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World economic outlook for 2019

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Abstract

Recent weaknesses in the world economy have prompted a downward revision of forecasts for 2019. The baseline projection scenario points to a widespread easing of growth, albeit more so in some areas than in others, against a backdrop of high uncertainty and significant downside risks. These include, most notably, the possible proliferation of protectionist measures, a disorderly no-deal Brexit, a sharper than expected slowdown in China or in the euro area, or a severe financial market adjustment. Any – or a combination – of these events could have a significant impact on the world economy, in a setting in which there is little room for manoeuvre in macroeconomic stabilisation policies.

Keywords: global economic outlook, protectionism, Brexit, financial stress, economic policy.

JEL codes: F01, F40, E50, E60.

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The world economy in 2018 and early 2019

The world economy decelerated throughout 2018, against a backdrop of high uncertainty, a loss of confidence and growing trade tensions. World GDP rose by 3.6%, 0.2 pp less than in 2017 and less than expected at the start of the year. This slowdown continued into early 2019 (see Charts 1.1 and 1.2). The weakening of the world economy was accompanied by: a significant deterioration in world trade, which became more pronounced towards the end of the year (see Chart 1.3), reflecting the growing uncertainty stemming from the trade war between the United States and China; financial stress, which affected both emerging and, towards the end of the year, developed market economies; and the doubts regarding the extent of the economic slowdown in China. In Europe, these factors were exacerbated by the fears surrounding the direction of economic policy in Italy and the uncertainty generated by the Brexit process.

In 2018, growth in the advanced economies was adversely affected by the deterioration in manufacturing, investment and external demand, while services and private consumption generally remained stronger, underpinned by the solid performance of the labour markets. This was, however, an uneven pattern. In the United States growth remained comparatively high, driven by the fiscal stimulus and robust private demand. But in other advanced economies the slowdown in activity was greater, owing to weak external demand and the impact of certain specific factors, some more short-lived than others, such as natural disasters in the case of Japan.

In the euro area, the slowdown in activity in the second half of the year was particularly intense and unexpected. Average GDP growth fell by 0.7 pp compared with 2017 (see Chart 2.1) as the external sector's contribution declined. The euro area economy is particularly open and was more severely hit than other areas by the trade tensions and geopolitical uncertainty. The past appreciation of the euro and trade specialisation by export market and product amplified this effect (see Chart 2.3).[1] In some euro area economies there were also idiosyncratic factors in play that weighed on growth, such as the "yellow vests" crisis in France.

Inflation rates in the advanced economies barely reflected the higher wage growth. Although unemployment rates in some of these economies stood at record lows (see Chart 1.4), prompting gradual wage acceleration, and despite the advanced cyclical position (see Chart 1.5), no significant inflationary pressures arose. Box 1 analyses the behaviour of prices, costs and margins in more detail. Inflation rates remained contained, with some fluctuations associated with oil price shifts (see Chart 1.6). In the United States, inflation rates stood at 1.9% at year-end, while in the euro area they eased to around 1.5% (see Chart 2.2). In Japan, growth in prices was even more contained at 0.3%. Inflation expectations in the medium term, calculated on market indicators, reflect a widespread decrease.

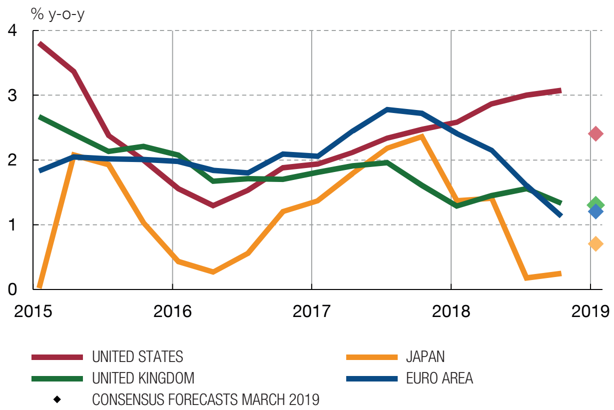
1 See "The impact of the slowdown in world trade on euro area exports", Box 2, "Quarterly Report on the Spanish Economy", *Economic Bulletin* 1/2019, Banco de España, pp. 13-14.

SLOWDOWN IN WORLD ECONOMY

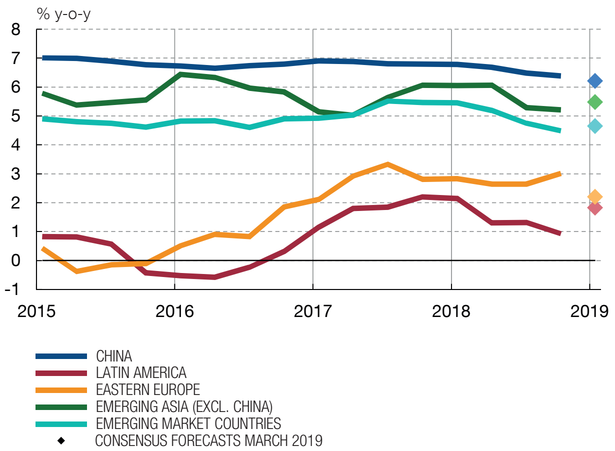
CHART 1

The world economy remains on a slowing growth path, with widespread downward revisions of forecasts, albeit with certain differences by area. Momentum held up better in the United States than in other advanced economies. The solid performance of labour markets continued. But world trade contracted in 2018 Q4, owing to the decline in trade in emerging Asia, and the leading indicators continue to show weakness. Inflation rates have eased recently, assisted by the energy component, and forecasts have also been revised down.

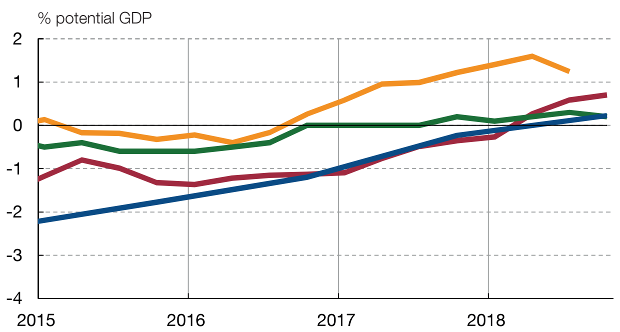
1 GDP AND CONSENSUS FORECASTS FOR 2019 (ADVANCED ECONOMIES)



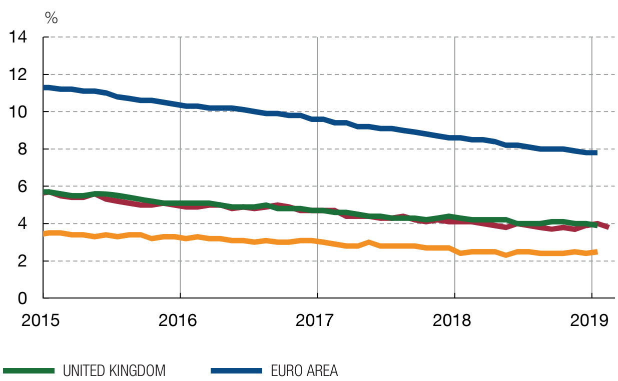
2 GDP AND CONSENSUS FORECASTS FOR 2019 (EMERGING MARKET ECONOMIES)



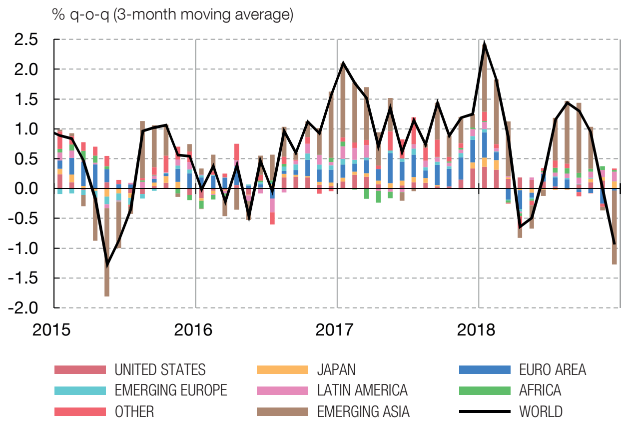
3 OUTPUT GAP ADVANCED ECONOMIES



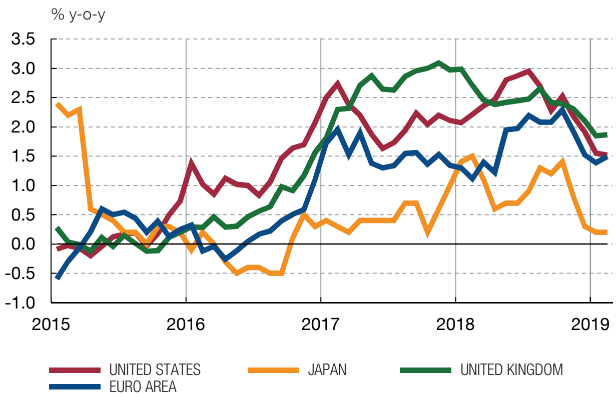
4 UNEMPLOYMENT RATE ADVANCED ECONOMIES



5 WORLD TRADE GROWTH BY AREA



6 HEADLINE INFLATION



SOURCES: CPB (Netherlands Bureau for Economic Policy Analysis), PEEI, US CENSUS, CBO, IMF WEO April 2019, OBR, Bank of Japan and IMF DOTS.

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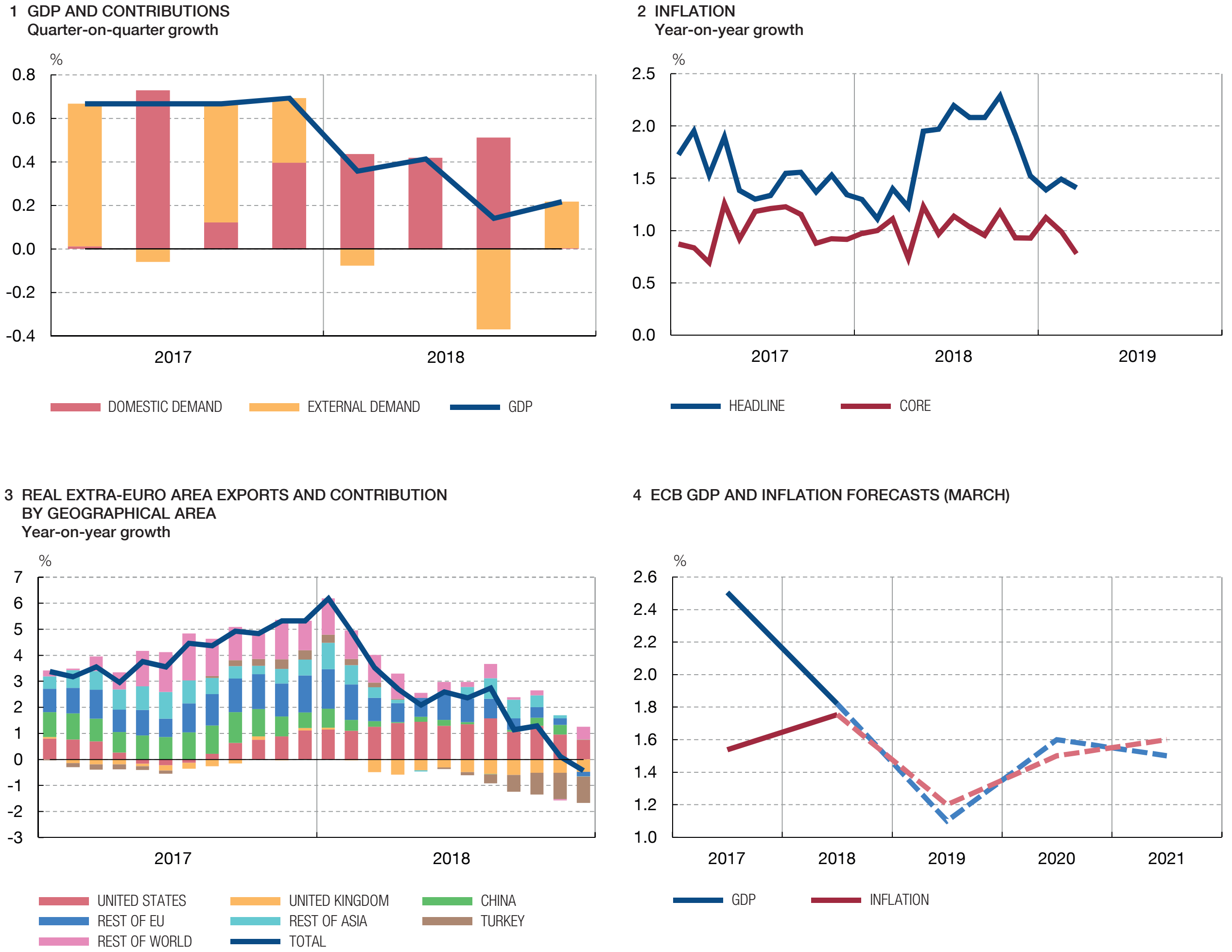
EURO AREA ECONOMY: DEVELOPMENT AND OUTLOOK

CHART 2

The slowdown in the euro area economy in 2018 is passed through to the forecasts for coming years. Exports are contracting sharply. Inflation remains moderate.



SOURCES: Eurostat and ECB.

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Economic activity in emerging market countries also lost momentum in 2018, owing to the loss of confidence and deterioration in world trade. The tightening of financial conditions also affected these countries, especially those most reliant on external financing, such as Argentina and Turkey, which had to make far-reaching economic adjustments. By region, growth remained low in Latin America. Momentum was greater in Asia, but also with signs of deceleration, especially in China. The previous measures adopted by the Chinese authorities to reduce private indebtedness, and the trade tensions with the United States, led to a cooling of the Chinese economy. This fuelled fears of a sharper slowdown in GDP growth; the authorities responded by introducing a series of supportive fiscal measures that have curbed the deceleration.

In this setting, 2018 saw several financial stress episodes that ultimately affected the advanced economies' financial markets. This financial stress, together with the signs of economic slowdown and the lack of inflationary pressures, prompted the main central banks to review their plans for monetary policy normalisation at the start of 2019. Specifically, the US Federal Reserve's monetary policy committee indicated, following its March meeting, that it plans to make no more interest rate hikes in 2019 and announced that it would bring its balance sheet reduction process to an end in September. In the euro area, the ECB extended the period over which it expects to keep interest rates unchanged and announced a new round of TLTROs. The more accommodative monetary policy stance, together with the recent optimism regarding the trade negotiations between the United States and China and the stimulus measures taken in China, have helped boost financial market performance since the start of the year.

World economic outlook for 2019

The growth outlook for 2019 points to an economic slowdown in most parts of the world. According to high-frequency (especially trade and manufacturing) indicators, activity continued to ease worldwide in 2019 Q1 and world economic growth for the full year is expected to be lower than in 2018. The main international bodies[2] baseline scenario points to world GDP growth of around 3.3%, some 0.3 pp less than last year.

Activity worldwide will continue to be backed by the sound labour market performance and expansionary demand policies, but high uncertainty and the weaker international environment will hold back investment growth and external demand in almost all areas. World trade contracted by nearly 1% in 2018 Q4 and is expected to grow by little more than 3% in 2019, less than in 2018 and below world GDP growth, even in a scenario in which there is no escalation in trade tensions. Although there is still insufficient evidence available to determine the factors behind this weak trade performance, following the dynamism recorded in 2017 it is clear that protectionism and uncertainty over trade policies[3] play a significant role.[4]

In the United States, activity will continue to ease in 2019. According to the latest Consensus forecasts, GDP growth is expected to fall from 2.9% in 2018 to below 2.5%. The tax reform and increase in public expenditure approved in 2018 will continue to bolster growth, which will also benefit from the curb announced by the Federal Reserve on the process to normalise monetary conditions and from the sound labour market position. However, global economic uncertainty and the effects of trade tensions will harm investment and exports, as was the case in 2018 (see Chart 3.1). In this setting, according to the Federal Reserve's projections, the inflation rate will remain somewhat below the 2% target. As from next year, when the fiscal stimulus starts to fade, growth will gradually decline, down to around the potential growth rate in coming years (see Chart 3.2).

The growth prospects for the euro area have decreased considerably. In particular, the persistence of the slowdown prompted the ECB to revise down its forecasts for 2019 and 2020 in its March projection exercise, to 1.1% and 1.6%, respectively, 0.6 pp and 0.1 pp lower than forecast in December (see Chart 2.4). This downward adjustment to the central growth path is due to global uncertainty and the weakening of world trade. It is also a consequence of specific euro area factors that are proving to be longer lasting and more acute than expected (the difficulties in the car industry, social unrest in France and the economic downturn in Italy), all of which are contributing to the weak cyclical momentum. Output gap estimates have widened substantially: the gap is only expected to turn positive again in 2021. This hampers growth in prices and delays the prospects for inflation to

2 See, for example, *World Economic Outlook: Growth Slowdown, Precarious Recovery*, IMF, April 2019.

3 Apart from the US-China and US-EU tensions, another source of uncertainty in the trade arena is the final approval of the new trade deal between the United States, Canada and Mexico.

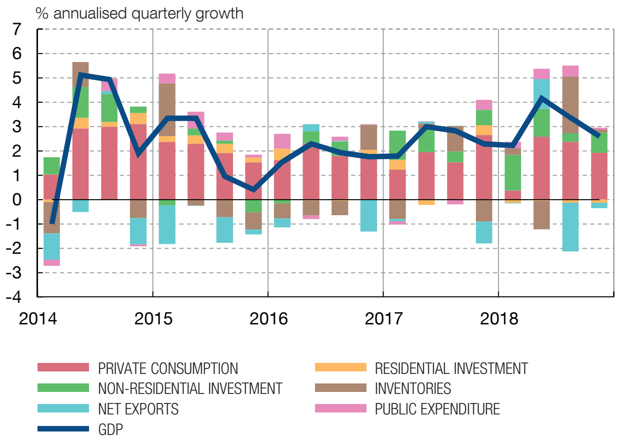
4 See, for example, "The latest protectionist trade trends and their impact on the European Union", Analytical Article, *Economic Bulletin* 2/2019, Banco de España, and "Scenario Box 1. Global Trade Tensions", *World Economic Outlook: Challenges to Steady Growth*, IMF, October 2018, pp. 33-35.

CHART 3

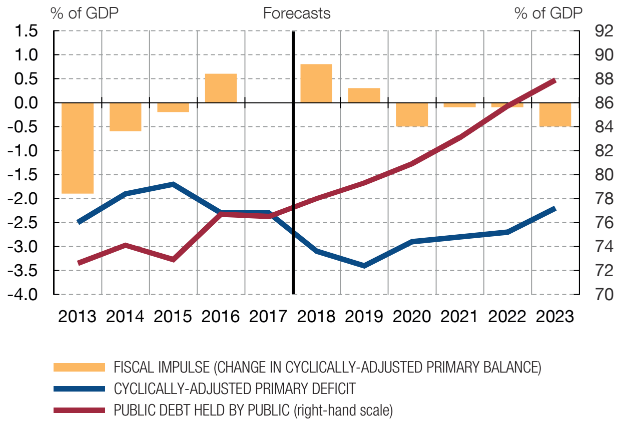
GROWTH IN UNITED STATES UNDERPINNED BY PRIVATE CONSUMPTION AND FISCAL IMPULSE. EXTERNAL SECTOR AND INVESTMENT BOTH WEAKER

Strong private consumption, underpinned by employment growth and tax cuts, was behind the higher growth in the United States. But investment and the external sector both show signs of weakness, and GDP growth will slow in coming years as the fiscal impulse reverses.

1 GDP GROWTH BY COMPONENT



2 FISCAL IMPULSE, PUBLIC DEFICIT AND PUBLIC DEBT



SOURCES: BEA, CBO and IMF.

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converge towards its objective: both headline and core inflation forecasts have been revised down from 1.8% to 1.6% for 2021 (see Chart 2.4). Lower oil prices, more moderate inflation expectations and a lower level of wage pass-through to prices than observed in previous cycles (see Box 1) all explain this downward revision.

Forecasts for 2019 have also been revised down in all the other main advanced economies, as a consequence of the economic and political uncertainty, the loss of confidence and the less favourable external environment. In Japan, GDP is expected to grow by around 1% in 2019, despite the tax stimulus measures envisaged to offset the adverse effects of the increase in private consumption tax planned for October 2019. The inflation outlook has been gradually trimmed and is below 1%, a distance from the central bank's objective. In the United Kingdom, GDP growth is expected to be only slightly above 1%. The great uncertainty surrounding the Brexit process and slowdown in the euro area will affect investment and exports. Inflation is set to remain around 2%.

A central element of this scenario for 2019 is the favourable employment performance, which is expected to continue to underpin economic growth. The employment response was strong during the economic upturn, making growth in the labour force participation rate compatible with a sharp drop in unemployment rates. Although this was associated in some cases – especially in the euro area – with higher part-time and temporary employment rates, job creation and higher wage income is playing a vital role to sustain growth in advanced economies.

Growth will remain relatively stable at around 4.5% in the emerging market economies overall, although with important differences across areas. Emerging economy financial markets have improved in recent months, as some of the factors responsible for their poor performance in 2018 have reversed. The shift in monetary policy stance among developed countries, and the stabilisation of the economies most affected by the turmoil, have eased financial conditions for emerging market economies. In addition, the Chinese economy has begun to show signs of stabilising, backed by the economic stimulus policies introduced recently. Against this backdrop, the Asian economies should continue to lead world growth. The Chinese economy is expected to continue to ease gradually, in line with the downward revision of the growth target from 6.5% to around 6%. The slower export growth associated with the cooling of the world economy and the easing in China will affect the region's other economies, with the exception of India where growth is expected to remain over 7%. Growth in Latin America could increase slightly, driven by stronger GDP growth in Brazil (up to rates verging on 2%), and a smaller contraction in activity in Argentina in the second half of the year (with GDP down 1.5%), and this despite a certain degree of slowdown in Mexico. In Turkey, GDP could decline by nearly 2%, owing to the adjustments needed to address the financial stress experienced last year. In any event, these forecasts assume that adjustment policies in the most vulnerable economies and prudent policies in all other areas, and also favourable financial market sentiment, will continue.

Main risks for the world economy

The balance of risks to this central projection scenario is clearly on the downside. The world economy could benefit from lower global uncertainty if the trade negotiations between the United States and China or the Brexit process end well, helping in turn to maintain favourable financial market sentiment. But the risks remain clearly on the downside: a further escalation in protectionism, a disorderly no-deal Brexit scenario, a sharper than expected slowdown in China or in the euro area, or a severe financial market adjustment would have a highly negative impact on the world economy.

The possible proliferation of protectionist measures would adversely affect world trade and could lead to a further loss of confidence and to further deterioration of the financial markets. Even though they affect only a relatively small proportion of world trade, the measures taken to date in the trade war between the United States and China have prompted a considerable deterioration in trade, without reducing the US economy's external trade imbalance. If the ongoing trade negotiations between the two countries in the truce period do not end well, or the protectionist threats directed at other regions or products (imports of vehicles and auto parts, for example) materialise, the impact on the world economy would be much more severe, especially if a further loss of confidence and deterioration of financial conditions ensued. According to IMF estimates, in such a scenario world GDP could decrease by almost 1% (see Chart 4.1). It is also possible that an eventual agreement between the United States and China might cause a shift in Chinese imports away from its current supply markets in favour of the US market, with a contractionary impact on the current supply markets.

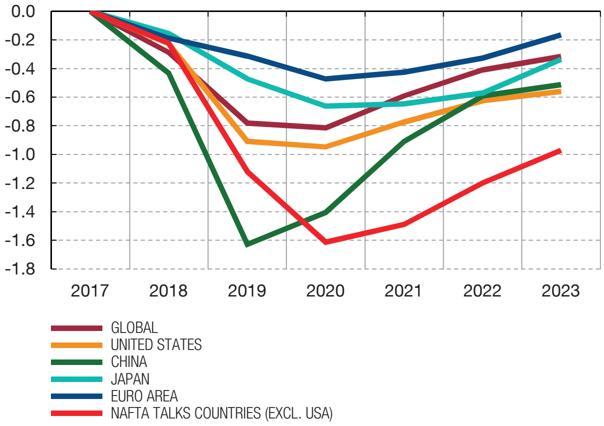
Another of the main risks for the world economy is a sharper than expected slowdown in China. Although the Chinese authorities have adopted a raft of economic policy measures to mitigate the slowdown in growth (and so far the deceleration seems to be contained), doubts persist regarding the real extent of the contraction and the effectiveness of these policies. Moreover, if the current stress situation is not resolved, the effects of a possible trade crisis with the United States would also have to be added in. This exacerbates the economic policy dilemma between supporting growth in the short term, at the expense of refuelling macro-financial imbalances (characterised by extremely high corporate sector debt, over 150% of GDP), or adopting a more prudent stance to avoid greater subsequent adjustment. In addition, although there is ample policy leeway in China, it has been affected by the high debt levels and the desire to avoid abrupt exchange rate movements. Given China's growing weight in the world economy and its close trade ties (through global production chains and the commodity markets) and financial ties, a sharper slowdown

DOWNSIDE RISKS FOR THE WORLD ECONOMY

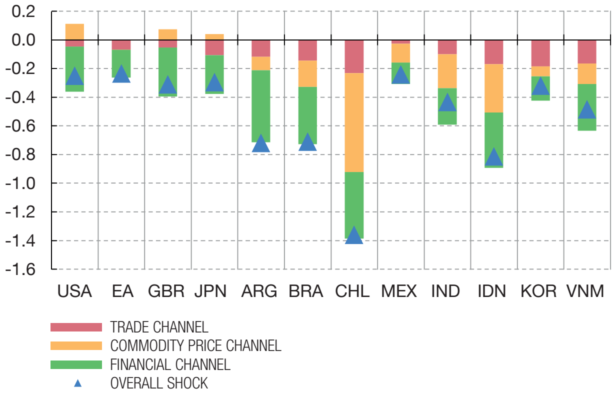
CHART 4

The balance of risks for the world economy is on the downside. A sharper than expected slowdown in China or in the euro area, a resurgence of trade tensions, a disorderly no-deal Brexit outcome or a severe financial market adjustment would all have a highly negative impact on world growth.

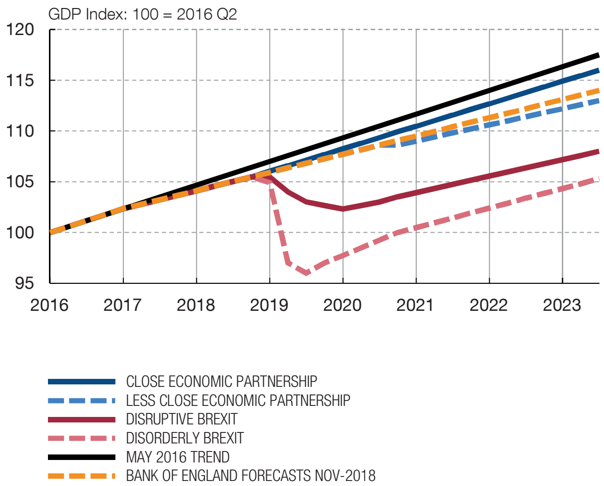
1 IMPACT OF INCREASED PROTECTIONISM (a)



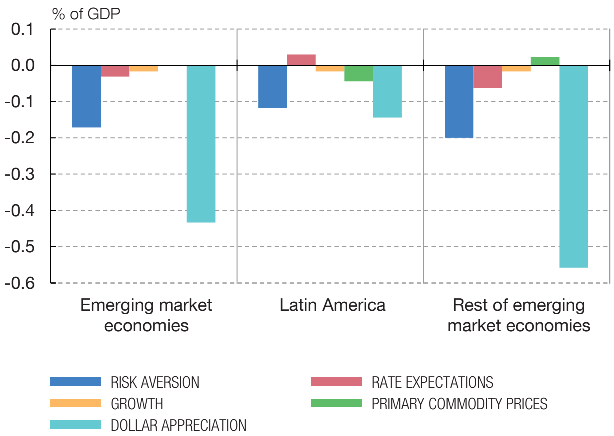
2 GLOBAL IMPACT OF SLOWDOWN IN CHINA - YEAR 1 (b)



3 BREXIT: DISORDERLY NO-DEAL SCENARIO (c)



4 IMPACT ON PORTFOLIO FLOWS TO EMERGING MARKET ECONOMIES (USD bn) (d)



SOURCES: WEO October 2018 and Bank of England.

a Includes the effect of the imposition of new and existing tariffs in the United States and the reprisals by China and other trading partners, and also the effect of the loss of business confidence and tightening of financial conditions on investment.
b Simulations using the NiGEM model. Impact on GDP growth in year 1 of a drop of 1 pp in potential growth and domestic demand in China, which entails a 7% drop in oil prices and an 8% drop in metal prices, as well as adverse effects on the global financial markets (a 10% correction on stock markets in China, Europe, Japan and the United States; a 50 bp increase in the equity premium; and a 60 bp increase in long-term interest rates in the emerging market economies).
c In the disruptive scenario, tariffs and barriers to trade are introduced suddenly and there are no new deals in the transition period, but the United Kingdom replicates deals acquired by virtue of EU membership. In the disorderly scenario, the United Kingdom loses existing trade arrangements that it currently has with non-EU countries through its EU membership and its border infrastructure is unable to cope smoothly with customs requirements. In the close economic partnership scenario, the United Kingdom retains arrangements for free trade in goods and some trade in financial services. In the less close economic partnership scenario, more customs checks and greater regulatory barriers to trade are introduced.
d The impacts simulated refer to a change in a standard deviation of the historical series of each of the variables up to end-2019, with all the other variables remaining unchanged, for global risk aversion (up to 2016 Q1 highs) and Federal Funds 2-year interest rate expectations (November 2007 highs), and for negative growth surprises (similar to those seen at end-2015). For commodity prices, a fall is assumed similar to that recorded between mid-2014 and end-2015 (–22%), and for the dollar, appreciation similar to that observed between mid-2014 and early 2016 (27%).

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would have a substantial impact, primarily on its regional trading partners and commodity exporters (see Chart 4.2).[5]

5 According to the findings of an own simulation exercise, a permanent drop of 1 pp in Chinese growth would reduce world growth by 0.4 pp in year 1 (-0.3 pp in the advanced economies and -0.5 pp in the emerging market economies, and potentially -0.8 pp in some emerging market economies in Asia and commodity exporting countries in Latin America).

The Brexit process is a further source of global uncertainty, especially for Europe. This uncertainty is not only short-term, insofar as the departure process per se is concerned, but also medium-term, regarding the nature of the future trade relationship.[6] The possibility of no deal being agreed before the departure date remains a serious downside risk and a source of uncertainty in the short term. The most likely scenario is a "soft Brexit", with a transition period up to the end of 2020, but if the United Kingdom were to leave the EU without an agreement – a disorderly no-deal Brexit scenario – the risks for UK GDP growth would be much higher, owing to the fall in trade and the tightening of financial conditions. Given London's role as a European financial centre, in that scenario the risk of greater financial fragmentation is not insignificant. According to Bank of England estimates,[7] a highly disorderly Brexit scenario, with no deal and no transition period, could shave almost 8% off UK GDP in the medium term (see Chart 4.3). This scenario would also have a strong negative impact on growth in other EU countries. On IMF estimates,[8] a no-deal scenario would reduce EU GDP growth by 1.5%, with a much higher impact in more exposed economies, especially Ireland and, to a lesser extent, the Netherlands, Denmark and Belgium.

The euro area's baseline growth scenario is also highly sensitive to other external risks apart from Brexit, given the area's high degree of economic openness, and to internal risks. From an internal standpoint, a key source of concern is that economic weakness in Italy might prompt a deterioration of the country's fiscal position and Italian banks' balance sheets. There is also the risk that the economic slowdown already observed in three of the euro area's main economies – Italy, Germany and France – could drag down the smaller ones. Moreover, economic (especially trade) policy uncertainty and the possibility of a sharper than expected slowdown in some systemic economies, such as China, could affect growth in the euro area. And all the above, against a complex political backdrop that is conducive to the emergence of anti-European movements that may hinder progress towards greater integration and more robust governance in the euro area.

Lastly, although financial market sentiment has improved in 2019 to date, the possibility of a severe adjustment in certain segments persists. The shift in the monetary policy outlook in the advanced economies, together with a certain degree of optimism regarding the trade negotiations between the United States and China, helped reverse the global financial market deterioration towards the end of 2018. However, adverse developments in the international political and economic environment, or unexpected monetary policy tightening, could give rise to sharp asset price adjustment, especially in some market segments that are showing signs of overvaluation after an extended period of low interest rates and search for yield. Against a backdrop of high government and private debt, these corrections would have an important effect on world activity.

On the emerging markets, a change in market sentiment would have most impact on the most vulnerable economies with high levels of foreign currency debt. In the case of China, tighter financial conditions or a more pronounced economic slowdown could undermine the solvency of the (highly-indebted) corporate sector. The source of the turbulence behind the market adjustment would condition the effects on capital flows to emerging market economies, according to their level of sensitivity to the different transmission channels (trade, finance, commodity prices). The available evidence shows that a substantial dollar

6 See J. L. Vega (coord.), "Brexit: Current situation and outlook", Banco de España Occasional Paper 1905.

7 See "EU withdrawal scenarios and monetary and financial stability. A response to the House of Commons Treasury Committee", Bank of England, November 2018.

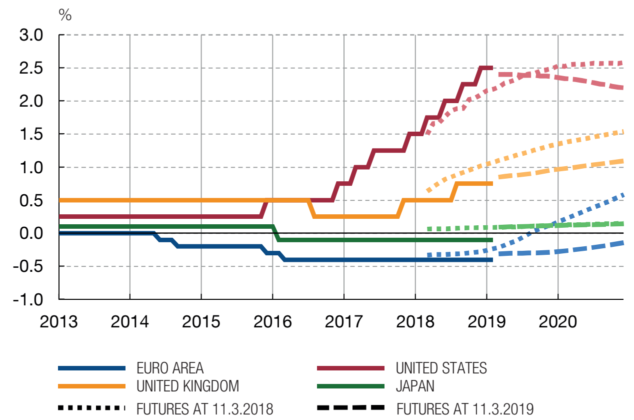
8 See Euro Area Policies: Selected Issues. International Monetary Fund, July 2018.

ECONOMIC POLICY HEADROOM HAS SHRUNK

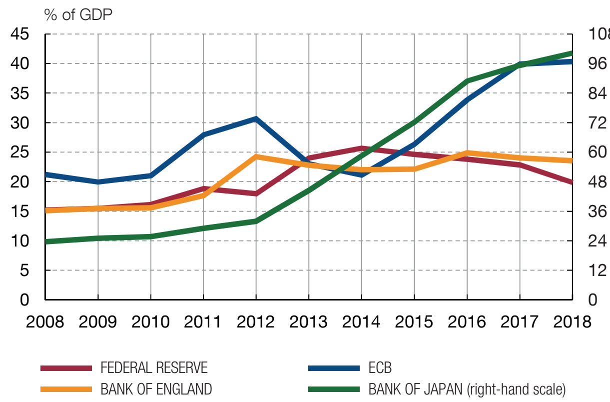
CHART 5

There are significant constraints on the demand policy response to a sharp slowdown in the world economy. The monetary policy stance has become more accommodative and interest rates are expected to remain at their present levels for longer. But in some cases they are already very close to the effective lower bound and this is an important limitation, bearing in mind that central bank balance sheets are already swollen. In the fiscal sphere, the doubts surrounding the sustainability of public finances in some countries, on account of high debt levels and persistent public deficits, also reduce the room for manoeuvre.

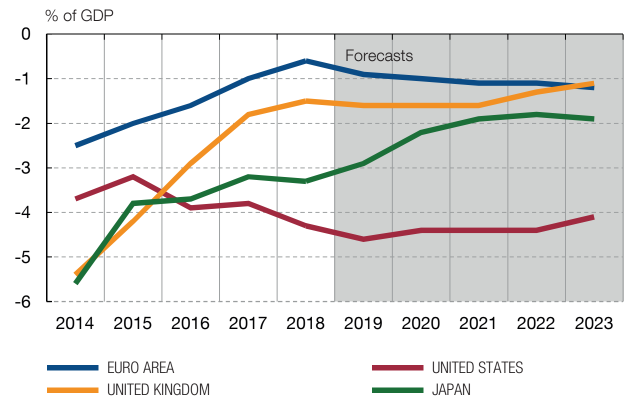
1 REFERENCE INTEREST RATES AND RATE EXPECTATIONS



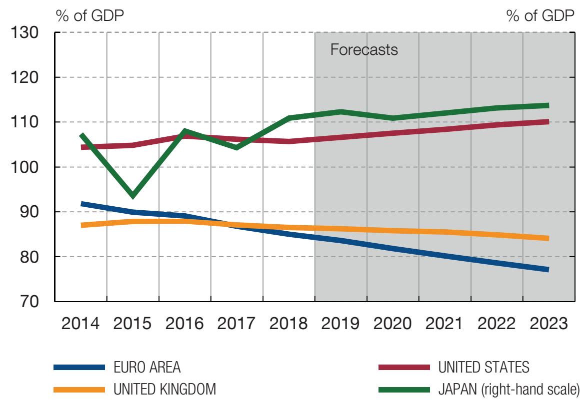
2 CENTRAL BANK BALANCE SHEETS: TOTAL ASSETS



3 FISCAL BALANCE



4 PUBLIC DEBT



SOURCES: Federal Reserve, ECB, Bank of England, Bank of Japan, Datastream-Thomson Reuters and IMF.

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appreciation would be the factor with the most impact[9] (see Chart 4.4). Moreover, in some economies there are still political risks which, were they to materialise, could cause financial turmoil. In the case of the economies worst hit by the stress in 2018 – Turkey and Argentina – the risk comes from a possible economic policy easing if the strains generated by the adjustments were to intensify. In other economies, the risks come from the absence of the reforms needed to ensure fiscal sustainability (such as pension reform in Brazil) and foster economic growth.

Conclusions and economic policy implications

The world economy is clearly facing an economic slowdown in 2019, against a backdrop of high uncertainty and major downside risks. The outlook for 2019, therefore, points to deceleration, more pronounced in some areas than in others, with the above-mentioned downside risks added in. The possible materialisation of one or more of these risks, and

9 See "Capital flows to emerging markets: recent developments and determinants", Analytical Article, *Economic Bulletin* 2/2019, Banco de España.

the possible interplay between them, poses a serious threat to the world economy, which could face a downturn scenario.

The economic policy headroom available to address this situation has decreased substantially. In the advanced economies, the authorities' capacity for response to a hypothetical scenario of materialisation of these risks is quite limited, owing to monetary policy constraints in a setting marked by very low interest rates and high central bank balance sheets (see Charts 5.1 and 5.2). In the fiscal sphere, some economies with healthy public finances, such as Germany, have some leeway to implement expansionary policies. However in others, such as the United States, Japan or Italy, high public debt levels and/or continuing high deficits narrow the room for manoeuvre (see Charts 5.3 and 5.4). The headroom available to emerging market economies varies significantly according to their level of vulnerability. In general, only countries with a credible monetary policy framework and no financial stability risks stemming from foreign currency debt would have room to cut interest rates. From a fiscal standpoint, in most regions the headroom available for implementing countercyclical policies is also very limited. Appropriate microprudential and macroprudential policies will be needed to address financial stability risks. And structural reforms will be needed to boost potential growth in the medium and long term.

9.5.2019

Inflation has been moderate in the advanced economies over the last few years. Chart 1 shows that at the beginning of 2019 inflation rates stood below the reference value of 2% in the main economies of this group, albeit with significant differences: 1.8% in the UK, 1.6% in the USA, 1.7% in the euro area and 0.2% in Japan. Core inflation rates are also moderate (2.2% in the UK and the USA, 1% in the euro area and 0.3% in Japan), in some cases below the central bank targets[1] and their respective historical averages.

Explaining the behaviour of prices and costs in the advanced economies has posed a notable challenge in the years following the financial crisis. Initially the literature focused on explaining the moderate decline in prices against a backdrop of deep falls in activity (missing disinflation). Subsequently, the challenge was to identify the factors underlying the persistence of moderate inflation in a setting of economic recovery and closure of the output gap (missing inflation). In this respect, wages showed a surprising small upward response in the early stages of the recovery, despite notable decreases in unemployment rates in the advanced economies (including the USA and the euro area).[2] After wages rose, interest turned to analysing their scant pass-through to final prices.[3]

An approach commonly used to analyse the behaviour of prices and costs is that based on the fact that prices (measured using added-value deflators, which exclude the cost of inputs) are determined by applying a margin to the labour costs incurred by firms. Labour costs are proxied by unit labour costs, which are constructed by taking employee remuneration, adjusted for productivity improvements. A limitation of this approach is that it does not consider the behaviour of other costs, such as financial costs, which have moderated significantly over the course of the recent recovery of the advanced economies.

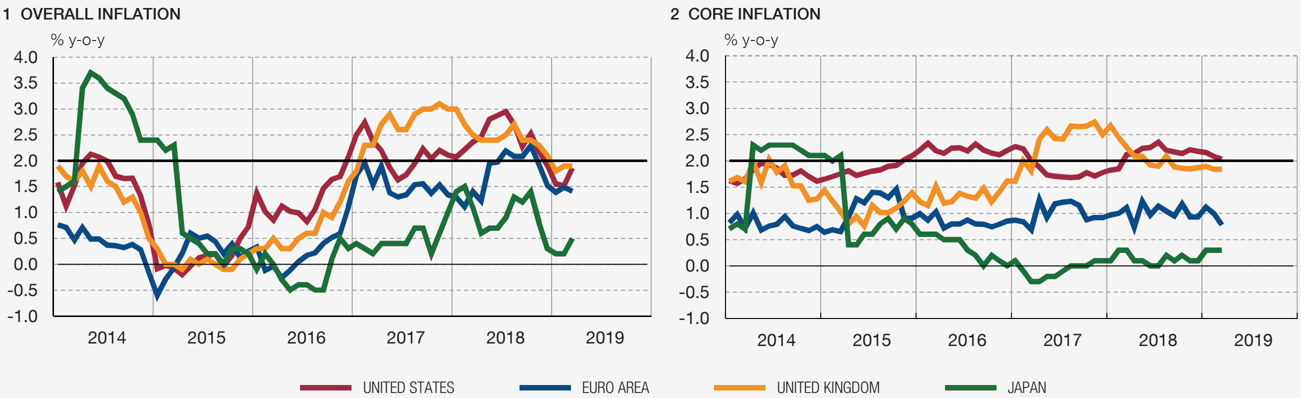
Chart 2 shows the rates of change of prices and unit labour costs in recent years for the USA, the euro area, Japan and the UK. As can be seen, it is difficult to identify a close relationship between the behaviour of unit labour costs and that of price indicators. In the case of the USA, the acceleration of labour costs from 2015 was not accompanied by higher inflation, but rather by a contraction in margins; as the economic expansion firmed, inflation increased and unit margins fell more slowly. By contrast, in the euro area, Japan and the UK the acceleration of unit labour

1 The Fed sets the US inflation target in terms of the year-on-year rate of change of the private consumption deflator, which is generally a few tenths of a percentage point below the inflation rate as measured by the CPI. As the basic indicator of inflation, the Fed preferentially monitors the rate of change of the core component of the private consumption deflator. This box maintains the references to the US CPI for the sake of uniformity with the other countries analysed.

2 Notable among the factors analysed is the role played by underemployment or involuntary part-time employment (which exercise little pressure on wages), immigration, labour market reforms in some countries, and the existence of non-linearity in wage response: downward rigidities which dampen the response in extreme crisis situations, so that when the situation improves the scope for rebound is also more limited. See Daly, M. C. and Hobijn, B. (2014), *Downward Nominal Wage Rigidities Bend the Phillips Curve*, Working Paper Series 2013-08, Federal Reserve Bank of San Francisco; Cuadrado, P. and F. Tagliati (2018), "*Wage moderation in Spain and in the euro area*" Banco de España, Economic Bulletin, December; M. Izquierdo, P. Font and S. Puente (2015) *"Real wage responsiveness to unemployment in Spain: Asymmetries along the business cycle"* IZA Journal of European Labor Studies, 4:13.

3 See Ciccarelli, M., Osbat, C., Bobeica, E., Jardet, C., Jarocinski, M., Mendicino, C. and Stevens, A. (2017), *Low inflation in the euro area: Causes and consequences*, ECB Occasional paper 181; IMF (2018), *European Wage Dynamics and Labor Market Integration*; Peneva, E. V. and Rudd, J. B. (2017), *The Pass-through of Labor Costs to Price Inflation*, Journal of Money, Credit and Banking, 49(8):1777-1802. Bobeica, E., M. Ciccarelli and I. Vansteenkiste, (2019), *The link between labor cost and price inflation in the euro area*, BCE working paper 2235. For an overview of the determinants of inflation in the euro area, see also Chapter 2 of the forthcoming Banco de España 2019 Annual Report.

Chart 1
BEHAVIOUR OF PRICES IN THE ADVANCED ECONOMIES



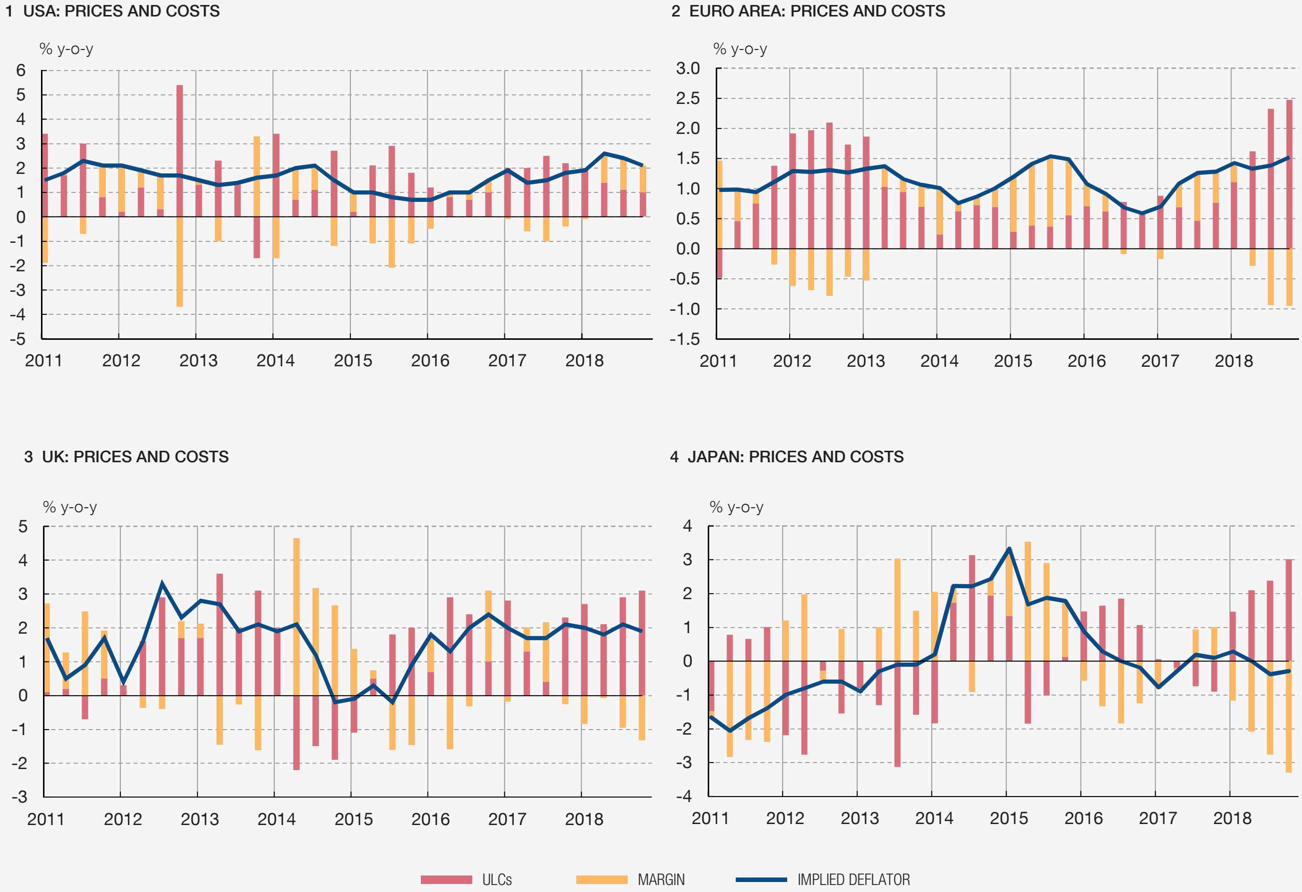
SOURCE: Thomson Reuters.

costs was not apparent until 2017 and no symptoms were observed of a pass-through to inflation, although unit margins did contract.

The evidence for the USA is in line with recent academic studies which do not find a close relationship between costs and prices in this economy, at least in the short term (Peneva y Rudd, 2017). Recent studies in the euro area suggest that the relationship between costs and prices depends, among other factors, on the inflation regime prevailing in the economy, and find a smaller pass-through of costs to prices in periods of lower inflation than at present (Bobeica et al (2019)).

In the most recent quarters, the low-inflation environment prevailing especially in Japan and the euro area, in conjunction with the heightened uncertainty as to the strength of demand in both these economies, may induce firms to prolong their highly cautious attitude when it comes to passing cost increases through to prices. By contrast, in the USA the recent sustained rises in productivity are prompting lower growth of unit costs and increased margins.

Chart 2
GDP DEFLATOR, UNIT LABOUR COSTS AND MARGINS



SOURCE: Thomson Reuters.