THE CAUSES OF INFLATION IN ITALY IN 2021-22

In the two years 2021-22, consumer price inflation in Italy rose rapidly, well beyond the expectations of analysts and central banks.[1] In order to quantify the contribution of the main drivers of the deviation between actual prices and those forecast at the beginning of the two-year period, an analysis was carried out using the Bank of Italy's econometric model.[2] In the model, consumer prices are determined by domestic supply prices and by the prices of imported goods and services. The latter reflect developments in the prices of commodities and manufactures on the international markets, as well as changes in the exchange rate. By contrast, domestic supply prices depend on developments in wages and unit profit margins, which are influenced by inflation expectations, cyclical developments and competitiveness vis-à-vis foreign competitors. Fiscal policy influences prices both directly, through changes in indirect taxes and administered prices, and indirectly, via its effects on aggregate demand, employment and labour costs.

The analysis takes as a reference the forecasting scenario presented in the *Economic Bulletin* published in January 2021, in which inflation was projected to be very low in the two years 2021-22 and which assumed developments in commodity prices, financial conditions and international trade that were markedly different from those that actually occurred, which were largely exceptional and unpredictable.[3]

The table presents estimates of the impact that unexpected changes in international prices (for energy commodities and other imported goods), foreign demand, interest rates and exchange rates, domestic demand and fiscal policy had on consumer prices and on domestic and imported supply prices. A simple comparison of the movements in the three indices shows that most of the difference between expected and realized inflation is attributable to the strong growth in import prices, which increased by almost 32 per cent over the two-year period, compared with the figure of just over 3 per cent forecast in January 2021.

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1 In Italy, HICP inflation reached 1.9 per cent in 2021 and 8.7 per cent in 2022, compared with a figure of less than 1 per cent for each of the two years considered as forecast in January 2021 by both the Bank of Italy and the analysts surveyed by Consensus Economics. Similar developments were observed in the euro area, where inflation stood at 2.6 per cent in 2021 and 8.4 per cent in 2022, compared with estimates made by the private analysts surveyed by Consensus in January 2021 indicating 0.9 per cent for that year and 1.3 per cent for the next. In March 2021, the ECB projections pointed to inflation of no more than 1.5 per cent in each of the two years.

2 A description of the general characteristics and main equations of the quarterly model of the Italian economy is contained in G. Bulligan, F. Busetti, M. Caivano, P. Cova, D. Fantino, A. Locarno and L. Rodano, 'The Bank of Italy econometric model: an update of the main equations and model elasticities', Banca d'Italia, Temi di Discussione (Working Papers), 1130, 2017. The results reported in this box are preliminary. For a more complete and detailed analysis, see D. Delle Monache and C. Pacella, 'The drivers of inflation dynamics in Italy in 2021-22', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), forthcoming.

3 The Bank of Italy's projections at the beginning of 2021 were based on assumptions similar to those adopted by the other leading forecasters: commodity prices, interest rates and exchange rates, as derived from market prices, reflected the prevailing market expectations. The assumed growth in international trade was not far removed from the estimates of the largest international organizations available at that time.

Table

Contributions to price trends in Italy in the two years 2021-22: deviations from the estimate at the start of the period (1)

(percentage change on previous year and percentage points)

		Consumer prices		Import prices		Domestic prices	
		2021	2022	2021	2022	2021	2022
A.	Projections published in *Economic Bulletin*, 1, 2021	0.7	0.8	1.7	1.6	0.2	0.7
B.	International prices	1.8	6.9	8.8	20.0	0.5	2.7
	Energy prices	1.4	4.4	3.9	9.5	0.0	0.5
	Food products and manufactures	0.5	2.5	5.0	10.5	0.5	2.2
C.	Foreign demand, exchange rates and interest rates	0.2	0.7	0.3	0.9	0.1	0.4
D.	Fiscal policy measures	-0.1	-1.1	0.1	0.5	0.1	0.5
E.	Domestic demand	0.0	0.5	0.1	1.5	0.1	0.7
F.	Residual component	-1.1	-0.4	-1.1	-2.6	-1.4	-1.6
	Actual realizations (A+B+C+D+E+F)	1.5	7.4	9.9	21.7	-0.4	3.4

(1) Consumer prices are measured by the implicit household consumption deflator, import supply prices are measured by the import deflator, and domestic supply prices are measured using the private sector value added deflator.

International prices. – Energy commodity prices have increased dramatically, especially since the outbreak of the conflict in Ukraine: compared with the levels implied by futures contracts at the beginning of 2021, oil prices have risen by 70 per cent on average, and gas prices by more than five times. The prices of imported food commodities and manufactures have also increased much more than expected, driven by higher energy prices, the strong recovery in demand after the pandemic, and widespread supply difficulties. The increases first passed through to consumer prices via the costs of imported goods (both consumer goods and intermediate inputs). These direct effects have been compounded by unexpected increases in domestic supply prices, which also largely reflect the impact of international prices on wages and on profit margins. Overall, developments in international prices are estimated to have contributed to the unexpected increase in consumer prices in Italy by 1.8 percentage points in 2021 and almost 7 percentage points in 2022.

Foreign demand, exchange rates and interest rates. – Growth in foreign demand was much stronger than expected, despite the negative effects of the war in Ukraine and the disruptions in global supply chains.[4] In addition, the euro exchange rate has depreciated, in line with the relatively faster normalization of monetary policy in the United States compared with the euro area. These developments contributed around 1 percentage point to the deviation between the expected increase in

[4] The *Economic Bulletin* published in January 2021 reported that foreign demand was projected to grow by 6.9 per cent in 2021 and by 5 per cent in 2022. The actual growth was instead 10.4 per cent in 2021 and 6.5 per cent in 2022.

consumer prices and that realized over the entire two-year period, mainly via the exchange rate channel.[5]

Fiscal policy. – Fiscal policy measures were adopted on a number of occasions, above all to moderate the effects of the increases in energy prices. Taken together, the measures introduced during the two-year period considered, but which had not yet been announced at the beginning of 2021, are estimated to have contributed to a reduction in inflation of around 0.1 percentage points in 2021 and 1.1 percentage points in 2022. The strongest effects can be attributed to the reduction of excise duties on fuel and of VAT on a number of energy products and to the elimination of some fixed costs in gas and electricity bills ('system charges'). These measures appear to have had a direct impact on inflation of about -1.5 percentage points in 2022, in part offset by the indirect impact, with an opposite sign, of the measures to support demand.

Domestic demand. – Despite the recessionary nature of the energy shock, GDP growth was higher than had been estimated at the beginning of 2021, especially on account of developments in household spending,[6] which increased much faster than expected thanks to the success of vaccination campaigns (which was still uncertain at the beginning of 2021) and to the reduction in saving needs, made possible by the savings accumulated during the periods in which there were restrictions on mobility and business. Higher domestic demand is estimated to have pushed up consumer prices by around half a percentage point, with the rise fully concentrated in 2022.

In short, almost 90 per cent of the higher consumer price inflation recorded in the two years 2021-22 – which had not been forecast at the beginning of the period – was attributable to the much higher than expected growth in international prices, the impact of which was exacerbated by exchange rate developments.[7] The inflationary pressures stemming from unexpected demand growth were more muted. Conversely, fiscal policy has helped to mitigate the acceleration in prices.

The residual contribution that is not attributable to the factors examined above is negative for all the price indices considered, and is especially marked for domestic supply prices. For the latter, the negative residual component is entirely attributable to more moderate trends in unit profit margins compared with those implied by

5 The increase in interest rates in the euro area, which started in mid-2022, appears to have mitigated only in part the upward pressures stemming from exchange rates and foreign demand, owing to the delay with which monetary policy is typically transmitted to prices.

6 Overall, GDP grew by almost 11 per cent in the two years 2021-22 and household consumption rose by more than 9 per cent, around 4 and 3 percentage points more than forecast in January 2021, respectively.

7 The effect of international prices, including those of energy commodities, other commodities and manufactures, refers to the contribution to the deviation between realized and projected inflation. In addition to import prices, this effect also manifests itself through changes in domestic prices, through the impact of international prices on inflation expectations (and thus on wages) and on competitiveness (which affects domestic producers' pricing policies).

the model.[8] This may have been influenced by the impact of measures adopted to mitigate the energy price increases, from which firms have benefited over the past two years. All other things being equal, these measures have led to an increase in the resources available to the private sector, which firms may have partly used to limit the increase in prices, especially at a time marked by high uncertainty about the potential recessionary developments resulting from the energy shock and the conflict in Ukraine.

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8 The residual component relating to labour costs is practically nil. Over the two-year period as a whole, the 3 percentage point difference between unit labour costs actually observed in the private sector and those forecast in January 2021 is entirely attributable to the impact of unexpected developments in international prices and domestic demand.