Summary[*]

International economic conditions continue to deteriorate, especially in the emerging countries and in the more export-oriented advanced economies. The normal dissipation of the long expansion has been joined by the impact of trade tensions, which have also adversely affected uncertainty and expectations. The slowdown in global economic activity has compressed the prices of raw materials and inflation, to which monetary policies have responded proactively.

According to the latest national accounts estimates, in the first two quarters of the year, Italian GDP increased quarter-on-quarter only slightly. Cyclical conditions have been affected by the weaker impulse of foreign demand and, primarily, by slack domestic demand. The virtual stagnation of consumption, even though sustained by consumer purchasing power, has been accompanied by a moderate recovery in capital accumulation.

The uncertainty of households and firms is high, despite the fact that labour market conditions are favourable overall, especially for permanent employees. The unemployment rate is declining but wage pressures are modest and inflation remains significantly lower than in the rest of the euro area. The weakness of inflation over the last decade has mainly reflected determinants connected with the global context.

The updated estimates produced with the short-term models of the Parliamentary Budget Office (PBO) indicate that in the third quarter GDP continued to expand at the same barely positive pace of the two previous periods. Forecasts for the fourth quarter, which are affected by a greater margin of uncertainty, appear to confirm the slow growth in output.

To summarise, GDP is expected to expand by an average of 0.2 per cent in 2019, marginally higher than in the forecasting exercise recently performed for the endorsement of Government forecasts.

Nevertheless, major downside risks, mainly of an external nature, cloud both the short and medium term. The international economy could weaken further in response to trade tensions, the slowdown of the Chinese economy, Brexit and financial imbalances. In the event of more unfavourable international conditions, the risk aversion of investors would increase rapidly and the scope for global economic policy-makers to intervene could be limited.

[*] *Prepared by the Macroeconomic Analysis Department. Information updated to October 22, 2019.*

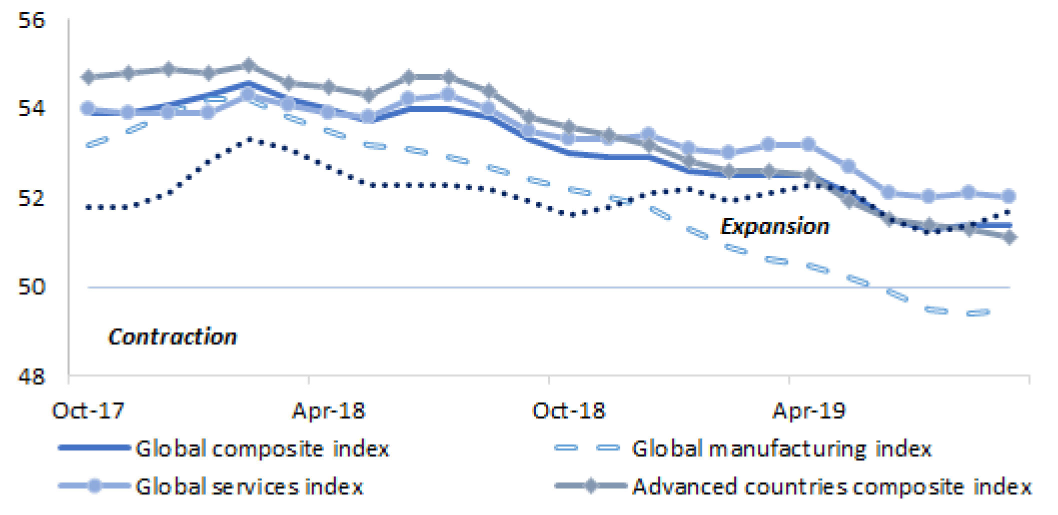
The international environment

The slowdown in the international economy is spreading

According to the most recent economic indicators, the deceleration in world economic activity continues, involving both the emerging and advanced countries. In September, the Markit Purchasing Managers' Index (PMI) for manufacturing fell to its lowest level in the last three years (Figure 1). The global manufacturing sector has been hit especially hard by the slowdown in trade, while services appear to be keeping pace. Although a global recession is not expected in the baseline scenarios, many analysts point to the fragility of the world economy. Countries with scope for fiscal intervention are being urged by the main international institutions to implement expansionary measures, partly with a view to exploiting the accommodative monetary policies in the main currency areas.[2]

In the United States, GDP increased by just 2.0 per cent in the second quarter of this year (annualized quarterly figures), down from 3.1 per cent in the previous period. The sudden contraction signalled by purchasing managers' indices (ISM) in the manufacturing sector in September engendered tensions in the markets, which subsided with the publication of data on the unemployment rate, which stood at 3.5 per cent, the lowest since December 1969. While there are no signs of recession at present, the economy is expected to weaken in the coming quarters, consistent with the expectations of the International Monetary Fund (IMF) for a slowdown in 2020.

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



Source: IHS Markit.
(1) Confidence indicators based on the assessments expressed by corporate purchasing managers. A value of more than 50 indicates an expansion.

[2] See for example the press conference of September 12, 2019 by the President of the ECB and Chapter 1 of the IMF's most recent WEO.

In the euro area, GDP decelerated in the second quarter to 0.2 per cent in quarterly terms, after having expanded at roughly twice that pace in the winter quarter. Developments in the area's two major manufacturing and exporting countries, Germany and Italy, have weighed on the area as a whole, as they posted a slight reduction and marginal expansion in GDP respectively.

The slowdown in international trade is also affecting Japan's economic activity, both directly by impacting exports and indirectly by reducing the need for new investment. The Japanese economy has also been held back by the recent increase in consumption taxes.

To limit the effects of the slowdown and to stimulate nominal growth, the central banks of several emerging countries (Brazil, Russia, Mexico and Turkey) have recently loosened their monetary policies, following the action of the Federal Reserve in August and September.

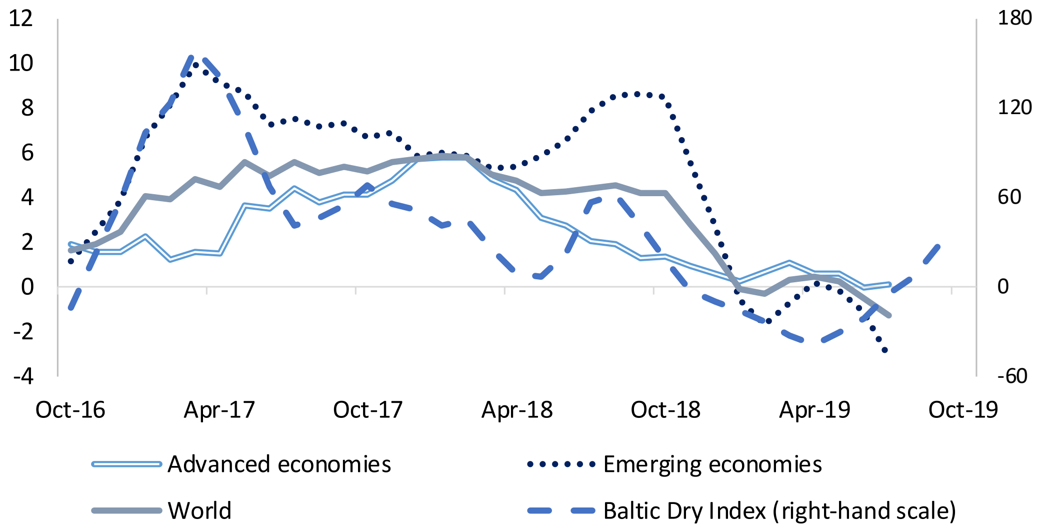
…partly in response to trade policies

The American administration announced further increases in tariffs, which by mid-December should cover almost all products imported from China. The recent measures requested by the United States against the European Union, which were approved by the World Trade Organisation, would not seem to have a strong direct effect, as they affect a basket of goods worth €7.5 billion, less 2 per cent of total European merchandise exports to the United States.

According to data from the Central Planning Bureau (CPB), the change in world trade growth in May-July was virtually nil compared with the previous three months (Figure 2). For 2019 as a whole, the major international institutions forecast a modest increase over the historical average. According to recent IMF simulations,[3] the set of trade policy measures adopted by the United States, together with retaliation by trade partners and indirect effects (on confidence, interest rates for firms and productivity), could reduce output in 2021 by about two percentage points for China and half a point for the United States, Japan and the euro area. In the long run, the reallocation of resources and the redirection of trade flows would mitigate the ultimate loss, especially for China.

[3] For more details, see the scenario described in Box 1.2 of the October 2019 WEO.

Figure 2 – Growth rate of imports and index of maritime freight costs
(annual percentage change in 3-month moving average)



Source: based on CPB and Thomson Reuters Datastream data.

IMF forecasts

For the fifth consecutive time, the IMF has revised its forecasts for the global economy downwards (Table 1). The growth of world GDP in 2019, which was forecast at 3.2 per cent in July (in July last year it was 3.9 per cent), is now projected at 3.0 per cent. The revision of expectations with respect to last July involves the entire world economy for 2019, while it concerns the emerging economies in 2020. The revision of projections for international trade was especially large, strongly influenced by the tightening of trade restrictions by the US administration. According to the IMF, trade is expected to expand by only 1.1 per cent this year, with an apparent elasticity to economic activity of just 0.37, significantly lower than the historical average.[4]

[4] For more information, see Parliamentary Budget Office (2017), "Report on recent economic developments", July.

Table 1 – IMF forecasts
(percentage changes and differences in percentage points)

	WEO October 2019		Difference with WEO July 2019	
	2019	2020	2019	2020
World output	3,0	3,4	-0,2	-0,1
Advanced economies	*1,7*	*1,7*	*-0,2*	*0,0*
United States	*2,4*	*2,1*	*-0,2*	*0,2*
Euro area	*1,2*	*1,4*	*-0,1*	*-0,2*
Emerging economies	*3,9*	*4,6*	*-0,2*	*-0,1*
World trade	1,1	3,2	-1,4	-0,5

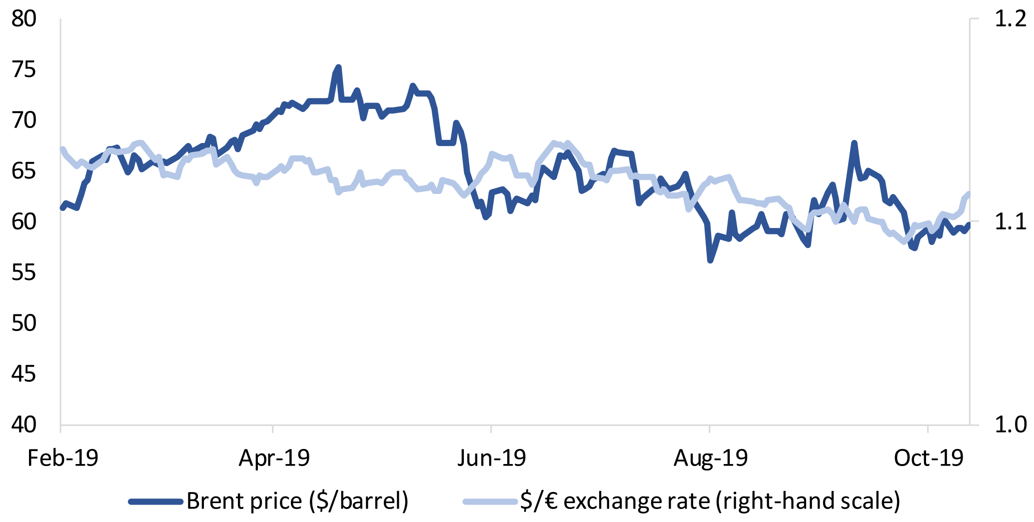
Source: IMF, *World Economic Outlook* (WEO), October 2019.

Oil prices stable despite terrorist attacks …

Since June, the price of oil has fluctuated around $60 a barrel. Conflicting information on developments in supply and demand kept prices flat throughout most of the summer. Prices jumped following the terrorist attacks on Saudi production in mid-September, but quickly subsided once it was established that world supply had been only marginally affected. In fact, the United States reacted quickly by bringing strategic reserves to the market and demand remained weak in reflection of economic conditions. The average price of Brent in the first 15 days of October was just under $59 a barrel (Figure 3).

For the first time since May 2017, at the beginning of September the dollar/euro exchange rate fell below 1.10, with the more expansionary monetary policy contributing to the depreciation of the European currency. In mid-September, the Governing Council of the European Central Bank (ECB) decided to cut its deposit rate by 10 basis points and announced the launch of a new asset purchase programme (€20 billion a month, starting November 1) in order to support the financial system and, therefore, the real economy.

Figure 3 – Oil prices and dollar/euro exchange rate

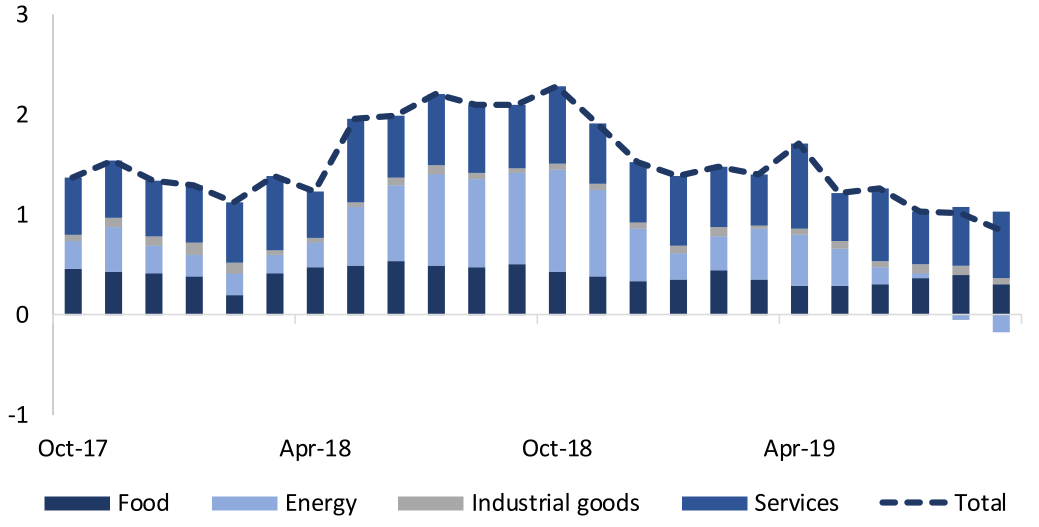


Source: Thomson Reuters Datastream.

European inflation continues to decline

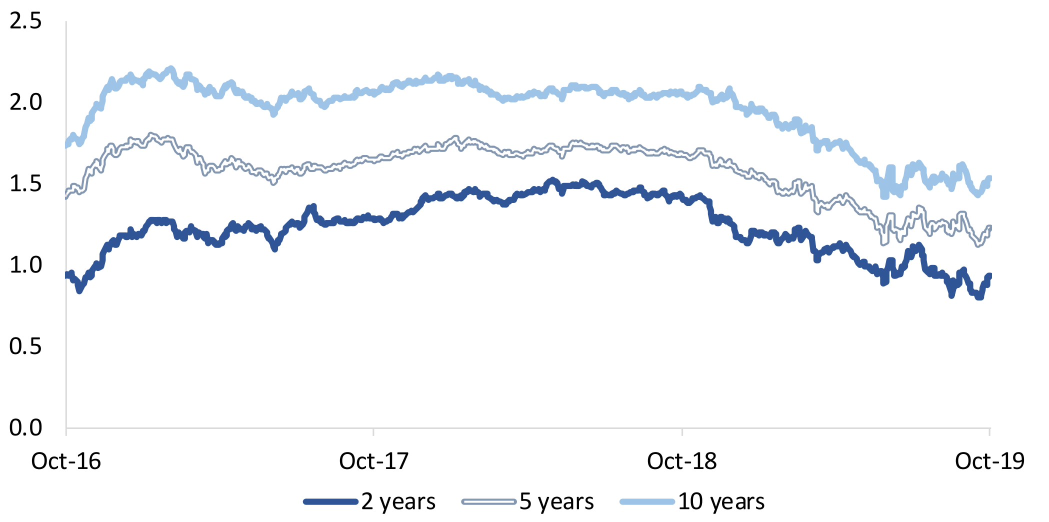
Inflation in the euro area continues to decline, falling below 1 per cent in September (0.8 per cent; Figure 4), as had not happened since the end of 2016. Food, *alcohol* and tobacco showed increases just below the ECB's target, while energy products are creating strong downward pressure on the overall price index. Core inflation remains low, at around 1.0 per cent. The ECB, in initiating a new asset purchase programme, reiterated that its current interest rate policy will be maintained for a considerable period, also in consideration of the fact that expectations are clearly below the monetary policy target even at the 10-year horizon (Figure 5).

Figure 4 – Inflation in the euro area
(percentage year-on-year change and contributions)



Source: based on Eurostat data.

Figure 5 – Inflation expectations implicit in inflation swaps
(percentages)



Source: Thomson Reuters Datastream.

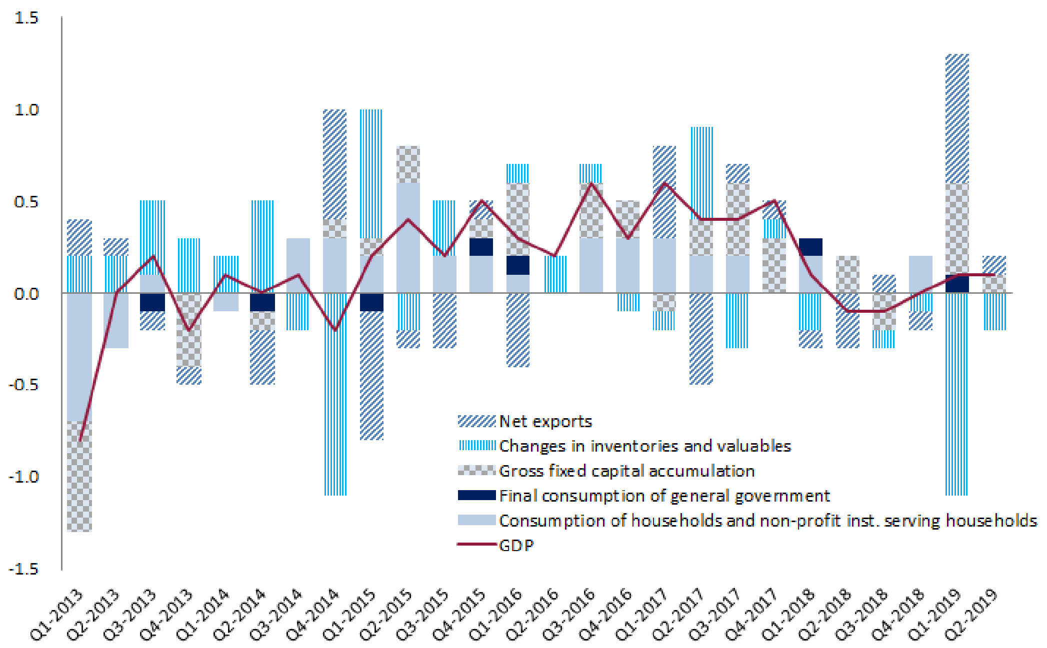
The Italian economy

Economic activity expands slowly

According to quarterly accounts published by Istat on October 4, 2019, consistent with the annual accounts released on September 23, Italy's GDP shrank between the spring and summer of last year, before stabilising towards the end of 2018. In the first two quarters of this year, economic activity began to expand again, albeit moderately (0.1 per cent on a quarterly basis in both periods). This trend, which is slightly better than that delineated in the previous release, is reflected in a slightly positive trend in GDP in the second quarter (0.1 per cent, from -0.1 in the previous accounts); growth already achieved in 2019 also improved to 0.1 per cent from the previous zero.

On the supply side, the quarter-on-quarter increase in value added in services in the second quarter (0.3 per cent) was offset by decreases in agriculture and in industry (equal to -1.3 and -0.5 per cent respectively). As regards the components of demand, the growth in gross fixed capital accumulation (0.4 per cent on the previous period) was accompanied by a barely positive change in final domestic consumption (0.1 per cent), while exports and imports recorded more substantial increases (1.2 per cent and 0.9 per cent respectively). The change in inventories subtracted 0.2 percentage points to growth, after the very significant negative contribution in the winter (-1.1 percentage points; Figure 6).

Figure 6 – GDP growth and contributions of the components of demand
(percentage change on previous period and contribution in percentage points)



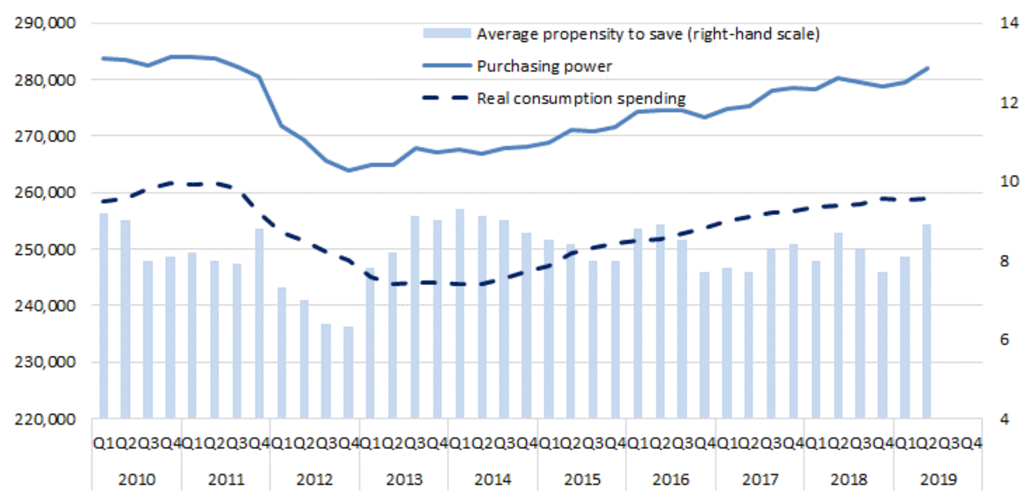
Source: based on Istat data.

Private consumption stagnates...

The weakness in private consumption expenditure that characterised much of 2018 continued in the first half of this year. In the second quarter, consumer spending increased only slightly on the previous quarter (0.1 per cent), reflecting an expansion in spending on services and non-durable goods, which were offset by decreases in purchases of durables and, above all, semi-durable goods. Household purchasing power increased appreciably (0.9 per cent compared with the first quarter of 2019), while the weakness of consumption produced a further increase in the propensity to save (to 8.9 per cent of disposable income; Figure 7).

The caution in spending plans in the spring was associated with a deterioration on household confidence. However, the most recent data for the third quarter point to a recovery in the overall index, especially on the components on the general economic situation and personal financial conditions. The future outlook for consumption is oriented toward a cautious optimism, not only due to the improvement of the climate of confidence but also the possibility that the initial effects of support measures for the lowest incomes (Citizenship Income) will begin to emerge.

Figure 7 – Household income, consumption and saving
(millions of euros and percentage shares)



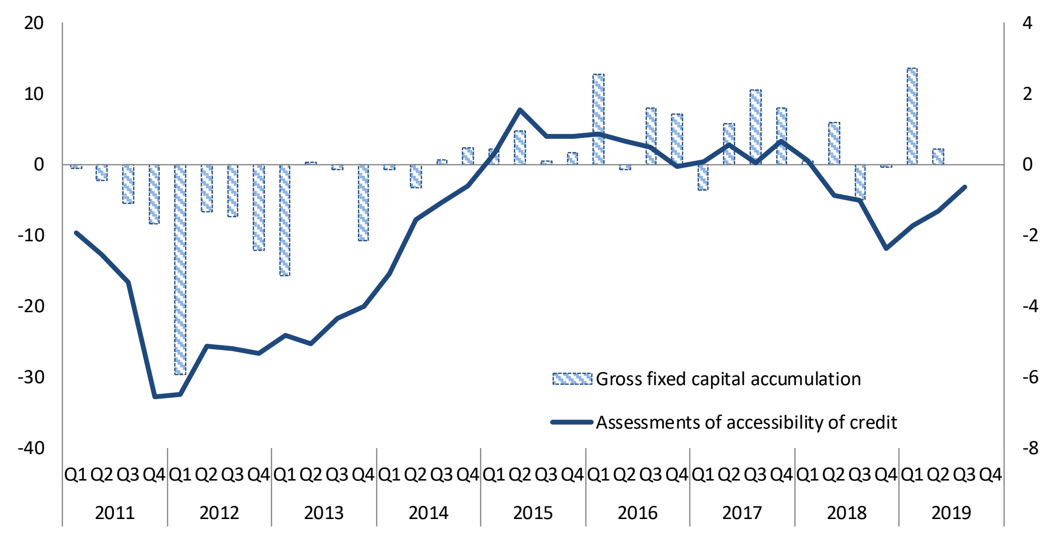
Source: based on Istat data.

...while investment in plant and machinery begins to expand again

In the second quarter capital accumulation expanded moderately quarter-on-quarter (0.4 per cent), after having jumped in the previous quarter. Investment expenditure was mainly driven by purchases of plants, machinery and armaments (2.7 per cent) and, marginally, intellectual property rights (0.1 per cent). Conversely, investment in construction contracted (-1.2 per cent residential property; -1.5 per cent in non-residential buildings), although less than the strong recovery in the winter quarter.

The Bank of Italy's August-September survey on inflation and growth expectations points to a moderate expansion of investment plans for the current year and an improvement in assessments of investment conditions. In the second quarter, the investment rate (i.e. the ratio between gross fixed capital accumulation and value added at basic prices) was virtually unchanged on January-March (21.6 per cent, compared with the previous 21.5 per cent). According to the Istat survey of manufacturing firms, lending conditions eased slightly in the summer quarter (Figure 8), mainly for medium-large firms. Favourable signals emerge from the data on lending volumes and rates applied to firms, although with some signs of greater caution on the part of the banks in their lending to small businesses. By contrast, mortgage lending to households remains sound, thanks in part to historically low interest rates. The harmonised survey of credit institutions conducted by the Bank of Italy in the second quarter indicates the continuation of growth in aggregate demand for credit and a slight tightening of lending criteria.

Figure 8 – Change in gross fixed investment and assessments of credit conditions
(percentage change on previous period and percentage balance)



Source: based on Istat data.

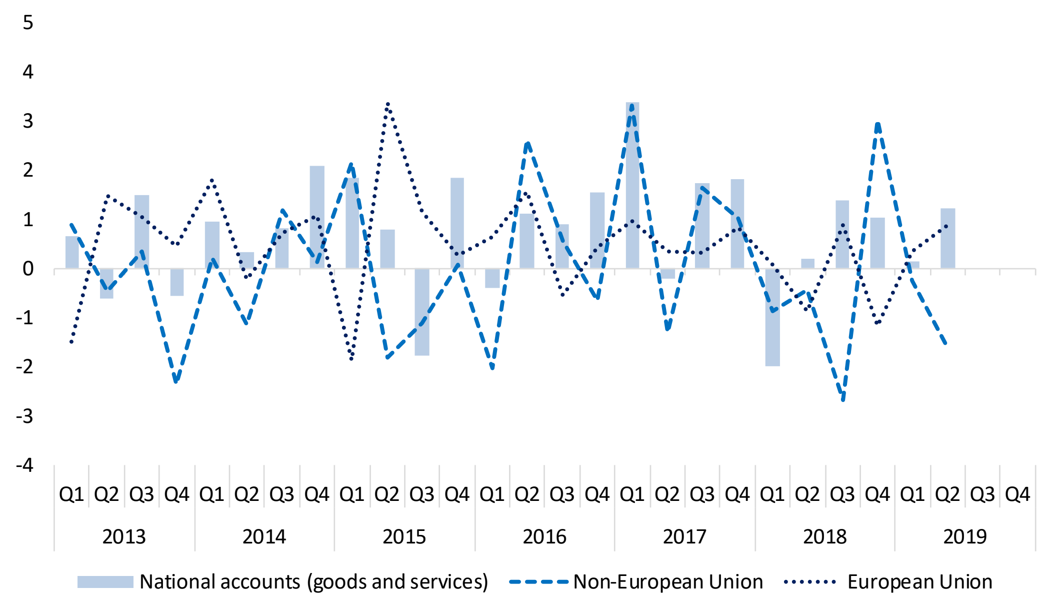
Foreign trade accelerates despite the weakness of global trade

In the second quarter of the year, foreign sales continued the growth that began in the spring of 2018, despite the weakening of global trade: the moderate growth of exports in the winter compared with the previous period was followed by a sharp acceleration in April-June (1.2 per cent; Figure 9).

With regard to export markets, monthly merchandise data indicate that the volume of sales outside the European Union was particularly volatile, with a weakening in the second quarter despite the expansion in nominal terms. Sales within the European Union, which were less erratic, continued the moderate growth under way since the end of 2018. Information drawn from Istat surveys among exporters of manufactured goods delineates an uncertain picture: the September survey, referring to the third quarter, reports a deterioration in expectations for foreign orders compared with April June, while expectations for turnover in international markets have partially reversed the decline registered in the second quarter.

The good performance of exports in the second quarter was accompanied by a recovery in imports (0.9 per cent in April-June compared with the first quarter of 2019), driven in part by the growth in investment in plant and machinery. The larger increase in exports, however, led to a slightly positive contribution to the growth of net foreign demand (0.1 percentage points).

Figure 9 – Change in exports (total and by geographical area) (1)
(percentage change on previous period)



Source: based on Istat data.
(1 The histograms represent changes on the previous period in the chain-linked values of total exports drawn from the national accounts. The lines show changes on the previous period in the volume of exports of internationally traded goods, seasonally adjusted by the PBO.

The latest economic indicators

The latest economic indicators point to very moderate output growth. The erratic performance of industrial production in the first two quarters of 2019 (with the increase in January-March almost entirely offset by the decline in the spring quarter) was followed by a further decline in July (-0.7 per cent) and a modest recovery in August (0.3 per cent). PBO estimates indicate that industrial activity was almost unchanged on average in the third quarter. Over the same period, the diffusion index fell to 51.1, although just over half of the sub-sectors were expanding.

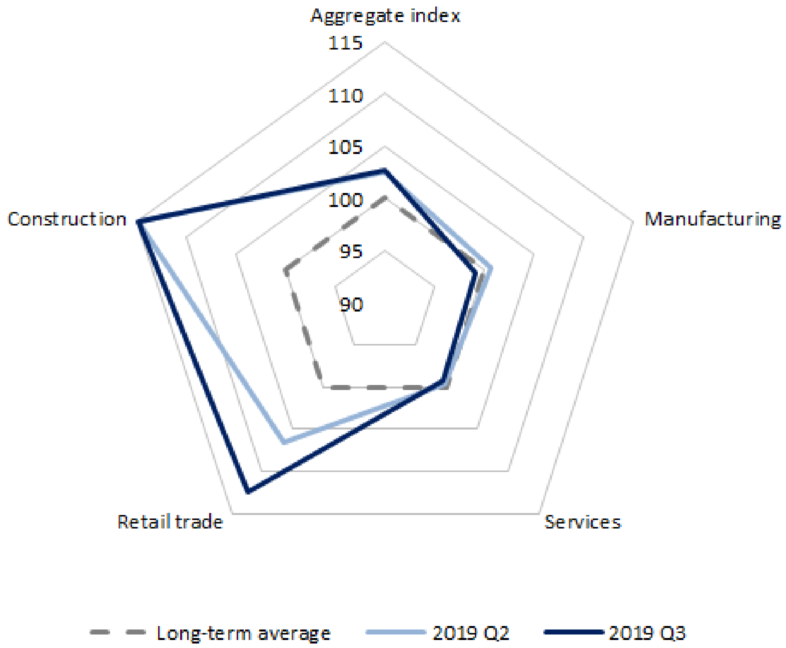
Qualitative indicators show developments varying between sectors: in manufacturing, the PMI decreased in the third quarter to 48.3, about one point below the April-June average. The Istat index of business confidence in industry also fell by around one and a half points in the summer, reflecting the gradual deterioration in assessments of orders.

In the first seven months of the year, output in construction increased year-on-year by an average of 3.2 per cent, showing signs of recovery from the stagnation that had characterized 2015-2018. The climate of confidence in the building industry, which in the last three years diverged from that in the other main sectors due to its improvement, was almost unchanged in the third quarter. 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 remain relatively positive, although inclined towards greater prudence.

Activities in the services industry increased in the second quarter of the year, especially for professional services. Growth was more moderate in retail trade and transportation (0.2 per cent), in line with the essential stagnation of private consumption. Recent qualitative indicators suggest a moderately favourable outlook for distribution. The confidence index for the market services sector fell slightly in the third quarter, while that for retail trade recovered strongly. The PMI indicator for services improved over the summer months compared with the second quarter.

For all sectors, the composite index of business confidence, obtained as the weighted average of sectoral indices, was essentially unchanged in July-September compared with the second quarter (Figure 10). The decline in the indices for industry and market services was offset by the rebound in that for retail trade (there were no significant differences for construction).

Figure 10– Confidence in productive sectors (1)
(index; average January 1998 – September 2019=100)

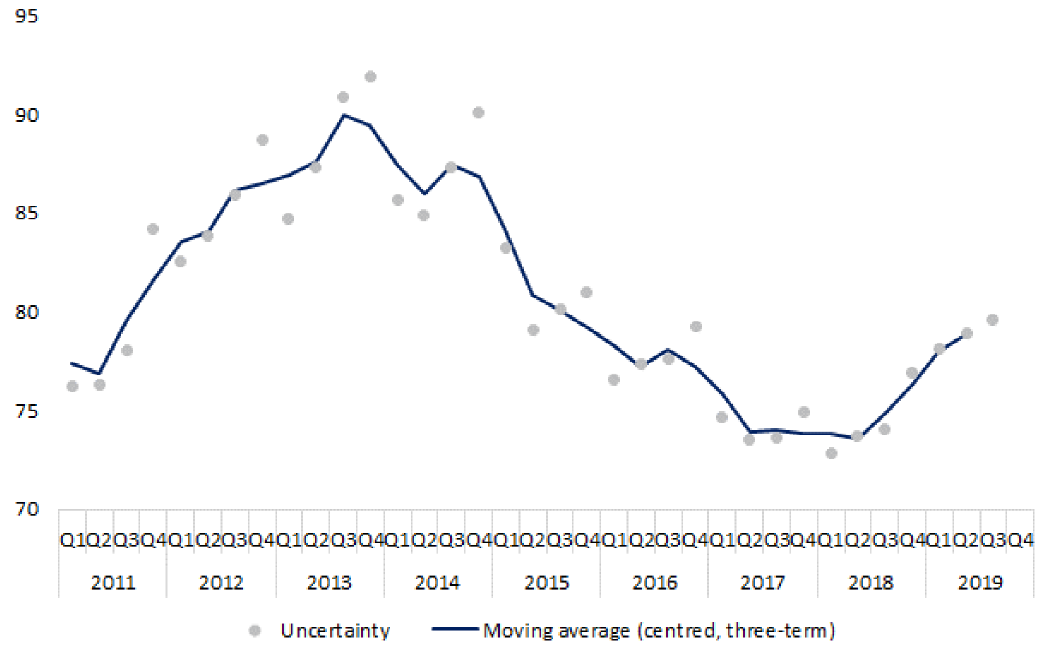


Source: based on European Commission and Istat data.
(1) The aggregate confidence indicator is constructed by applying the weights used by Istat to produce the Istat Economic Sentiment Indicator (IESI) to the time series (standardised) of sectoral confidence indicators of the European Commission.

The uncertainty of households and firms continues to rise. The PBO indicator, although remaining below the highs registered in 2013-2014 in the third quarter of the year, began to deteriorate from the end of 2018 (Figure 11), mainly reflecting the sub-components of the index connected with services and manufacturing.

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 well below zero at a value (-0.39) close to the minimum reached in June; in the same month the Istat leading indicator continued its decline, which has been under way since the end of 2017.

Figure 11– Indicator of uncertainty
(index; 1993 Q1=100)

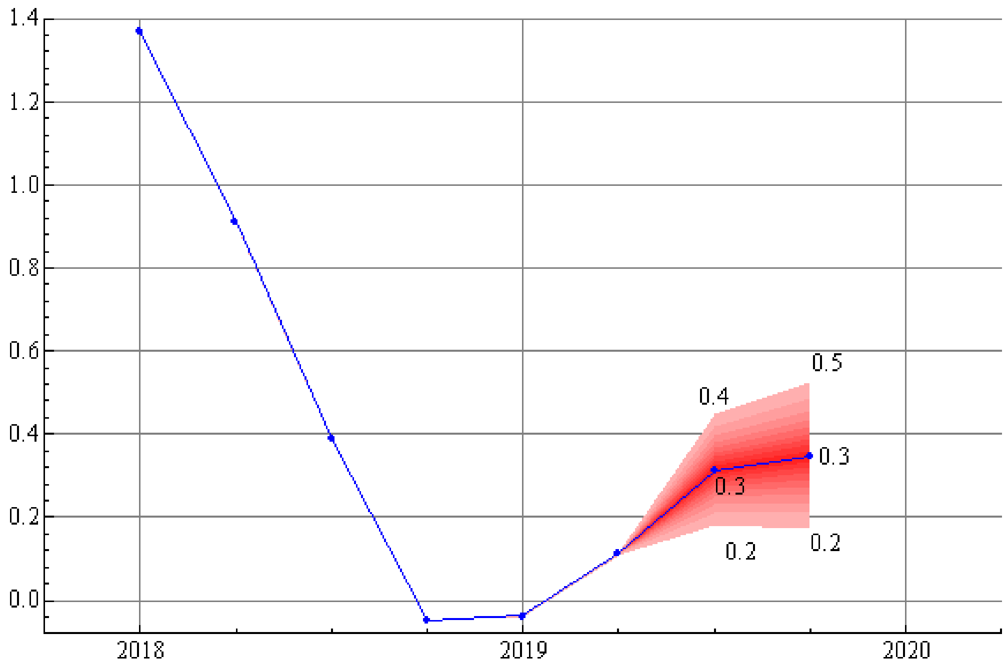


Source: based on Istat data.

Short-term forecasts

The short-term models of the PBO suggest that economic activity in the second half of the year will continue to expand at the moderate pace seen in the first half. In the third quarter, GDP is estimated to have increased by 0.1 per cent on the previous quarter (0.3 per cent year-on-year; Figure 12) within a confidence band of between -0.1 and 0.2 per cent. The weakness of industrial production in the summer prompts caution in forecasts for developments in the manufacturing system, whose fragility could also affect other sectors of the economy. However, the first expansionary effects of the Citizenship Income may have emerged in the summer. Weak economic performance is expected for the final part of the year as well (with quarter-on-quarter GDP growth of 0.1 per cent, for the fourth quarter in a row), albeit with a broader margin of uncertainty. This would produce an increase in GDP for 2019 of 0.2 per cent, marginally above the growth envisaged in the forecasting exercise recently conducted by the PBO for the endorsement of the Government's forecasts in the Update to the 2019 Economic and Financial Document. Expectations for slow growth in the second half of 2019 impact the carry-over effect on next year, which would be very small (0.1 per cent).

Figure 12 – Forecasts for year-on-year GDP growth and confidence intervals (1)



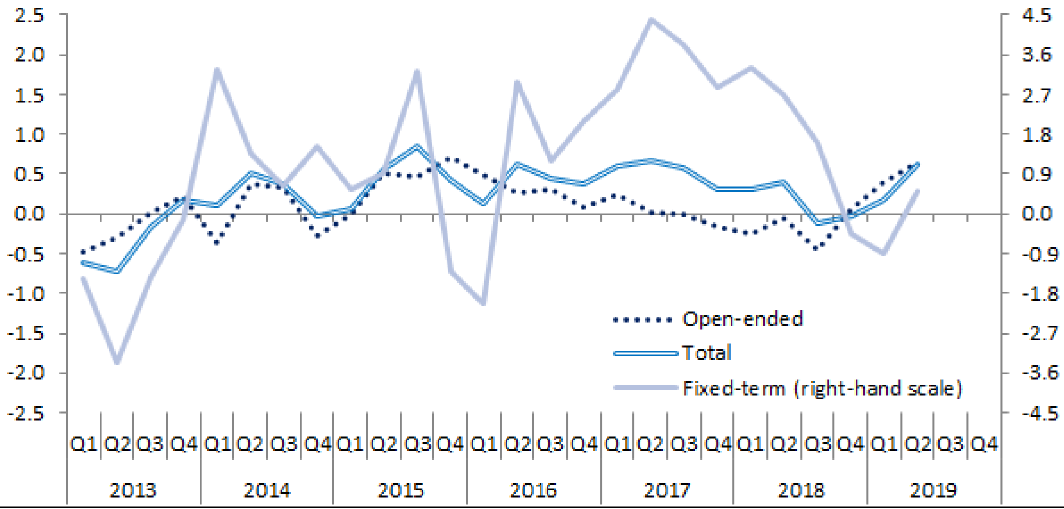
(1) The confidence intervals regard a band of 90 per cent around the central scenario.

Employment growth slows, while the unemployment rate continues to decline

The labour market has continued to improve despite the weakness of economic activity. In the second quarter, labour demand, expressed by the number of payroll employment positions on the basis of existing employment contracts, accelerated (0.4 per cent on the previous quarter, up from 0.2 per cent in the first quarter), driven by the increase in services (0.7 per cent), while industry posted a contraction. Labour inputs, measured in terms of hours worked registered in the national accounts, fell broadly (-0.1 per cent, from 0.4 per cent in the first quarter).

Data from the Labour Force Survey indicate that increase in the number of persons in employment compared with the previous period was buoyed both by open-ended employment (0.7 per cent) and by fixed-term employment (0.5 per cent, after two consecutive declines; Figure 13). These developments were accompanied by an increase in involuntary part-time work (64.8 per cent of total part-time workers, from an average of 64.1 in 2018). Preliminary data for July-August reveal stagnation in employment: the contribution of payroll employment was offset by a reduction in self-employment.

Figure 13 – Change in payroll employment
(percentage change on previous period)

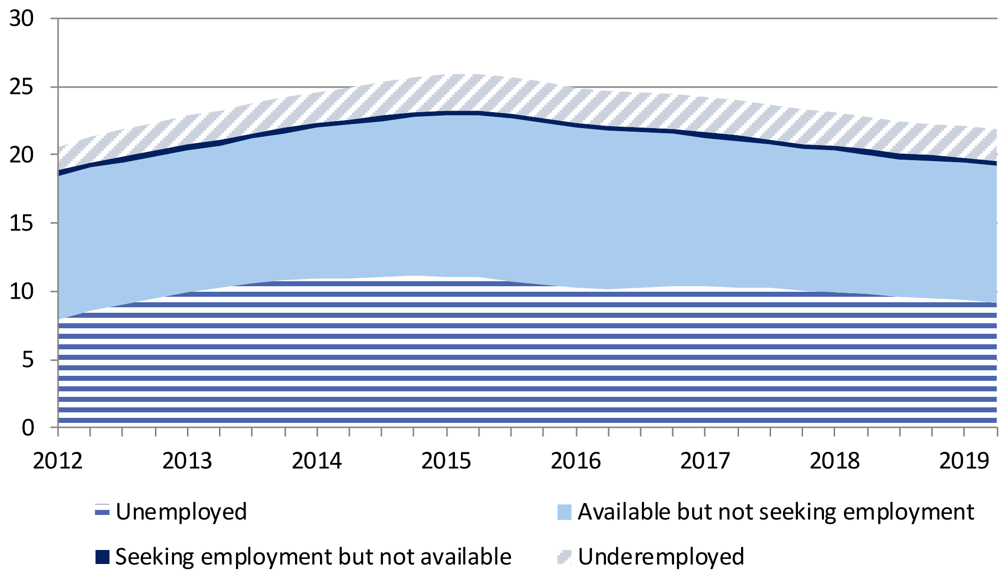


Source: based on Istat data.

The transformation of fixed-term positions into permanent contracts continued. According to INPS administrative data, in January-July, the increase in permanent contracts was driven by the growth in new permanent hires (8.1 per cent compared with the same period of 2018, equal to a gain of 62,000 contracts) and, to an even greater extent, by the transformation of fixed-term contracts (57.5 per cent, or more than 160,000 jobs). The increase in such transformations may have reflected firms' decisions to preserve their labour input by bringing forward transformations of fixed-term contract to permanent positions in the light of the rules introduced with the "Dignity Decree". At the same time, the activation of new fixed-term contracts decreased (-8.7 per cent compared with the same period of 2018), with a similar trend evident in the corresponding terminations (-5.9 per cent).

In the second quarter of 2019, the contraction in the number of persons seeking employment increased (113,000 fewer, almost double the number posted in the first quarter). The result was a significant reduction in the unemployment rate (to 9.9 per cent, 0.4 percentage points lower than in January-March), fostered in part by the concomitant increase in employment. However, the degree of underutilisation of the labour force remains high: the relevant indicator (which in addition to job-seekers considers the potential additional labour force and the underemployed) is still around 22 per cent (Figure 14). According to preliminary information, the unemployment rate is estimated to have fallen further in the summer months (9.6 per cent in July-August).

Figure 14 – Unemployment, underemployment and potential additional labour force (1)
(4-term moving average; percentage shares)



Source: based on Istat data.
(1) Ages 15-74 years.

Wage growth, measured on the basis of actual earnings, subsided considerably in the second quarter (up 0.7 per cent year-on-year, from 1.9 per cent in the first quarter). The increase in hourly compensation of employees (1.1 per cent) more than halved compared with the previous period. In the private sector, the change in actual earnings was markedly greater than that in contractual hourly wages (0.8 per cent year-on-year); developments in public sector earnings went in the opposite direct. According to the most recent information, the growth gap between actual earnings and contractual wages closed in the summer months.

The modest increase in hourly productivity (0.1 per cent in in the second quarter over the previous period) was the result of a slight increase in value added (0.1 per cent) in conjunction with a marginal decline in hours worked. The increase in productivity in the industrial sector (0.4 per cent) is entirely attributable to construction, compared with stagnation in industry excluding construction. By contrast, the deterioration in the services sector continued for the second consecutive quarter. Taking account of developments in compensation of employees and productivity, unit labour costs slowed on a year-on-year basis (1.2 per cent, down from 3.5 per cent in the previous period), reflecting divergent trends in productive sectors: the rapid increase in industry excluding construction (3.4 per cent) was offset by moderation in services and a contraction in construction.

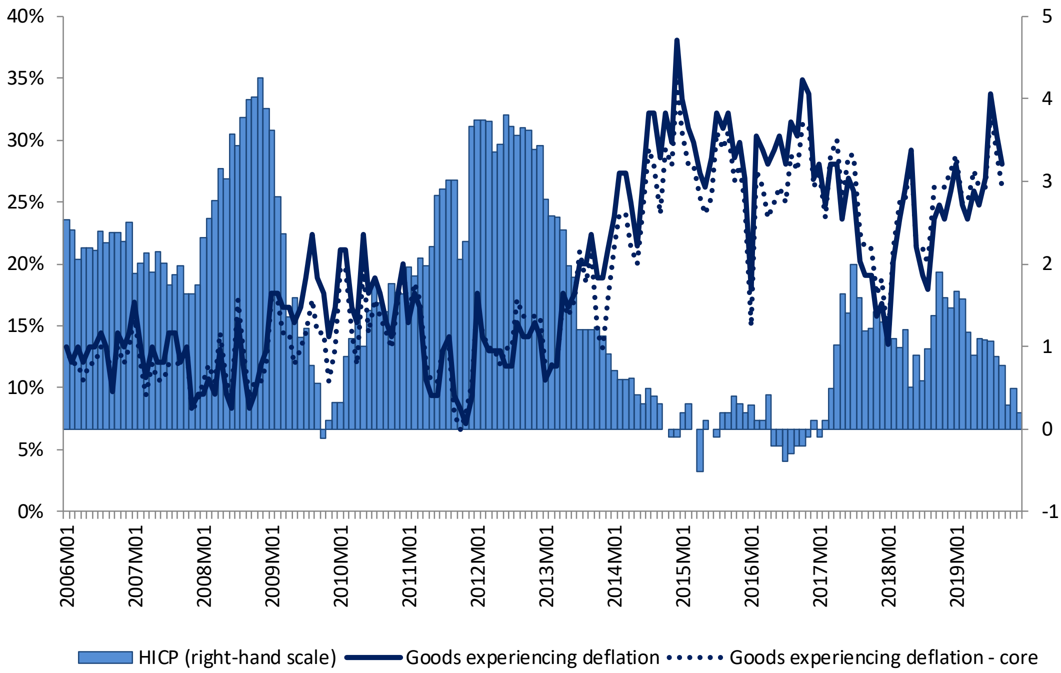
Inflation continues to decline

Inflation in Italy remains low, consistent with the weakness of economic activity. After a moderate revival in the spring, consumer price inflation returned to very low values, significantly below those for the euro area, including core inflation.

In September consumer price inflation measured by the national consumer price index fell to 0.3 per cent (0.2 per cent for the harmonised index), the lowest figure since November 2016 (Figure 15). Core inflation rose slightly, to 0.6 per cent. The decline in inflation is therefore attributable to the prices of unregulated energy products (-2.6 per cent year-on-year), as well as transport services (0.4 per cent year-on-year), reflecting seasonal factors. Overall, the decline in goods prices (-0.2 per cent, from zero the previous year) was associated with an acceleration in services prices (from 0.8 to 0.9 per cent year-on-year). Inflation carry-over for 2019 as a whole amounted to 0.6 per cent, both for the general index and for core inflation.

The weakness of prices spread across expenditure items. Since the summer, the share of goods and services in the harmonized index of consumer prices experiencing price decreases has risen, increasing to an average of 31 per cent in the last three months, compared with 26 per cent in the previous months of the year.

Figure 15 – Proportion of goods and services in the HICP experiencing deflation
(percentage shares and year-on-year changes)



Source: based on Eurostat data.

The inertia of inflation also reflects the absence of pressures in the upstream segment of the production process. As regards external components, import prices fell by 1.8 per cent on an annual basis in July, whereas they had increased until May. Producer prices in industry also experienced a sharp slowdown in August (-1.4 per cent on an annual basis). Excluding the energy component, inflation is positive but low (0.5 per cent compared with the previous year), in line with core consumer inflation. In construction, the prices of residential buildings are falling once again, by 0.4 per cent quarter-on-quarter (from an average of 0.5 per cent in the previous three months). In the services sector, prices rose modestly quarter-on-quarter (0.2 per cent in the second quarter), although the time series does not, however, exceed the levels posted at the end of 2018.

The moderation of prices in Italy over the last decade is the reflection of a combination of different factors: domestic demand factors specific to the Italian economy; external factors (prices of raw materials, oil and exchange rates); and supply factors (the efficiency of production processes and production costs). For a discussion of these issues, and with specific regard to the supply and demand components of the GDP deflator, see the Box at the end of this Report.

The inflation expectations of businesses and households reported in Istat confidence surveys remain cautious. The expectations of firms for prices in the following 12 months are essentially stable (only 4.2 per cent of respondents expect price increases), with modest signals of a recovery only for final consumption goods, while households show some signs of moderate improvement, with the percentage of those expecting price increases rising to 43 per cent in September (from an average of 38 per cent in the previous two months).

Box – A decade of low inflation in Italy: a counterfactual exercise

After the long phase of "great moderation", ended with the global financial crisis of 2008-2009, a period characterised by the weakening of global economic activity, defined by some economists as "secular stagnation",[5] began. Nominal dynamics have also changed over the last decade, as the determinants of inflation have become more difficult to identify and inflation itself has been very low overall. If, following the global crisis, inflation did not subside as expected (missing deflation),[6] the subsequent recovery in international economic conditions was not accompanied by a parallel recovery in nominal magnitudes (missing inflation).[7] A number of arguments have been advanced to justify this price inertia, attributing it to globalization,[8] digitalization or the role of expectations, [9] which also have an impact on the lower responsiveness of prices to developments in the labour market. However, no conclusive theory has emerged.

Low inflation has profoundly affected economic policies. Central banks reacted proactively, overcoming the zero-bound constraint with the introduction of unconventional instruments. Price inertia also poses a challenge to governments, especially for countries with large public debts, for which the evolution of nominal GDP over the medium term is crucial in determining the sustainability of the public finances.

Italy has been affected by the process of price moderation, no less than the other advanced economies. Consumer inflation fell from an annual average of 2.5 per cent in 2000-2008 to 1.3 per cent in the last decade (Table B1). The decline was more pronounced than that observed for the euro area: while in the last ten years the change in the consumption deflator was on average equal to that of the area, in the previous period it had been slightly higher (by 0.2 percentage points per year; Table B1). Analysing the contribution of the main aggregates of the Italian consumer price index (Figure B1), a key role is played by the prices of energy products, which have led the turning points of the time series. To a significant extent, the cost of energy explains the difference between the average values in the two sub-periods (the average annual change fell from 5.0 to 1.5 per cent), but the core component and the domestic segment (especially services, which rose from 2.5 to 1.4 per cent) also had a significant impact.

Observing the phenomenon on the supply side we also find a generalised weakening of the nominal variables. The average annual growth of the GDP deflator decreased in the last decade by 1.4 percentage points compared with the previous period (Figure B2 and Table B1). The decline in the GDP deflator rate of change was clearly more pronounced than in the euro area as a whole (the differential was 0.5 percentage points the year before the crisis but disappeared in the last decade; Table B1). In Italy, the contribution of wages to the growth of the GDP deflator (Figure B2) went from 0.9 per cent on average in 2000-2008 to about half that in the following decade, as did social contributions, which however have little impact (0.2 to 0.1 per cent). Profit margins and indirect taxes were affected by the fiscal policy measures implemented over the last decade, both in terms of increasing VAT[10] and reducing IRAP. In the last two years the rate of change of the GDP deflator

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[5] Rachel, L. and Summers, L.H., (2019) "Public boost and private drag: government policy and the equilibrium real interest rate in advanced economies" *BPEA Conference Draft, Spring*.

[6] For the United States, see Hall, R. E. (2011). "The long slump" *American Economic Review*, 101(2):431–69 and for the other advanced countries see Friedrich, C. (2016) "Global inflation dynamics in the post-crisis period: What explains the puzzles?" *Economics Letters*, 142(2):31–34

[7] See Constancio, V. (2015), "Understanding inflation dynamics and monetary policy", *Speech at the Jackson Hole Economic Policy Symposium* and International Monetary Fund (2016), Chapter 3, "Global disinflation in an era of constrained monetary policy" in *World Economic Outlook*, *October*, pages 121–170.

[8] For more on the impact of external and internal factors on euro-area inflation, see the work and bibliography in Busetti, F., Caivano, M., and Delle Monache, D. (2019), "Domestic and Global Determinants of Inflation: Evidence from Expectile Regression," Working Paper no. 1225, Banca d'Italia, *Economic Research and International Relations Area*.

9 Busetti, F., Delle Monache, D., Gerali, A. and Locarno, A. (2017), "Trust, But Verify. De-Anchoring of Inflation Expectations Under Learning and Heterogeneity", *January 25*, ECB *Working Paper* No. 1994.

[10] On September 17, 2011 the VAT rate was raised by a percentage point from 20 to 21 per cent; on October 1, 2013 it was raised by a further point to 22 per cent.

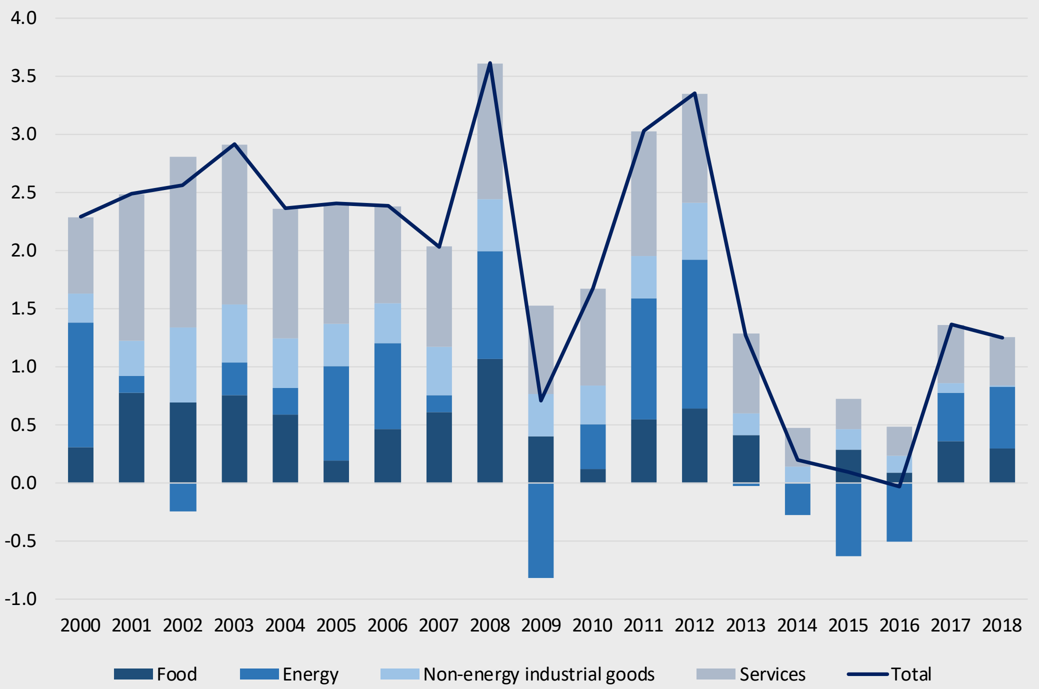
has fallen to a level close to the historical lows experienced in 2010, mainly due to the compression of profits. There is also a trend towards negative differentials with the euro area series: the growth of the GDP deflator was lower than that for the area in both 2017 and 2018, accumulating a gap of 0.7 percentage points over the two years, something that had not happened since the start of the monetary union.

Table B1 – Inflation indicators by sub-period
(average annual percentage changes)

	A 2000-2008	B 2009-2018	B-A Difference between periods
Consumption deflator - Italy	2.5	1.3	-1.2
Consumption deflator - euro area	2.3	1.3	-1.0
GDP deflator - Italy	2.5	1.1	-1.4
GDP deflator - euro area	2.0	1.1	-0.9

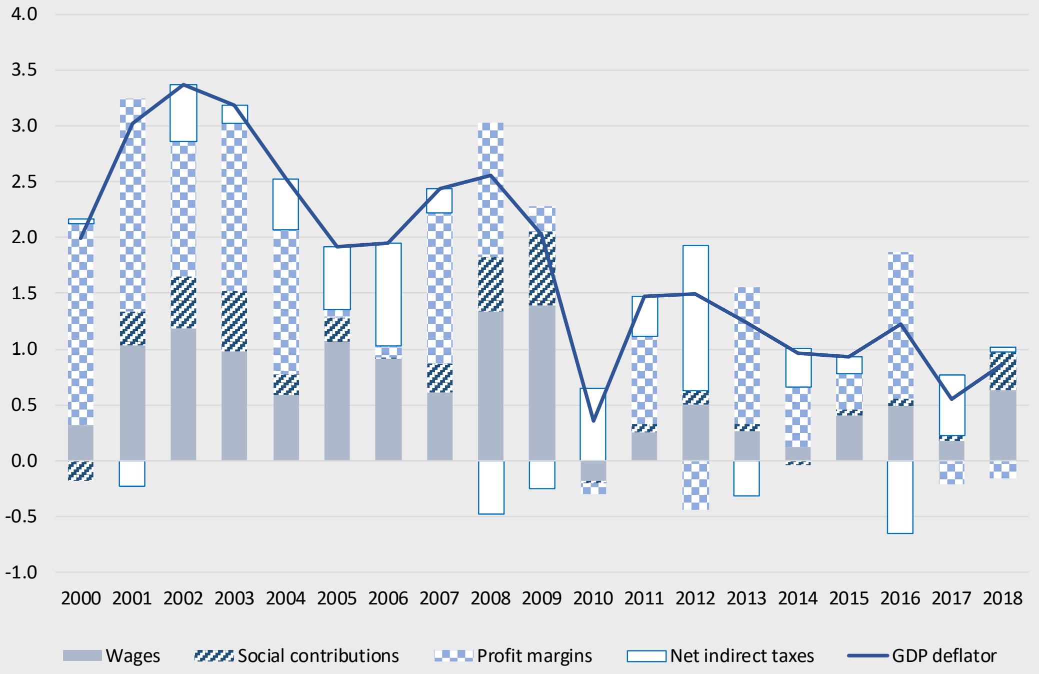
Source: based on Eurostat data.

Figure B1 – Overall consumer price index and contributions of components (1)
(year-on-year percentage changes and contributions to growth)



Source: based on Istat data.
(1) The figure reports the contributions of the sectoral components to the rate of change of the harmonised general consumer price index.

Figure B2 – GDP deflator and cost components
(year-on-year percentage changes and contributions to growth)



Source: based on Istat data.

In assessing the decline in Italian inflation in the 2009-2018 period, three main categories of determinants can be identified. An initial grouping comprises the weakness of domestic demand ("demand-side factors"), which mainly regarded confidence and spending during the double-dip recession. A second category regards the "external factors", which have impacted different markets. These included lower foreign demand and the fall in the prices of energy raw materials, which was transmitted to the behaviour and expectations of households and firms. It is also necessary to consider the role of the exchange rate, although the empirical literature provides evidence of a decrease in the pass-through of foreign prices to domestic prices.[11] Finally, "supply-side factors" should be considered, in which the greater efficiency of production processes has structurally reduced production costs. These factors are linked, for example, to the process of technological innovation and participation in global value chains, as well as to the level of competition to which companies are exposed even in the services sector.

In what follows, we present the findings of an estimation of the impact of the above factors on the change in the Italian GDP deflator, which in the last decade has definitely fallen more than in the euro area. The analysis is based on counterfactual scenarios created using the MeMo-It econometric model.[12] The exercise considers shocks to the main exogenous variables of the model, such that in the 2009-2018 period the series maintain the same average annual rate of change recorded in the previous decade (1999-2008).

As regards internal "demand-side factors", we considered shocks to public spending. In the ten years from 2009 to 2018, we assume an annual increase in intermediate consumption of 4.5 per cent in nominal terms (from the 1.4 per cent actually observed) and an increase of 4.8 per cent in

[11] Ciccarelli and Osbat, *cit.*; Mikolajun I. and Lodge D. (2016), "Advanced economy inflation: the role of global factors", *ECB Working Paper* N. 1948; Eickmeier, S. and Pijnenburg, K. (2013), "The Global Dimension of Inflation – Evidence from Factor Augmented Phillips Curve", *Oxford Bulletin of Economics and Statistics*, Vol.75 no. 1.

[12] A description of the model is given in "The PBO's macroeconomic forecasting tools". The exercise was conducted using a database of the MeMo-It prior to that incorporating the national accounts data released on September 23, 2019.

public investment (compared with the actual 2.3 per cent decline). The "external factors" include the main international exogenous variables of the model. The exercise assumed average growth in world trade of 6.5 per cent (from the actual 3.5 per cent), an appreciation of the dollar/euro exchange rate (1.0 per cent, compared with a depreciation of around two per cent on the basis of observed data), an average increase in the price of oil in dollars of about 15 per cent (compared with the small increase of 1.3 per cent), an increase in the dollar price of international manufactured goods of just under 4.0 per cent (compared with an observed reduction of about 1.0 per cent). The "supply-side factors" are represented by the trend component of total factor productivity, for which an increase of 0.4 per cent is assumed (compared with the 0.1 per cent indicated in the model database).[13]

All other conditions being equal and in the absence of correlations between the individual scenarios, the combined effect of all the shocks considered would produce an increase in the average annual growth of the GDP deflator of 1.2 percentage points (Table B2). It follows that if the factors considered had maintained their pre-crisis dynamics, the annual change in the GDP deflator in 2009-2018 (which in the time series fell by 1.4 per cent; Table R1) would have been similar to that of the previous decade.

Analysing the contribution of the three factors to the developments in the GDP deflator, the exercise indicates that the exogenous external determinants would have dominated the national ones. The "demand-side factors" taken as a whole would explain only 0.2 percentage points. Domestic spending moderately boosted both profit margins and wage growth; on the uses side, the increase in the GDP deflator would be entirely attributable to the domestic demand component (Table B3), especially for consumption, while the impact on the terms of trade would be negligible.

Table B2 – Impact of exogenous factors on the components of the GDP deflator
(difference from baseline scenario; average annual contributions to growth in 2009-2018)

	Compensation of employees	Gross wages	Social contributions	Gross operating income	Value added deflator	Net indirect taxes	GDP deflator
External factors	0.7	0.5	0.2	0.6	1.3	0.1	1.3
Supply-side factors	-0.2	-0.1	0.0	-0.2	-0.3	0.0	-0.4
Demand-side factors	0.1	0.0	0.0	0.1	0.2	0.0	0.2
Total	**0.6**	**0.4**	**0.2**	**0.6**	**1.1**	**0.0**	**1.2**

Source: computations with the MeMo-It econometric model.

Table B3 – Impact of exogenous factors on the demand-side components of GDP deflator
(difference from baseline scenario; average annual contributions to growth in 2009-2018)

	Domestic demand	Private consumption	Terms of trade	Exports	Imports	GDP
External factors	2.1	1.4	-0.7	0.7	1.4	1.3
Supply-side factors	-0.3	-0.2	-0.1	-0.1	0.0	-0.4
Demand-side factors	0.2	0.1	0.0	0.0	0.0	0.2
Total	**1.9**	**1.3**	**-0.8**	**0.6**	**1.4**	**1.2**

Source: computations with the MeMo-It econometric model.

[13] Since the series is calculated using bilateral statistical filters, account was taken of the filter phase by shifting backwards the period for which the pre-crisis average was calculated (1995-04).

The “external factors” accounted for 1.3 percentage points, attributable to different channels. The rise in the prices of international manufactured goods in the counterfactual scenario expands profit margins, driven also by the recovery in international trade. On the other hand, the counterfactual increase in oil prices clearly supports wages (due to the indexing to consumer prices), but at the same time it reduces profit margins. The counterfactual appreciation of the exchange rate reduces profit margins (due to the loss of competitiveness) and at the same time attenuates wage dynamics (through indexation to consumer inflation). The marked increase in incomes attributable to external factors is reflected in the deflators of domestic demand, especially that for household consumption. Conversely, the sharp rise in foreign prices in the counterfactual scenario significantly supports the import deflator and therefore causes a deterioration in the terms of trade.

Finally, the “supply-side factors” have deflationary impacts (by 0.4 percentage points) in the counterfactual scenario attributable to efficiency gains, which are reflected both in profit margins and in compensation of employees. Lower nominal incomes are associated with decreases in the demand deflators, especially that for private consumers. The lower domestic production costs permit more competitive pricing policies abroad, reducing the export deflator.

Finally, a number of caveats of the counterfactual exercise should be mentioned. First, the results are obtained on the basis of shocks to the exogenous variables of the MeMo-It structural model. Accordingly, they are strongly affected by the identification hypotheses specific quantitative tool adopted. Furthermore, the simulations do not take account of price expectations, which are not fully represented in MeMo-It. Those expectation have played a key role in recent years, however.[14] Finally, the exercise proposed here does not directly take account of the Eurosystem’s monetary policy, except through its effects on the exchange rate. However, recent empirical evidence shows that it has had a decisive impact in countering disinflationary tendencies.[15]

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[14] See among others Coibion, O. and Gorodnichenko, Y. (2015), “Is the Phillips curve alive and well after all? Inflation expectations and the missing disinflation”. *American Economic Journal: Macroeconomics*, 7(1):197-232. For an assessment of recent developments in inflation expectations in the euro area, see the Box “Downside risks to inflation expectations according to the Bank of Italy’s analyses”, in Banca d’Italia, *Economic Bulletin*, October 2019.

[15] See the analyses cited in Neri S. and Siviero S. (2019), “The non-standard monetary policy measures of the ECB: motivations, effectiveness and risks,” Occasional Papers no. 486, Banca d’Italia, *Economic Research and International Relations Area*.