are uprated with RPI, which for a variety of reasons tends to result in above-inflation rates of growth.

Nevertheless, the rate of inflation has this year stayed comfortably within the one percentage point margin for error in the Bank of England’s remit. And with the economy facing an uncertain path from Brexit, there have been few expectations from the Bank’s Monetary Policy Committee to raise interest rates. These have now remained unchanged since August 2018.

This may change. Domestic price pressures have been building steadily, with annual earnings growth excluding volatile bonuses staying above 3% for 10 consecutive months to April. As these pressures continue to mount, the Bank of England may find the need to tighten policy.

Chart 15: Headline inflation and contributions from broad category groups



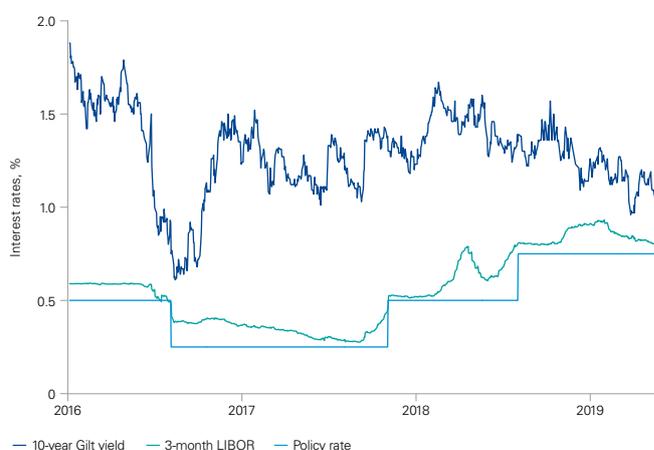
Source: ONS

Overall, however, credit conditions have eased since March with lower interest rates on government debt and in the short-term interbank markets. Since the start of March, yields on 10-year gilts have fallen by 41 basis points, while the three-month interbank rate is down by seven basis points. This easing reflects in part concerns about a slowing global economy.

The reduced threat of a no-deal Brexit temporarily lifted the value of Sterling, but it has since fallen back to levels seen at the start of this year.

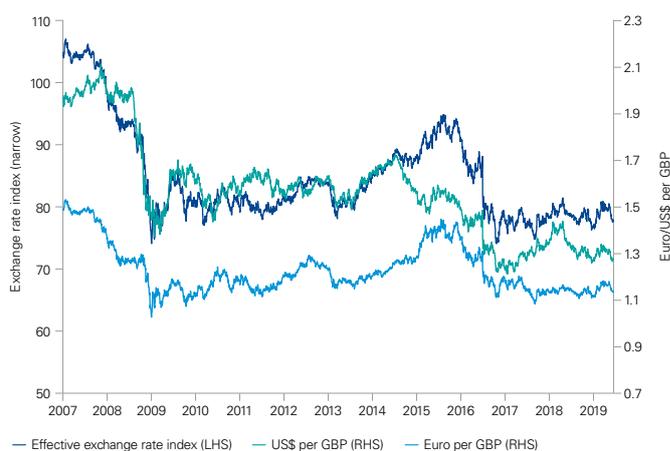
Chart 17 shows the performance of the trade-weighted exchange rate index, as well as the Sterling exchange rates against the US dollar and the euro. The pound has performed relatively better against the euro rather than the dollar, which continues to benefit from a relatively stronger US economy.

Chart 16: UK interest rates since 2016



Source: Bank of England

Chart 17: UK exchange rates



Source: Bank of England

Public finance: end of austerity, interrupted

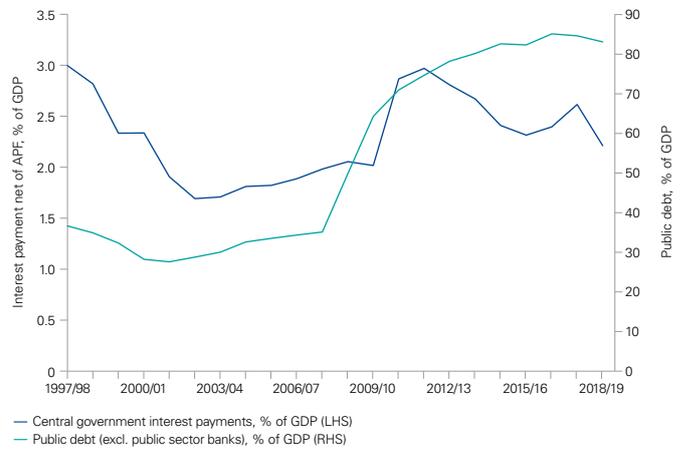
Latest data for the 2018-19 fiscal year show that public finances strengthened gradually, with the deficit down to £24bn. The figure is only marginally above March’s £22.8bn forecast from the Office for Budgetary Responsibility (OBR) and will inevitably change as revenue and spending data are revised over the course of the year. But even without further revisions, this is a substantial improvement on 2017-18, when the Treasury needed to borrow £41.8bn. For the current financial year, the OBR forecasts a deficit of £29.3bn.

Improvements in the deficit have allowed for a gradual – though modest – reduction in the overall level of government debt, which fell from 84.6% of GDP in the 2017-18 financial year to 83.1% in 2018-19. This represents further progress from the 2016-17 peak, when government debt reached 85.1% of GDP. The OBR’s March projections suggest that under current spending plans and revenue projections, the level of public debt will continue to fall, reaching 73% of GDP in 2023-24.

As Chart 18 shows, despite what are historically high levels of debt, interest payments have been falling, to just 1.7% of GDP in the 2018-19 financial year. In fact, at the currently level of ultra-low interest rates, interest payments today account for a smaller proportion of GDP than a decade ago, when the equivalent figure was 2.1%. If interest rates increase, the high level of indebtedness could lead to a rapid escalation in the cost of interest payments for the government, leaving less funding available for public services.

The government’s Spending Review, scheduled to conclude in the autumn of this year, will lay out ministers’ spending priorities, but probably only until the 2020-21 financial year. The review process is due to start in the summer with a debate on how to split overall spending between departments, but in the absence of a Brexit deal, which seems the most likely outcome for the start of summer, and a change in leadership, its remit is likely to be limited to just one year.

Chart 18: Public debt and interest payments



Source: ONS

The final settlement will be tough. With the shape of Brexit unresolved and potential for a more damaging no-deal scenario on the rise, the Treasury is expected to continue to hold some money in reserve, leaving the £24.8bn of headroom against its fiscal target unspent. In recent budgets, these funds have been pencilled in as one part of a “double dividend” from a smooth transition to life outside the European Union for the UK. The second part was to come from improving economic prospects amid expectation of a smooth transition, which have also proved elusive.

Moreover, the government has committed to increasing spending on the NHS by an extra £26bn annually and to spend at least 2% and 0.7% of UK GDP on defence and international aid budgets respectively. As a result, other departments may still end up facing real-terms cuts in their budgets unless more funding is made available. Although the Chancellor promised the “end of austerity” in the Autumn Budget and the Spring Statement, the reality for some departments may be very different.

In short, despite a healthier outlook for the public finances, with manageable deficits and a falling ratio of debt-to-GDP, Brexit turmoil continues to stand in the way of long-term planning and a meaningful shift away from the years of austerity.



An inflation
measure past
its sell-by date?



Why the days of RPI are numbered and how the market must catch up

What is it you can measure and get three different answers, all of which are accurate? The answer to the riddle is inflation. In March 2019, the rate of UK inflation simultaneously stood at 1.8%, 1.9% and 2.4%.

The explanation, of course, is that three different price indices are currently used to measure consumer price inflation: Retail Price Index (RPI), the longest standing measure, Consumer Price Index (CPI), which is used by the Bank of England as its target, and the most recently added Consumer Price Index including owner-occupiers' housing costs (CPIH). But this is more than just a curiosity: these differences can cost you a lot of money.

In this article we explain how this can impact different users of inflation indices and the significance of a shift away from the most traditional measure of inflation.

- Inflation indices are extensively used in business life, from determining the rise in regulated prices to the costs of loans and more. A higher index means borrowers, such as the government and graduates, have to pay more for the interest on their loans, because index-linked gilts and student loans are pegged to the higher measure of RPI. While consumers of some public utilities, such as rail, water and telecom, face higher prices because the revenue allowances of these regulated industries are linked to the RPI.
- The choice of inflation index has become an increasingly relevant concern since 2010 as the gap between the main two measures of inflation (RPI and CPI) widened.
- Although the deficiency of the RPI has become well recognised in recent years, its historical legacy still makes it the most widely used inflation index.
- Ultimately, both public and private users will need to make a decisive switch to the CPI given that it is a more realistic measure of consumer prices. It is also much easier to hedge as it is the Bank of England's monetary policy target.
- However, the process will take time. The lack of a mature and liquid market for CPI-linked gilts is one of the obstacles.

- Businesses that need to move ahead of the market, especially those required by regulatory mandate, need to plan ahead for a smooth transition.

The gap between two competing measures of inflation

Currently, the Office for National Statistics (ONS) publishes three measures of consumer-facing inflation: the RPI, the CPI and the CPIH. The RPI, once the official measure of inflation but superseded by the CPI, is still widely used. And in 2013, the ONS introduced the CPIH to remedy the problem that the CPI does not take housing costs into account².

As Chart 19 illustrates, the CPI and the CPIH tend to move more or less in line with one another, but the gap between the RPI and the CPI is often significant, with the former typically giving a higher reading of inflation. Since 2010, the 12-month RPI rate has, on average, been 0.8 percentage points higher than the CPI.

Chart 19: Three different indices, three different results



Source: ONS via Haver

² ONS, Consumer Price Inflation (includes all 3 indices – CPIH, CPI and RPI) QMI, 20 Dec 2017.

There are four main contributors to the gap between CPI and RPI:

1. RPI includes a measure of the price of owner-occupied housing, but CPI does not.
2. Even leaving aside housing, the mix of goods and services covered by the two measures is slightly different.
3. For a given mix of goods and services, the two measures apply different weights to each component.
4. Given the mix of goods and services and the weights applied to them, the two measures use different formulas to calculate the averages. This is referred to as the 'formula effect'.

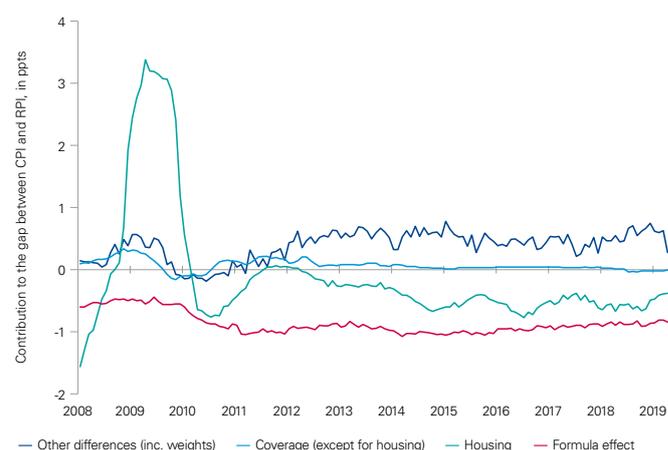
Chart 20 illustrates how each of these factors contributes to the gap between RPI and CPI. The formula effect is the most significant factor, adding an average of 0.9 percentage points to RPI compared to CPI since 2011. The housing component is also sizeable, accounting for an average of 0.4 percentage points of gap over the same period, though its impact was more pronounced during the financial crisis in 2009 when housing market volatility was elevated. The effect of other differences usually works in the opposite direction. Combining all factors, CPI has, on average, run 0.5 percentage points ahead of RPI since 2011.

As well as being the most significant contributor to the gap between the CPI and the RPI, the formula effect is also the most controversial. While the RPI relies on the Carli formula (which takes an arithmetic average), the CPI and the CPIH use the Jevon formula (based on a geometric average), resulting in an average difference in the 12-month growth rate of close to 0.7 percentage points. In 2010, the ONS adjusted the methodology it used when collecting data on clothing, which increased sample size due to the relaxation of rules on the comparability of different clothing styles. Unexpectedly, the new methodology interacted with the different formulas for the RPI and the CPI in such a way that the gap between the two measures attributable to the formula effect almost doubled. This made it untenable to continue overlooking the extent to which the RPI overestimates inflation compared to the CPI.

Accordingly, the UK Statistical Authority and the ONS investigated the RPI methodology, concluding that its use of the Carli formula was just one of several weaknesses. In 2013, the RPI was stripped of its national statistic status. In addition, earlier this year, the House of Lords Economic Affairs Committee reviewed the issue and published a report recommending that a statistic that is "admitted openly" to be flawed should not continue to be used so widely³.

The UK Statistical Authority had intended to treat the RPI as a legacy measure, anticipating that it would gradually be phased out, but this position is facing increasing challenge. The House of Lords now recommends that statisticians instead consider how to fix the index's methodological problems on a regular basis.

Chart 20: The gap between CPI and RPI explained



Source: ONS via Haver

³ House of Lords Economic Affairs Committee, Measuring Inflation, 17 January 2019.

How the RPI and the CPI are used

RPI remains a widely-used inflation index despite its well-recognised drawbacks. The index has a longer history and is embedded as a reference point in many financial and commercial contracts, as well as in legislation. Indeed, most traditional financial instruments historically indexed to the RPI continued to use it as the default after the 2013 changes.

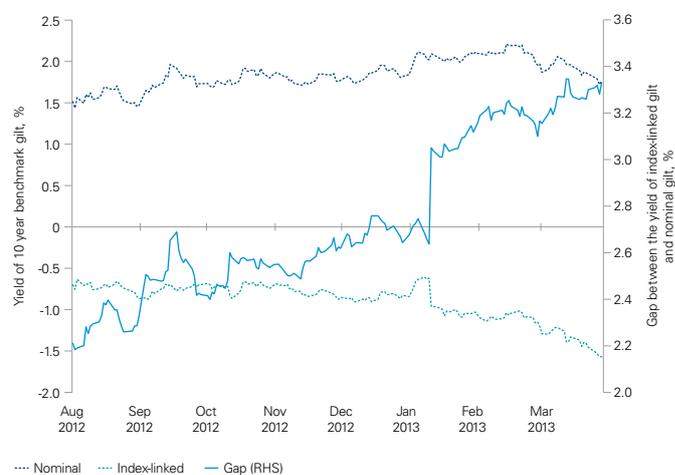
Since 2010, the problem with the RPI has become more pronounced. Both the government and the private sector have slowly started to recognise this would not be sustainable. The House of Lords report recommends that the government should switch to CPI from RPI “in all areas of present use that are not governed by private contracts”. We see examples of both public and private users of inflation indices transitioning away from the RPI, but the process is still in its early stages.

Index-linked gilts

There is a great deal at stake given the role of the RPI in the sovereign debt market. Currently, the interest rate on all index-linked UK government bonds is pegged to the RPI. Even if the Debt Management Office decides to start issuing CPI-linked gilts, RPI-linked gilts will continue to be dominant for many years; existing RPI-linked issues include durations running up until 2068.

Based on estimates by the House of Lords Economic Affairs Committee, the rise in the RPI following the 2010 change in data collection methodologies has cost taxpayers £1 billion a year in additional interest payments⁴. The UK Statistics Authority’s declaration that the RPI would not be fixed, but should no longer be treated as national statistic, on 10 January 2013 led to an immediate market reaction with a fall in the yield of RPI-linked gilts relative to nominal gilts (see Chart 21).

Chart 21: Gap between index-linked gilt yield and nominal yield



Source: Refinitiv

⁴ House of Lords Economic Affairs Committee, Measuring Inflation, 17 January 2019.

Corporate bonds

The vast majority of private sector index-linked bonds are also linked to the RPI as corporate bonds tend to be priced relative to gilts. However, there are signs that the private sector is now starting to switch. In June 2018, Cambridge University issued the first ever listed CPI-linked bond, with high hopes in the market that this would be landmark moment for the CPI-linked market⁵.

The Bank of England

The Bank of England was among the earliest official agencies to change inflation index. In December 2003, it changed the inflation target for monetary policy from the RPIX (RPI excluding mortgage interest payments) to the CPI.

Regulated industries

A variety of basic public goods, including water, electricity, urban public transport, railway transport, airport landing fees and telecoms charges, are delivered by profit-making businesses that have characteristics of natural monopolies or oligopolies. Those businesses are supervised by a number of industry regulatory bodies, which collectively form the UK Regulators Network (UKRN).

Many of these authorities actively regulate price and revenue, traditionally with reference to the RPI. This has often led to customers – public utilities users – paying more because public transport fares and the cost of public utilities have increased at a faster rate than they would have done if regulators used the CPI.

In June 2018, the UKRN published a paper echoing the view that the RPI is deficient as an inflation index and making it clear that regulators were changing tack. Telecoms regulator Ofcom began moving away from RPI indexation as early as 2013 and all of its main charging controls are now indexed to the CPI. In the water sector, Ofwat will have price controls linked to the RPI only until 2020. Electricity regulator Ofgem has not yet made the shift but proposes to do so⁶.

This is especially important since the regulatory framework based on the RPI covers more than simply the fees companies charge. In practice, given that revenues are indexed to the RPI as required by regulators, many supply contracts for utility companies also have to include an element of RPI indexation so that the expected income stream can be matched with liabilities. Consequently, RPI-linked debt has also been a key part of the financing framework for regulated companies. Indeed, water companies are very large issuers of index-linked debt, accounting for nearly 50% of corporate bonds linked to inflation. Any change to the reference index therefore requires careful management throughout the supply chain.

Student loans

Interest on student loans is currently linked to the RPI. A report on student loans by the House of Commons Treasury Committee concludes that it sees “no justification” for the resultant additional interest payments that graduates are made to bear⁷.

⁵ Financial Times, Cambridge pioneers CPI linkage in inflation bond sale, 20 June 2018.

⁶ UKRN, Position paper on the use of inflation indices, June 2018.

⁷ House of Commons Treasury Committee, Student loans, 6 February 2018.

The public sector

With different inflation indices in place, users have often sought to switch between them for their own benefit. Even the government has indulged in 'index shopping'. The House of Lords' report⁸ points out that the majority of payments to the public are indexed to the CPI, while the majority of payments by the public are indexed to RPI.

Nevertheless, many government agencies had acknowledged the need to change. In 2011, the basis of indexation for civil service pensions was switched to the CPI. In 2014, HM Revenue & Customs switched the basis of indexation for personal income tax allowances and thresholds to CPI; since April 2018, business rates have also increased in line with the CPI rather than the RPI.

Pension funds and insurers

KPMG estimates that of £2 trillion of pension scheme liabilities in the UK, around £1,100 billion, is RPI-linked and £300 billion is CPI-linked, with the latter expected to increase further. The majority of liability in pensions to be paid in the future is now linked to the CPI and the majority of liability in pensions already in payment is linked to the RPI.

As pension liabilities are long-term, the significant size of the potential market for CPI-linked pension schemes has generated demand from insurance companies for CPI-linked assets such as corporate debt to generate revenues matched to their liabilities. However, the market is not yet in a position to satisfy this demand.

Table 2. Users of CPI and RPI benchmarks

CPI	RPI
Bank of England monetary policy target	Index-linked gilts
Cambridge University bonds, July 2018	Most other listed bonds
Private sector pension funds under the rules of the Pensions Trust – since 6 April 2011	Private sector pension funds under the rules of the Pensions Trust – prior to 6 April 2011
State pensions and civil service pensions	National Savings & Investments index-linked savings certificates
Social housing rent uprating	Interest on student loans
Personal tax – income tax allowance and thresholds	Indirect tax (vehicle excise duty, fuel duty, alcohol duty, tobacco duty, gaming duty, air passenger duty)
Business rates	The rate of fuel benefit charge for company cars, fuel benefit charge for company vans, and the benefit charge for company vans
Working age benefits, maternity pay, personal independence payments	Charge controls imposed across a range of regulated industries such as rail, water and telecoms (member organisations of the UK Regulators Network (UKRN))
The most recent renewables subsidies (the contracts for difference)	Renewable energy subsidies under the Renewables Obligation (RO), the Feed-in-Tariff (FiT) and early adopters of the Renewable Heat Incentive (RHI)

Towards a decisive switch to the CPI?

The fact that the Bank of England uses the CPI as its target for monetary policy means that the CPI should best convey average inflation in the long run. The risk of inflation, as measured by the CPI, is therefore much easier to hedge or manage, making it a preferred choice as an inflation index.

In addition, given the well-established flaws of the RPI, and the importance to embrace one index that will be used throughout the economy, the government needs to take the initiative to make the switch to CPI indexation, despite the potential impact this could have on government revenue. The private sector also needs to step up actions to move towards a wider ecosystem of CPI-linked market instruments, so that inflation risk can be more readily hedged.

While the RPI will need to be replaced with a more realistic measure of inflation in public and private contracts, the process will take many years to complete. It's not only time that is needed, but also political agreement given the often conflicting interests of different stakeholders. For example, the government would need to consider the revenue impact of any switch to the CPI for the indexation of indirect taxes etc.

In the corporate sector, with regulatory bodies such as Ofwat intending to switch, the businesses they supervise will have no choice but to adapt. More broadly, while public and private users can continue to rely on the RPI data in the near term, as the consensus builds on the need to move to the CPI, all businesses will need to be prepared.

The challenge for the private sector is that it needs a market for CPI-indexed debt and derivatives in order to hedge against the risk of inflation. This will take a long time to develop. While a mature and liquid market for sovereign index-linked bonds now serves as a basis for the market of corporate index-linked debt, it took 18 years after the first RPI-linked gilt issue in 1981 for the launch of the first corporate RPI-linked bond. With no CPI-linked gilt market even in place yet, it will be difficult for corporate CPI-indexed financial instruments to take off.

Moreover, while it would be possible to hedge CPI risk even without a well-functioning market for CPI-linked instruments if the gap between CPI and RPI were stable, this isn't always the case. In fact, the gap has been quite volatile over time, ranging between -3 and 3 percentage points since 1989⁹.

The contribution made by some components of the gap – the formula effect and effects due to differences in coverage – are relatively stable, but changes to data collection methodologies like those made in 2010 can make a significant difference. The housing component and other effects, meanwhile, tend to fluctuate more markedly. And while it is possible to purchase an additional hedge against changes in the difference between the two measures as well as against movements in the RPI itself, the costs for businesses then begin to mount up.

Businesses therefore need to be conscious that in the transition from the existing world of RPI indexing towards a wider use of the CPI, the financial market may not provide all the support that they ideally require. Any business with RPI-linked liabilities will need to analyse the impact on their cash flow profiles and debt servicing capabilities of a possible switch to CPI indexing – and plan for mitigating strategy.

⁹ Legal and General Investment Management, CPI Liabilities, the Wedge and the Hedge, 2019 Client Solutions.

The innovation dividend: powering trade with technology



What impact will new technologies have on the UK's trade over the next 30 years?

Investment in innovation and technological change can drive a step change in trade and an acceleration of trade growth in a post-Brexit Britain, in contrast to the damage expected to be caused by the UK's departure from the European Union.

Our research into current trends points to three key outcomes that we expect to emerge:

- Investment in technology will help power trade growth in the future, which could see UK trade volumes rise to more than £4 trillion¹⁰.
- The scale and type of investment in technology and connectivity will have a dramatic impact on trade outcomes. The greatest gains will come from advances in mobility and communication technology.
- UK trade along the Asia Pacific corridor stands to benefit most through rapid growth in trade volumes due to a rapid increase in economic prosperity in this region.

Direction of change: scenarios for the future

Our starting point for future trade assumes that current trade relationships remain broadly unchanged, with no major negative shocks to trade or the economic environment over the medium term. We later look at an example of how Brexit could change our forecasts.

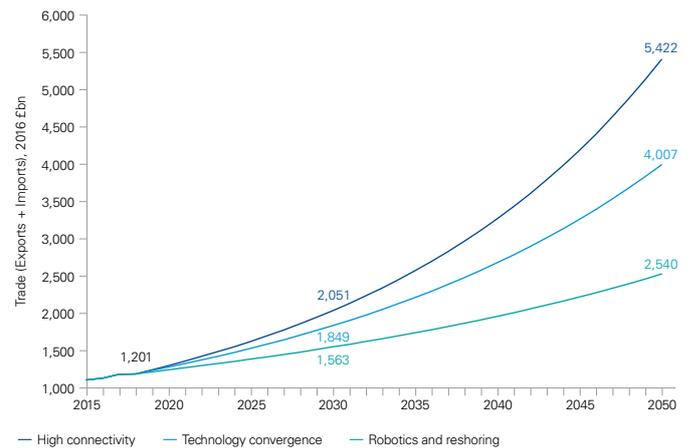
We then consider three different potential scenarios for technological change. Chart 22 shows the potential impact on UK trade of each of these scenarios up to 2050. We use a measure of total trade, defined as the sum of imports and exports.

In our central scenario, which we call **technology convergence**, we expect the UK economy's trade with the rest of the world to increase to £1.8 trillion by 2030 and to more than triple to £4 trillion by 2050, from its 2018 volume of £1.2 trillion.

Our more optimistic scenario, **high connectivity**, would enable the UK's overall trade to increase to £2.1 trillion by 2030 and to £5.4 trillion by 2050. In terms of openness as a proportion of GDP, this would put the UK in 2050 on a par with the Netherlands in the present day¹¹, as the ratio of trade to GDP would increase to 146% by 2050.

At the other end of the scale, a **robotics and reshoring** scenario could mean that the UK's trade volume increases more marginally from its 2018 level, to £1.6 trillion by 2030 and £2.5 trillion by 2050. UK trade would continue to grow, despite the less accommodating technology developments. But this would partly be a consequence of the UK becoming a smaller part of the wider global economy, courtesy of rapid economic growth in emerging economies, and in part due to economic growth in the UK economy.

Chart 22: Forecasts of UK trade volumes under different scenarios



Source: KPMG analysis

¹⁰ All our trade forecasts in this report are in 2016 prices.

¹¹ World Bank World Development Indicators 2019, data for 2017; Netherlands: 151%.

So, what are the specific changes in technology that lead to these outcomes? Our three scenarios focus on future developments in value chains and transportation costs.

Our **high connectivity** scenario envisages advances in communication technologies, such as the internet of things, which underpin the development of more complex and far-reaching global supply chains. For individual manufacturers, this offers a route towards greater specialisation and exploitation of economies of scale. Advances in mobility and autonomous transportation lead to lower costs and greater efficiencies in logistics. For example, fully-automated vehicles would operate round-the-clock, cutting both the cost of transport and delivery times. Service sectors would benefit too, particularly from improving digital communications: services would increasingly become more tradable, closing the gap with goods trade.

Our **robotics and reshoring** scenario anticipates that developments in artificial intelligence (AI) and machine learning, as well as advances in 3D printing, will be the dominant drivers of change. With much greater potential to fully automate processes, this scenario sees value chains truncate as more tasks become concentrated in roboticised production factories. With a heavy emphasis on capital inputs, these are located in advanced economies leading to a process known as reshoring. Developments in 3D printing, meanwhile, allow manufacturers to move the production of customisable components closer to their customers as digital information flows replace the transport of manufactured goods.

Our **technology convergence** scenario is the out-turn that we consider most likely. It's a baseline that falls somewhere between the two more extreme scenarios for future trade. Different sectors and companies would make different use of different technologies. We expect this scenario to feature:

- lower mobility costs, leading to lower transportation costs for goods;
- 3D printing in widespread use for industrial and high-end consumer goods, due to its suitability for small-scale production;
- more complex supply chains for low-cost, high-scale industrial manufacturers, making use of co-ordination opportunities powered by the internet of things;

- fully-automated and vertically-integrated manufacturing facilities for other manufacturers;
- a greater and increasing share of services trade (particularly important for services-focused economies such as the UK).

In the **technology convergence** scenario, the forces driving more supply chain complexity and fragmentation are offset by the opportunities of large-scale automation and 3D printing. Some companies may choose to continue operating with a global value chain, increasing both the length and complexity of their supply chains. Others will prefer to concentrate their production in automated facilities, depending on the suitability of tasks for automation.

This choice would largely reflect the type of market that the business operates in and its broader strategy. High levels of customisation and small-scale production are more suited to 3D printed manufacturing due to constant unit costs during the bulk of the production process; large-scale mass market production is more likely to be organised through complex international value chains.

Additionally, continuing advances in mobility technologies are potentially powerful. We expect the first fully-automated products to reach the public early in the 2020s, with a full switch to autonomous vehicles to follow between 2035 and 2040. This would bring a range of benefits, increasing the utilisation and efficiency of goods vehicles, and reducing the costs of transport and logistics.

The bottom line, as Chart 22 shows, is that trade volumes continue to rise in all scenarios, even if we allow for a substantial shift in the patterns of production led by a switch to more capital-intensive production technologies.

Key destinations for future trade

One reason to be optimistic about the prospect of increasing trade under each possible direction of technological change is the growing importance of the Asia Pacific region as an engine of global growth. As development in this region continues to close the gap with other advanced countries, its demand for UK goods and services will steadily increase.

Chart 23 shows that even in a scenario where the development of trade is hampered by a technology shift towards automation and robotics, exports to this corridor would still continue to grow by an average of 3.9% a year in real terms over the period to 2050. Under the most optimistic scenario for trade, this forecast rises to 6.6%, though our baseline scenario envisages a 5.5% annual increase.

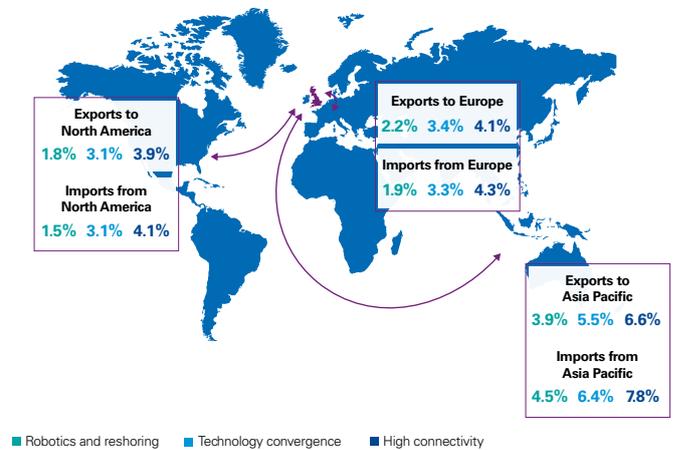
Trade with other regions will also increase under each of these scenarios. For example, we expect exports to Europe, including the remaining 27 EU countries, to grow by between 2.2% and 4.1% per year, compared to growth of 2.4% that we have seen over the last 20 years. These scenarios do not include any specific assumptions about Brexit. In practice, any outcome that hinders trade in either goods or services between the UK and the EU would result in slower trade growth between the UK and Europe¹².

Future trade and the Brexit effect

Technology may not provide a solution to the thorny issues of Brexit. Innovation may never resolve the question of how to manage the border with Ireland nor circumvent the non-tariff barriers likely to spring up between the EU and the UK after Brexit is complete. Over time, technology certainly does have the potential to drive trade in the opposite direction to Brexit – and in a more significant manner if our central scenario comes to pass.

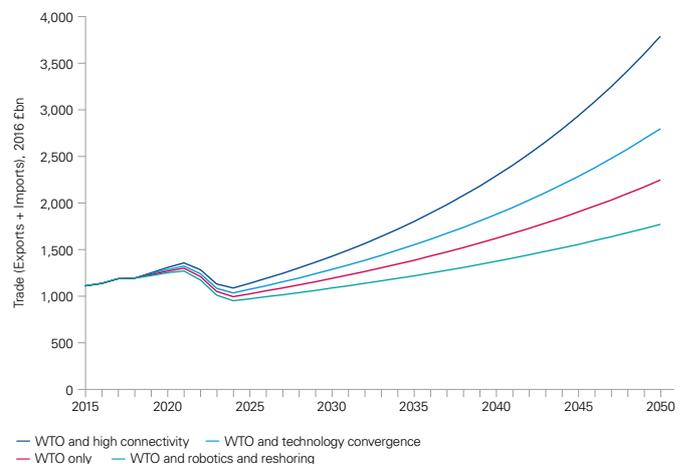
Following a Brexit that sees the UK forced to trade with the EU on World Trade Organisation (WTO) terms, the volume of UK trade could suffer a significant setback that could leave the volume of trade in 2030 to be same as in 2018 at £1.2 trillion (as depicted in the ‘WTO only’ scenario in Chart 24).

Chart 23: Forecasts of UK trade across different corridors, % average annual growth 2019-50



Source: KPMG analysis based on WIOD 2016, ONS data

Chart 24: Forecasts of UK trade under different scenarios, assuming no-deal Brexit



Source: KPMG analysis

¹² See the following page for a comparison of one possible Brexit outcome and technology’s impact on trade.

This could correspond to the medium-term impact of the UK leaving the EU without a deal and subsequently failing to negotiate any additional free trade agreement with the EU27. UK trade is then projected to rise to £2.2 trillion by 2050 under this scenario.

The effect of Brexit could be similar to moving the UK further west, into the Atlantic Ocean. It could make trade more costly, and after adjusting to this change, growth would resume at a slightly lower pace from a lower base.

Under a **technology convergence** scenario, which also captures the impact of a no-deal Brexit, faster overall growth in trade could see UK trade recover to £1.3 trillion in 2030, and rise to £2.8 trillion by 2050, compared to £4 trillion without considering the Brexit effect on trade.

As Chart 24 shows, the potential impact of a no-deal Brexit on our two alternative technology scenarios is also expected to be significant. The results show a drop in the overall volume of future trade in 2050 from £5.4 trillion to £3.8 trillion and from £2.5 trillion to £1.8 trillion in our **high connectivity** and **robotics and reshoring** scenarios respectively.

Overcoming the Brexit effect

Despite Brexit, our view is that the UK economy is likely to become ever more open to trade in the coming decades. There are potential factors that may slow that trend, particularly if the UK moves towards technologies such as automation. And Brexit remains a negative influence on trade of as yet unknown proportions.

Businesses should embrace the opportunities stronger trade will provide, while factoring in the competitiveness pressure such growth could entail. At the same time, it is paramount for government to heed lessons from the recent past, and pursue more active policies to support some of the short-term casualties from growing trade.



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