ufficio parlamentare di bilancio

Summary[*]

The global expansion is continuing, albeit with divergent developments in the various countries. By contrast, world trade is displaying clear signs of slowing, in part reflecting protectionist tensions. Global growth has been accompanied by an increase in oil prices, mainly driven by supply factors.

In Italy, economic activity weakened in the second quarter and economic indicators suggest that it slowed further in the summer. Industrial production stagnated in the first half of the year. According to our estimates, in summer industrial output was broadly stable , with a decline in the sectoral diffusion of growth. Household confidence is largely stable, while business confidence continues to deteriorate and uncertainty is increasing.

Labour market conditions are generally favourable, especially for fixed-term employment. The unemployment rate is declining. Inflation remains below that of the euro area and wage pressures are generally subdued.

On the basis of the estimates produced with the short-term models of the Parliamentary Budget Office (PBO), in the third quarter GDP is expected to have expanded only slightly. Forecasts for the fourth quarter, which are clouded by considerable uncertainty, seem to prefigure the continuation of very modest growth.

Reflecting these developments, quarterly data put the average GDP growth in 2018 at 1.0 per cent. Considering calendar effects, the growth registered in the annual accounts could reach 1.1 per cent. The slowdown expected for the second half of this year also has an impact on the carry-over to growth in 2019, which on the basis of the above estimates would be extremely small (0.2 per cent).

There are growing fears for unfavourable developments in the short or medium term. The international scenario is affected by uncertainty about protectionist developments and trends in energy commodity markets. Sudden increases in risk aversion on the part of financial market operators remain a threat, which would have a rapid impact on the macroeconomic conditions of the Italian economy.

[*] *Prepared by the Macroeconomic Analysis Department. Information updated to 19 October 2018.*

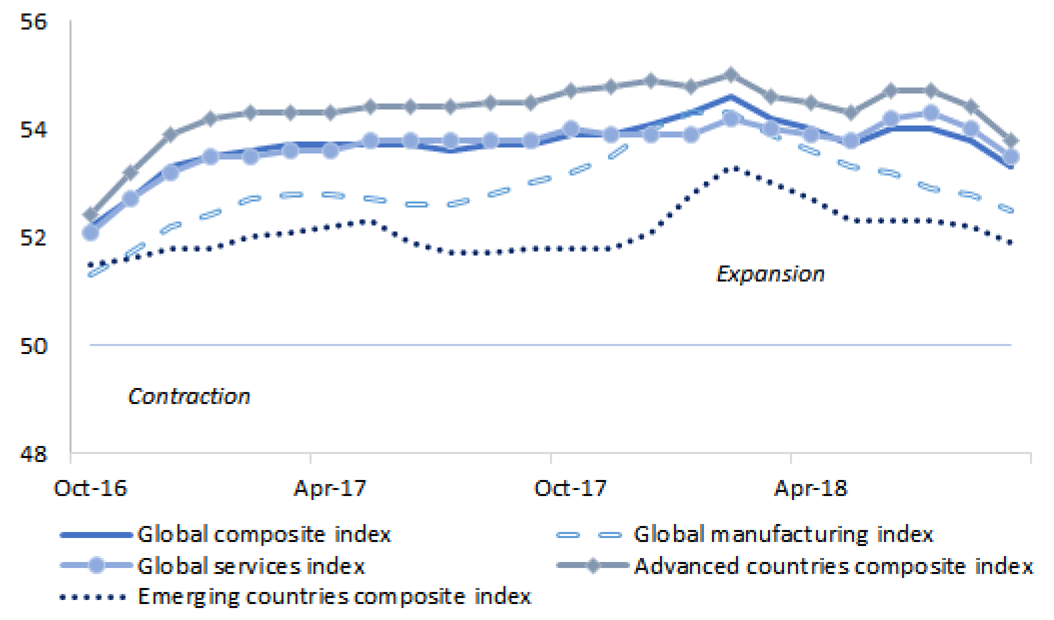
The international environment

The global expansion is mixed ...

The year about to conclude is the ninth consecutive year of expansion in the world economy. For some countries, such as the United States, this has been one of the longest expansions in history. However, the overall global growth is masking mixed underlying developments. In the euro area, GDP decelerated significantly in the first half of the year compared with the previous six months, while in the United States (benefiting from fiscal stimulus) and in Japan, activity strengthened in the second quarter. Among the emerging countries, the continuing strong growth in China stands in contrast to the marked deterioration in Latin America (Argentina, Brazil and Venezuela). The normalisation of US monetary policy and geopolitical tensions (as in Turkey and Argentina) have triggered a flight-to-quality towards dollar-denominated securities, with a consequent weakening of the currencies of other countries.

The leading indicators continue to decline. In September, the global index of purchasing managers (JP Morgan Global Composite PMI), while remaining in the zone indicating expansion, recorded its third consecutive decrease, with the decline involving all the main components (Figure 1). According to various analysts, the deterioration in confidence largely reflects expectations for world trade.

Figure 1 – JP Morgan Global PMI (1)
(three-month moving average)



Source: Thomson Reuters.
(1) Confidence indicators based on the assessments expressed by corporate purchasing managers; a value of more (less) than 50 indicates an expansion (contraction).

… and world trade weakens

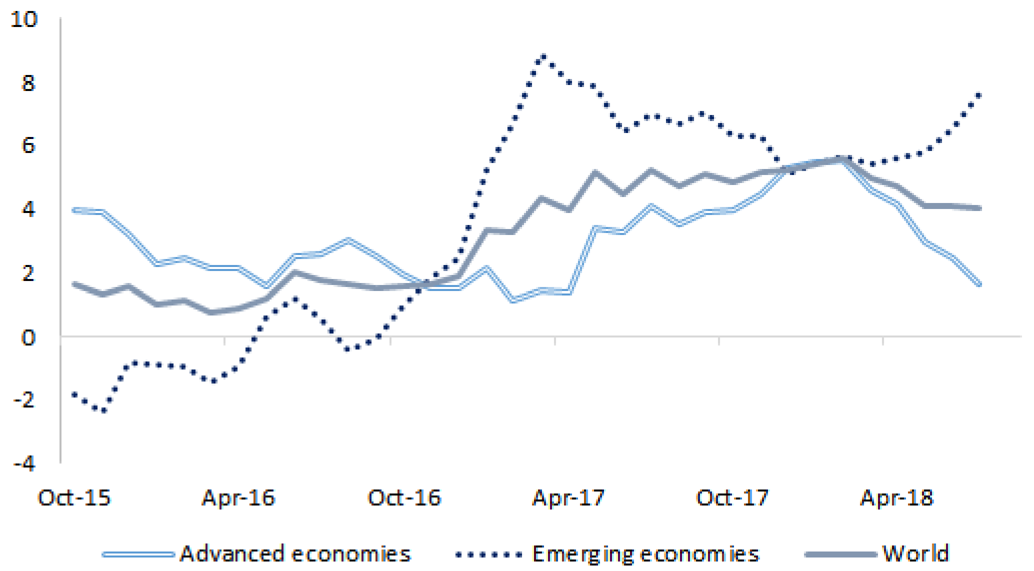
The escalation in trade disputes, triggered by US protectionist measures primarily aimed at reducing imports from China, is beginning to have an impact. The year-on-year growth rate in the three-month moving average for global imports, as measured by the Central Planning Bureau, fell again in July to 4.0 per cent after peaking in February at 5.6 per cent (Figure 2).

According to recent analysis by the International Monetary Fund (IMF; see the Box), the measures rolled out so far have had a limited macroeconomic impact. However, if additional measures and counter-measures are deployed, impacting the confidence and financial condition of enterprises, the repercussions would be significant and widespread.

The International Monetary Fund revises growth forecasts

The IMF recently revised downwards its medium-term GDP forecasts for both the advanced countries and the emerging economies. For the former, the slippage was modest, while the revision for the emerging countries was more pronounced, especially for 2019. Expectations for world trade diminished sharply, partly reflecting the implementation of more restrictive trade policies (Table 1).

Figure 2 – Growth rate of world imports
(annual percentage change in 3-month moving average)



Source: based on Thomson Reuters data.

Table 1 – IMF forecasts for growth in GDP and world trade
(percentage changes and differences in percentage points)

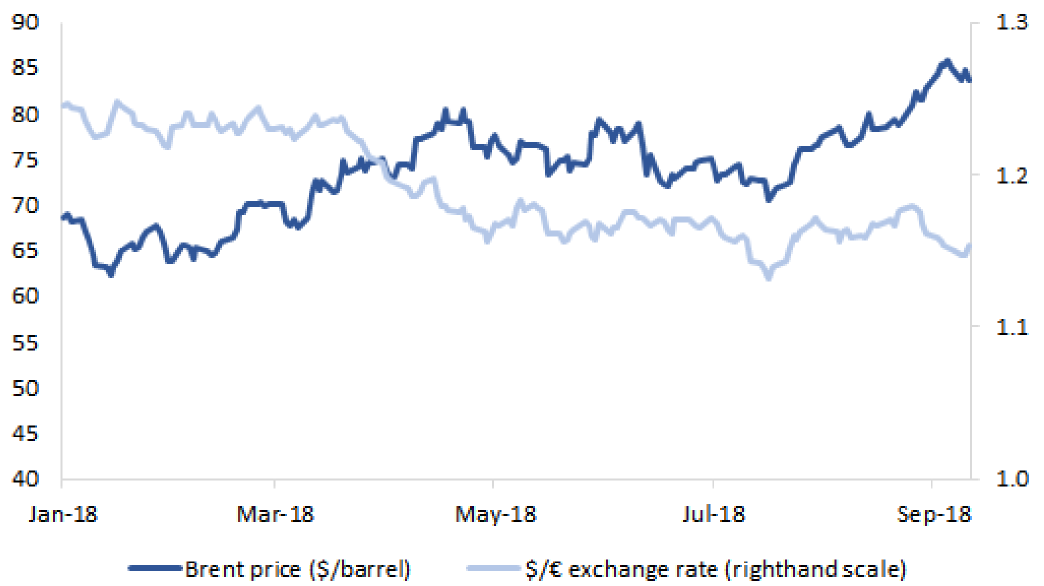
	WEO October 2018		Difference with WEO July 2018	
	2018	2019	2018	2019
World output	3.7	3.7	-0.2	-0.2
Advanced economies	*2.4*	*2.1*	*0.0*	*-0.1*
United States	*2.9*	*2.5*	*0.0*	*-0.2*
Euro area	*2.0*	*1.9*	*-0.2*	*0.0*
Emerging economies	*4.7*	*4.7*	*-0.2*	*-0.4*
World trade	4.2	4.0	-0.6	-0.5

Source: IMF, *World Economic Outlook* (WEO), October.

Oil prices are rising and in the euro area inflation is approaching the target

Between January and July, oil prices increased by more than 10 per cent (Figure 3), reflecting supply below the level of the quotas agreed between OPEC and non-OPEC exporting countries. In the summer, the price of oil continued to rise, still mainly driven by supply factors, exceeding $80 dollars a barrel at the end of September. On the foreign exchange market, the favourable economic conditions in the United States and the less accommodative stance of the Federal Reserve contributed to the strengthening of the dollar. The US currency appreciated significantly against the currencies of the emerging countries, less so against the euro.

Figure 3 – Oil prices and dollar/euro exchange rate

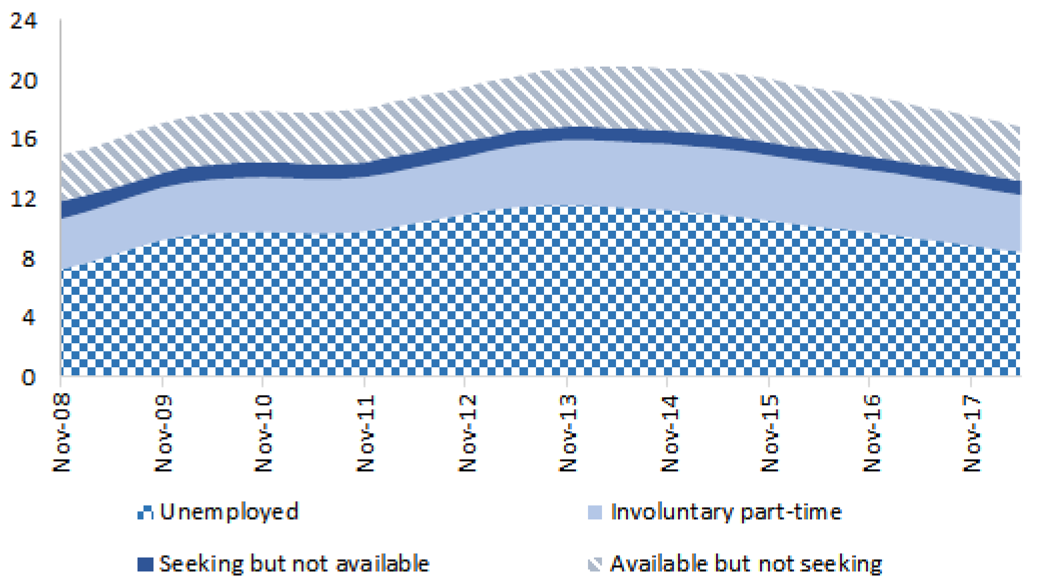


Source: based on Thomson Reuters data.

Inflation in the euro area, which has been close to the monetary policy target since the summer, reached 2.1 per cent in September. However, core inflation remains below 1 per cent, mainly due to the slow rate of growth in the prices of non-energy industrial goods. As announced in July, the European Central Bank (ECB) halved its purchases under the expanded asset purchase programme to €15 billion a month from the first of October, while maintaining the commitment to reinvest the repayments from maturing securities. Inflation expectations are virtually unchanged, and the ECB reiterated that net purchases of assets will cease from the beginning of next year.

The unemployment rate continues to decline in the euro area, although developments vary sharply across countries. The broader category of underemployment also contracted, albeit only very slightly (Figure 4). The number of people in involuntary part-time employment and the potential additional labour force (i.e. persons seeking work but not immediately available and those who would be immediately available but are not actively seeking a job) remains large.

Figure 4 – Euro area: unemployment, potential additional labour force and underemployment (1)



Source: based on Eurostat data.
(1) Persons aged 15-74.

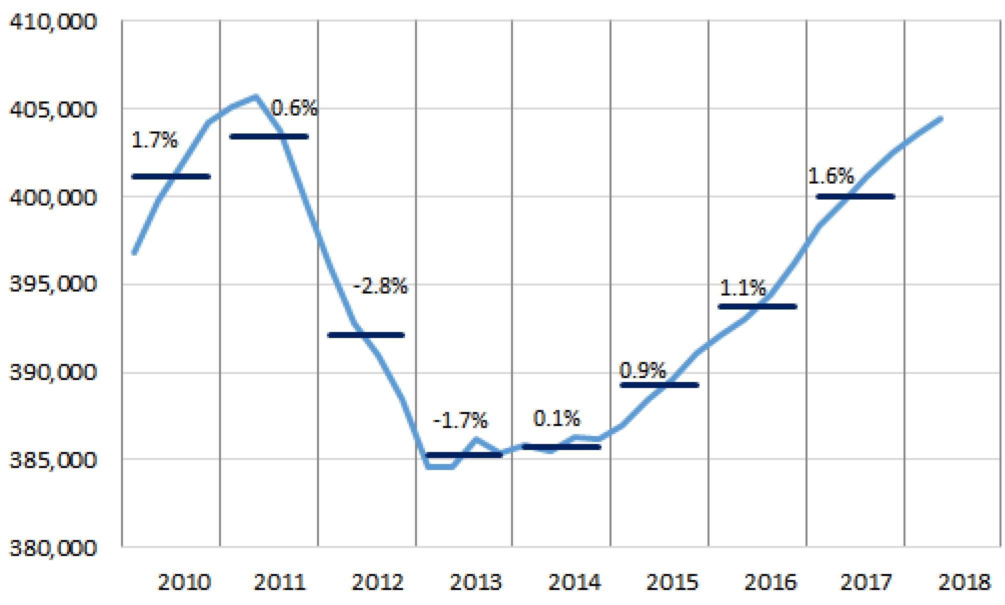
The Italian economy

Growth slowed slightly in the spring

The latest national accounts figures released by Istat on October 3 confirmed the slowdown in GDP growth: in the second quarter the Italian economy expanded by 0.2 per cent on the previous quarter (1.2 per cent year-on-year), down from 0.3 per cent in the winter (Figure 5). Following this development, the growth already achieved in 2018 would be 0.9 per cent. This is still compatible with the Government's forecast for the full year included in the Update to the Economic and Financial Document (1.2 per cent), although the projection is exposed to downside risks (see the section "Short-term forecasts" below).

Economic activity in the second quarter was buoyed by investment spending (which contributed half a percentage point to growth) and, to a lesser extent, by stock-building (two-tenths of a point). The contribution of final consumption was nil, while net foreign demand subtracted about five-tenths of a point from growth. With exports virtually unchanged on the previous quarter, imports of goods and services expanded briskly (1.6 per cent compared with the first quarter). On the supply side, small gains on the previous period were posted in construction and services, while industry excluding construction stagnated. Value-added in agriculture contracted sharply.

Figure 5 – Real GDP (1)
(millions of euros and annual growth rates)



Source: based on Istat and MEF data.
(1) The dark blue horizontal segments indicate annual rates of change. The light blue line shows quarterly levels of GDP expressed as chain-linked values, adjusted for calendar and seasonal effects.

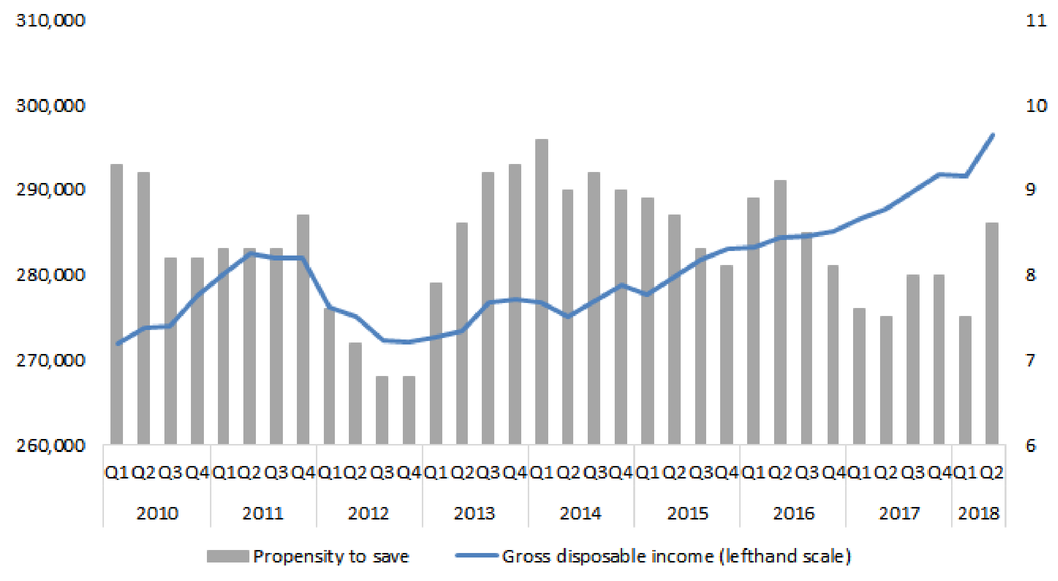
Consumption spending stalls ...

After eight consecutive quarters of growth, private consumption stalled in April-June, reflecting the decline in purchases of semi-durables and a slight increase in purchases of durables and services. Household disposable income increased by 1.3 per cent compared with the previous quarter and the propensity to save of consumer households therefore increased (to 8.6 per cent; Figure 6), suggesting greater prudence in consumer spending habits. Consumer confidence in September was close the average level registered in the second quarter. The staying power of confidence in an environment of employment growth could sustain a moderate increase in household spending in the second half of 2018.

... while investment jumps

Capital accumulation posted a pronounced rebound in the spring, recouping the decline registered in the first three months of the year. The overall growth in gross fixed investment (2.8 per cent on the previous quarter) was driven by a strong expansion in spending on plant, machinery and weapons (7.0 per cent) and transport equipment (8.2 per cent). Investment in housing and non-residential buildings also increased, albeit at a slow pace (0.7 and 0.6 per cent, respectively). Corporate profits were broadly unchanged.

Figure 6 – Disposable income and propensity to save
(millions of euros and percentage shares)



Source: based on Istat data.

Looking forward, the Bank of Italy’s Survey on Inflation and Growth Expectations points to a slowdown in investment in the second part of the year, due to less favourable conditions for capital accumulation and access to credit. September’s Istat survey on manufacturing firms signals a deterioration in lending conditions, especially for smaller businesses.

Foreign trade languishes

Exports remained weak in the second quarter, decreasing by 0.1 per cent compared with the previous period, when they had fallen sharply (-2.4 per cent). The contraction in the first half, which was especially sharp for transport equipment and automobiles, was only partially affected by the protectionist climate (see the section on the global economy and the Box). Exports to certain developing countries, Turkey in particular, declined considerably, impacted by the normalisation of US monetary policy.

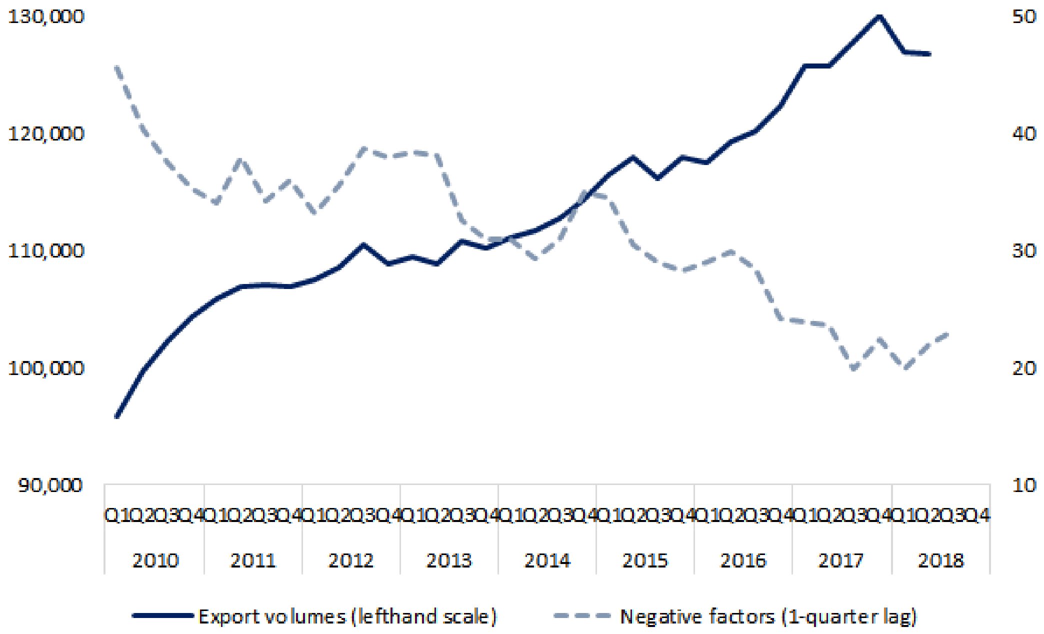
The most recent data on foreign sales show a partial recovery on average in July-August compared with the second quarter (1.6 per cent in value and 1.4 per cent in volumes, obtained by deflating with producer prices on foreign markets). Surveys of manufacturing exporters appear to foreshadow the continuing weakness of exports in the short term: the Istat quarterly indicator of obstacles to export (Figure 7) continues to deteriorate. The survey of confidence among manufacturing firms, conducted in September, shows a large proportion of deteriorating assessments of foreign orders and expectations for turnover on international markets.

The erratic developments in exports in the summer months were accompanied by an expansion in total imports on previous periods (2.5 per cent in July and 0.4 per cent in August), most likely induced by the dynamism of investment, which normally has a strong impact on purchases from abroad.

The latest economic indicators

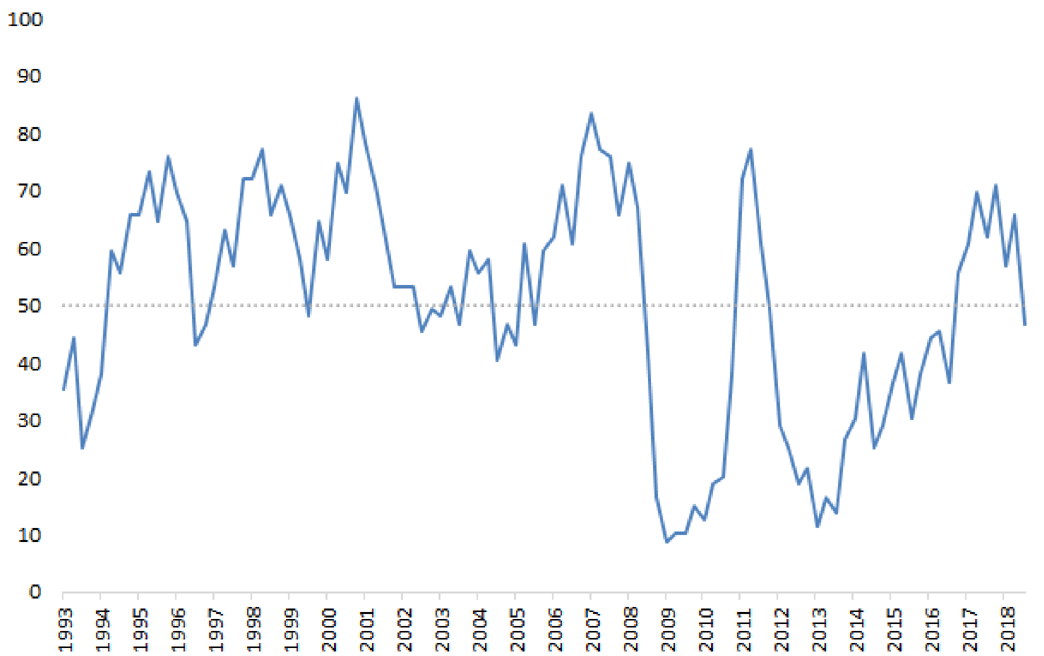
The weak performance of industrial production in the first two quarters of 2018 (an average decline of 0.2 per cent on the previous period) was followed by strong volatility between July (-1.6 per cent compared with the previous month) and August (+1.7 per cent on a monthly basis). Based on PBO estimates for the entire summer quarter, industrial activity remained essentially unchanged, with downside risks. Analysing developments in the various segments, the number of sectors experiencing growth is falling. The PBO diffusion index continues to decline (Figure 8) and is now below the 50 per cent threshold.

Figure 7 – Exports and export barriers
(millions of euros and percentage shares)



Source: based on Istat data.

Figure 8 – PBO diffusion index
(percentage shares)



Source: based on Istat data.

Signs of deterioration in the manufacturing sector are also evident in qualitative indicators. The Purchasing Managers' Index (PMI) fell in July and August before stabilising in September close to the threshold commonly understood as a dividing line between phases of expansion and contraction. In the same month, the Istat index of manufacturing confidence remained at its level in August, when it was down by around two points.

Output in construction increased on average in the first seven months of the year (1.3 per cent year-on-year), although it remained close to the historically low levels that characterised the 2015-2017 period. The index of confidence in the building sector fell in August-September. The housing market survey conducted in June-July by the Revenue Agency, the Bank of Italy and Tecnoborsa found that the expectations of industry operators for the short and medium-term outlook for the real estate market were less favourable than the previous survey.

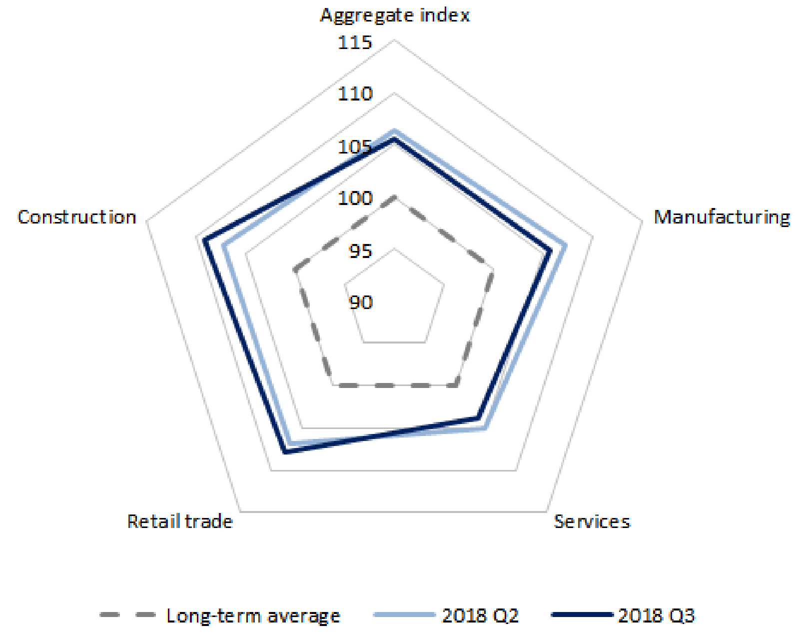
Activity in the services sector increased moderately in the second quarter (value added rose by 0.3 per cent on the previous period), despite the stagnation in private consumption. Forward-looking indicators point to caution. Confidence has worsened in market services and stabilised in retail trade. The PMI for services, while picking up in September, was broadly unchanged over the summer quarter as a whole.

For all sectors, the aggregate index of business confidence, obtained as the weighted average of sectoral indices, was slightly lower on average in July-September compared to the second quarter. The deterioration in confidence in manufacturing and services was only partly offset by increases in construction and retail trade (Figure 9).

Uncertainty is beginning to weigh on the confidence of households and firms. The PBO indicator, while remaining at historically low values, posted its second consecutive rise in the summer (Figure 10), mainly driven by the sub-components of the index connected with industry excluding construction and services.

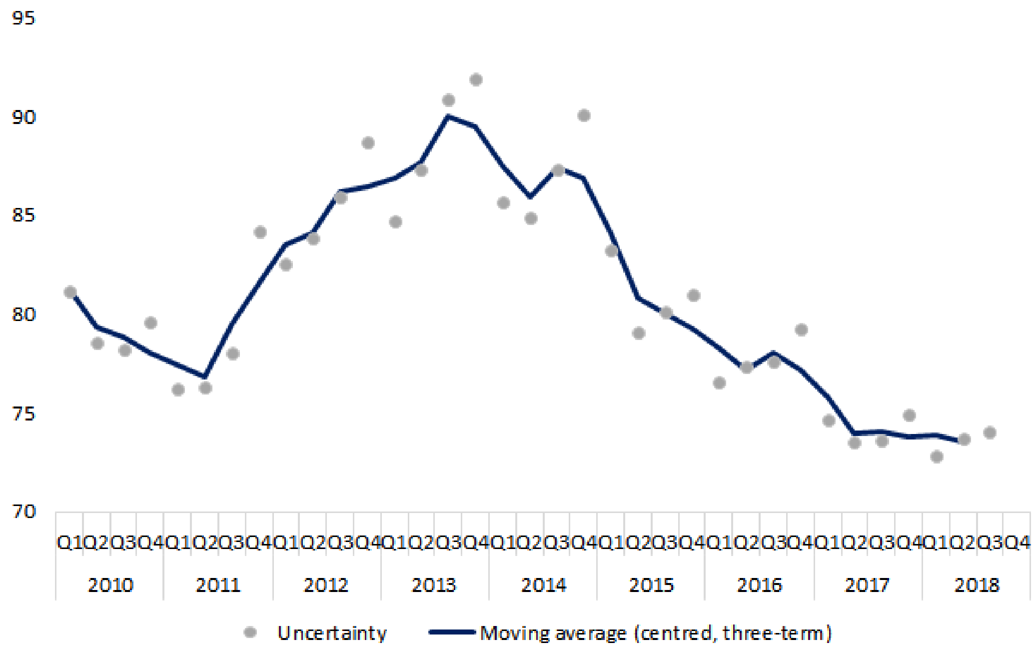
Overall, the composite economic indicators produced by various institutions are consistent in signalling the weakening of the cycle. The ITA-coin coincident indicator developed by the Bank of Italy was again close to zero in September; in the same month the Istat leading indicator continued its decline, which has been under way since the end of 2017.

Figure 9 – Confidence in productive sectors (1)
(index; average January 1998 – September 2018=100)



Source: based on European Commission and Istat data.
(1) The aggregate confidence indicator is constructed by applying the weights used by Istat to produce the Istat Economic Sentiment Indicator (IESI) to the time series (standardised) of sectoral confidence indicators of the European Commission.

Figure 10 – PBO indicator of uncertainty
(index; 1993 Q1=100)

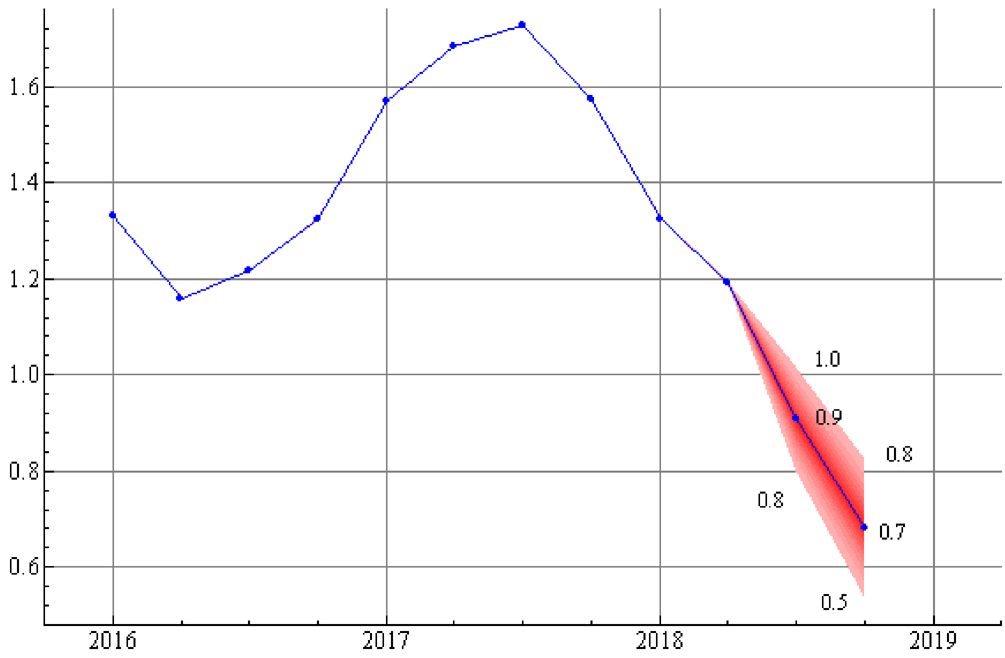


Source: based on Istat data.

Short-term forecasts

The weakness of economic conditions is reflected in the estimates produced using the PBO's short-term models. In the third quarter, GDP is forecast to grow by 0.1 per cent (within a symmetrical confidence band of between 0.0 and 0.2 per cent), reflecting the volatility of the industrial cycle and the uncertainties in international developments. In the final quarter of the year, output is projected to expand by the same amount as in the third quarter, although with a wider band of uncertainty (Figure 11). These developments would produce GDP growth of 1.0 per cent for 2018 as a whole. Considering that this year has three more business days than 2017, adjusted annual growth could amount to 1.1 per cent.[2] Expectations for slow growth in the second half of 2018 also impact the carry-over effect on next year, which on the basis of the mentioned forecasts would be very low (0.2 per cent).

Figure 11 – Forecasts for year-on-year GDP growth and standard error (1)



(1) The error bands regard a confidence interval of 90 per cent around the central scenario.

[2] This estimate confirms the PBO forecast for GDP growth in 2018 produced as part of the endorsement exercise for the Government's macroeconomic scenario presented in the 2018 Update.

The unemployment rate continues to fall

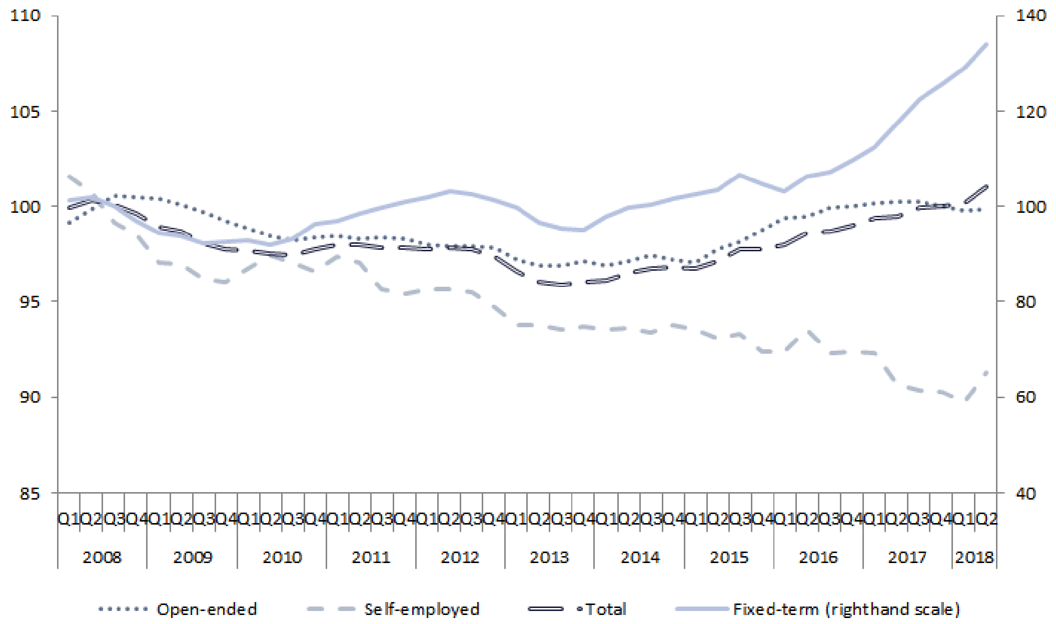
In the spring, labour market conditions improved compared with the start of the year. The rise in employment was followed a significant decrease in the unemployment rate. Hours worked increased (by 0.8 per cent on the previous period) faster than GDP. Labour demand grew in all the main sectors, with the exception of construction. However, hours worked per employee remain below the average for 2007.

On the supply side, data from the Labour Force Survey indicate that the increase in the number of persons employed in the second quarter (0.9 per cent on the previous quarter) was mainly driven by fixed-term contracts, with open-ended hiring making a smaller contribution.

In the second quarter, the number of persons in employment returned to near its pre-crisis levels. The essential invariance of open-ended employment was accompanied by an increase in fixed-term employment and a contraction in self-employment (Figure 12). The depth and the exceptional duration of the recession, on the one hand, and the subsequent gradual recovery, on the other, have also had other compositional effects.

Female employment has increased by 5.8 per cent compared with the level before the recession, male employment is still about 370,000 lower than its pre-crisis level. Geographical divergences have also grown: the regions of the Centre-North have largely exceeded the employment levels prevailing at the beginning of 2008, while in the South the recovery is still under way.

Figure 12 – Employment by employment status
(index; 2008 average = 100)



Source: based on Istat data.

According to preliminary data, employment growth decelerated in the summer and was essentially unchanged on average in July-August compared with the previous three months. This performance would reflect the slowdown in the fixed-term component, the contraction in permanent employment and another decline in self-employment.

The unemployment rate began to fall again in the second quarter, especially among young people in the South. The increase in the employment rate was greater than that in the participation rate. The number of inactive persons decreased (by 2.9 per cent year-on-year) due to a reduction in the main components except those who are not looking for a job but are available to work. In addition, the decline in the number of discouraged persons continued. In July-August, the unemployment rate fell to 10.0 per cent, close to the level reached in early 2012.

Wage growth has strengthened, but remains moderate. In the second quarter, hourly contractual earnings for the entire economy rose by 1.3 per cent, reflecting a slightly slower increase in the private sector (1.1 per cent) and an acceleration in the public sector (2.0 per cent) due to contract renewals. Growth in actual earnings also accelerated, to 2.3 per cent on an annual basis.

The larger increase in hours worked compared with the rise in value added led to a decline in hourly productivity (-0.5 per cent on an annual basis) in all the major sectors, with the exception of construction. Deteriorating productivity, wage acceleration and higher social contributions (due to the expiry of the social security contribution relief) were reflected in an increase in unit labour costs (1.2 per cent year-on-year in the average of the first two quarters).

Inflation remains below the euro-area average

Despite some upward pressure from its more volatile components, inflation in Italy remains lower than that in the major European partners. Pressures from the labour market are limited and have been slow to translate into strains on consumer prices.

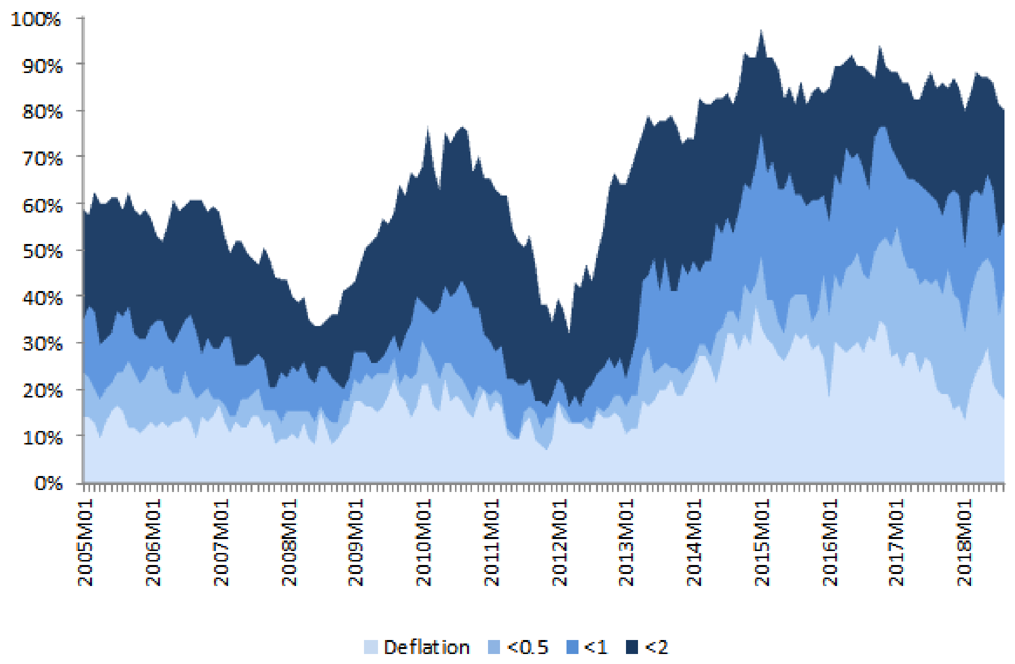
In September, the national consumer price index rose by 1.4 per cent on an annual basis, down from 1.6 per cent in August. The deceleration was mainly attributable to temporary factors. The prices of food and transport services were impacted by the volatility that characterises the end of the summer. The pace of growth in the prices of energy products also declined, although it remained high (9.3 per cent on an annual basis) due to oil price increases and the depreciation of the euro. The carry-over of the consumer inflation for 2018 is now at 1.2 per cent. Core inflation, which excludes the prices of energy and unprocessed food, is not showing upward signs and is stable under 1 per cent (0.7 per cent on an annual basis in September).

Price increases are beginning to spread among the various expenditure items. In August, the share of goods and services in the basket of the harmonised price index whose prices have decreased contracted further (to 18 per cent; Figure 13). The share of items with prices rising by less than 0.5 per cent and 1 per cent also declined. However, the magnitude of price increases is very low, at less than 2 per cent for 80 per cent of the goods and services in the basket.

Excluding the energy component, imported inflation is contained (0.8 per cent in August year-on-year). Industrial producer prices rose by 4.4 per cent year-on-year in August, but that increase was only 2.5 per cent when energy products are excluded. In the construction industry, the prices of residential buildings continued to rise (by 1.8 per cent in August year-on-year, up from 1.1 per cent for the first eight months of the year). In services, increases in producer prices (1.4 per cent on an annual basis in the second quarter of 2018) were smaller than at the beginning of the year.

According to the Istat confidence surveys, the inflation expectations of firms and households remain moderate. Firms' expectations for prices in the next 12 months are substantially stable (only 7.5 per cent of respondents expect prices to increase). Household expectations are also moderate, albeit with some signs of greater pessimism (the percentage of those expecting prices to increase rose to 39 per cent in September, up from an average of 37 per cent in June-August).

Figure 13 – Proportion of goods and services in the HICP experiencing deflation or low inflation
(percentage shares)



Source: based on Eurostat data.

Box – Recent international trade tensions

The weakening of international trade has been accompanied by protectionist announcements and measures, originating in the United States and then spreading to China and Europe. The impact of these measures is not yet clear, but there is broad consensus that the risks of a trade war are high. This box summarises the main actions already implemented and their relation to the structure of the US trade deficit. The box concludes with a number of simulations of the macroeconomic impact of tariff barriers.

Since the beginning of 2018, the US Administration has begun to follow up on the programmes announced during the electoral campaign under the motto "America First" to protect companies exposed to international competition. The Administration's main goal is to reduce imports from China, which is accused of unfair trade practices such as dumping. Temporary exemptions are envisaged for other countries, including the EU, against a background of a spate of announcements suspending or restoring the measures.

The first duties, introduced in January on imports of solar panels and washing machines, were levied under the provisions of Section 201 of the Trade Act (which addressed threats to domestic production).[3] Subsequently, invoking Section 232 of the Trade Expansion Act (concerning imports threatening national security), duties of 25 per cent and 10 per cent, respectively, were levied on steel and aluminium. In July and August, citing Article 301 of the Trade Act, the United States levied duties of 25 per cent on a list of some $50 billion in imported goods from China. At the end of September, 10 per cent duties came into force for additional goods totalling $200 billion. On several occasions the President of the United States has declared that he is ready to impose duties on all Chinese imports. After placing tariffs on US goods in response to those levied on steel and aluminium, the European Union, Canada and Mexico began contentious negotiations. Canada and Mexico have signed a new trade agreement with the United States (the USMCA), which partly modifies NAFTA. However, talks between the European Union and the United States are continuing. China has opted for a harsher response, levying retaliatory duties on imports of US goods comparable to those imposed by the United States.

The issue of the US trade deficit appears to have taken on strategic importance for the United States. Since the beginning of the 2000s, the US trade deficit has amounted to about $500 billion a year, peaking at around $700 billion in the years immediately preceding the global financial crisis (Figure B1).

The US external deficit is entirely accounted for by trade in goods, since the country runs a surplus on trade in services. More specifically, the surplus on services is primarily generated by financial services ($77 billion), intellectual property income ($75 billion) and travel ($70 billion). On the goods side, the deficit mainly originates with consumption goods (-$404 billion) and capital goods (-$108 billion), while the country runs a surplus on trade in vehicles ($122 billion) (Figure B2).

Analysing trade flows by country, the bulk of the deficit on goods is accounted for by China (Figure B3) and is concentrated in trade in machinery and transport equipment (-$212 billion) and other manufactured goods (-$140 billion) (Figure B4).

Given the importance of imports of manufactured goods and transport equipment, it is understandable that most of the measures announced by the US Administration, and the associated retaliatory measures, have therefore focused on these segments, particularly automobiles.

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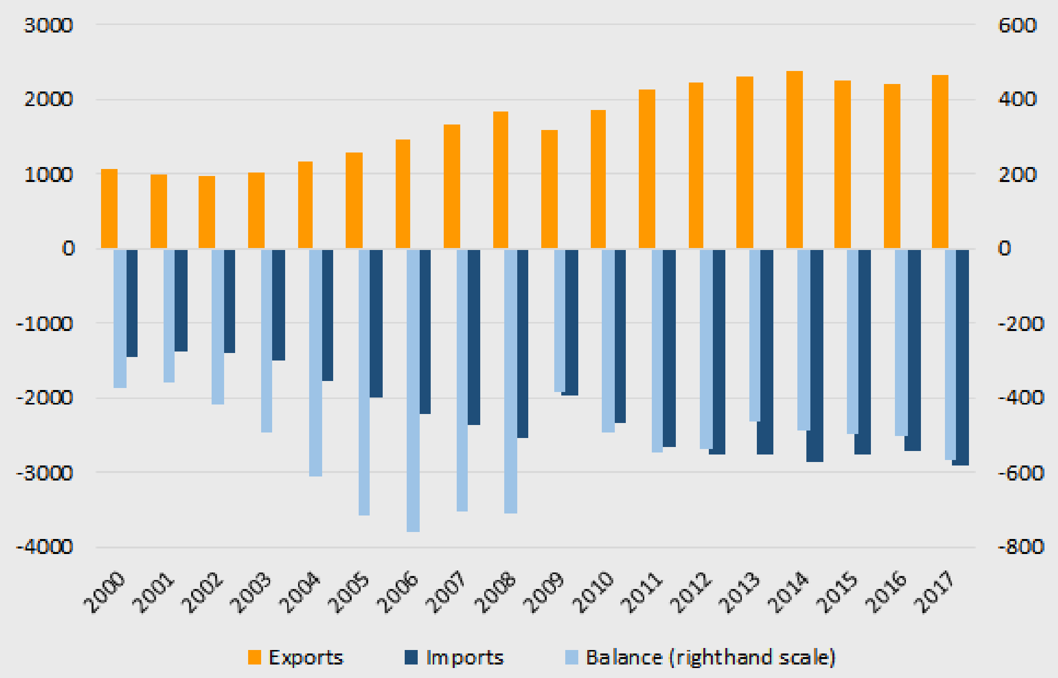
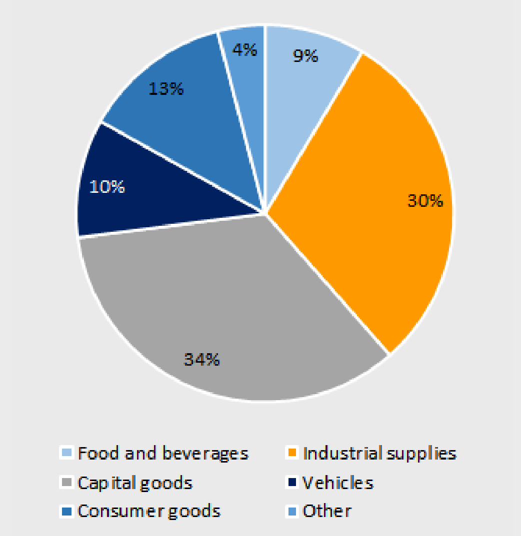
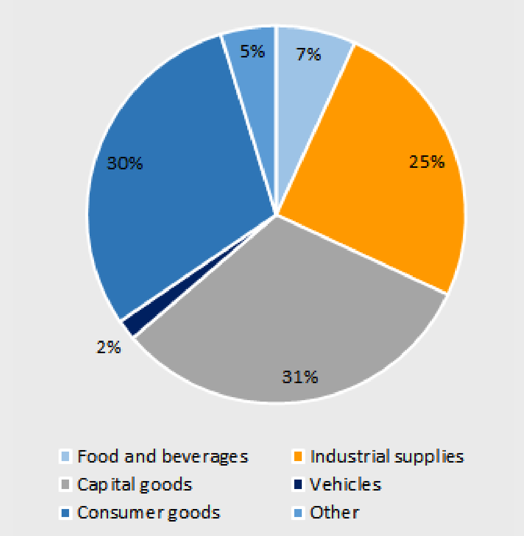
[3] The structure of the tariffs is complex. For example, washing machines face a duty of 20 per cent on the first 1.2 million units imported and 50 per cent on subsequent imports. For solar panels, the duty is 30 per cent for the first year, but only for imports exceeding 2.5 gigawatts. The duties for each product also vary with time, with the levies generally being phased out over the next two years. More information is available on the website of the US Trade Representative.

Figure B1 – United States: trade flows
(billions of dollars)



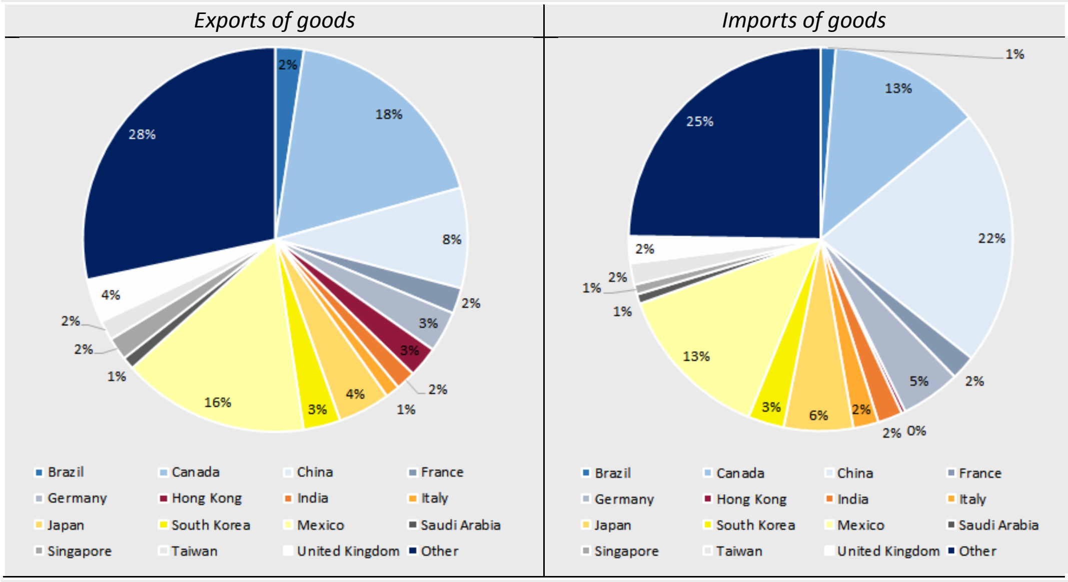
Source: Bureau of Economic Analysis.

Figure B2 – United States: exports and imports of goods by end-use category – 2017
(percentages)

Exports	*Imports*
	

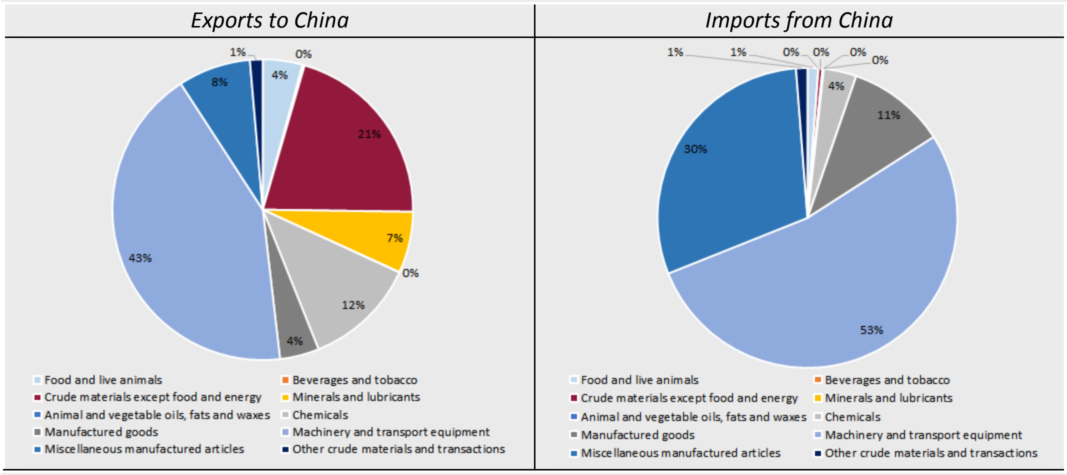
Source: Bureau of Economic Analysis.

Figure B3 – United States: trade flows by country of destination or origin –2017
(percentages)



Source: Bureau of Economic Analysis.

Figure B4 – United States: United States-China trade flows by type of good –2017
(percentages)



Source: Census Bureau.

The consequences of trade barriers for national and global economies depend on several factors.

For a large economy such as the United States, the introduction of a tariff can have a positive impact not only on activity in the protected sectors but also on aggregate social welfare, provided that the damaged countries do not adopt retaliatory measures. Normally, however, commercial partners do react, so the ultimate outcome is a loss of collective welfare, as in a non-cooperative Nash equilibrium. The scale of this loss depends on various circumstances, first and foremost on how much of the increase in cost attributable to the duty is absorbed by the seller and how much is passed through to the final purchaser of the good. A second important factor is the elasticity of demand to price. Even if partial, the pass-through involves an increase in the final price of the imported good. Buyers can respond to the increase by buying more domestic goods (if there is unused production capacity) or by buying more foreign goods from countries on which no duty has been levied (trade diversion) or, finally, by paying the higher price. From the point of view of real income, the three different outcomes involve either an increase, no change and a reduction in domestic incomes respectively. This second effect gives rise to the third effect, concerning the impact of the demand multiplier on domestic output. This factor amplifies or dampens the primary effect due to possible substitution effects. Finally, the impact of tariff barriers will differ depending on the stage of the value chain on which they are imposed. Effectiveness is maximised if duties are levied on the price of a final goods, but gradually declines the further up the value chain they are applied. These transmission channels, formalised in economic theory, are accompanied by potential repercussions on confidence, the quantification of which is extremely uncertain.

At the end of 2016, the IMF and the OECD tried to assess the possible impacts of what were at the time just hypothetical protectionist measures.[4] In the latest *World Economic Outlook*, however, the IMF[5] conducted more detailed simulations. The simulations are cumulative in nature, as they sum the impact of successive shocks. The first layer of simulation, which contains only the measures and counter-measures actually implemented so far, is expanded by adding a layer of measures that have been announced but not deployed, the effects on business confidence and investment and, finally, the impact on financial conditions. The simulations were conducted using the Global Integrated Monetary and Fiscal Model (GIMF), the IMF's general economic equilibrium model.[6] The results of the IMF study indicate that the United States and China would suffer long-term reductions in GDP in all the simulations. In the baseline scenario, which considers solely the measures already adopted, the negative effects are generally limited to one- or two-tenths of a percentage point. The most adverse scenario, on the other hand, involves long-term losses of around 1 percentage point of GDP for the United States and six-tenths of a point for China. In the case of medium-intensity shocks, other countries would enjoy only temporary benefits associated with trade diversion. In the long run, the net effect would be negative. Ultimately, despite sectoral and geographical shifts that would bring benefits to some firms, the trade war scenario would have overall negative long-term consequences for all major economies.

Finally, the assessment of the macroeconomic impacts of protectionism must also be contextualised in the light of the considerable integration of production in the various countries, which requires data on global value chains. Traditional trade accounting does not consider the fact that some phases in the production of a given good can be performed in different countries and, therefore, that product may cross the same border several times during its transformation. The balance of payments does not adjust for these multiple entries, so it records the transaction at each crossing of the border. The OECD and the World Trade Organization (WTO) have developed a methodology that measures trade in terms of value added, avoiding the double counting of transactions and identifying the origin by country of production of the value added for each subset of final goods.[7] Figure B5 reports the shares of value added by country of origin for US imports of Chinese goods. On average, only two thirds of the value added of US imports from China is generated in that country, with a third coming from other countries (including the United States itself). Ultimately, the imposition of duties on China also has repercussions for other countries, in proportion to their share of the value added of Chinese exports. In conclusion, trade restrictions lead to generalised welfare losses, both for countries that protect themselves with barriers and for their trade partners. The protected national industries could gain a temporary advantage, but in the long term they would also be affected by the general macroeconomic weakening of economic activity.

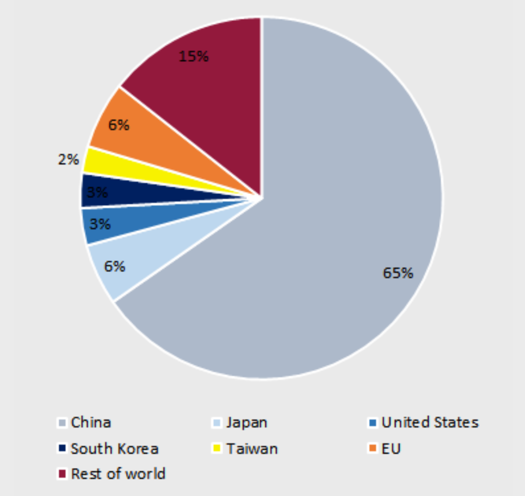
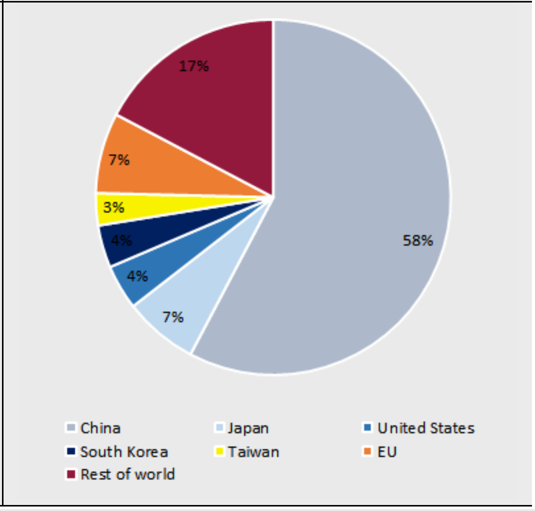
[4] IMF (2016) "Tariff Scenarios", *World Economic Outlook* – October 2016. OECD "The impact of changes in global trade costs", *Economic Outlook* – November 2016.

[5] IMF (2018) "Challenges to steady growth", *World Economic Outlook*, October 2018.

[6] For more information, see Laxton D. et al. (2010) "The Global Integrated Monetary and Fiscal Model (GIMF) – Theoretical Structure", Working Paper No. 10/34.

[7] See OECD-WTO (2012) "Trade in Value-Added: Concepts, Methodologies and Challenges".

Figure B5 – United States: origin of value added of US imports from China –2011
(percentages)

Total imports	*Imports of manufactured goods*
	

Source: OCSE, Trade in value added database