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Summary[*]

After the sharp contraction in economic activity in the first half of the year, the easing of social distancing restrictions fuelled a rapid recovery in the summer. The latest forecasts of the International Monetary Fund (IMF) have been revised slightly upwards, but they point to a contraction in global trade of more than ten percentage points in 2020 and are exposed to major downside risks. Oil and stock prices have partially recovered in recent months, from the collapse attributable to the first wave of the pandemic, benefiting from the responsiveness of economic policies. The European Union has launched the Next Generation EU (NGEU) initiative, an innovation for a common response to a global shock. The balance sheet of the European Central Bank has expanded to historically high levels to counter the sudden drop in inflation.

In Italy, economic activity fell by about 18 percentage points overall in the first two quarters of the year, with contractions being registered in all major sectors of the economy. Labour inputs decreased by an even greater extent, although the robust expansion of wage supplementation mechanisms and the temporary moratorium on layoffs helped preserve payroll employment at firms. Signs of a rapid recovery emerged in the third quarter, which PBO models show driving an increase of 12 percentage points in GDP on average, but with an extremely broad range of the estimates. The recovery in recent months is mainly attributable to growth in industry and construction. Conversely, activity in the services sector remained weak, especially for enterprises most closely linked to tourism.

In recent weeks, COVID has begun to spread again in Italy, with the resurgence coming with a slight lag compared to other European countries. The prospects for the Italian economy in the final part of the year are highly dependent on the evolution of the epidemic and the measures taken to fight it. Assuming various alternative epidemiological scenarios and taking account of the statistical relationship with the restrictive measures adopted during the first wave, the effects on economic activity in the fourth quarter would be not negligible. In a less adverse scenario, the pandemic would subtract about three percentage points of GDP, while in the adverse case the effect would be eight points. The impact on the change in GDP for 2020 as a whole would be one or two percentage points, but the repercussions would be greater on the growth rate for 2021, as the fourth quarter has a strong statistical carry-over impact on the following year. The exercise depends heavily on the assumptions formulated, as well as on statistical relationships derived from observations of the first wave of the COVID pandemic. For these reasons, the findings should be interpreted with caution.

[*] *Prepared by the Macroeconomic Analysis Department. Information updated to 21 October 2020.*

The international environment

Economic activity is recovering, but the pandemic is accelerating again

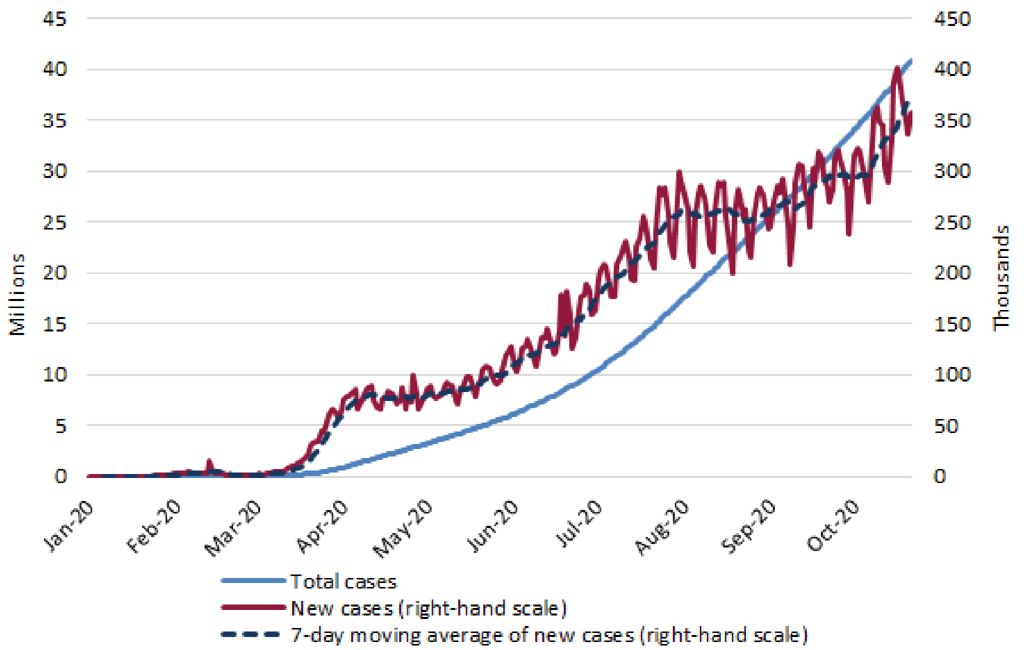
Ten months after the outbreak of the pandemic, the loss of human lives around the world has risen well above 1 million, while the total number of people infected exceeds 40 million (Figure 1). In addition to engendering considerable personal suffering, the crisis has also inflicted heavy losses on the economic system, with scars that could remain evident for a considerable time.

After the sharp contraction in economic activity in the first half of the year, the easing of social distancing measures led to a rebound in production in the summer quarter, although it was not sufficient to recoup the level of output registered at the end of 2019. After plummeted during the months in which the spread of the pandemic was at its greatest, at the beginning of the summer the Purchasing Managers' Index (PMI) returned above 50, the threshold separating contraction and expansion (Figure 2).

After contracting in the first quarter (6.8 per cent year-on-year), domestic output in China returned to growth in the second (3.2 per cent) and then accelerated in the summer (4.9 per cent). The overall change in GDP in the first 9 months of the year was positive (0.7 per cent compared with the same period of the previous year), thanks in particular to the recovery in industrial production (1.2 per cent).

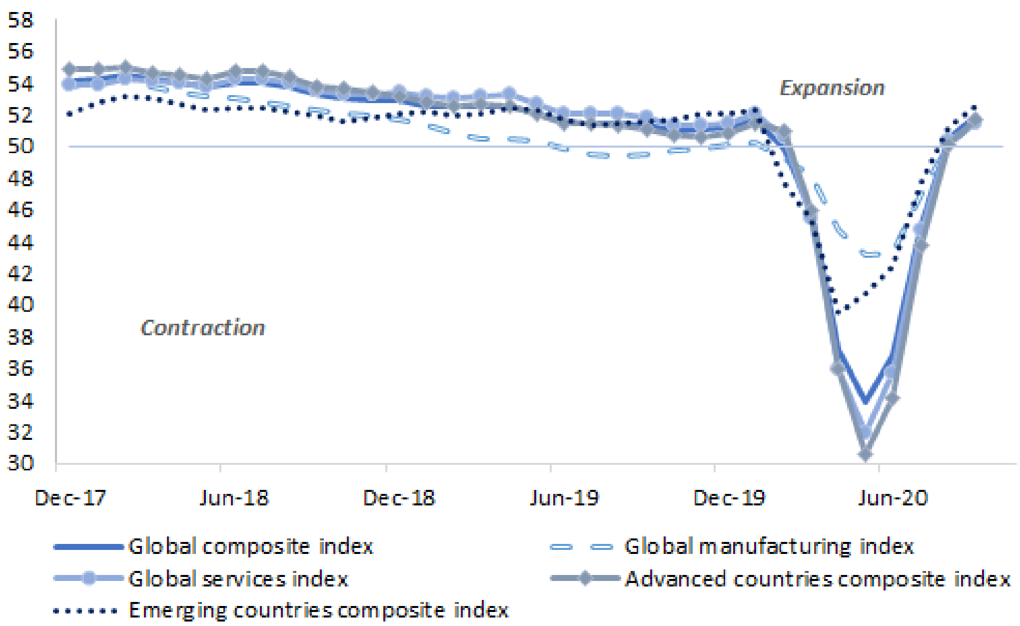
In the United States, where the coronavirus spread with a certain lag, the economy has so far displayed a strong capacity to react, thanks in part to the fiscal stimulus imparted with the CARES Act passed in the spring. Nonetheless, of the over 22 million jobs lost between March and April, only half were recovered in the following 5 months. The unemployment rate jumped to 14.7 per cent in April, before falling back to 7.9 per cent in September. In the euro area, the effects of social distancing measures had a significant effect on GDP in the first quarter (-3.7 per cent) and an even stronger impact in the second (-11.8). Unemployment, on the other hand, only rose to a limited extent (from 7.2 per cent in March to 8.2 per cent in August) thanks to the area's system of social protection, which protects jobs more effectively.

Figure 1 – Spread of COVID-19 around the world



Source: European Centre for Disease Prevention and Control.

Figure 2 – JP Morgan Global PMI (1)
(three-month moving average)



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

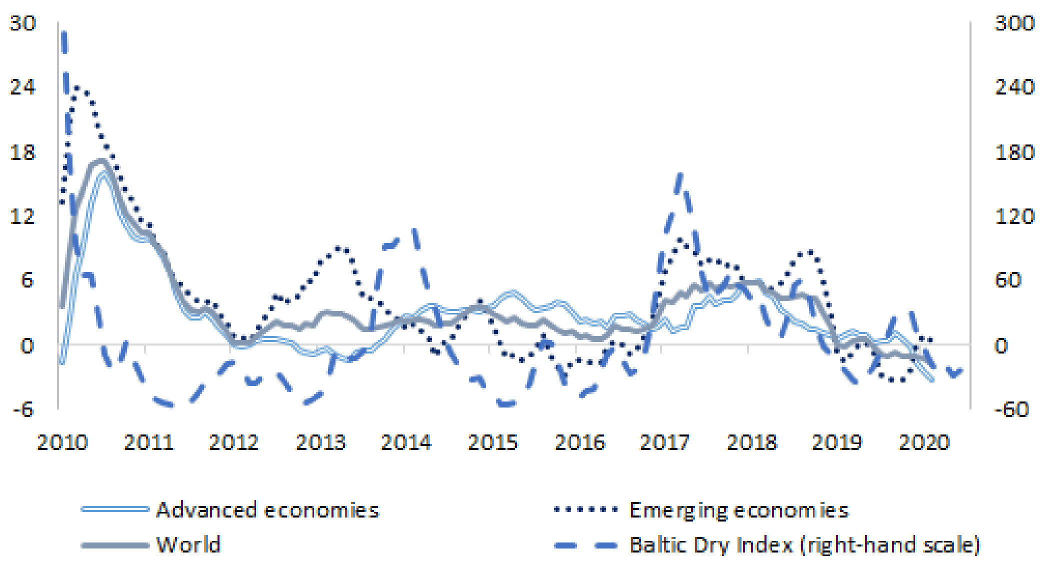
The reaction of equity markets to the pandemic was swifter and more synchronised. At the end of March, most markets had fallen nearly 40 per cent from their level at the start of the year. In the following months, they posted a slow recovery, buoyed by the improvement in confidence and substantial monetary and fiscal support. In mid-October, the Dow Jones returned to its level at the beginning of the year, while the FTSE100 was still down 20 per cent.

Trade resumes, but the accumulated losses are substantial

World trade was severely impacted by the pandemic, due both to the reduction in demand and the restrictions on trade imposed in the emergency. Although trade tensions between China and the United States were eased slightly by agreements reached at the beginning of the year, they still affected trade even further. The US trade deficit vis-à-vis China narrowed (the latter's share of the total US deficit went from 65 to 45 per cent between 2018 and the first half of 2020), but the overall deficit did not change significantly as it worsened in respect of other countries.

According to data from the Central Planning Bureau (CPB), in June and July the world trade index returned to expansion on a monthly basis (7.9 and 4.8 per cent respectively) after 5 months of contraction. Overall, in the first seven months of the year, trade contracted by 8.5 per cent compared with the same period of the previous year. The recovery in trade also had a positive impact on maritime freight rates (Baltic Dry Index), which returned to the levels of November of last year (Figure 3).

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



Source: based on CPB and Refinitiv data.

The International Monetary Fund raises its forecasts for 2020

In its October *Outlook*, the IMF revised its growth expectations for 2020 upwards for the first time. World GDP should contract by 4.4 per cent this year, an improvement of 8 tenths of a point compared with the June scenario. The revision reflects developments in the advanced countries, where the decline is now expected to amount to 5.8 per cent; for the emerging economies, the expected contraction of just over three percentage points has been confirmed. For next year, however, forecasts for the rebound in world GDP growth (to 5.2 per cent) have been lowered slightly. Forecasts for the decline in trade have improved for this year (-10.4 per cent) and, albeit marginally, for 2021 as well (Table 1).

Oil prices remain weak despite production cuts

The pandemic also impacted the oil market, drastically reducing the demand for crude oil. The considerable oversupply reached a peak in April when, due to the near exhaustion of storage capacity, WTI prices fell into unprecedented negative territory. Prices subsequently began to rise thanks to the agreement between the OPEC+ countries on a production cut of almost 10 million barrels per day. Since the beginning of the summer, the price of the European benchmark crude, Brent, has fluctuated between $40 and $45 per barrel (Figure 4).

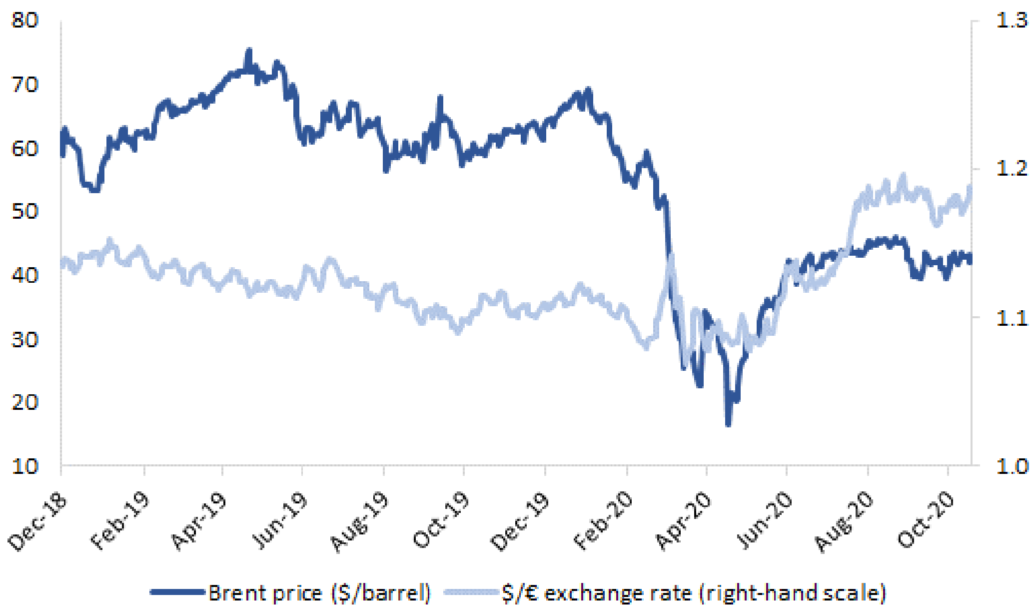
Analysts' assessments of the stronger monetary stimulus in the United States compared with the euro area have affected foreign exchange markets. The euro exchange rate, which had fluctuated around 1.10 against the dollar in the first five months of the year, appreciated by just over 5 per cent between the end of May and the second ten days of October.

Table 1 – IMF forecasts
(percentage change and difference in percentage points)

	WEO October 2020			Difference with WEO update June 2020	
	2019	2020	2021	2020	2021
World GDP	2.8	-4.4	5.2	0.8	-0.2
Advanced economies	*1.7*	*-5.8*	*3.9*	2.3	*-0.9*
United States	*2.2*	*-4.3*	*3.1*	3.7	*-1.4*
Euro area	*1.3*	*-8.3*	*5.2*	1.9	*-0.8*
Emerging economies	*3.7*	*-3.3*	*6.0*	*-0.2*	*0.2*
World trade	1.0	-10.4	8.3	1.5	0.3

Source: IMF, *World Economic Outlook*, October 2020.

Figure 4 – Oil prices and dollar/euro exchange rate



Source: Refinitiv.

European inflation fades despite ultra-expansionary monetary policy

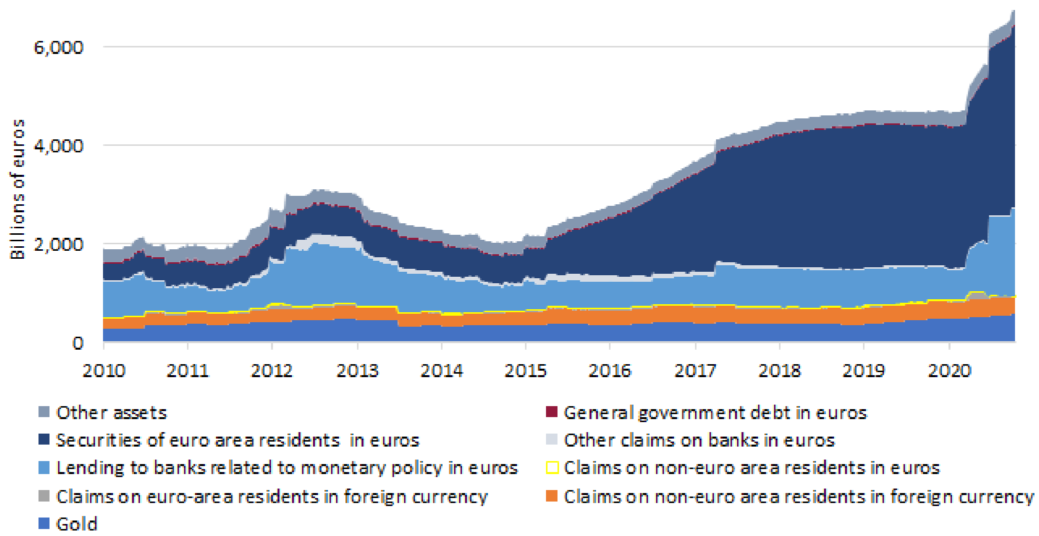
Between the end of 2019 and last February, annual consumer price inflation in the euro area had fluctuated within a range of 1.2-1.4 per cent, in step with developments in core inflation. With the spread of the pandemic, inflation began to decline. On the one hand, social distancing measures prevented the purchase of certain goods, while on the other the steep fall in energy prices created scope for cost savings. In just a few months, inflation first fell to nil (in May) before becoming negative in August and September (-0.3 per cent in the latter month). Core inflation remained close to 1.0 per cent until July, but in the following two months it dropped sharply, falling to 0.2 per cent in September.

Inflation expectations responded quickly to the recession, reaching an extremely low level as early as the end of March (0.3 per cent for those at 2 years). Expectations subsequently began to rise before stabilising somewhat starting in June. In mid-October, inflation expectations were 0.8, 1.2 and 1.5 per cent at 2, 5 and 10 years respectively.

At its meeting on 10 September, the Governing Council of the ECB decided to leave the rates on main refinancing operations, the marginal lending facility and the deposit facility unchanged. In the area of unconventional monetary policy measures, the Pandemic Emergency Purchase Programme (PEPP) is continuing with a total envelope of €1,350 billion. The asset purchase program (APP) also remains active with monthly purchases of €20 billion until the end of the year. The Council also reaffirmed its commitment to reinvest the principal repayments on maturing securities both under the PEPP and the

APP. From the beginning of April to mid-October, the ECB expanded its assets by over €1,500 billion, or around 30 per cent, reaching historic highs (Figure 5).

Figure 5 – Eurosystem consolidated assets
(billions of euros)



Source: ECB.

The Italian economy

The collapse of GDP in the second quarter affected all sectors

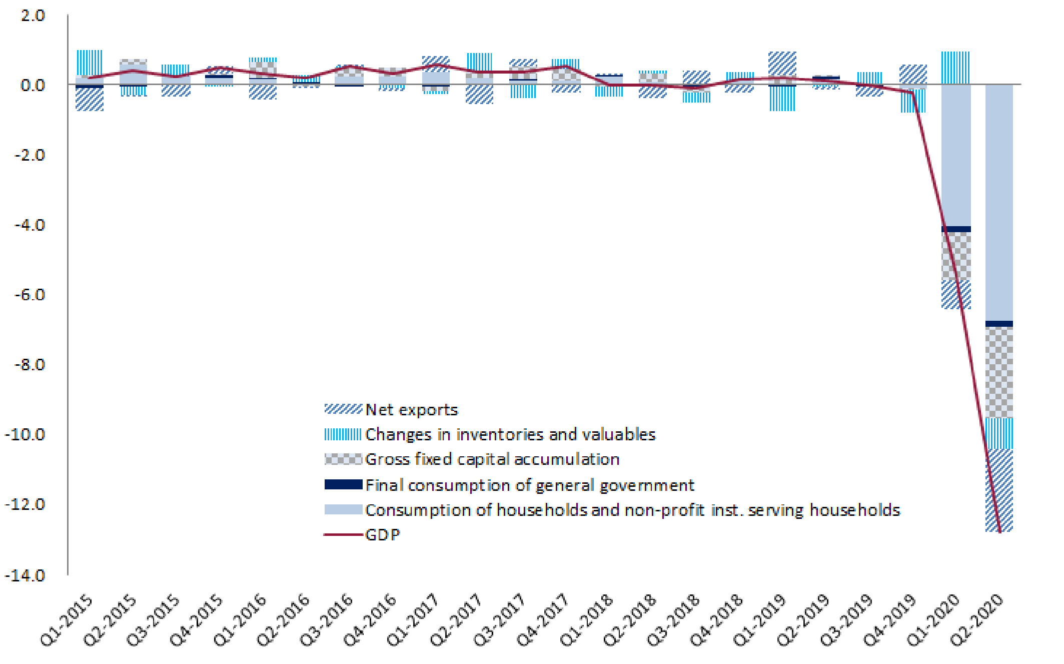
Conditions in the Italian economy, which stagnated overall in 2019, deteriorated rapidly in the first half of this year due to the COVID-19 pandemic. According to the latest quarterly national accounts (published by Istat at the beginning of October and consistent with the annual national accounts released on 22 September), Italy's GDP fell by 13.0 per cent in the second quarter compared with the January-March average and by 18.0 per cent compared with the same period in 2019. The decrease already acquired for 2020 as a whole was 14.8 per cent. Compared with the Istat estimate of 31 August, the changes on the previous period and year-on-year were revised downwards by two and three tenths of a percentage point respectively. The contraction of GDP in Italy in the spring compared with the previous period was more severe than that recorded in Germany (-9.7 per cent) and the euro area (-11.8 per cent), but smaller than that in Spain and France (-17.8 and -13.8 per cent, respectively).

On the supply side, value added contracted sharply in all the main production sectors, with quarter-on-quarter decreases in agriculture (-3.7 per cent), industry (-20.5) and services (-11.3). As regards the components of demand, the contraction in fixed capital accumulation (-16.2 per cent compared with the previous period) was larger than that in final domestic consumption (-8.5 per cent). The effects of the pandemic were especially marked for exports and imports, which fell by 26.4 and 20.6 per cent respectively. The change in inventories and foreign trade subtracted 1.2 and 2.3 percentage points from growth, respectively, while the adverse impact of domestic demand (net of inventories) was much sharper (-9.6 per cent; Figure 6).

The epidemic has dampened household spending, stimulating saving

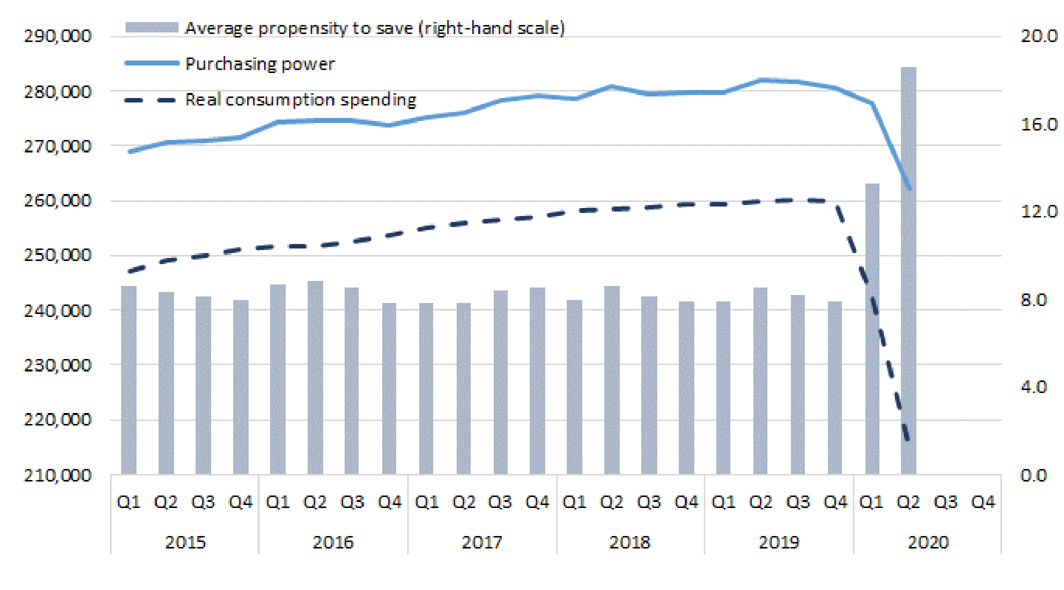
The almost flat profile of quarterly household expenditure in 2019 was followed by a severe contraction in the first half of this year, with spending down more than 17 percentage points compared with the end of 2019. The decline, especially in the second quarter of the year, affected all types of purchases, with durable goods and services being especially hard hit. Disposable income (and household purchasing power) also declined but to a much smaller extent due to the income support measures deployed by the government. Household propensity to save, which was substantially stable at 8.1 per cent of disposable income in 2019, increased markedly in the first half of the year, reaching 18.6 per cent in the second quarter (up from 13.3 per cent in the first quarter; Figure 7). While the increase in the first quarter probably reflected the difficulty in purchasing goods and services due to the closure of non-essential activities, the jump in the following period may also have reflected greater prudence on the part of households with regard to certain types of consumption (such as tourism and recreational activities).

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



Source: Istat.

Figure 7 – Household purchasing power, consumption and saving
(millions of euros, chain-linked values, 2015 and percentage shares)



Source: Istat.

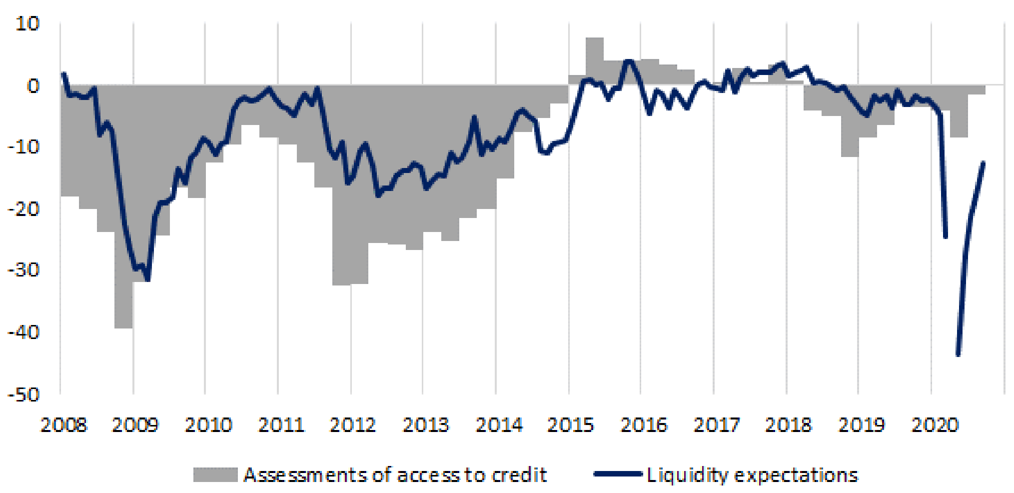
In the third quarter, consumption showed a rapid but partial recovery from the spring lows: according to Confcommercio estimates, in the summer months the level of expenditure was about 10 per cent lower on average than in the same period last year. The change in purchases of services (in particular recreational services, hotels and air transport) is still deeply negative and has only been partially offset by developments in purchases of goods (mainly for personal care, communication and automobiles). After the decline recorded in the spring, the consumer confidence index registered a strong recovery in the third quarter. A breakdown of the findings by current/future outlook and views of the general economic situation/personal financial circumstances highlights how the recovery in the aggregate index is mainly attributable to the improvement in expectations for and assessments of the overall state of the economy.

Conditions for investment are improving, but the drag of uncertainty remains strong

After the contraction registered in the first quarter (-7.7 per cent), capital accumulation plunged by more than 16 per cent between April and June. Developments in the second quarter reflected the contraction in investment in construction (-22.1 per cent for investment in housing and -22.4 per cent for non-residential buildings), which was greater than that in purchases of plant, machinery and armaments (-16.6 per cent). The Bank of Italy's August-September survey on inflation and growth expectations points to an upward revision of firms' investment plans for the second half of this year. According to the Survey on Industrial and Service Firms, however, only one third of firms plan to spend more on investment in 2021 than in 2020.

Unlike other recessions, the accumulation of private capital did not appear to be held back by financial conditions. According to the Istat survey of manufacturing firms, lending conditions eased slightly in the summer quarter (Figure 8). Favourable signals also

Figure 8 – Assessments of credit conditions and liquidity expectations in manufacturing
(difference between percentage shares of positive and negative responses)



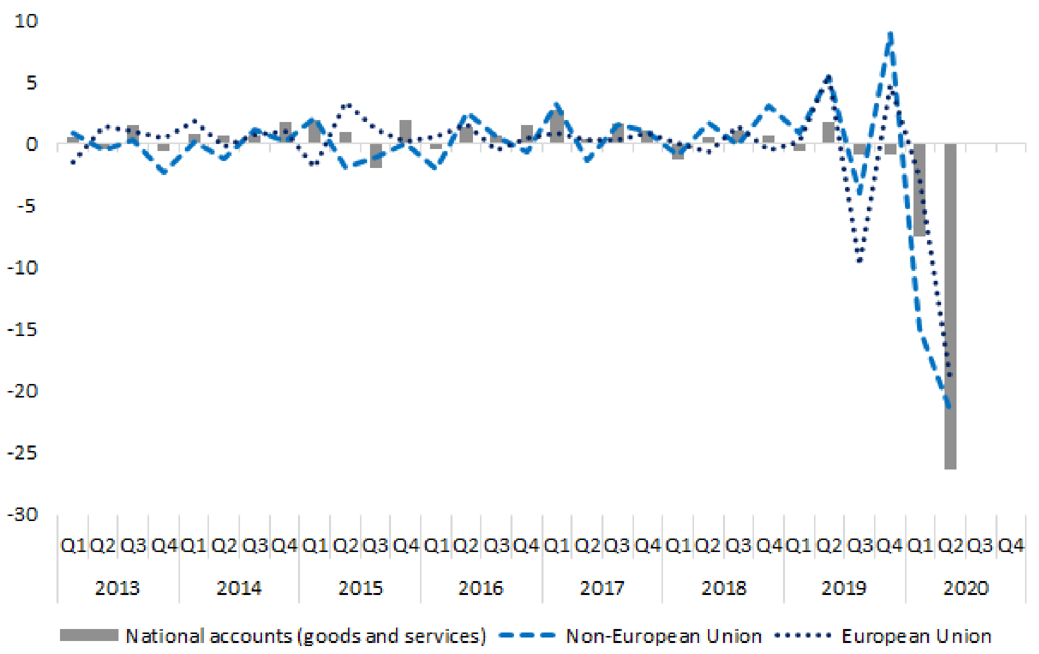
Source: Istat.

emerged from the data on lending volumes and rates applied to firms, facilitated by the expansionary policies of the ECB and by the government's actions to support bank lending. These developments could sustain the recovery of economic activity in the coming quarters, although the picture is clouded by numerous sources of uncertainty (which are also reflected in the PBO indicator discussed later) and fragility. The scope for capital accumulation is also limited by the low level of capacity usage (which according to Istat surveys stood at 63.8 per cent in the second quarter, a sharp decline from the average of 77.0 per cent in 2019).

Foreign trade contracted by about one third in the first half of the year

The slowdown in international trade in the first half of the year had a more than proportional impact on Italian exports: the decrease in the winter (-7.5 per cent) deteriorated further in April-June (-26.4 per cent; Figure 9). With regard to export markets, monthly data on trade in goods indicate that the contraction in the volume of exports was similar for markets in the European Union and those outside the EU.

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



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

The most recent information on foreign trade shows a significant recovery in flows in the summer months. On average in July-August, exports to both EU and non-EU markets increased compared with the second quarter (by 27 per cent for the European Union and 30 per cent for non-EU markets) in both in value and volume terms (obtained by deflating nominal series with producer prices).

Istat surveys of exporters of manufactured goods are positive for the second half of the year: the September survey, regarding the third quarter, reports an improvement in assessments and, above all, expectations for foreign orders compared with April-June. Obstacles to exports are reported as being in sharp decline compared with the previous survey conducted in the spring.

The sharp contraction in foreign sales in the second quarter was accompanied by a marked decline in imports (-20.6 per cent in April-June compared with the first quarter of 2020), which also reflected the weakness of expenditure for investment in plant and machinery. The larger fall in exports, however, meant that net foreign demand made a negative contribution to GDP growth (-2.3 percentage points) in the second quarter.

Economic indicators show a sharp rebound in the summer

The real-time indicators used to assess current conditions presage a recovery in economic activity in the third quarter, which is expected to be pronounced in manufacturing but coloured by greater uncertainty in services. After the collapse registered during the lockdown (20.5 per cent in March and 28.4 per cent in April), industrial production expanded rapidly in May (42.1 per cent) before moderating in the following three months (8.2, 7.4 and 7.7 per cent, respectively). In reflection of these dynamics, the level of activity in August returned to its 2019 average. The PMI for the manufacturing sector remained in expansionary territory in September (at 53.2), consolidating the recovery from the historic low recorded in April (31.1).

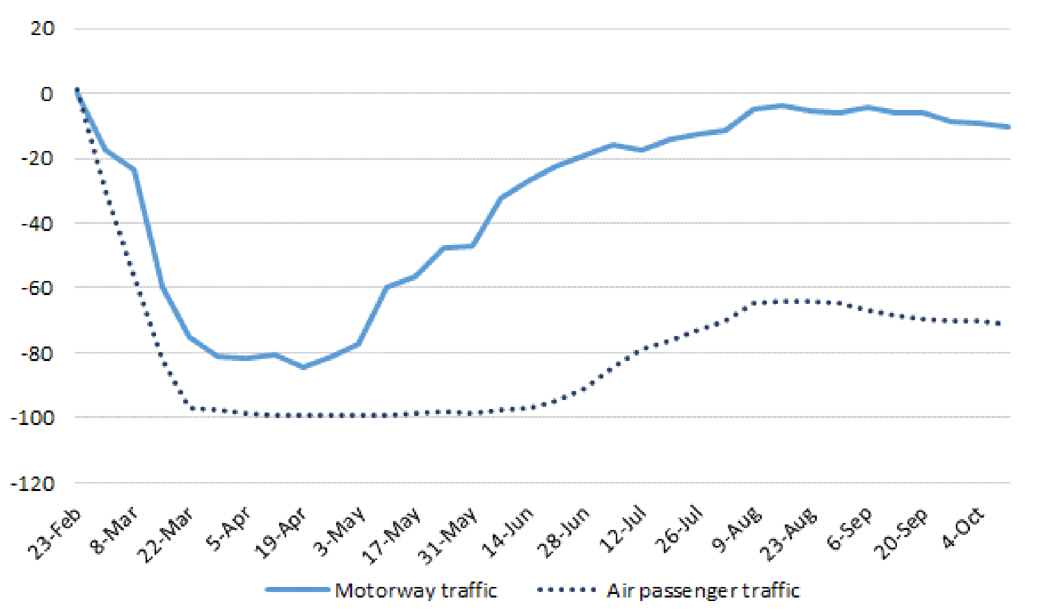
The favourable developments in activity in buildings registered in May continued in the subsequent quarter. In the June-August period, average output increased by over 70 per cent compared with March-May, but was marginally negative on an annual basis. Housing prices in the second quarter increased compared with the previous period (3.1 per cent). However, this primarily reflected sales finalised before the lockdown. Moreover, the underlying volume of transactions was extremely small, making the survey of prices highly unrepresentative.

The impact of the health emergency on the services sector appears to be persistent. The restrictions imposed on the movement of people led to a collapse in the retail sector, which only partially recovered in the months following the lockdown. In the second quarter, turnover in services was down more than 70 per cent year-on-year for hotels and restaurants and by about one third for travel agencies and business services. According to a survey conducted by SWG on behalf of Confturismo-Confcommercio, visitor stays during summer were shorter and the expenditure lower. In August, the flow of Italians to holiday destinations was reasonably robust, while arrivals of foreigners were modest. In the transport sector, at the end of September, passenger air traffic was over 70 per cent below the level of 2019, while motorway traffic, which had returned close to pre-pandemic levels at the beginning of August, gradually declined from September (Figure 10). Even the service industry segments that were not shuttered during the lockdown recorded heavy losses, as in the case of information technology and communications (-8.0 per cent). After having recorded historic lows in April (10.8), the sectoral PMI moved into expansionary territory in July (51.6) before slipping below the critical threshold of 50 in August (47.1) and September (48.8).

The uncertainty of households and firms as measured by the PBO indicator subsided in the summer, but remains very high in historical terms (Figure 11). This mainly reflects the deterioration in confidence in the market services and retail trade segments in the first half of the year.

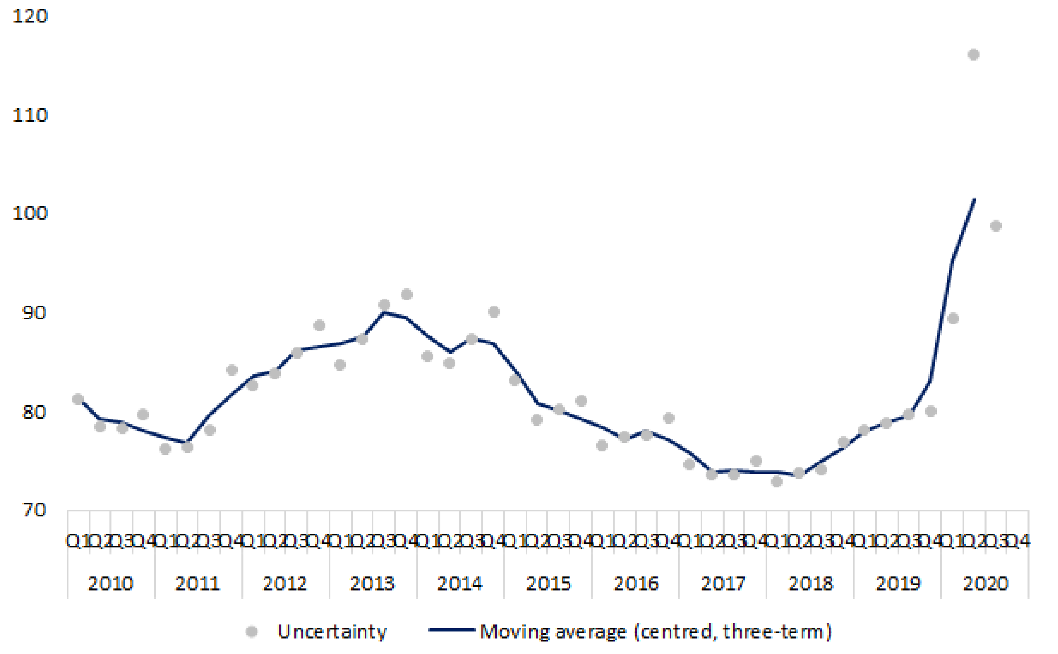
Composite economic indicators such as the ITA-coin coincident indicator produced by the Bank of Italy and the Istat economic sentiment indicator (IESI) concur in signalling a rapid but partial recovery of the Italian economy. The resumption of activity, which was limited to the summer months, is also evident in the most timely monthly variables (Figure 12). The consumption of gas for industrial uses in September increased for the fifth consecutive month, with a similar pattern in electricity consumption, while automobile registrations, after having almost disappeared during the lockdown, gradually recovered from May.

Figure 10 – Air and motorway traffic
(year-on-year percentage changes – weekly averages)



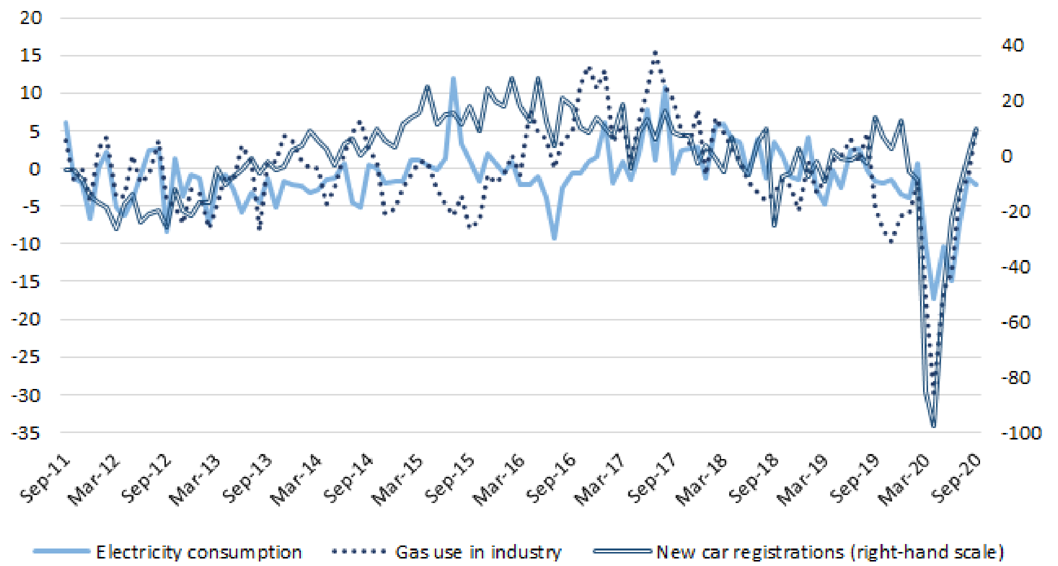
Source: Autostrade per l'Italia and Assaeroporti.

Figure 11 – PBO indicator of uncertainty (1)
(index; 1993 Q1=100)



Source: based on Istat data.
(1) The method used to calculate the uncertainty indicator is based on the procedure discussed in the box "Uncertainty measured on the basis of business and consumer surveys" published in the PBO's Report on Recent Economic Developments for April 2017.

Figure 12 – Real-time indicators of economic activity
(percentage year-on-year change)

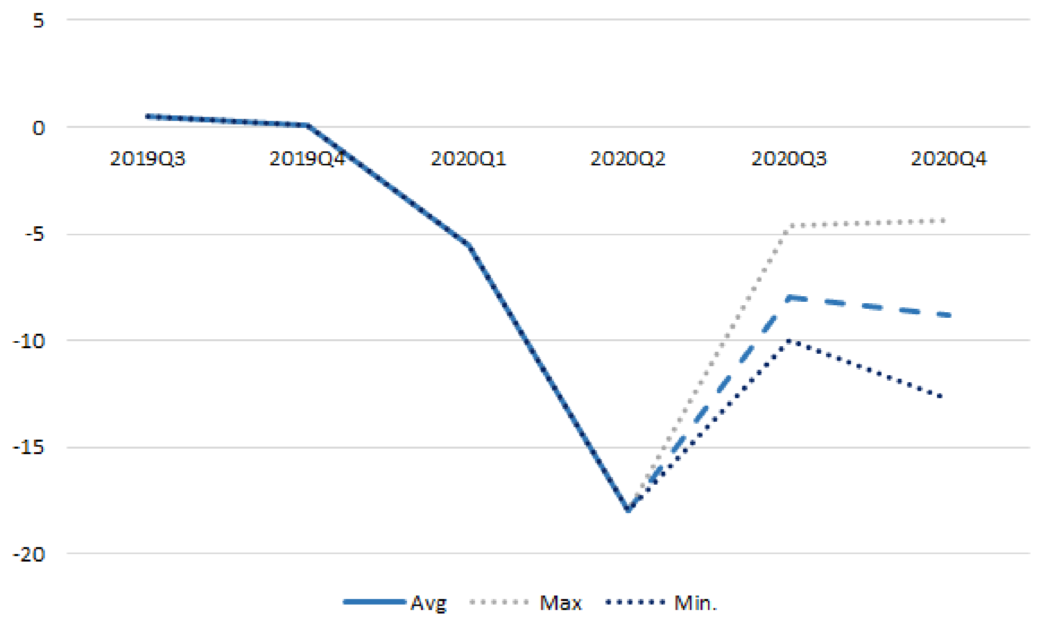


Source: Terna, Snam, ANFIA.

Short-term forecasts

Economic activity revived significantly in the summer, reflecting the removal of restrictions on production and the movement of people in May. According to the PBO's short-term models, in the third quarter GDP is estimated to have jumped by about 12 per cent, although it would still be eight percentage points lower than pre-COVID values. The range of variability of these estimates is extremely high (Figure 13), extending a few percentage points above and below the mean. The uncertainty affecting the previous quarter is quite substantial, reflecting the lack of real-time indicators for the services sector, as well as possible revisions of the quarterly time series in the coming months. In the final part of the year, the positive impulse from the easing of the pandemic during the summer is expected to dissipate. The quarter-on-quarter change in GDP would be barely positive in the baseline forecast, which however does not consider the new wave of the pandemic. Considering a number of evolutionary scenarios, based on the response of the authorities and the population last spring, the recessive effects of the resurgence of the disease could range from about 3 to 8 percentage points of GDP, depending on the severity of the health emergency (for an analysis see the Box "Resurgence of the pandemic in Italy and economic activity: selected evolutionary scenarios").

Figure 13 – Short-term GDP forecasts (1)
(year-on-year percentage change)



(1) The GDP forecasts were obtained using the PBO's short-term forecasting models (for more details, see http://www.upbilancio.it/wp-content/uploads/2018/01/Nota-tecnica-previsione-macro-UPB.pdf).

Employment recoups some ground; recourse to wage supplementation mechanisms declines

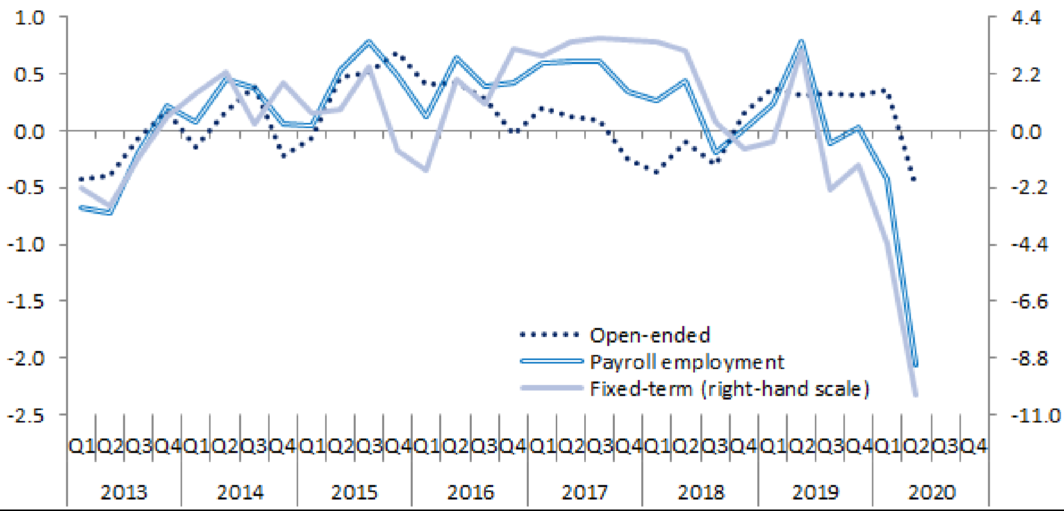
The restrictions adopted in the spring to tackle the pandemic greatly reduced the use of labour. The contraction in the number of hours worked in the second quarter (-15.2 per cent on the previous quarter) was more than double that recorded in the first three months of the year and even larger than the decline in GDP. The reduction in labour inputs affected the major sectors of production to a similar degree (-14.1 per cent in industry excluding construction, -21.4 per cent in construction and -15.4 in services).

The number of persons in employment declined by much less owing to support from the economic policy measures adopted in the emergency. The expansion of eligibility for the wage supplementation scheme (CIG) and the moratorium on layoffs for economic reasons, which will be in force until the end of this year, have so far proved effective in preserving jobs. In fact, the decrease in employment in the second quarter (-2.0 per cent compared with the previous three months) was due largely to the contraction in fixed-term employment (-10.2 per cent; Figure 14).

The most recent data points to a reversal of the trend in employment in July-August (0.5 per cent compared with the previous three months), attributable to employees on open-ended contracts, mainly older workers (35 years and over). However, the gap with respect to pre-crisis levels is not negligible: in August, employment was 1.5 per cent lower than the level recorded in February.

With the resumption of economic activity, the balance between the activation and termination of employment relationships in the private sector also returned positive. Data

Figure 14 – Change in payroll employment
(percentage change on previous period)



Source: Istat.

from the mandatory notifications of new hirings, terminations or contract transformations[2] indicate that the net improvement in the number of jobs between 4 May and 30 June (around 217,000 contracts) mainly reflected the growth in activations of new positions, as any increase in terminations was contained by the moratorium on layoffs.

The use of wage supplementation scheme has gradually declined with the removal of restrictions on economic activity. According to INPS data, the total number of hours of wage supplementation authorised in August (293.7 million, including solidarity funds) was approximately one-third lower than the average for June-July (458.6 million) and almost two-thirds lower compared with the exceptionally high values recorded in the spring. In May-August, the number of hours authorised for COVID-19-related reasons exceeded 95 per cent of the total. Overall, the number of hours authorised by month to which they pertain as calculated by INPS[3] decreased to about 221.3 million in the third quarter, down from over 2 billion in the second. Actual recourse to wage supplementation (including the number of hours of wage supplementation for the health emergency) was less than half the hours authorised under the ordinary and special wage supplementation mechanisms and the solidarity funds, while it came to around 67 per cent for the exceptional wage supplementation programme (CIG in deroga).

After collapsing in the period from March to April, labour market participation began to normalise with the end of the lockdown. The number of job seekers jumped in May and gradually returned to pre-crisis levels in the summer months. The decrease in the number of inactive individuals affected both genders but impacted women to a greater extent. In August, the number of inactive persons was still higher than pre-crisis levels (1.9 per cent compared with February, or 256,000 more individuals). In July-August, the increase in the participation rate (1.3 percentage points compared with the average for the previous three months) outpaced the increase in the employment rate, causing the unemployment rate to increase to 9.8 per cent (from 8.3 in the second quarter; Figure 15).

Wage pressures from the labour market remained weak. The growth in hourly contractual wages in the second quarter (0.6 per cent year-on-year) remained in line with the trend of the last six months, reflecting slightly more rapid growth in the private sector (0.7 per cent) and a sharp slowdown in public employment wage growth (0.3 per cent). Wage then slowed in the summer months, falling to nearly zero in the public sector. The slow growth in wages also reflected the large number of expired bargaining agreements and the prolongation of wage bargaining in the face of considerable uncertainty about the recovery. The increases provided for in recent renewals of bargaining agreements were in line with the low inflation forecasts (net of imported energy products) formulated by Istat for 2020-2023.

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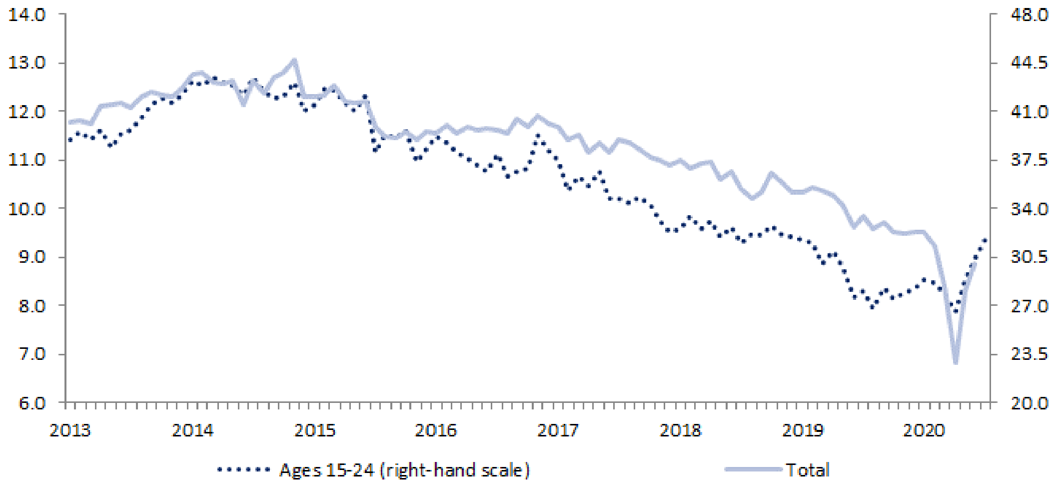
2 See ANPAL, "Approfondimenti COVID-19", Nota periodica no. 5/2020.
3 See INPS, Osservatorio CIG: i dati relativi ad agosto 2020.

Figure 15 – Unemployment rate
(percentages)



Source: Istat.

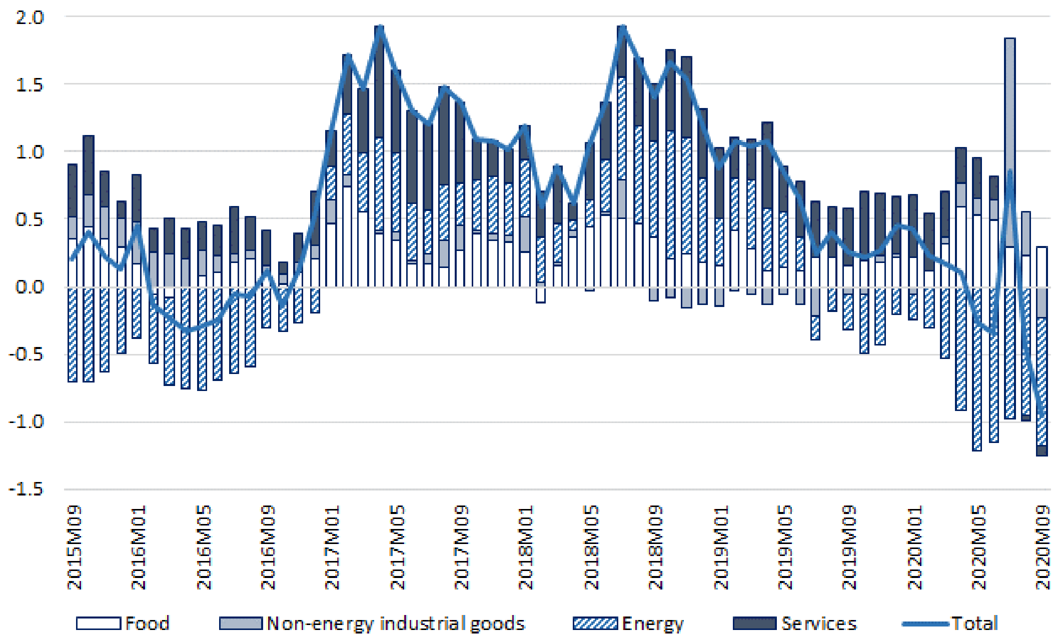
The acceleration in labour costs in the first half of the year (3.4 per cent in the first quarter, 6.6 per cent in the second) largely reflected the statistical treatment of wage supplementation measures in the national accounts: income from payroll employment includes part of the benefits received under wage supplementation programmes, while the total number of hours worked excludes hours not worked and subsidised by INPS. This produced in an increase in unit labour costs (1.5 per cent in the second quarter), despite the increase in output per hour worked.

Consumer price inflation continues to decline

Inflation in Italy was negative again in September, the fifth consecutive month this has occurred. The national consumer price index (NIC) decreased by 0.6 per cent on an annual basis, one-tenth of a point more than in August (Figure 16). The year-on-year decline in the prices of energy goods remains large (-9.9 per cent), while those in the prices of transport services (-1.6 per cent) and recreational, cultural and personal care services (-0.4 per cent) were smaller. The prices of durable goods were almost unchanged (-0.1 per cent), while food prices rose (1.1 per cent). Core inflation, which excludes the prices of energy and unprocessed food, is virtually nil (0.1 per cent, from 0.3 per cent).

Inflation already acquired in September for 2020 as a whole is negative for the NIC (-0.2 per cent) and remains weak even excluding the more volatile components (0.6 per cent).

Figure 16 – Consumer price index and contributions of components (1)
(year-on-year percentage change and contributions)



Source: based on Eurostat data.
(1) The chart shows the contribution to growth of the sectoral components of the harmonised consumer price index.

The proportion of items in the basket experiencing deflation increased in August (30 per cent) compared with the average for the first six months of the year (25 per cent). In the upstream segment of the production process, however, downward pressure from the prices of raw materials eased. Imported inflation remained stable in August, with the decline decreasing in annual terms (-5.8 per cent year-on-year, compared with -6.4 per cent in July). Producer prices in industry continued the decrease that began in the summer (-3.0 per cent year-on-year in August compared with -3.5 per cent in July), reflecting developments in energy prices. In services, producer prices in the second quarter increased slightly compared with the previous period following the increases registered in cargo handling, warehousing and storage services triggered by the COVID-19 emergency. However, the trend remains negative compared with a year earlier (-1.1 per cent). In the construction sector, price trends are broadly stable.

The inflation expectations observed in Istat surveys remain cautious. The share of consumers expecting price increases continues to decrease (-25.9 in September from -17.8 in August) and has reached values observed in previous periods of deflation (summer of 2016). The proportion of firms expecting stable prices was 89.1 per cent of those interviewed in September, although the share of those forecasting falling prices (around 6 per cent) has decreased compared with the peak in the spring (15.6 per cent in May).

Box – Resurgence of the pandemic in Italy and economic activity: selected evolutionary scenarios

The COVID-19 epidemic, which initially emerged in China towards the end of 2019, swiftly expanded into a pandemic capable of generating significant economic and social impacts on a global scale. The wave of contagion initially affected Asia before moving to Europe and subsequently the Americas. At the moment, while in countries such as India and Brazil the pandemic is still in the acute phase of the first wave, Europe is experiencing a resurgence of infections. In the spring, Italy registered a greater rate of diffusion and mortality than the rest of the European economies, but the country currently appears to be lagging slightly behind in the second wave.

The social distancing measures adopted in the first half of the year to stem the spread of the virus were effective from a health point of view, but they imposed an unprecedented burden on the economy. Both the manufacturing and services sectors were adversely affected. The greater use of flexible working arrangements enabled the continuation of some activities remotely, while those necessarily performed in person (such as tourism, restaurants and retail trade) recorded significant losses in turnover.

In Italy, GDP decreased by about 18 points in the first two quarters overall. This drop can reasonably be attributed entirely to the COVID-19 emergency, given that in the absence of the pandemic, the main forecasts were pointing to virtually no output growth. The easing of restrictions starting in May was followed by a rapid recovery in economic activity in the third quarter, but expectations for the final part of this year depend heavily on developments in the pandemic, which in recent weeks has resumed its rapid spread.

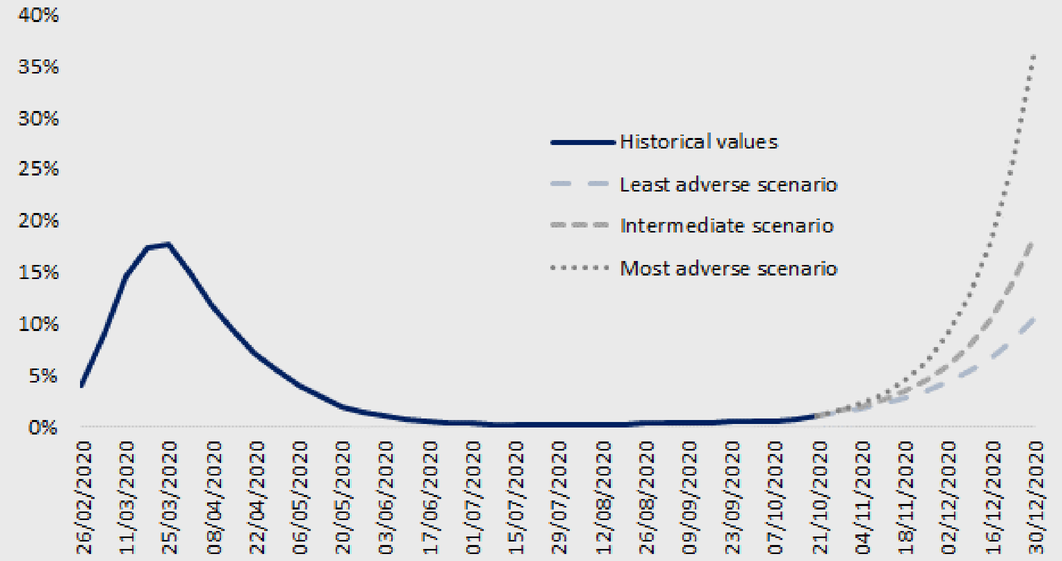
The macroeconomic impacts of a resurgence of the virus are extremely difficult to quantify. The analysis can be conducted using different types of models. If the aim is to estimate the medium-term impact on multiple macroeconomic variables, then the gold standard for quantitative instruments are structural econometric models.[4] If, on the other hand, our interest regards a shorter time horizon and the only reference variable for measuring the effects of the pandemic is GDP, we can use nowcasting models, which are normally more accurate in teasing out short-term developments.

This box adopts this second approach, combining short-term forecasting models for GDP with epidemiological scenarios constructed on the basis of the experience of last spring. Specifically, the analysis is divided into three phases: i) the definition of a number of assumptions about the evolution of the epidemic, represented by a time series indicator; ii) the construction of scenarios for pandemic containment measures consistent with the assumptions about its evolution; and iii) the assessment of the impact of the containment measures on GDP in each of the scenarios.

The exercise focuses on the current quarter and is performed on a monthly basis through December. The cumulative number of new cases is considered as an indicator of the spread of the pandemic, normalised by the total number of swabs processed. Specifically, taking the peak observed in the spring as a reference point, three alternative scenarios for the evolution of the pandemic are traced: in the least unfavourable case, the peak reached at the end of the fourth quarter is approximately half the peak number of cases observed in the spring; in the intermediate case the same peak is recorded; and in the most adverse scenario the peak value is double that registered during the first wave (Figure B.1).

[4] At the national level, the Ministry for the Economy and Finance proposed a scenario for the resurgence of COVID in the 2020 Update to the EDF in addition to the usual alternative scenarios formulated with the ITEM econometric model to assess the uncertainty of the medium-term forecasts (2020-2023). Similarly, in its most recent *World Economic Outlook* the IMF proposed an adverse scenario to its long-term forecasts based on simulations produced using the G20 Model.

Figure B1 – Positive swabs as a percentage of the total



Source: based on Civil Protection data.

In order to model the responses of the authorities to the second wave, we employed the stringency index constructed by the University of Oxford and used by various international analysts to track the restrictions adopted by different countries in their response to the pandemic.[5] For Italy, the evidence for the first wave - although very limited in terms of the number of monthly observations - shows a high correlation (0.89) between the time series of the share of positive swabs and that of the stringency index. Using this relationship, three scenarios for restrictions can be formulated that are consistent with the different assumptions adopted concerning the spread of the pandemic. The three projections for stringency were then evaluated using the PBO's mixed-frequency model for monthly GDP, used for short-term forecasts.[6]

The developments in monthly GDP from February to today seem effectively aligned with the stringency index (Figure B.2). The simultaneous correlation between the two series is around 92 per cent, similar to that of quantitative indicators such as industrial production.

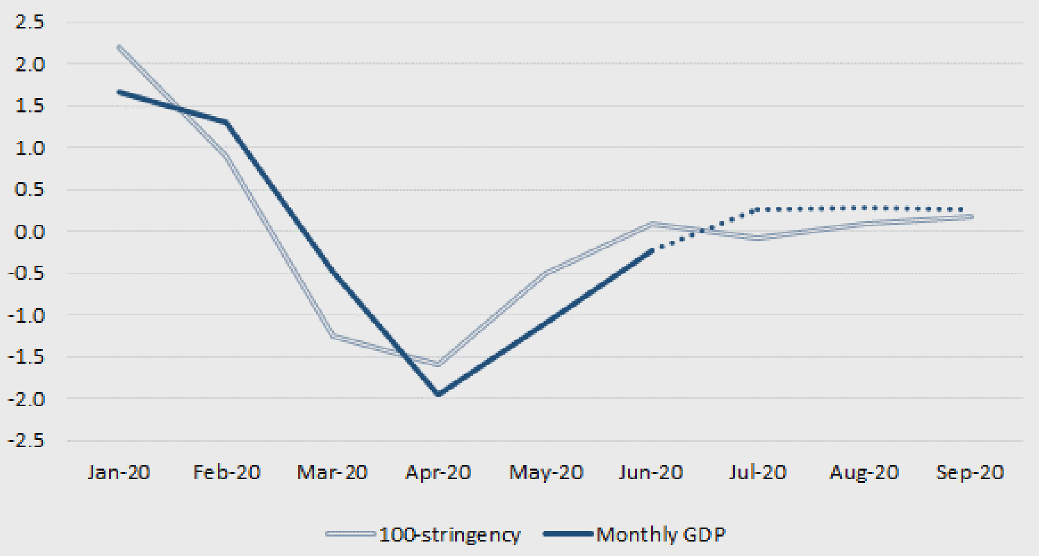
Under the very stringent assumption that the relationship between the two variables in the autumn is the same as that observed in the first half of this year, it is possible to extrapolate what GDP growth rate would be consistent with the three scenarios for restrictions on mobility and economic activity in the country, summarised previously. Based on these relationships, a second wave would negatively impact GDP in the fourth quarter of 2020 by 3.5 percentage points (best case), 5.0 points (intermediate case) and 8.0 points (worst case).

These effects on the fourth quarter mean - considering the statistical impact of the change in GDP already acquired - that GDP growth in 2020 would deteriorate by between about one and two percentage points. Also considering the statistical carry-over impact, the shock to the fourth quarter would represent a significantly adverse legacy (between some three and six percentage points) for the annual change in GDP in 2021.

[5] For more details, see *Variation in government responses to COVID-19*, BSG-WP-2020/032, BSG Working Paper Series, Blavatnik School of Government, University of Oxford.

[6] The monthly GDP series was obtained using the PBO's short-term mixed-frequency model based on the methodology proposed in Frale, C., Marcellino, M., Mazzi, G. and Proietti, T. (2011), "*EUROMIND: a monthly indicator of the euro area economic conditions*", *Journal of the Royal Statistical Society*, *Series A*, Vol. 174, applied to the Italian case in Frale, C. and Monteforte, L. (2011), "FaMIDAS: A Mixed Frequency Factor Model with MIDAS Structure", Working Papers, Bank of Italy, No. 788. For a more detailed description of the PBO's models, see http://www.upbilancio.it/wp-content/uploads/2018/01/Nota-tecnica-previsione-macro-UPB.pdf.

Figure B2 – Monthly change in GDP and the stringency index (1)
(standardised year-on-year percentage change)



Source: based on Istat and Refinitiv data and data from Oxford University *COVID-19 Government Response Tracker*.
(1) The chart gives the standardised series of monthly changes in GDP forecast on the basis of the PBO's short-term models (for more details, see http://www.upbilancio.it/wp-content/uploads/2018/01/Nota-tecnica-previsione-macro-UPB.pdf) and the stringency index.

The previous assessments are based on strong assumptions, so they should be considered as indicative of the possible orders of magnitude of the effects of the new wave. The caution in interpreting the results depends on several factors. With regard to the epidemiological scenarios, the indicator for the number of positive swabs may have been distorted in the past. In the spring, the reduced availability of swabs meant that the scarce resources available were mainly used for those with more severe symptoms, as diagnosis was directed at responding to urgent care needs rather than prevention. The percentage of positive cases at that time may therefore not be directly comparable with today. Currently it is possible to perform a greater number of tests, including those for tracing purposes, so it is possible that in the (non-random) sample of the people who undergo a swab, negative results emerge more often than they did in spring. Furthermore, from a statistical point of view, the relationships on which the exercise is based are extracted from a small number of observations, which prevents true inferential analysis. The same correlations observed in spring are projected, which implicitly assumes that the reaction functions of the authorities (for the restrictive measures) and of the individuals (for the behaviour of households and firms) remain similar, which cannot be taken for granted. Finally, there is no doubt that compared with the first wave, healthcare facilities and the population are better prepared and informed today, meaning that the economic costs could also be lower.