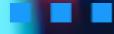


EY Italian Macroeconomic Bulletin

N°13 | December 2025



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Executive summary

- The global economy shows signs of recovery, with growth expected at 3.2% in 2025 and 3.1% in 2026. Emerging markets are driving a rebound, while advanced economies expand at a slower pace. Global inflation is easing, settling near pre-pandemic levels.
- Overall, the uncertainty remains high but has declined compared to the first half of the year. The new US trade policy shows little immediate impact in terms of price increases in the United States, yet it shows visible impact on imports.
- The application of tariffs is expected to negatively affect international trade next year, as reflected in projections for global trade growth in 2026, which is anticipated to be less dynamic than in 2024 and 2025.
- In the Eurozone, following a 0.9% growth in 2024, a slight acceleration is expected in 2025 (1.2%), followed by broadly stable growth in 2026 (1.1%). The industrial sector remains under strain, despite recent PMI indices improvement, while the services sector shows an overall positive picture.
- At its September meeting, the European Central Bank kept monetary policy rates unchanged (deposit rate at 2.0%), also considering inflation forecasts, which are expected to remain under control (2%). Downside risks persist, stemming from geopolitical situation, industrial sector weakness, and elevated public debt levels compared to pre-pandemic benchmarks.
- From a sectoral perspective, Italy continues to exhibit significant heterogeneity. Overall, industry remains weak despite dynamic segments (such as pharmaceuticals). The services sector shows a more positive trend, although total turnover has remained broadly stable in recent months.
- Inflation has declined in recent months (1.2% in November) compared to the levels earlier this year. Core component remains persistent, while the energy component supports the reduction in overall inflation. The labor market remains solid, although real wages per hour worked are still below 2021 levels. Contractual tension (measured as the percentage of employees awaiting contract renewal) remains high, potentially supporting incomes in the medium term.
- The current economic environment may change in the medium to long-term following the adoption of specific technologies, such as artificial intelligence. The impact of this technology on national economies will depend on several factors (e.g., adequate infrastructure, skilled workforce) but will cover a broad scope, from productivity to labor markets.
- In this context, EY forecasts real GDP growth of 0.5% in 2025 and 0.7% in 2026 for Italy, while inflation is expected to rise by 1.7% in 2025 and 1.5% in 2026. These projections are subject to a high degree of uncertainty, given the contradictory signals occasionally emerging from recent data.

Figure 1: Real GDP, Italy - % change

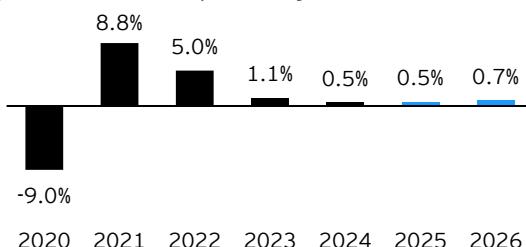
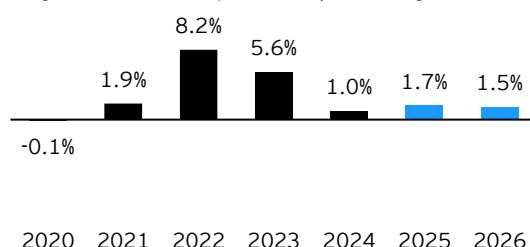


Figure 2: Consumer prices, Italy - % change



The global scenario

The world economy

After expanding by 3.3% in 2024, global GDP is projected to follow a broadly similar trajectory over the next two years, albeit with a slight moderation. In its latest World Economic Outlook,¹ the International Monetary Fund forecast growth of 3.2% in 2025 and 3.1% in 2026.

This reflects a highly uneven performance across major economies, often difficult to predict given the prevailing uncertainty and frequent revisions to growth estimates.

In the United States, output is expected to settle around 2.0% in 2025, following 2.8% in 2024, with a similar pace of 2.1% thereafter. These figures diverge markedly from Eurozone projections, where growth of 0.9% in 2024 is forecast to rise to 1.2% in 2025 and ease to 1.1% in 2026.

Emerging markets, by contrast, are set to perform better, with average growth exceeding 4% between 2025 and 2026, driven primarily by robust economic activity in China and India.

The OECD's latest Economic Outlook broadly confirms these trends, estimating global growth at 3.2% for 2025 and 2.9% for 2026 (2.0% and 1.7% for the US, and 1.3% and 1.2% for the Eurozone).²

On inflation, global consumer prices are expected to ease from 5.8% in 2024 towards levels closer to the 2000-2019 average (3.9%), reaching 3.7% by 2026.

Among advanced economies, the United States is projected to show a slightly lower inflation rate of 2.7% in 2025, followed by a further decline of 0.3 percentage points. These values remain above the 2% price stability benchmark set by the Federal Reserve, despite the positive trajectory.

The Eurozone presents a different picture: inflation at 2.4% in 2024 is forecast to fall to 2.1% and 1.9% in 2025 and 2026, respectively.

Figure 3: Real GDP - % change

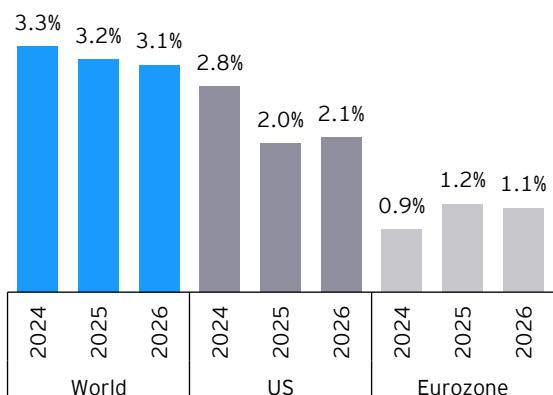
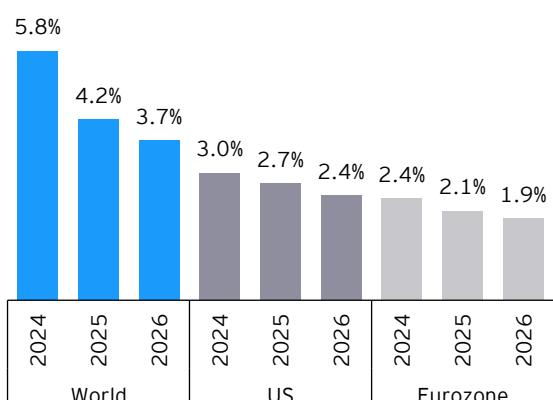


Figure 4: Consumer prices - % change



Source: EY-Parthenon elaborations on IMF World Economic Outlook data, October 2025.

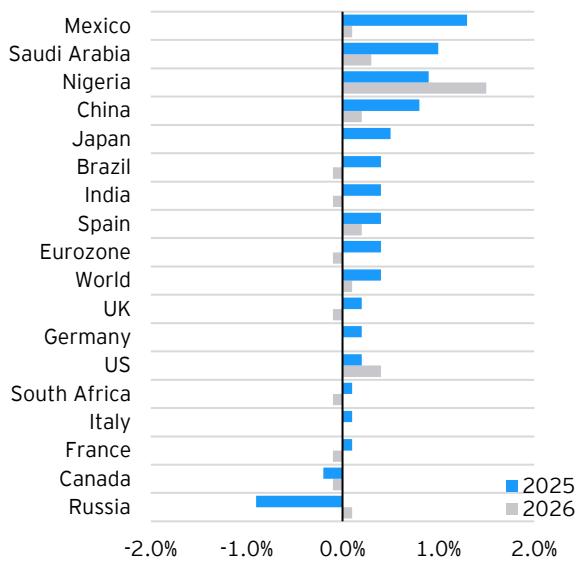
As mentioned earlier, the global macroeconomic framework is characterized by a high level of uncertainty, making forecasts by

¹ International Monetary Fund, World Economic Outlook, October 2025 - Global Economy in Flux, Prospects Remain Dim.

² OECD Economic Outlook, Resilient Growth but with Increasing Fragilities, December 2025.

major international institutions often subjected to significant revisions.

Figure 5: IMF forecast revisions - April 2025 vs. October 2025, percentage points



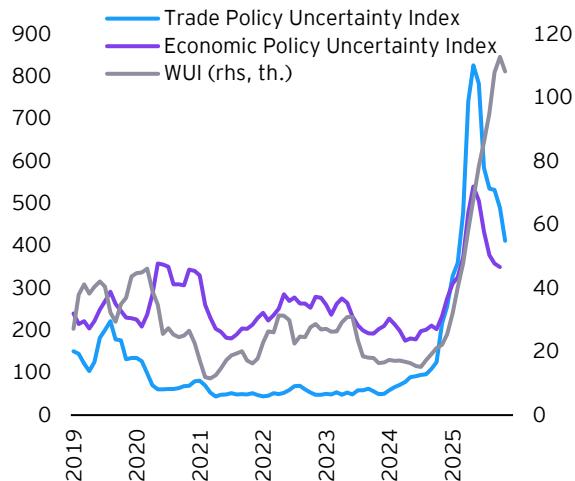
Source: International Monetary Fund.

Comparing the IMF's latest outlook with April 2025 projections reveals slight optimism for growth over the next two years. Globally, the institution revised growth upward by 0.4 percentage points for 2025 and 0.1 for 2026. Looking at major economies, notable upward revisions were recorded for China (+0.8 percentage points and +0.2 percentage points), India (+0.4 percentage points followed by -0.1 percentage points), and the Eurozone (similar to India). Conversely, Canada (-0.2 percentage points and -0.1 percentage points) and Russia (-0.9 percentage points followed by +0.1 percentage points) saw downward adjustments, reflecting uncertainty and geopolitical effects such as trade tensions and the war in Ukraine.

Overall, this climate of uncertainty is well captured by indicators such as the Trade Policy Uncertainty Index, which, despite a significant decline in recent months, remains very high compared to historical data. A similar trend is observed in the Economic Policy Uncertainty Index, while the World Uncertainty Index shows a different dynamic.

New trade policies – primarily those of the United States – along with geopolitical dynamics such as the wars in Ukraine and the Middle East, have increased global uncertainty, though trade tensions have not yet generated significant global impacts.

Figure 6: Uncertainty indices, World - 3-month moving averages



Source: EY-Parthenon elaborations on data from Caldara et al. (2019),³ Economic Policy Uncertainty database. WUI: World Uncertainty Index. Latest observation: November 2025.

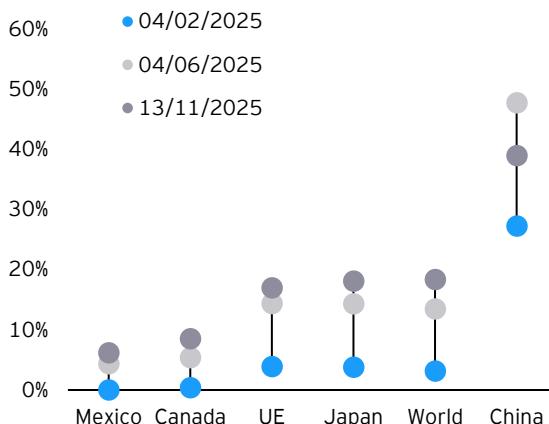
The resilience of economic activity, and the currently limited effects on price levels stem from factors that have partially mitigated the impact of trade policies rather than underlying economic strength. For example, households and firms anticipated consumption ahead of tariff hikes, supporting global activity in early 2025. Trade flows also adjusted, shifting towards third countries.

Delays in implementing announced trade measures, or less stringent enforcement than initially signaled, allowed firms to postpone price increases while awaiting clarity on timing and tariff levels.

³Caldara, Dario, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo, "The Economic Effects of Trade Policy

"Uncertainty," revised November 2019, Journal of Monetary Economics, forthcoming.

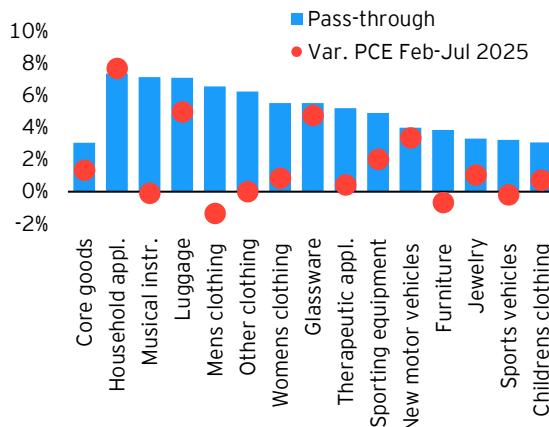
Figure 7: Average tariff rate from US to different countries - weighted average by import value



Source: EY-Parthenon elaborations on IMF and WTO data.

Although not immediately visible, tariff effects on prices are present, particularly in high-frequency data, as shown by Cavallo et al. (2025).⁴ Pass-through to consumer prices remains limited for now.⁵

Figure 8: Inflation pass-through by product, US



Source: IMF World Economic Outlook, October 2025. The "Core goods" category refers to goods excluding energy and food.

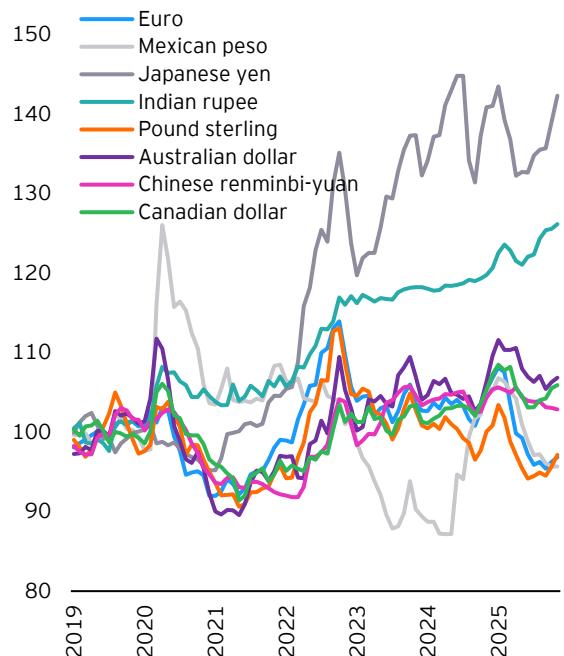
Inventory accumulation and subsequent disposal, pre-sales, back-orders, goods placed in bonded warehouses, and price fixing under long-term contracts have also slowed the pass-through of cost increases to prices. The increase in corporate profits in recent years, driven by rising prices following the COVID-19 pandemic, has also

⁴ Cavallo, Alberto, Paola Llamas, and Franco Vazquez. 2025. "Tracking the Short-Run Price Impact of US Tariffs." Harvard Business School Working Paper, Cambridge, MA.

partially absorbed the cost increases, passing only a portion of them on to consumers.

Another factor to consider is the dynamics of exchange rates against the dollar, which did not appreciate, as in previous episodes of trade tensions, but instead depreciated, reflecting greater demand for hedging by non-US investors. Although a weaker dollar amplified the negative effects of trade-distorting policies by making US imports even more expensive, the depreciation also partially supported global trade and reduced potential inflationary pressures related to the exchange rate (consider, for example, that the prices of many major commodities are denominated in dollars, so an appreciation of the dollar would have led to higher raw material costs), thus supporting global economies (especially emerging markets and developing economies).

Figure 9: Dollar exchange rate against other currencies - index, average 2019=100



Source: EY-Parthenon elaborations on Eurostat data. A decrease in the index represents a depreciation of the exchange rate, and vice versa. Latest observation: November 2025.

Although the effects of trade-distorting policies are not clearly visible at present on some

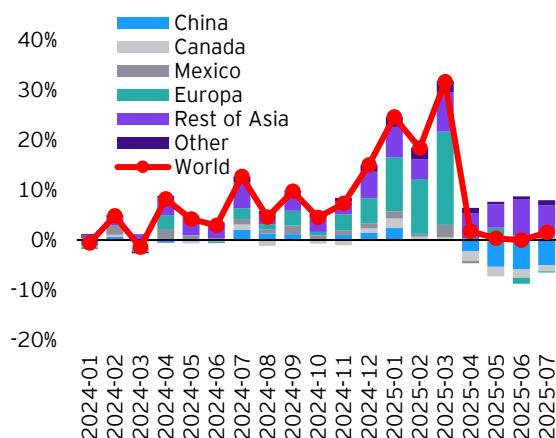
⁵ International Monetary Fund, World Economic Outlook, October 2025 - Global Economy in Flux, Prospects Remain Dim.

metrics where impacts were expected, they are evident from a trade perspective.

The latest monthly data on US goods imports show that, compared to the same period of the previous year, the last few months have seen a sharp deceleration in imports after the figures recorded earlier in the year. This trend is potentially linked to the early purchase of certain goods in anticipation of the implementation of the new US administration's aggressive trade policies.

The slowdown experienced is primarily due to a reduction in imports from Europe, alongside a reduction in imports from China and Canada. However, the positive role of Asian countries in import growth continues.

Figure 10YoY % change and contributions



Source: EY-Parthenon elaborations on UN Comtrade data.

This trade uncertainty, and uncertainty in general, has negative effects on growth: in a recent study, Londono, Ma, and Wilson (2025) show that a one standard deviation increase in economic policy uncertainty is accompanied by a 2% decline in investment, peaking about two years after the shock and gradually declining over about three years. Estimates for trade policy uncertainty range between 0.7% and 2%, peaking in the first two quarters and declining in the second year.⁶

In this regard, it is important to emphasize that there are two main channels through which the negative effects of uncertainty manifest themselves. First, firms tend to postpone

⁶Londono, Juan M., Sai Ma, and Beth Anne Wilson. 2025. "Costs of Rising Uncertainty." FEDS Notes, April 24. <https://doi.org/10.17016/2380-7172.3779>.

⁷Bernanke, Ben. 1983. "Irreversibility, Uncertainty, and Cyclical Investment." Quarterly Journal of Economics 98 (1): 85-106.

investments and projects when the outlook is uncertain, because waiting can potentially prove less costly than a worsening scenario.⁷ Households exhibit similar behavior, postponing durable goods purchases and maintaining spending on essential goods. A second channel operates through precautionary behavior. When perceived income risk increases, households save more, thus dampening consumption growth (Bansal and Yaron 2004).⁸

However, this does not necessarily translate into a reduction in production in the short term. Frontloading purchases to avoid potential price increases resulting from future customs duties partially offsets (temporarily) the wait-and-see and precautionary stance. At the same time, companies may choose to keep prices unchanged and absorb higher costs through margins to retain their customer base while waiting for uncertainty to subside, as previously mentioned.

The Brexit experience is an interesting example in this regard, when business investment maintained an upward trend in the period immediately following the United Kingdom's exit from the European Union and only began to contract from 2018 onwards.⁹

To illustrate the mechanisms of uncertainty in the context of trade, a recent study examined uncertainty shocks due to trade policies and the effect of tariffs separately. Two analyses were conducted.

In the first, economic agents face an increase in tariff rates that gives rise to increased uncertainty, and they anticipate consumption (imports) fearing potentially larger price increases, thus boosting production. Faced with cost uncertainty, firms increase prices to maintain margins, generating a modest and short-lived increase in inflation. Once the effect of anticipating consumption diminishes, uncertainty acts as a negative shock to demand: activity slows, and inflation declines as firms squeeze margins.

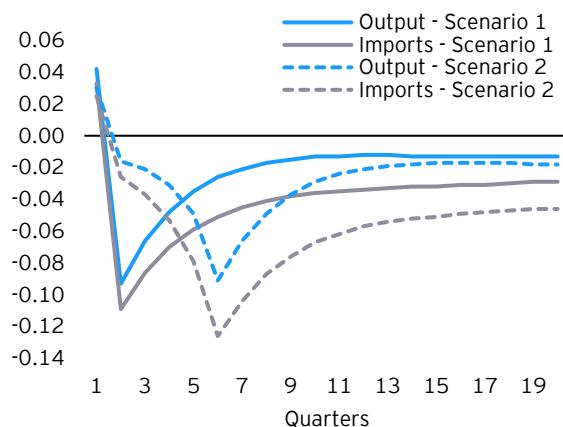
In the second analysis, economic agents receive news today that tariff uncertainty will increase in the future, like what would happen in the event of pauses or extensions in the

⁸Bansal, Ravi and Amir Yaron. 2004. "Risks for the Long Run: A Potential Resolution of Asset Pricing Puzzles." Journal of Finance 59(4): 1481-1509.

⁹Bank of England (BOE). 2019. Monetary Policy Report, Section 4. London.

implementation of specific trade policy decisions. The anticipation of imports is similar, but this time it is motivated by potentially larger price changes expected in the future rather than by an immediate increase in costs. Because the timing of the uncertainty is known (for example, the expiration of a pause, the date of a bilateral negotiation meeting), companies can plan, build inventories, and adjust prices less abruptly. Consequently, when the increase in uncertainty can be anticipated in the short to medium term, the effect on price increases is more gradual and appears more persistent than when uncertainty increases more abruptly.¹⁰

Figure 11: Production and imports response to uncertainty shock - percentage deviation from the steady state



Source: IMF World Economic Outlook, October 2025. Scenario 1: The shock materializes in the first quarter; Scenario 2: Expectations of the shock are formed in the first quarter, while the shock materializes in the fourth quarter.

Turning our attention to commodity price trends, it's interesting to note how different trends have been recorded in recent months depending on the category considered.

Oil prices, specifically Brent crude, stood at \$63.6/bbl¹¹ in November 2025, down from the rest of the year (January-October average of \$70.2/bbl), with the sole exception of May 2025 (\$64.2/bbl). In this regard, the tariff announcements have caused a decline in global demand expectations and coincided with the launch of an accelerated production program by OPEC+ (Organization of the Petroleum Exporting Countries plus some non-member countries,

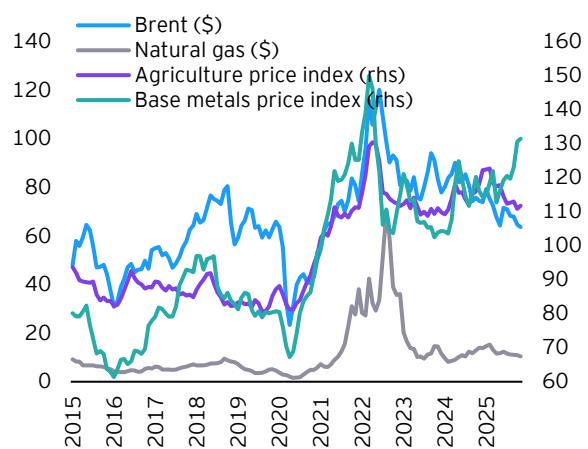
¹⁰ Ghironi, Ozhan (2025).

¹¹ Dollars per barrel of oil. One-barrel equals approximately 159 liters.

¹² International Energy Agency, Oil Market Report - October 2025, <https://www.iea.org/reports/oil-market-report-october-2025>.

including Russia). The International Energy Agency forecasts global demand growth of 0.7 mb/d (million barrels per day) in 2025, non-OPEC+ supply growth of 1.6 mb/d in 2025, and OPEC+ supply growth of 1.4 mb/d.¹²

Figure 12: Energy commodity prices (\$) and agricultural and base metals price index (2010=100)



Source: EY-Parthenon elaborations on World Bank data. Brent crude and natural gas prices are expressed in \$/bbl and \$/mmbtu, respectively. The price of natural gas refers to natural gas quoted in the Title Transfer Facility (TTF). The agricultural price index takes into account the prices of various agricultural goods and derivatives at the global level (e.g., the price of wheat). Latest observation: November 2025.

Therefore, while potential Russian supply disruptions pose an upside risk to prices, increased supply from OPEC+, combined with the uncertain global economic climate caused by tariffs, continues to put downward pressure on prices.

Natural gas listed on the European market settled in November at around the levels recorded in previous months, with a price of \$10.4/mmbtu¹³, down from the figure recorded in October (\$10.9/mmbtu). The overall price therefore continues its downward trend, following the increase recorded between 2024 and the first months of 2025.

Agricultural commodity prices, after accelerating between the final months of 2024 and the first months of 2025, are now on a downward trend, recording a reduction compared to the values of the first months of the year.

¹³ Dollars per million British thermal units, a measure of the amount of gas.

Finally, base metals continued their significant growth path. Compared to the same month last year, base metal prices increased by 13.2% in November 2025 (14.5% compared to January 2025). The increase in prices refers mainly reflects the key components of the index (e.g., aluminum, copper, tin) with the sole exception of nickel.

The trend in metal prices is very important, given their role in shaping core inflation (inflation calculated net of the most volatile components, such as energy and unprocessed food products).

Shocks to metal prices, for example, have significant and long-lasting effects, especially in economies whose production systems reply to their intensive use as intermediate inputs for the production of goods. This phenomenon differs from supply shocks in energy products such as oil, which primarily impact headline inflation.

The global economy's shift toward more metal-intensive production, primarily due to the energy transition, could lead to metal price shocks increasingly influencing core inflation. As a result, such shocks may become less immediately visible but more persistent over time. Furthermore, the reduced reliance on fossil fuels and the increased use of metals as inputs to energy systems could make the global economy less dependent on oil and more dependent on the metals.¹⁴

Recent geopolitical tensions could also make metal prices more volatile, especially given the trade-distorting and restrictive measures implemented since the war in Ukraine.¹⁵ Given that metal production is often geographically concentrated and not easily substitutable, any trade tensions typically lead to sharp price fluctuations, amplifying negative impacts on the global economy.¹⁶

Finally, it is important to remember that raw materials play a central, yet often underestimated, role in determining macroeconomic fluctuations in both advanced and emerging and developing markets. In the

context of current supply shocks related to energy transition, environmental disasters, and geopolitical and trade tensions, understanding the macroeconomic impact of commodity price fluctuations is crucial. To understand the effect of commodity price shocks on production and inflation, it is essential to understand how interconnected the sectors under analysis are with the rest of the economy and the rest of the world.¹⁷ These interconnections determine the reallocation of labor and capital across sectors in response to changes in commodity prices and play a key role in determining fluctuations in real activity and inflation.

Overall, the geopolitical and economic situation remains complex, with uncertainty surrounding future global developments. Growth forecasts are impacted by trade-distorting measures and potential developments, while commodity prices, despite their partial recovery, continue to show higher levels than those recorded before the pandemic crisis.

Growth in the world's major economies: the latest data

The international landscape is marked by a heterogeneous performance among the world's leading economies, even when analyzing short-term dynamics.

United States

Due to the shutdown, namely, the suspension of administrative activities following the failure to approve the budget—data for the third quarter of the US economy and the latest monthly figures are unavailable. Therefore, the most recent data are reported below.

US GDP recorded growth of 0.8% in the second quarter of 2025 (3.3% annualized),¹⁸ after a

¹⁴ Boer, Lukas, Andrea Pescatori, and Martin Stuermer. 2024. "Energy Transition Metals: Bottleneck for Net-Zero Emissions?" *Journal of the European Economic Association* 22.

¹⁵ Gopinath, Gita, Pierre-Olivier Gourinchas, Andrea Presbitero, and Petia B Topalova. 2024. "Changing Global Linkages: A New Cold War?" IMF Working Paper 2024/076.

¹⁶ Alvarez, Jorge, Mehdi Benatiya Andaloussi, Chiara Maggi, Alexandre Sollaci, Martin Stuermer, and Petia Topalova. 2023. "Geoeconomic Fragmentation and Commodity Markets." IMF Working Paper 2023/201.

¹⁷ In this regard, reference should be made to the following works: Baqaei, David, and Emmanuel Farhi. 2019. "The Macroeconomic

Impact of Microeconomic Shocks: Beyond Hulten's Theorem." *Econometrics* 87(4): 1155–203; Bigio, Saki, and Jennifer La'O. 2020. "Distortions in Production Networks." *Quarterly Journal of Economics* 135 (4): 2187–253; Silva, Alvaro. 2024. "Inflation in Disaggregated Small Open Economies." *Federal Reserve Bank of Boston Research Department Working Paper* 24-12, Boston, MA; Silva, Alvaro, Petre Caraiani, Jorge Miranda-Pinto, and Juan Olaya-Agudelo. 2024. "Commodity Prices and Production Networks in Small Open Economies." *Journal of Economic Dynamics and Control* 168: 104968.

¹⁸ For more information, <https://www.bea.gov/help/faq/463>.

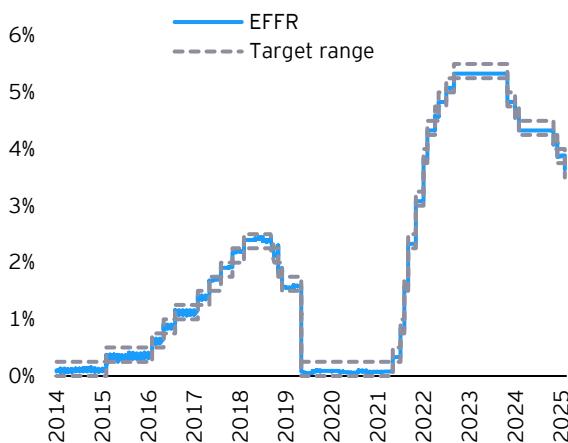
quarterly contraction of 0.1% in the first quarter of the year.

This result is mainly attributable to a positive contribution from foreign trade (1.4 percentage points) and an increase in private consumption (quarterly growth of 0.4%, contributing 0.3 percentage points). Regarding net exports, the positive outcome reflects a sharp drop in imports (-8.5%) and a modest decline in exports (-0.3%).

Private investment also contracted, falling by 3.6% compared to the previous quarter, corresponding to a negative contribution to quarterly growth of -0.7 percentage points.¹⁹

As for price dynamics, US inflation has shown a rebound in recent months. In September 2025, inflation stood at 3.0%, a level consistent with January 2025 and higher than the first half of the year (January-June average of 2.6%). A similar trend is observed in other price indices (e.g., the Personal Consumption Expenditure Price Index).²⁰

Figure 13: Monetary Policy Reference Rates, United States



Source: EY-Parthenon elaborations on Federal Reserve Bank of New York data. EFFR: Effective Federal Funds Rate; the EFFR is calculated as the volume-weighted median of reported overnight transactions. For more information, [see <https://www.newyorkfed.org/markets/reference-rates/effr>](https://www.newyorkfed.org/markets/reference-rates/effr).

Despite inflation remaining above the Central Bank's target, the Federal Reserve decided at its latest meeting to cut policy rates, setting a range between 3.50% and 3.75%.²¹

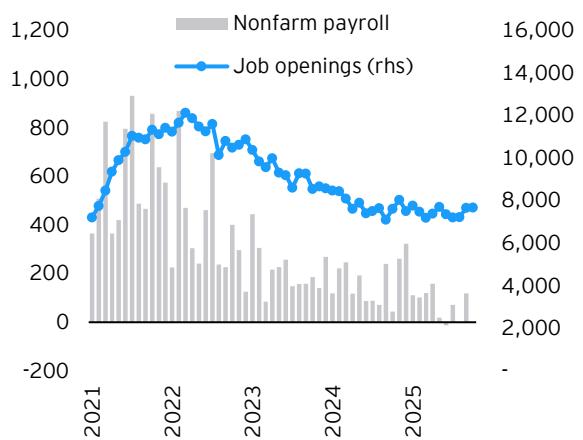
¹⁹Gross Domestic Product, 2nd Quarter 2025 (Second Estimate) and Corporate Profits (Preliminary), <https://www.bea.gov/news/2025/gross-domestic-product-2nd-quarter-2025-second-estimate-and-corporate-profits-preliminary>.

²⁰For more information, <https://www.bea.gov/data/personal-consumption-expenditures-price-index>.

This decision comes amid economic uncertainty and a slowing labor market. It is worth recalling that the Federal Reserve's statutory dual mandate requires it to pursue full employment and price stability.

As noted, the labor market appears to be losing momentum. In September, employment rose by 119,000 jobs, following a decline of 4,000 in the previous month. Meanwhile, job openings have remained stable since mid-2024, after peaking in 2022, with monthly values above 7,000. The unemployment rate remains broadly stable above 4%.²²

Figure 14: Change in nonfarm payroll and job openings - US



Source: EY-Parthenon elaborations on Bureau of Labor data Statistics (BLS). Nonfarm payroll refers to the number of US workers in the economy excluding business owners, household employees, unpaid volunteers, farm employees, and the unincorporated self-employed. This measure represents approximately 80% of workers contributing to the Gross Domestic Product (GDP). For more information, [see <https://fred.stlouisfed.org/series/PAYEMS>](https://fred.stlouisfed.org/series/PAYEMS).

Recent data show that in September 2025, consumer spending was flat compared to the previous month (0.0%), after weak growth in August (0.2%). This stagnation reflects a decline in goods consumption (-0.4% in September, after +0.3% in August and +0.6% in July) and modest

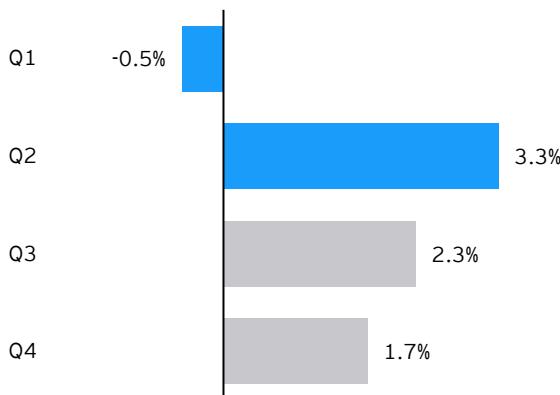
²¹Federal Reserve issues FOMC statement, 10 December 2025, <https://www.federalreserve.gov/newsreleases/monetary/20251210a.htm>.

²²Bureau of Labor Statistics, Employment Situation News Release. For more information, [see <https://www.bls.gov/news.release/empsit.toc.htm>](https://www.bls.gov/news.release/empsit.toc.htm).

growth in services spending (+0.2%, similar to August).²³

Industrial and manufacturing activity remains weak: in September 2025, industrial output rose slightly (+0.1%) after a contraction in August (-0.3%) and growth in July (+0.2%). Manufacturing output was flat in September, following gains of 0.2% and 0.1% in July and August. Year-on-year, industrial and manufacturing production grew by 1.6% and 1.5%, respectively.²⁴

Figure 15: GDP 2025 - US, annualized QoQ % change

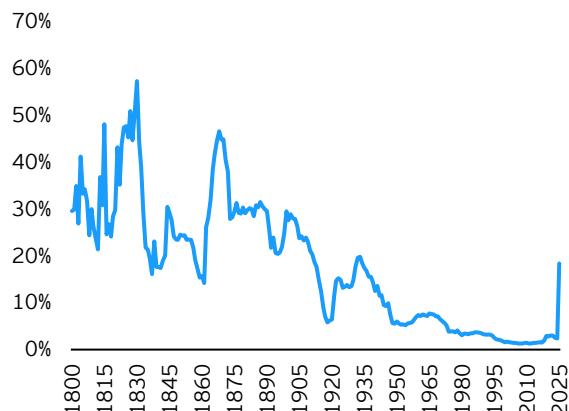


Source: EY-Parthenon elaborations on Data from the Federal Reserve Bank of New York, US Bureau of Economic Analysis (BEA). Gray bars represent available forecasts for the next few quarters (New York Fed Staff Nowcast). Rates of change are annualized. Last updated: December 5, 2025.

Looking ahead, the New York Fed's November 2025 projections indicate average GDP growth over the next four quarters ranging from -0.15% to +3.21%, with a median of 1.62%,²⁵ signaling a broadly dynamic economy. Short-term forecasts point to annualized growth²⁶ of 2.3% and 1.7% in Q3 and Q4 2025, respectively.²⁷

When assessing the US economy, recent trade policy decisions and abrupt changes must be considered, as they add uncertainty domestically and globally. The effective tariff rate currently applied by the US to the rest of the world is about 18%, a level not seen since the early 20th century – a figure with significant implications for global growth and inflation.

Figure 16: Average effective tariff rate, US



Source: EY-Parthenon elaborations based on World Trade Organization, International Monetary Fund. Last updated: November 2025.

The World Bank's scenario analysis identifies two cases (downside and upside) based on the severity of US trade policies.²⁸

In the downside scenario, a weighted average tariff increase of about 10 percentage points relative to May 2025 is assumed, triggering retaliatory measures by trade partners. Renewed trade tensions would also lead to persistent uncertainty and heightened financial market volatility. The overall impact on global growth would be a reduction of 0.5 and 0.4 percentage points in 2025 and 2026 versus the baseline. Inflation would initially fall by 0.4 points in 2025 due to weaker energy prices, before rising by 0.5 points above baseline in 2026 as tariff effects materialize. Monetary easing would be constrained across advanced and emerging economies.

In the upside scenario, the effective US tariff rate, while remaining above 2024 levels, would fall by roughly half compared to the baseline (end-May 2025), accompanied by the removal of retaliatory measures. This outcome could follow negotiations leading to bilateral trade agreements and easing tensions. Reduced tariffs and improved confidence from mid-2025 would lift

²³ Personal Income and Outlays, September 2025. For more information, <https://www.bea.gov/news/2025/personal-income-and-outlays-september-2025>.

²⁴ Industrial Production and Capacity Utilization, July 2025. For more information, <https://www.federalreserve.gov/releases/g17/current/default.htm>.

²⁵ Federal Reserve Bank of New York, Outlook-at-Risk: Real GDP Growth, Unemployment, and Inflation,

<https://www.newyorkfed.org/research/policy/outlook-at-risk#root:growth-at-risk>.

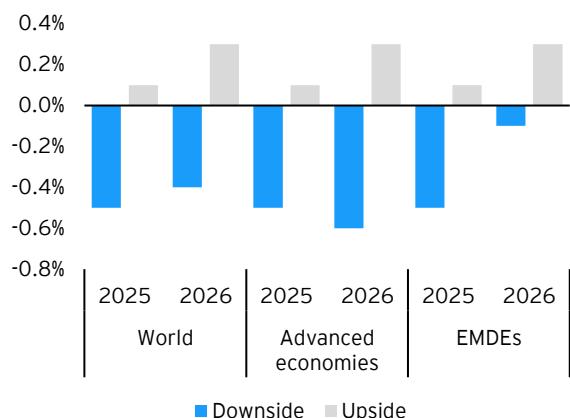
²⁶ For more information, <https://www.bea.gov/help/faq/463>.

²⁷ For more information, <https://www.newyorkfed.org/research/policy/nowcast#/overview>.

²⁸ World Bank, Global Economic Perspective, June 2025.

global growth by 0.1 and 0.3 points in 2025 and 2026 versus baseline.

Figure 17: Change in global growth under different scenarios - percentage points



Source: World Bank.

United Kingdom

The U.K. economy grew by 0.1% in Q3 2025, following stronger gains in Q2 (+0.3%) and Q1 (+0.7%). Q3 performance was driven by private consumption (+0.2%), public spending (+0.5%), investment (+1.8%), and a positive trade contribution.²⁹

High-frequency data show slight improvement: after monthly contractions of 0.1% in July and August, services grew by 0.2% in September.³⁰

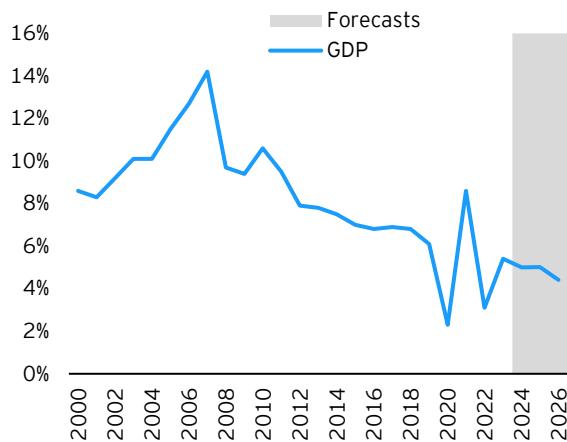
Construction expanded by 0.2% in September after a 0.5% drop in August and a 0.2% rise in July.³¹ Industry contracted by 2.0% in September, following +0.3% in August and -0.1% in July.³²

Inflation eased to 3.6% in October from 3.8% in July-September, though still above December 2024 levels (2.5%). Core inflation remains elevated and stable at around 3.5% (3.4% in October, 3.5% in September, 3.6% in August).³³

China

The trajectory of China's economy shows clear signs of deceleration. This process does not refer solely to recent GDP growth or forecasts for 2026 (the OECD, in its latest Economic Outlook, estimates growth of 5.0% for 2025 and 4.4% for 2026, broadly in line with the International Monetary Fund, which projects growth of 4.8% and 4.2% for the two years), but represents a long-term trend underway since the post-financial crisis period (2008).

Figure 18: GDP, China - % change



Source: EY-Parthenon elaborations on OECD data.

Analyzing the latest figures, China's economy recorded GDP growth of 4.8% in Q3 2025 compared to the same quarter of the previous year, following increases of 5.2% and 5.4% in Q2 and Q1, respectively. On a quarterly basis, GDP rose by 1.1% in Q3, after gains of 1.0% and 1.2% in Q2 and Q1 2025.³⁴

The industrial sector slowed in October, with values growing 4.9% year-on-year, down from 6.5% in September. October's increase was partly driven by higher value added in other transport

²⁹GDP first quarterly estimate, UK: July to September 2025, <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletin/s/gdpfirstquarterlyestimateuk/julytoseptember2025>.

³⁰Office for National Statistics, Index of Services, UK: September 2025, <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/bulletins/indexofservices/september2025>.

³¹Office for National Statistics, Construction output in Great Britain: September 2025, <https://www.ons.gov.uk/businessindustryandtrade/constructionindustry/bulletins/constructionoutputingreatbritain/september2025newordersandconstructionoutputpriceindexesjulytoseptember2025>.

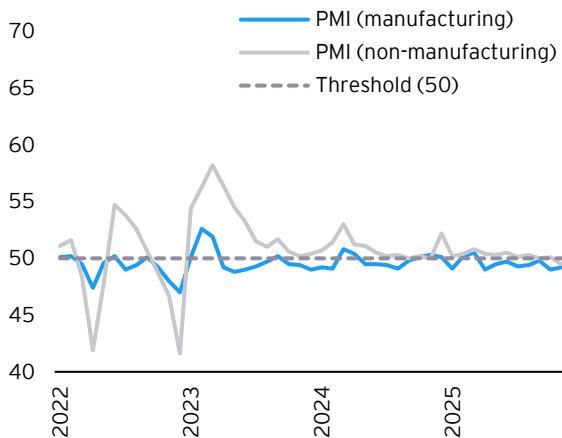
³²Office for National Statistics, Index of Production, UK: September 2025, <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/bulletins/indexofproduction/september2025>.

³³Office for National Statistics, Consumer price inflation, UK: October 2025, <https://www.ons.gov.uk/economy/inflationandpriceindexes/bulletins/consumerpriceinflation/october2025>.

³⁴Preliminary Accounting Results of GDP for the Third Quarter of 2025, <https://www.stats.gov.cn/english/PressRelease/202510/t202510271961697.html>.

equipment (annual change of 15.2%) and the automotive sector (15.2%).³⁵

Figure 19: Purchasing Managers Index (PMI), manufacturing and non-manufacturing activities - China



Source: EY-Parthenon elaborations on National Bureau of Statistics of China data. Latest observation: November 2025.

Regarding expectations among manufacturing and non-manufacturing operators, the PMI published by the National Bureau of Statistics of China remains broadly aligned with the expansion threshold (50).³⁶

The real estate sector continues to struggle, with investment contracting by 15% between January and October 2025 compared to the same period last year, underscoring severe distress.³⁷

Broadening the scope to total investment, cumulative growth between January and October 2025 versus the same period of the previous year is negative, with a decline of 1.7%, reversing the positive trend seen in May 2025 (cumulative growth January-May was 3.7%).³⁸

Retail sales in October 2025 rose 2.9% year-on-year, below September (3.0%) and August (3.4%).³⁹

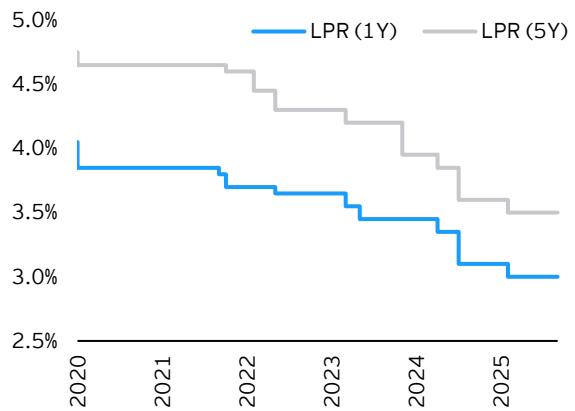
In foreign trade, exports fell by 0.8% in October 2025, while imports increased by 1.4%. October marks the first month of negative export growth since the implementation of the new US trade policy.⁴⁰

Based on this information, it is clear that China's economy is experiencing a slowdown, which the country is addressing through targeted fiscal and monetary measures.⁴¹

From a monetary perspective, policy rates remain low compared to previous years—a stance maintained even as major global central banks pursued restrictive policies to curb rising prices.

Specifically, the Loan Prime Rate (LPR—the benchmark rate used by commercial banks to price loans for top-tier clients) stood at 3.00% for one-year and 3.50% for five-year maturities in August 2025. The Medium-term Lending Facility (MLF) rate remains unchanged at 2.00%, the rate at which commercial banks and institutions such as the China Development Bank borrow from the central bank for the medium term.⁴²

Figure 20: Loan Prime Rate (LPR) at 1 and 5 years, China



Source: EY-Parthenon elaborations on People Bank of China data. Latest observation: November 2025.

³⁵ Industrial Production Operation in October 2025, <https://www.stats.gov.cn/english/PressRelease/202511/t202511171961875.html>.

³⁶ Purchasing Managers' Index for November 2025, <https://www.stats.gov.cn/english/PressRelease/202512/t202512021961963.html>.

³⁷ Investment in Real Estate Development from January to October 2025, <https://www.stats.gov.cn/english/PressRelease/202511/t202511171961878.html>.

³⁸ Investment in Fixed Assets from January to October 2025, <https://www.stats.gov.cn/english/PressRelease/202511/t202511171961877.html>.

³⁹ Total Retail Sales of Consumer Goods in October 2025, <https://www.stats.gov.cn/english/PressRelease/202511/t202511171961879.html>.

⁴⁰ For more information, see <http://english.customs.gov.cn/statistics/report/preliminary.html>. The annual change in exports stands at -1.1% when considering exports expressed in dollars, while that of imports stands at +1.0%.

⁴¹ The State Council Information Office of the People's Republic of China, "China vows 'highly proactive' fiscal policy to shore up economy." For more information, http://english.scio.gov.cn/pressroom/2025-01/11/content_117658569.html.

⁴² For more information, <http://www.pbc.gov.cn/en/3688229/3688335/3883798/index.html>.

On the fiscal side, a recent study shows that policy can also support export growth: certain subsidies have boosted export volumes and lowered export prices, particularly in sectors such as metallurgy and furniture manufacturing.⁴³

China's economic slowdown is expected to persist, highlighting the need for structural reform of its growth model. Key challenges include demographic pressures (population aging will shrink the labor force), slowing productivity growth (as China transitions toward advanced-economy status), and diminishing returns on investment—funded by historically high savings—channeled into less productive sectors such as real estate.^{44,45}

These factors point to the need to rebalance China's growth model toward one increasingly

driven by private consumption. Without reforms, potential growth could fall to around 3.8% on average between 2025 and 2030 and to 2.8% between 2031 and 2040. In a reform scenario, potential growth could remain near 4.7% between 2023 and 2038.⁴⁶

While the global outlook shows a general recovery, numerous uncertainties and vulnerabilities persist, given a geopolitical environment that is improving slightly yet remains complex, more moderate growth in some economies compared to pre-pandemic levels, the impact of trade-distorting measures and related slowdown in trade, and commodity prices still elevated relative to pre-pandemic benchmarks.

⁴³ Rotunno, L., & Ruta, M. (2024). Trade Implications of China's Subsidies. IMF Working Paper WP/24/180, 2024 Aug.
⁴⁴ International Monetary Fund (IMF). 2017. "Asia: At Risk of Growing Old before Becoming Rich?" Chapter 2 in Asia and Pacific Regional Economic Outlook: Preparing for Choppy Seas. May 2017: Washington, DC.

⁴⁵ Madsen, Jakob B., Md. Rabiul Islam, and James B. Ang. 2010. "Catching Up to the Technology Frontier: The Dichotomy Between Innovation and Imitation." Canadian Journal of Economics 43(4): 389-1411.
⁴⁶ Muir, D., Novta, N., & Oeking, A. (2024). China's Path to Sustainable and Balanced Growth. IMF Working Paper WP/24/238, 2024 Nov.

The European framework

The Eurozone economic picture and economic indicators

After quarterly growth of 0.1% in the second quarter of 2025, the Eurozone recorded more dynamic GDP growth (0.3%). This figure reflects GDP growth of 0.6% in Spain and 0.5% in France, while growth was essentially stagnant in Germany (0.0%) and Italy (0.1%).

On a year-on-year basis, comparing the third quarter of 2025 with the same quarter of the previous year, Eurozone GDP growth was 1.4%, similar to that recorded in the second and first quarters of 2025 (1.6%). This figure also reflects dynamic growth in Spain (2.8%) and positive but less significant growth in France, Italy, and Germany (0.9%, 0.6%, and 0.3%, respectively).

Figure 21: GDP and contributions by country, Eurozone - % change YoY

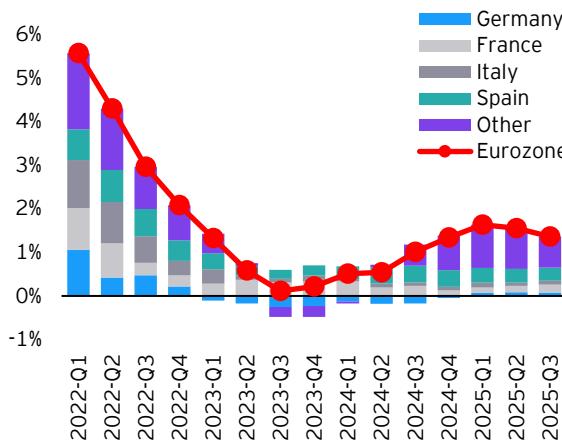
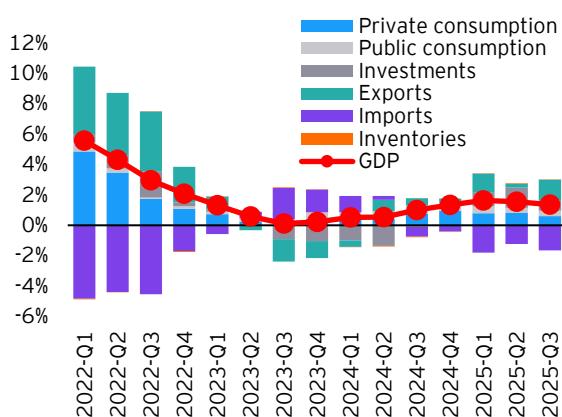


Figure 22: GDP and contributions by component, Eurozone - % change YoY



Source: EY-Parthenon elaborations on Eurostat data.

Looking at GDP components, growth in the third quarter of 2025 was primarily driven by private consumption and investment (with positive contributions of 0.6 and 0.7 percentage points, respectively); public consumption followed (0.4 percentage points), while net foreign demand contributed negatively, as imports grew more strongly than exports.

Eurozone industrial production showed a positive trend (2.1%) in October 2025, marking the ninth consecutive month of growth after approximately 21 months of contraction. From a cyclical perspective, however, the industrial production index remains volatile, alternating between months of growth and contraction. Overall, the index shows Eurozone industry is still characterized by weaknesses, with values close to but still below the 2021 average (about 1%).

Specifically, in the main countries of the monetary union, German and Italian industry continue to show a negative trend, with values well below the average recorded in 2021 and with a substantially stable trajectory.

Figure 23: Industrial production by main countries, Eurozone - index, 2021=100

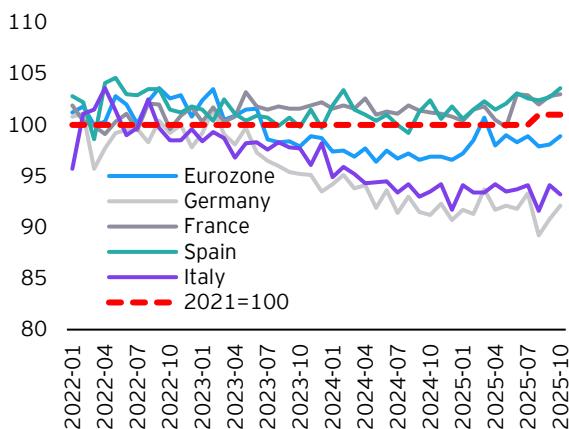
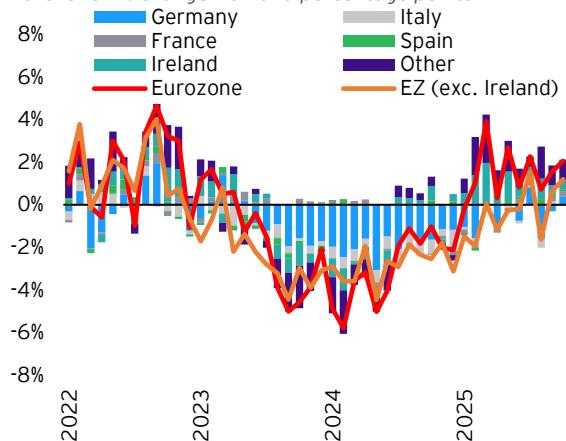


Figure 24: Industrial production by main countries, Eurozone - % change YoY and percentage points



Source: EY-Parthenon elaborations based on Eurostat data. Latest observation: September 2025.

When analyzing industrial production trends, it is also important to consider the role of Ireland, whose contribution to the Eurozone's industrial sector presents complexities, given that it hosts numerous large manufacturing companies. When the Irish industrial sector is excluded from the data, the performance expressed by the index appears less positive.

Analyzing the main macro-categories of industrial goods, intermediate goods production is the most critical: while October saw growth in this category (0.6%), the index for intermediate manufactured goods remains approximately 11% below the 2021 average. The picture is different for consumer goods and capital goods, whose indices stand above 2021 levels (11.3% and 1.9%, respectively).

Regarding industry, it is important to note that on April 4, 2025, China imposed restrictions on rare earth exports, creating production challenges in some sectors. These measures were introduced in retaliation for increased US tariffs on Chinese products during the escalation of US-China trade tensions, thus posing a supply-side shock. China is the world's leading supplier of rare earths (approximately 95%) and also plays a key role in refining other critical raw materials, such as lithium and cobalt. These factors underscore China's critical role in global supply chains and highlight the Eurozone's vulnerability to potential geopolitical disruptions.^{47,48}

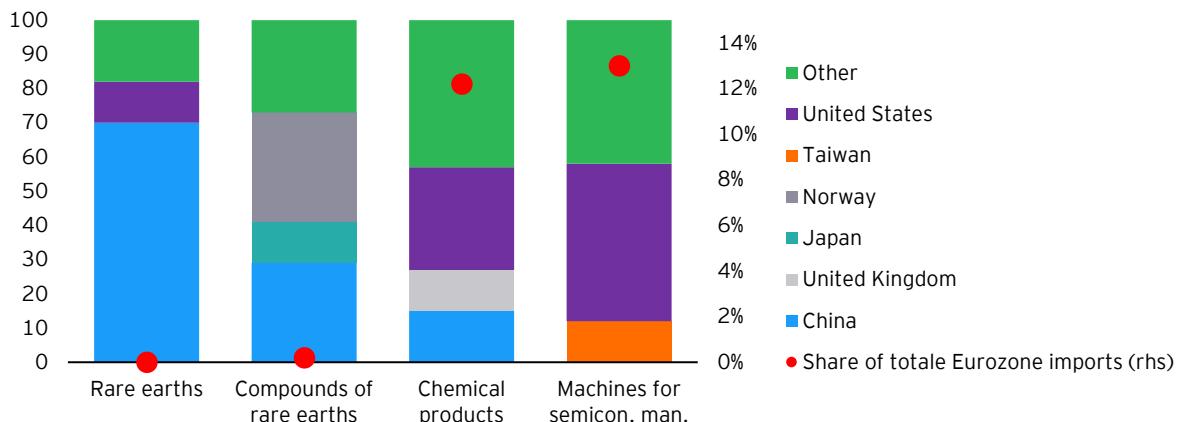
Specifically, regarding relations with the Eurozone, China accounts for approximately 70% of rare earth imports. However, this exposure must be added to "indirect" exposure, that is, imports of goods containing these elements, which in turn cause producing countries to import rare earths from China. For example, the United States imports approximately 80% of its rare earths from China, which means the Eurozone remains indirectly exposed to Chinese supplies when importing US products containing rare earths.⁴⁹

⁴⁷ International Energy Agency (2024), "Global Critical Minerals Outlook 2024", IEA Publications.

⁴⁸ International Relations Committee Work stream on Open Strategic Autonomy (2023), "The EU's Open Strategic Autonomy from a central banking perspective", Occasional Paper Series, No 311, ECB; Attinasi, M.-G., Boeckelmann, L., Gerinovics, R. and Meunier, B. (2025), "Unveiling the hidden costs of critical dependencies", Economic Bulletin, Issue 5, ECB.

⁴⁹ ECB Economic Bulletin Issue 6-2025.

Figure 25: Origin of specific products by country, Eurozone - % of total



Source: ECB Economic Bulletin Issue 6-2025.

Rare earth supply shortages are negatively impacting much of the manufacturing industry, with widespread adverse effects. Rare earths are critical components in the production of specific goods, including automobiles, computers, and telephones, in sectors essential to the Eurozone's supply chain. According to recent research, approximately a quarter of all companies, including Volkswagen, Renault, and Telefónica, have only one intermediary separating them from Chinese rare earth suppliers (i.e., a single intermediary between these companies and the Chinese supplier). These intermediaries are often US technology firms that manufacture products using rare earths supplied by Chinese companies. This reliance on indirect supply chains amplifies Eurozone companies' exposure to potential supply shocks, as even minor disruptions to Chinese exports can cascade through intermediaries and negatively affect a wide range of industrial sectors.⁵⁰

A sudden disruption in rare earth supplies from China to the United States would have a significant impact on the Eurozone economy, as US companies operate in strategic sectors and are heavily dependent on raw materials from China. Currently, approximately 160 US companies act as direct intermediaries between European firms and Chinese exporters, but each serves numerous Eurozone counterparties, so any supply disruptions could have substantial knock-on effects along supply chains.

Continuing the analysis of economic data, PMI indicators⁵¹ for manufacturing and services provide timely insights into sector performance. Starting with manufacturing, sentiment among operators is improving in the four main Eurozone countries, with Germany, France, and Italy showing positive trends compared to previous months, bringing values close to the expansion threshold (50); Spain exhibits an even more favorable trend, with the index above this threshold for several months, signaling a broadly positive climate among sector operators.

Confidence in the services sector also appears positive overall, with indices for the four main Eurozone countries above the 50-point reference threshold.

⁵⁰ ECB Economic Bulletin Issue 6-2025.

⁵¹The Purchasing Managers' Index (PMI) is one of the most popular economic indicators. It measures the prevailing direction of economic trends in the manufacturing, construction, and services sectors, based on timely surveys of the most representative companies in each sector. Values above 50 indicate a growing trend in economic activity, while values below 50 indicate a decline.

Figure 26: Purchasing Managers Index (PMI), manufacturing

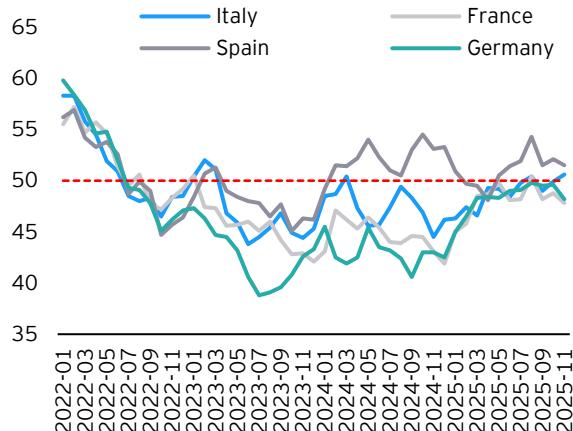
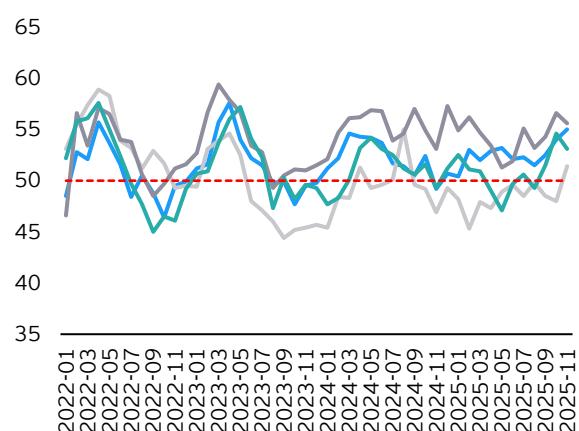


Figure 27: Purchasing Managers Index (PMI), services



Source: EY-Parthenon elaborations based on S&P Global data. Latest observation: November 2025.

Monetary Policy and Prices in the Eurozone

On 30 October 2025, the European Central Bank decided to keep its key monetary policy interest rates unchanged, considering the evolution and outlook for inflation (around 2%), positive labor market dynamics, as well as the overall context and potential factors that could lead to an increase in the price index.⁵²

latest Survey of Professional Forecasters (Q4 2025)⁵³ by the European Central Bank confirms the ECB's expectations regarding inflation trends. Inflation is projected to be 2.1% in 2025, 1.8% in 2026, and 2.0% in 2027, with a slight upward revision for 2025 of 0.1 percentage points. Respondents identified declining energy prices, particularly oil and natural gas, as some of the factors reducing overall inflation over the forecast horizon; in addition, the appreciation of the euro, which exerts a "disinflationary" effect (lower relative cost of dollar-denominated goods), is also contributing.

The interest rates on main refinancing operations and on the marginal lending facility and the deposit facility⁵⁴ therefore stand at 2.15%, 2.40%, and 2.00%, respectively.

⁵²ECB, Monetary policy decisions, 30 October 2025. For more information,

<https://www.ecb.europa.eu/press/pr/date/2025/html/ecb.mpr251030-cf0540b5c0.en.html>.

⁵³The ECB Survey of Professional Forecasters, Fourth quarter of 2025, October 2025. For more information,

https://www.ecb.europa.eu/stats/ecb_surveys/survey_of_professional_forecasters/html/ecb.spf2025q4.en.html.

⁵⁴The deposit facility rate is one of three key interest rates set by the ECB every six weeks as part of its monetary policy decisions. This rate defines the interest banks earn on their overnight deposits (for the duration of one business day) at the central bank. The other two key interest rates are the main refinancing operations (MRO) rate and the marginal lending facility (MLF) rate. The MRO rate defines the cost at which banks can obtain credit from the central bank with a maturity of one week. If banks need overnight liquidity, they can use the marginal lending facility at a higher rate. For more information, see https://www.ecb.europa.eu/stats/policy_and_exchange_rates/key_ecb_interest_rates/html/index.en.html.

Figure 28: Reference interest rates of the European Central Bank's monetary policy

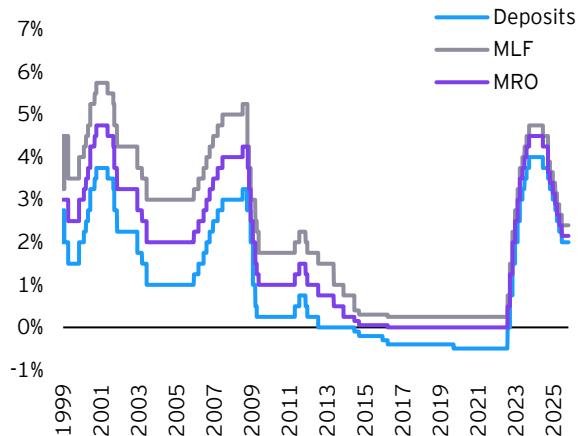
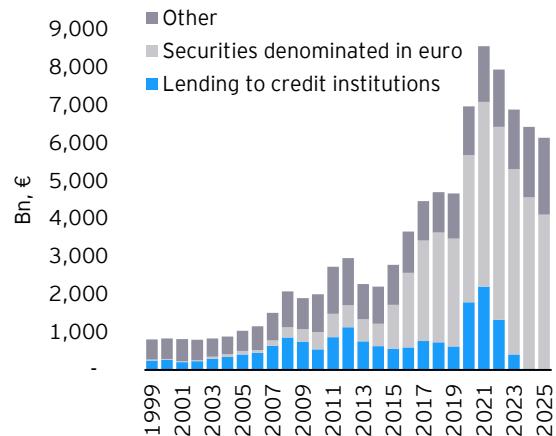


Figure 29: Main balance sheet items of the European Central Bank (€, billion)



Source: EY-Parthenon elaborations based on European Central Bank (ECB) data. MLF = Marginal Lending Facility; MRO = Main Refinancing Operation. The deposit facility rate refers to deposits at the central bank. Balance sheet items - loans to credit institutions: this includes loans to euro-area credit institutions related to monetary policy operations denominated in euros (the various items include main refinancing operations and LTROs); euro-denominated securities: this includes euro-denominated securities of euro-area residents (the various items include assets acquired for monetary policy purposes); other: this includes gold and foreign currency-denominated claims on euro-area residents and non-residents. The latest observation for 2025 refers to the *weekly financial statement* of November 28, 2025.

Focusing on the effects of the restrictive monetary policy implemented in previous years, this not only allowed inflation to return toward levels consistent with the price stability objective but also had significant effects on emerging European economies. Studies show that ECB monetary tightening leads to more-than-proportional increases in government bond yields in "emerging Europe",⁵⁵ along with substantial rises in sovereign spreads, depreciations of local currencies, and a marked reduction in output.⁵⁶ This phenomenon applies both to "conventional" monetary policy—primarily through interest rate hikes—and to balance sheet reduction by the Central Bank. Effects remain moderate when tightening occurs predictably but can become significant if the pace accelerates unexpectedly. Finally, negative impacts tend to be more pronounced under a fixed exchange rate regime compared to an inflation-targeting regime with a flexible exchange rate.

The restrictive monetary cycle in place since mid-2023, together with a more or less significant easing of certain external factors (such as commodity price trends), has been effective in bringing inflation back toward target levels.

⁵⁵ In this regard, Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Kosovo, Macedonia, Moldova, Montenegro, Poland, Romania, Serbia and Turkey are considered, excluding Russia and Ukraine due to the ongoing war.

⁵⁶ Engler, P., Ferrucci, G., Zabczyk, P., & Zheng, T. (2024). ECB Spillovers to Emerging Europe: The Past and Current Experience. IMF Working Paper WP/24/170, 2024 Aug.

Figure 30: Inflation rate, Eurozone - % change YoY

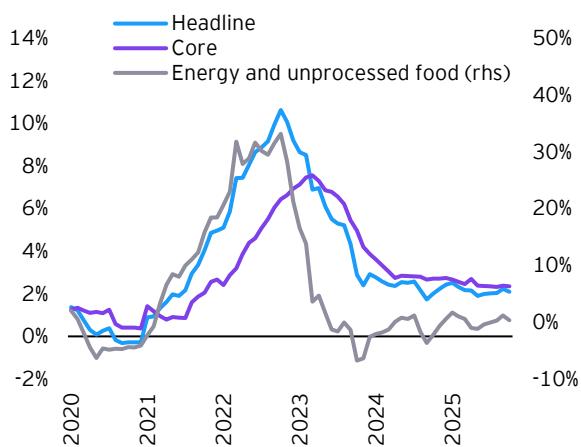
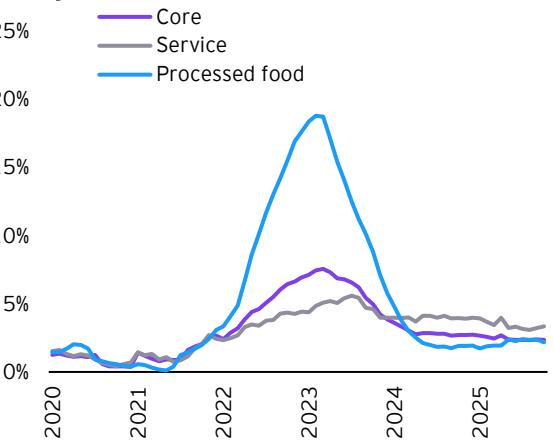


Figure 31: Inflation rate, Eurozone - 3-month annualized % change



Source: EY-Parthenon elaborations based on Eurostat data. The *headline measure* considers all goods in the basket used to calculate price changes; the *core measure* considers goods in the *headline basket* excluding energy and fresh food. Rates refer to harmonized rates. Latest observation: October 2025.

In October, headline inflation (which considers all goods in the basket used to monitor price trends) stood at 2.1% in the Eurozone. This figure aligns with the ECB's target, despite persistent risks of potential inflationary pressures (such as geopolitical tensions). Core inflation (the underlying component) remains higher and more persistent (at 2.4% in October, similar to the level recorded over the previous five months). A similar phenomenon occurred during the pandemic crisis, when energy prices fell sharply due to the global slowdown: a core inflation rate above headline indicates that underlying components are rising faster than energy and fresh food prices.

Regarding inflation trends in the Eurozone, it is important to note that the rate analyzed represents the monetary union as a whole and may differ significantly from inflation rates in individual member countries.

Figure 32: Inflation and degree of dispersion, Eurozone

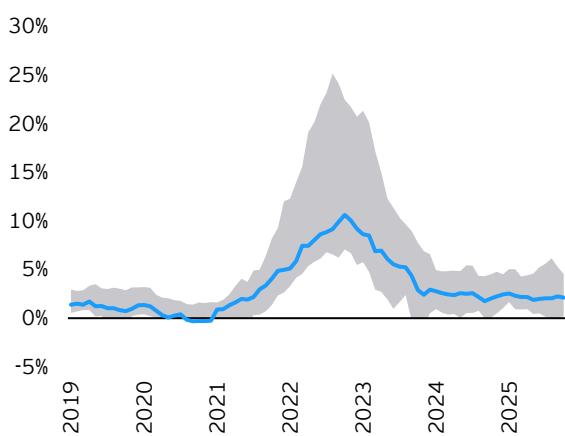
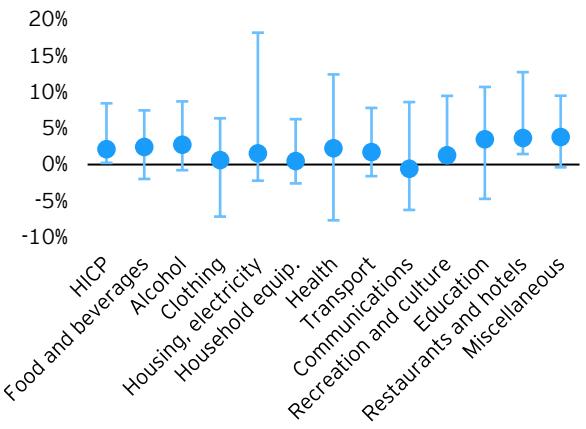


Figure 33: Inflation and degree of dispersion by product type, Eurozone



Source: EY-Parthenon elaborations based on Eurostat data. The inflation rate is calculated using the Harmonized Index of Consumer Prices (HICP). The gray area (left chart) and the vertical bars (right chart) represent the inflation dispersion for the categories considered. Latest observation: October 2025.

The dispersion of the harmonized consumer price index reached very high levels between 2022 and 2023, following inflationary pressures after the pandemic and during the energy crisis. From 2024 to date, dispersion has clearly declined compared to previous peaks, although it remains above pre-pandemic levels.

A detailed analysis of HICP components reveals heterogeneity in dispersion: the energy component, for example, shows very high dispersion, reflecting differences in energy policy and supply dependence (e.g., in Russia), now reduced across countries. Another factor explaining heterogeneous inflation trends among Eurozone countries relates to the varying effectiveness of monetary policy transmission mechanisms: evidence shows that monetary policy effects are stronger in economies with more developed financial systems (which enhance credit channel efficiency, a key transmission channel) or where uncertainty is lower (consistent with the idea that uncertainty not only reduces investment, labor demand, and consumption but also makes economic agents less responsive to changes in economic conditions and interest rates).⁵⁷ Conversely, the level of economic development (emerging versus advanced economy) appears less relevant.⁵⁸ Finally, coordination between monetary and fiscal policy can improve transmission effectiveness and, consequently, influence inflation dynamics.^{59,60}

The persistence of certain HICP components is partly explained by the positive performance of the Eurozone labor market, which remains healthy despite signs of cooling. One tool for analyzing labor market dynamics is the Beveridge curve, which examines the relationship between unemployment and vacancy rate,⁶¹ providing insights into economic health and labor market characteristics.

Figure 34: Beveridge curve in Eurozone countries - 2019q1-2025q2

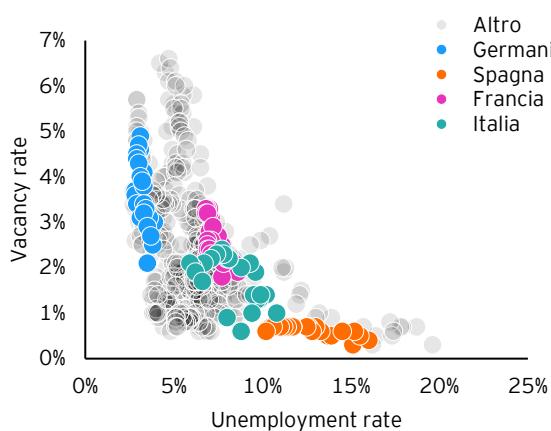
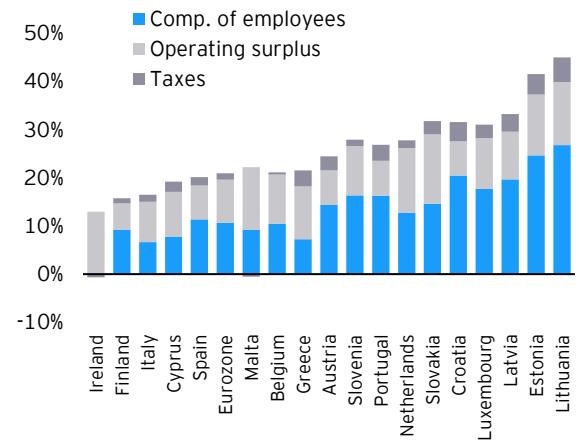


Figure 35: Contributions to GDP deflator growth, Eurozone



Source: EY-Parthenon elaborations on Eurostat data.

Also in this perspective, the analysis of major Eurozone economies reveals heterogeneity. Spain, for example, shows relatively low vacancy rates compared to other major countries (Italy, France, and Germany), combined with a higher unemployment rate. These two factors describe a labor market that is currently less dynamic, with limited price pressures from this channel. Germany presents a different picture, with high vacancy rates and unemployment below 5%. In this case, the labor market may exert upward pressure on prices, particularly on core inflation.

⁵⁷Bloom, N. (2009). The impact of uncertainty shocks. *Journal of Econometrics*, 77(3), 623-685.

⁵⁸Deb, P., Flores, J. E., Firat, M., & Furceri, D. (2023). Monetary Policy Transmission Heterogeneity: Cross-Country Evidence.

⁵⁹Bianchi, F., Faccini, R., Melosi, L. (2020). Monetary and fiscal policies in times of large debt: Unity is strength (No. w27112). National Bureau of Economic Research.

⁶⁰Beyer, R., Duttagupta, R., Fotiou, A., Honjo, K., Horton, M., Jakab, Z., Lindé, J. (2023). "Shared Problem, Shared Solution: Benefits from Fiscal-Monetary Interactions in the Euro Area".

⁶¹The job vacancy rate is defined as the ratio of the number of vacancies to the sum of the number of filled positions and the number of unfilled positions. A vacant position is defined as a paid position that is newly created, unfilled, or about to become vacant (i) for which the employer is taking active steps and is prepared to take further steps to find a suitable candidate outside the company concerned; and (ii) that the employer intends to fill immediately or within a specific period of time. For more information, [see \[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Job_vacancy_rate_\\(JVR\\)\]\(https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Job_vacancy_rate_\(JVR\)\)](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Job_vacancy_rate_(JVR)).

The role of wages in price dynamics can also be analyzed through national accounts. Breaking down the GDP deflator⁶² by income components⁶³ shows that labor costs have been a key driver of price increases between Q4 2019 and Q2 2025, despite differences across countries.

Beyond the labor market, inflation is closely linked to bank credit trends. The impact of current interest rate levels on credit conditions is evident from the latest Eurozone Bank Lending Survey, which offers valuable insights.^{64,65}

Eurozone banks reported a slight and unexpected net tightening of credit standards for firms in Q3 2025 (net percentage of banks at 4%). This follows a near-zero net percentage (-1%, indicating slight easing) in Q2.

Figure 36: Changes in credit standards applied to the approval of loans or credit lines to enterprises, and contributing factors, Eurozone

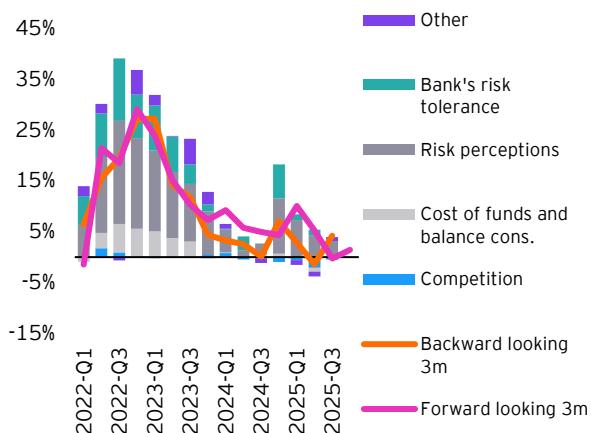
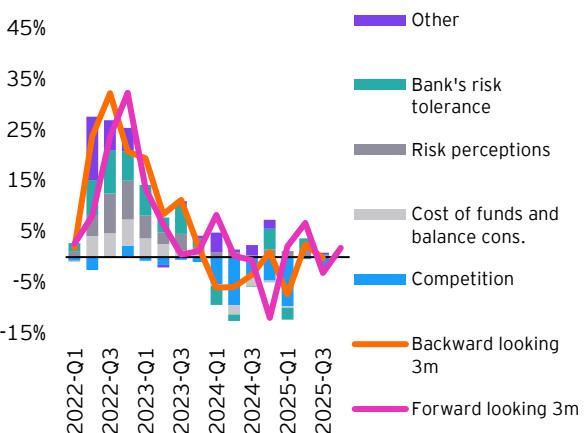


Figure 37: Changes in credit standards applied to the approval of loans to households for house purchase, and contributing factors, Eurozone



Source: EY-Parthenon elaborations based on European Central Bank data (Bank Lending Survey). For households, the reference is to the conditions for lending to purchase a home. Net percentages are defined as the difference between the sum of the percentages of banks that responded, "significantly tightened" and "slightly tightened" and the sum of the percentages of banks that responded, "slightly eased" and "significantly eased" with reference to the change in credit conditions. Net percentages for responses to questions on contributing factors are defined as the difference between the percentage of banks reporting that a given factor contributed to a tightening and the percentage of banks reporting that it contributed to an easing.

Among the four main Eurozone countries, German banks reported a net tightening of corporate lending standards, while banks in Italy, France, and Spain reported unchanged criteria. Perceived risks related to the economic outlook contributed to stricter credit standards, with high geopolitical uncertainty and trade-related risks cited as differentiating factors across sectors or firms.

For household credit (specifically mortgage loans), banks reported unchanged standards in Q3 2025 (with net percentage at 0%). The slight net easing expected in Q2 (-3%) did not materialize. Among the four main countries, German banks reported net tightening, while standards remained unchanged in France, Italy, and Spain. Competition had a modest positive effect on easing credit standards for this loan category. In Q4 2025, Eurozone banks expect to slightly tighten mortgage lending standards (net percentage at 2%), driven mainly by German banks, while French, Spanish, and Italian banks are expected to keep standards unchanged.

⁶² A deflator is a value that expresses the change in prices over a period of time for a product or basket of products, used to deflate (price-adjust) a measure of value changes for the same period (e.g., sales of that product or basket), thus eliminating price increases or decreases and leaving only volume changes. For more information, see <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Deflator>.

⁶³ The income-based analysis of gross domestic product (GDP) considers compensation from employees, taxes on production and imports minus production subsidies, gross operating surplus, and other income. The income-based approach shows how GDP is distributed among the various participants in the production process. For more information, see https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Income_approach.

⁶⁴ The Bank Lending Survey (BLS) has been conducted since January 2003 by the national central banks of the countries that have adopted the single currency in collaboration with the European Central Bank. It is aimed at credit policy makers at the major banks in the area (approximately 150). The survey provides a clear overview of the factors influencing credit supply and the terms and conditions offered to customers, on the one hand, and the trends in credit demand and its determinants, on the other.

⁶⁵ The euro area bank lending survey - Third quarter of 2025.

Finally, regarding Eurozone public finances, according to the ECB's September 2025 macroeconomic projections, the general government budget balance is expected to deteriorate over the forecast horizon. The Eurozone deficit fell from 3.5% of GDP in 2023 to 3.1% in 2024, partly due to the gradual removal of most fiscal support measures introduced to counter rising prices. For 2025, the deficit is projected at 2.9%, rising to 3.2% in 2026 and 3.4% in 2027. This increase is mainly due to higher interest payments and a slight deterioration in the cyclically adjusted primary balance.⁶⁶

Figure 38: Net borrowing and components, Eurozone - % of GDP

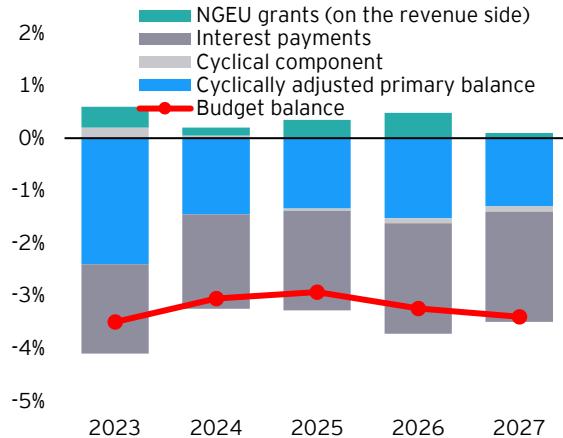
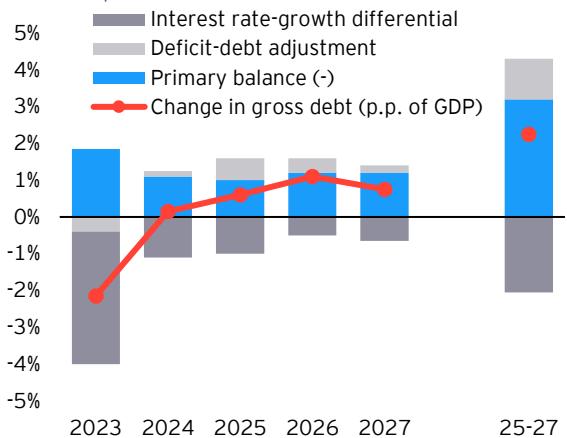


Figure 39: Change in public debt and components, Eurozone, % of GDP



Source: ECB Economic Bulletin Issue 6-2025. The primary balance is adjusted for the cycle and for NGEU grants on the revenue side.

Consequently, the debt-to-GDP ratio is expected to rise from 87.4% in 2024 to just under 90% in 2027, considering persistent primary deficits and deficit-debt adjustments (DDA). These adjustments represent the difference between the public deficit/surplus in a given year and the change in public debt stock in the same year. Three elements are distinguished:⁶⁷

- (i) Transactions on principal financial assets: the first component concerns the government's transactions on principal financial assets, such as deposits, shares, securities, and loans. If, for example, a government accumulates deposits or purchases company shares, it must raise more financial resources, thus increasing its debt, even if the budget deficit remains stable. Conversely, if it sells these assets, for example, through privatizations, it obtains liquidity that can be used to reduce its debt, without affecting the deficit.
- (ii) Valuation effects and other changes in debt volume: The second component is related to valuation effects and other changes in debt volume. Public debt is measured at face value, but new issues or repayments may occur at prices other than *face value*. Furthermore, if part of the debt is denominated in foreign currency, changes in exchange rates can change its value in euros, without impacting the deficit. This category also includes statistical reclassifications, such as the transition of entities from the public to the private sector or vice versa, which can change the volume of debt without directly affecting the deficit.
- (iii) Timing of recording differences and residual factors: The third component concerns timing differences and other residual factors. In public accounts, revenues and expenditures are recorded on an accruals basis, that is, when they occur, and not necessarily when the actual payment occurs. This can lead to discrepancies: for example, taxes are considered revenue when they are assessed, even if payment occurs later. This category also includes any statistical

⁶⁶ECB staff macroeconomic projections for the euro area, September 2025, https://www.ecb.europa.eu/press/projections/html/ecb_projections202509_ecbstaff-c0da697d54.en.html.

⁶⁷ Kezberle, L., & Maurer, H. (2018). Deficit-debt Adjustment (DDA) Analysis: An Analytical Tool to Assess the Consistency of Government Finance Statistics. European Central Bank. ECB Statistics Paper No. 29.

discrepancies between financial and non-financial data, as well as all other residual transactions not included in the first two components.

Beyond the primary balance and DDA, the third element influencing debt-to-GDP growth is the interest-growth differential, consistent with economic theory.⁶⁸

The Eurozone outlook remains complex. Economic activity is broadly weak, with industry still showing signs of strain despite timid improvements. Restrictive monetary policy has played a key role in curbing price increases, but disinflation appears to be slowing in recent months, partly due to strong labor market and wage dynamics. Current public debt levels and projected increases pose a major challenge for Eurozone economies, limiting fiscal space for future needs (e.g., defense spending, climate transition). Finally, political uncertainty in some Eurozone countries—particularly France—adds another layer of complexity to the macroeconomic environment, with potential spillovers to other monetary union members.

⁶⁸For further information, see, for example, Checherita-Westphal, C. (2019). Interest rate-growth differential and government debt dynamics. *Economic Bulletin Boxes* , 2 , https://www.ecb.europa.eu/press/economic-bulletin/focus/2019/html/ecb.ebbox201902_06-0c96ee6f7c.en.html .

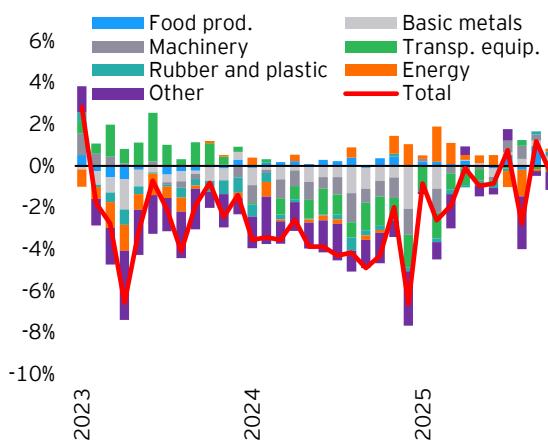
The Italian economy

The performance of the real economy

Industrial production contracted 0.3% year-on-year in October, compared to the same month the previous year. This contraction corresponded to a 1.0% contraction compared to the previous month. This growth follows a significant increase in September, when growth of 1.2% year-on-year was recorded.

Analyzing the trend in growth rates over the last period, after the contractions recorded between 2023 and early 2025, the last few months have been characterized by less significant contractions. In October, the index level was approximately 7 percentage points lower than the 2021 average.

Figure 40: Industrial production index and components - % change YoY, Italy



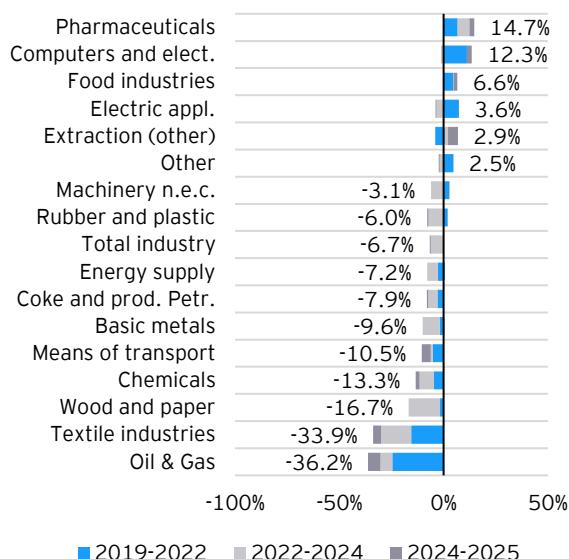
Source: EY-Parthenon elaborations based on ISTAT data. Latest observation: October 2025.

The positive trend in October is mainly due to growth in the food sector, together with metallurgy and the production of other machinery ("machinery not classified elsewhere").

It is important to note, however, that these last two production categories have seen a significant contraction in recent years, with metallurgy recording a decline in the industrial production index of approximately 12 percentage points compared to the 2021 average and the production of other machinery returning to the 2021 average after recording, however, a cumulative growth of 10% compared to the 2021 average towards the end of 2022.

By delving into the details of industrial production and adopting a longer-term perspective, it is possible to obtain additional information on the main industrial sectors and the dynamics that have characterized them in recent years.

Figure 41: Industrial production index by industrial sector, Italy - % change compared to 2019 and contributions for the years analysed



Source: EY-Parthenon elaborations on ISTAT data. Machinery n.e.c.: Manufacture of machinery and equipment not elsewhere classified.

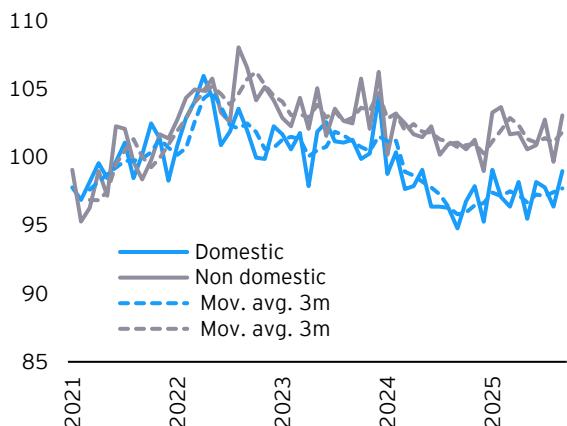
Specifically, manufacturing, metallurgy, rubber and plastics manufacturing, and electrical equipment manufacturing recorded growth of 2.4%, 2.1%, and 1.0%, respectively, in October 2025. Conversely, chemicals, textiles, and coke and refined products manufacturing recorded year-on-year declines (-7.0%, -5.2%, and -4.6%, respectively).

Taking a longer-term perspective, it's possible to gain additional insights into the performance of the Italian industry. Compared to 2019, the pharmaceutical industry, the computer and electronics manufacturing industry, and the food industry represent the top three industrial sectors by positive performance, with growth of 14.7%, 12.3%, and 6.6%, respectively.

On the other hand, it is clear that the crude oil and natural gas extraction sector, the textile industry, and the wood and paper products industry are still far from pre-crisis levels (with production down 36.2%, 33.9%, and 16.7%, respectively).

Another figure that highlights the overall negative situation of Italian industry is the one related to the volume of industrial turnover.

Figure 42: Industrial turnover volume (excl. construction), Italy - index, 2021=100



Source: EY-Parthenon elaborations on ISTAT data. Latest observation: September 2025.

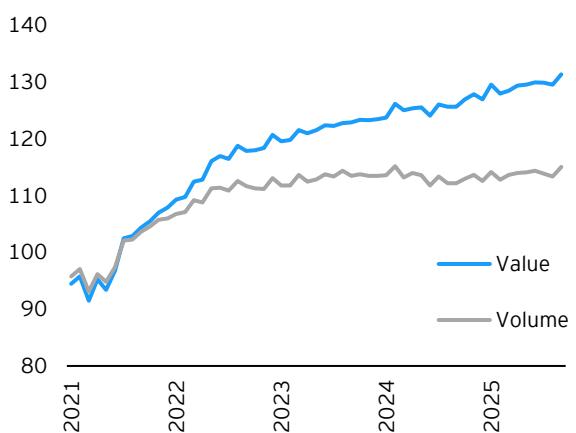
Analysis of this indicator shows a negative trend since 2022, with some differences between the domestic and foreign markets. Specifically, the trend in turnover from the domestic market has deteriorated more sharply since mid-2022 and, even more significantly, since the end of 2023. A slight improvement has been observed

since early 2025 in both the domestic and foreign markets.

Changing perspective and focusing on the performance of the services sector, which accounts for more than 70% of Italy's total added value, we see that the trend is not particularly positive, despite overall showing better dynamics than those of industry.

The sector's turnover trend shows that, in nominal terms, growth has been significant (an increase of approximately 30% since 2021); however, this growth is largely attributable to the increase in prices experienced since 2022: in real terms, overall growth has been more modest (around 15%).

Figure 43: Index of value and volume of turnover of services, Italy - index, 2021=100



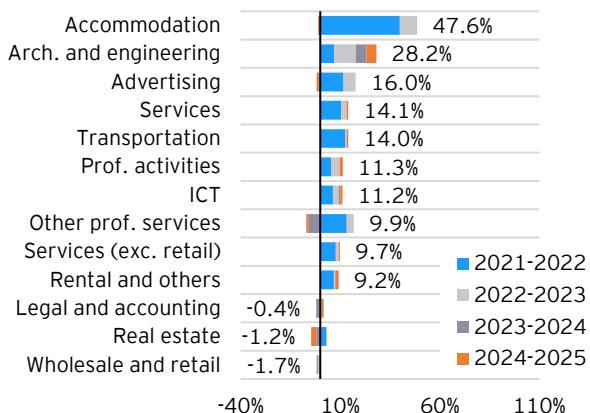
Source: EY-Parthenon elaborations on ISTAT data. Latest observation: September 2025.

By breaking down the data into the main services, it is also possible to obtain further detailed information on the sector's performance.

The latest data relating to accommodation and food services show a growing sector, with a variation compared to the 2021 average value of approximately 48%. Always growing but at a different pace are the activities of architectural and engineering firms, testing and technical analysis which have recorded, in the same period, a growth of approximately 28%.

On the other hand, wholesale and retail trade services and real estate activities recorded an even lower turnover volume than the 2021 average figures.

Figure 44: Index of turnover volume of services by branch, Italy - index, % change 2021-25 and contributions

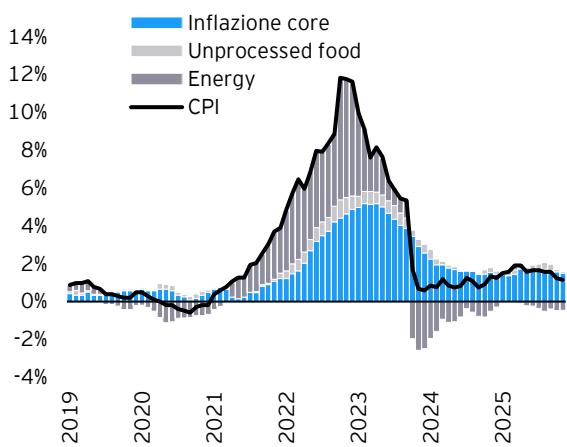


Source: EY-Parthenon elaborations on ISTAT data. Latest observation: September 2025.

Price trends and the labor market in Italy

In November, the inflation rate was 1.2%, in line with October and lower than the rate experienced in the first nine months of the year (January-September average of 1.7%).

Figure 45: Inflation and main components, Italy - % change YoY and percentage points



Source: EY-Parthenon elaborations on ISTAT data. Latest observation: November 2025.

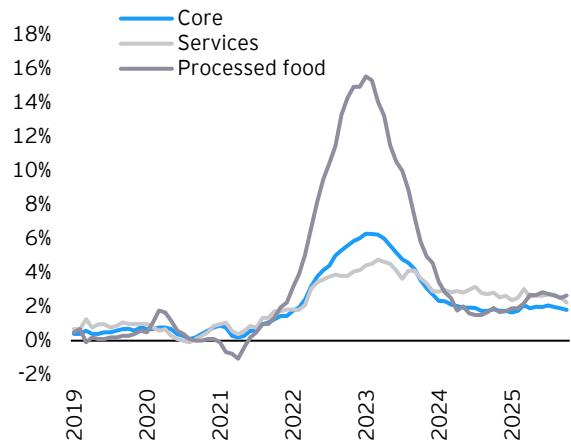
Inflation has therefore shown a decline in recent months, a trend mainly due to a reduction in the contribution of the core component and a negative contribution from the energy component.

Core inflation (the underlying component) stood at 1.8% in November, a reduction from the

figure for October (1.9%) and September (2.0%), after several months of stable growth around 2%.

The trend in the underlying component is, in turn, due to a growing or persistent trend in the processed food component (variation of 2.7% in November 2025) and a reduction in the services component, which went from 2.6% in September and October to 2.2% in November.

Figure 46: Core and component inflation, Italy - % change YoY and percentage points

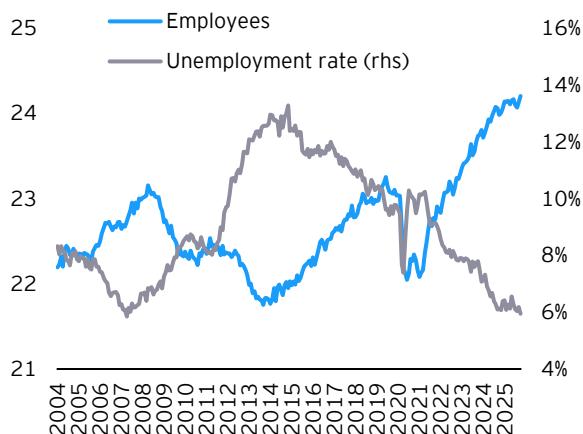


Source: EY-Parthenon elaborations on ISTAT data. Latest observation: November 2025.

Inflation trends are also linked to labor market dynamics. In this regard, the total number of employees remains at an all-time high (approximately 24.2 million); the unemployment rate remains at around 6%.

The growth in the number of employed people is also accompanied by contractual solidity, considering that in October 2025 there was an increase of approximately 115 thousand units in permanent employment compared to a reduction in fixed-term employment (-119 thousand units) compared to the figure for December 2024.

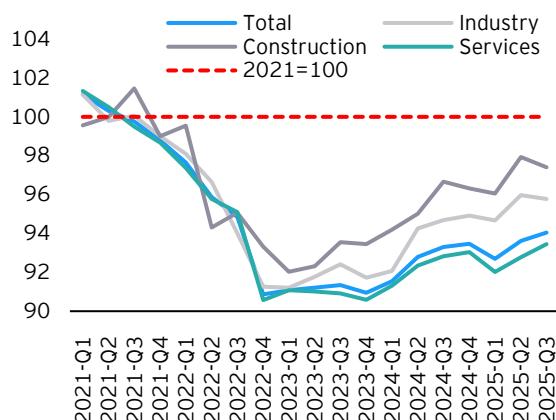
Figure 47: Employment and unemployment rate, Italy



Source: EY-Parthenon elaborations on ISTAT data. Latest observation: October 2025.

While the positive employment trend is reflected in wage growth (2.2% growth in the third quarter compared to the same quarter of the previous year), it is noteworthy that real wages per hour worked continue to remain below the level recorded in 2021, despite the positive trend in recent quarters.

Figure 48: Real hourly wages by macro sectors of the economy, Italy - index, 2021=100



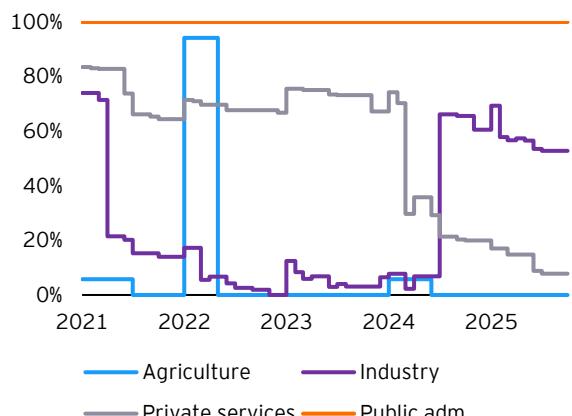
Source: EY-Parthenon elaborations on ISTAT data.

Salary trends are also linked to the timing of employee contract renewals in Italy.

Dividing economic activity in Italy into four major sectors (agriculture, industry, private services, and public administration), a first finding that emerges is that all public administration employees are awaiting a contract renewal (approximately 22% of total employees in Italy, accounting for approximately 24% of total

income). Added to this are approximately 53% of employees in industry (industrial employees represent approximately 25% of total employees in Italy, for a total of approximately 28% of total income) and 8% of employees in the private services sector (which, overall, represent approximately 72% of employees, or 71% of distributed income).

Figure 49: Contractual tension by sector, Italy - % of employees awaiting contract renewal

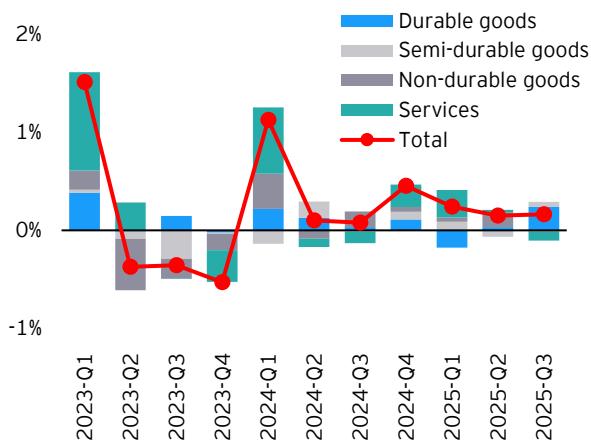


Source: EY-Parthenon elaborations on ISTAT data.

These data therefore show that a significant portion of Italy's salaried employment is still awaiting contract renewals, which supports overall incomes in the medium term, thus leading to an increase in consumer spending potential, with potential positive repercussions on growth. However, it is also important to consider potential upward pressure on price levels.

The overall positive trend in the labor market is reflected in growth in consumption, although not particularly dynamic, which in the third quarter of the year recorded a 0.2% change compared to the previous quarter, a value in line with that experienced in the previous quarter.

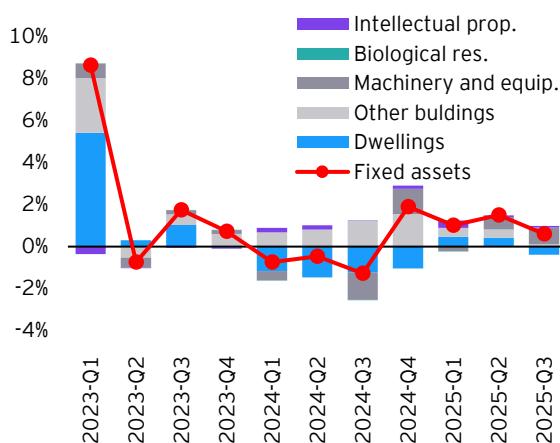
Figure 50: Household final consumption expenditure by item of expenditure, Italy - % change QoQ and contributions



Source: EY-Parthenon elaborations on ISTAT data.

With reference to the other components of GDP, investments continue to show a positive trend, with a growth compared to the previous quarter of 0.6%, after dynamic growth in the second quarter (1.5%) and positive growth in the first quarter of the year (1.0%).

Figure 51: Investments, Italy - % change QoQ and contributions

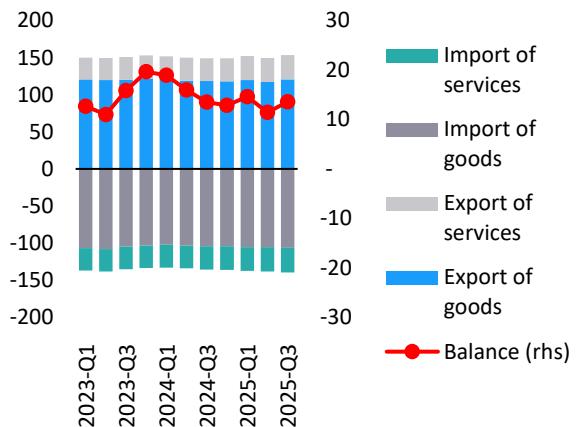


Source: EY-Parthenon elaborations on ISTAT data.

This growth was supported in part mainly by an increase in investment in plant and machinery (positive contribution of 0.8 percentage points), and by a slight positive contribution from investment in non-residential buildings and intellectual property (0.1 percentage points in both cases); on the other hand, the contribution of investment in housing was negative (-0.4 percentage points).

Finally, with reference to the foreign trade component, in the third quarter of 2025 Italy continued to record a trade surplus (€14 billion), mainly supported by the export of goods (€121 billion).

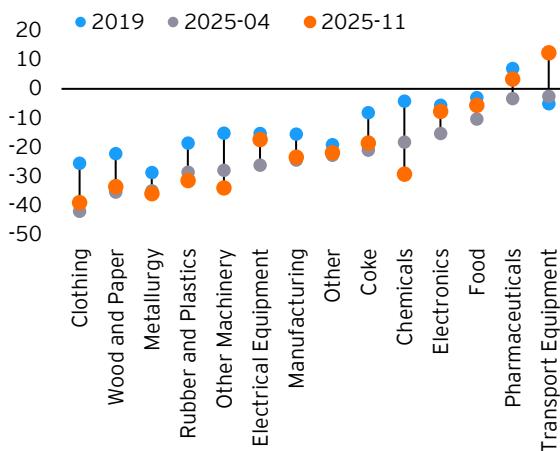
Figure 52: Exports and imports, Italy - billions, €



Source: EY-Parthenon elaborations on ISTAT data.

Given the ongoing trade uncertainty since the beginning of the year, following numerous announcements and implementations of distortive trade policies, it is interesting to analyze information regarding Italian companies' opinions on the matter. In this regard, ISTAT offers interesting data representative of these opinions, including detailed information by specific industrial sector.

Figure 53: Sentiment on external orders, Italy - balance



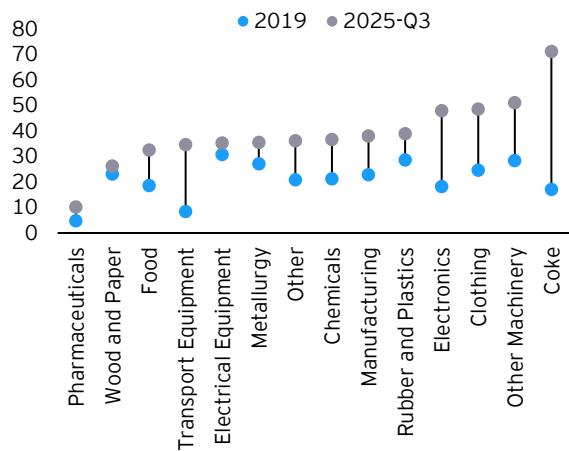
Source: EY-Parthenon elaborations on ISTAT data. The figure shows the net percentage of companies that answered "high" to the question "What is the current level of orders and production?" compared to those that answered "low." Latest observation: November 2025.

Analyzing the assessment of external orders for 2019, April 2025, and October 2025, we note that, overall, there has been a widespread worsening of assessments compared to 2019, with a few not particularly significant exceptions.

Different and more varied dynamics have been recorded in recent months, mainly between April 2025 (the date when tariffs began to be imposed) and November 2025 (the latest available data), given that during this period different announcements regarding tariffs imposed by the United States have occurred.

In some sectors, the assessment of the current situation does not appear significantly different from that of the beginning of the year, for example for the clothing, wood and paper, rubber and plastic, and other machinery sectors, while in other sectors the assessment has improved significantly, for example for the electronics manufacturing (computers and electrical equipment) or the pharmaceuticals sector.

Figure 54: Negative factors influencing exports by sector, Italy



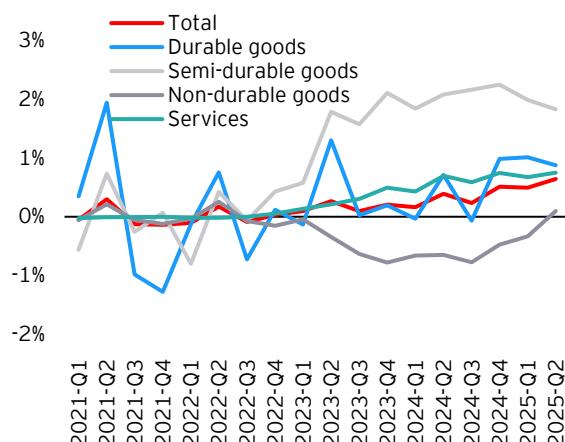
Source: EY-Parthenon elaborations on ISTAT data. The data shows the net percentage of companies that answered "yes" to the question "Are your exports in the current quarter affected by negative factors" and those that answered "no."

The sectoral heterogeneity of the latest assessments and the dynamics recorded between 2019 and 2025 therefore reflect a high level of uncertainty and diversified trade policy choices by sector.

This is also demonstrated by the assessment that companies in different sectors of the economy have regarding the presence of negative factors influencing exports.

A final point of note in commenting on the performance of the Italian economy in recent quarters concerns the data revisions that the Italian National Institute of Statistics proposes with each new data release. Specifically, the latest release (November 2025) featured substantial revisions to some national account's items.

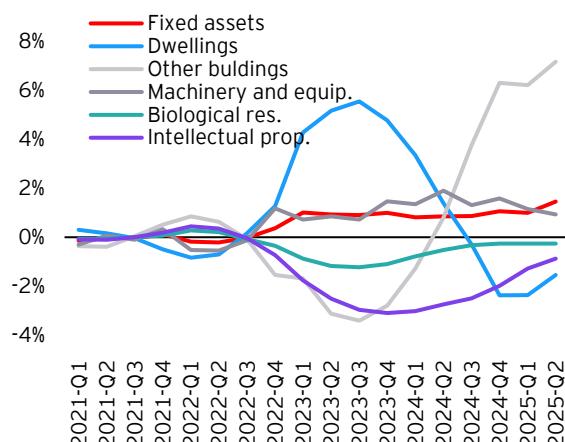
Figure 55: Household final consumption expenditure, Italy - revisions between Nov 2025 and Aug 2025 editions



Source: EY-Parthenon elaborations on ISTAT data.

From the point of view of household consumption, for example, it is noted that the gap between the data shared in the August 2025 version and those shared in the latest available version is significant for some consumption categories (such as non-durable and semi-durable goods).

Figure 56: Investments, Italy - revisions between Nov 2025 and Aug 2025 editions



Source: EY-Parthenon elaborations on ISTAT data.

Even more significant are the revisions for the various investment categories, especially with

reference to housing (positive revision between 2022 and 2024 and downward revision from the end of 2024).

These revisions have a significant impact on the forecasts for the Italian economy, outlining a partially different narrative even just with reference to the magnitude of the rates of change in some quarters.

Overall, the Italian economy remains substantially weak, due to a context of high uncertainty and a struggling industrial sector, while the service sector is showing greater dynamism. On the other hand, signs from the labor market appear encouraging, with employment at an all-time high and a potential recovery in consumption in the near future; inflation appears substantially stable and in line with the price stability objective set by the European Central Bank.

Focus: Artificial Intelligence and macroeconomics

Main messages:

1. *Artificial intelligence, particularly generative AI (genAI), has spread at an unprecedented rate, reaching 100 million users in just a few months. This rapid adoption, aided by low entry costs, highlights AI's transformative potential for the economy.*
2. *Among its various benefits, AI is expected to have positive, albeit modest, effects on productivity, serving as an important tool especially for countries characterized by stagnant productivity and an aging population. However, the benefits depend on factors such as digital infrastructure, human capital, and access to data. Estimates indicate an impact of between 0.5% and 3% cumulative productivity growth over 5-10 years, with heterogeneity across countries.*
3. *From a labor market perspective, the adoption of AI is also expected to have mixed impacts: on the one hand, some tasks will be automated, while on the other, new professions will emerge. Approximately 25% of European jobs are highly exposed to automation, but the overall effects are still uncertain. AI may also reduce wage inequality but increase wealth inequality.*
4. *The use of AI is estimated to increase energy demand and therefore electricity prices (up to +9% in the US by 2030 and 5% in Europe), with additional emissions estimated at 1.7 GT of CO₂ between 2025 and 2030. Energy availability, therefore, becomes a fundamental issue.*

When it comes to investments and technological progress, artificial intelligence (AI) is probably the most important and discussed topic of recent years, as well as a potentially significant factor in defining certain economic and geopolitical dynamics.

There are many reasons why artificial intelligence is so relevant, the first and foremost being the rapid diffusion of this technology. Consider, for example, that generative artificial intelligence (genAI, a subset of artificial intelligence) reached 100 million users in just a few months (measured by the users of OpenAI's ChatGPT, the first widely available and accessible application of genAI). In contrast, the time required for other technologies to reach this milestone has been measured in years or decades. While these differences may be partly due to the low cost of access to this technology (accessible via smartphones and personal computers), the historically unprecedented speed of adoption is representative of the potential of AI and the applicability of the technology itself to a wide range of tasks.⁶⁹

The importance of technological progress and artificial intelligence is also demonstrated by analyzing the value-added performance of related sectors compared to other sectors of the economy.⁷⁰ Consider, in this regard, sectors related to this technology (such as computer manufacturing, electrical equipment manufacturing, and ICT services) have experienced more dynamic growth than other sectors or manufacturing in general, even in countries where manufacturing value added growth has been negative over the past 20 years.

⁶⁹Cerutti, M. E. M., Pascual, A. I. G., Kido, Y., Li, L., Melina, M. G., Tavares, M. M. M., & Wingender, M. P. (2025). *Global Impact of AI: Mind the Gap* (No. 2025/076). International Monetary Fund.

⁷⁰ Bogmans, C., Gomez-Gonzalez, P., Ganpurev, G., Melina, G., Pescatori, A., & Thube, S. (2025). Power hungry: How will you drive energy demand. *IMF Working Papers*, 81 (4), 2025.

Figure 57: Diffusion of innovation - years to reach 100 million users

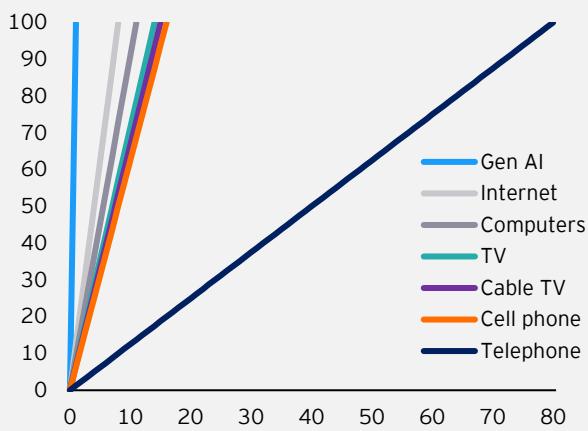
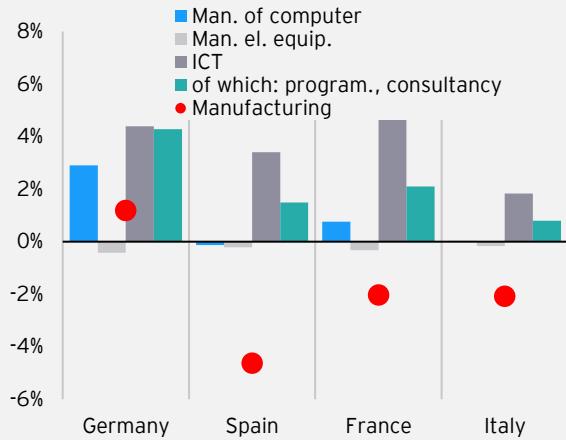


Figure 58: Change in value added shares by sector - 2000-2023



Source: Misch et al. (2025); EY-Parthenon elaborations on Eurostat data.

Interest in artificial intelligence, however, goes beyond its rapid diffusion and the dynamics that related sectors are experiencing there are, in fact, various fields of action and the macroeconomic impacts expected from the diffusion and improvement of this technology over time.

Among the various aspects, it is possible to identify some important issues to take into consideration, such as: (i) the role that AI can have on productivity; (ii) the effects on the labor market and (iii) the effects on energy demand in the coming years.

Productivity

Productivity is a fundamental issue from the perspective of economic growth. It can be measured in various ways (for example, as added value generated per hour worked in relation to labor productivity) and represents one of the cornerstones of a country's competitiveness and its ability to generate wealth in the medium to long term.

The topic of productivity is increasingly important, especially given the rising average age in many advanced economies, which is generally associated with a decline in productivity.⁷¹ The correct use of new technologies theoretically leads to potential increases in productivity, thus representing a key concern, especially in countries like Italy where productivity has been stagnant for years.

However, to evaluate the possible effects of AI, it is necessary to consider numerous factors including:⁷²

1. The ability to embrace change and integrate it into production processes: factors such as cutting-edge digital infrastructure and a skilled workforce can significantly impact the effectiveness of AI adoption and integration. Countries lacking the right resources may struggle to realize the potential benefits of adopting this technology.
2. The degree of exposure of an economy to AI: while some economies boast a larger share of employment and industrial sectors highly exposed to the use of AI, others remain concentrated in less *digital* -intensive activities, potentially reducing both immediate risks (e.g. reduced employment) and potential benefits (increased productivity).

⁷¹Maestas, N., K. J. Mullen, and D. Powell. 2023. "The Effect of Population Aging on Economic Growth, the Labor Force and Productivity." *American Economic Journal: Macroeconomics* 15 (2): 306-332; Asao, K., Seitani, H., Stepanyan, A., & Xu, T. (2025). The Impact of Aging and AI on Japan's Labor Market: Challenges and Opportunities. *IMF Working Papers*, (2025/184).

⁷²Cerutti, M. E. M., Pascual, A. I. G., Kido, Y., Li, L., Melina, M. G., Tavares, M. M. M., & Wingender, M. P. (2025). *Global Impact of AI: Mind the Gap* (No. 2025/076). International Monetary Fund.

3. Access to the necessary data and technologies: Potential disparities in access to specific hardware or datacenters could further widen the gap between countries that will benefit from AI and those that will fail to achieve significant benefits from this technology.

Figure 59: Labour productivity (value added per employee) - index, 1980=100

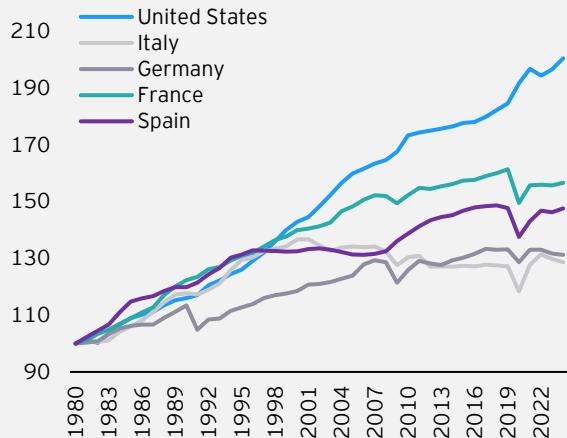
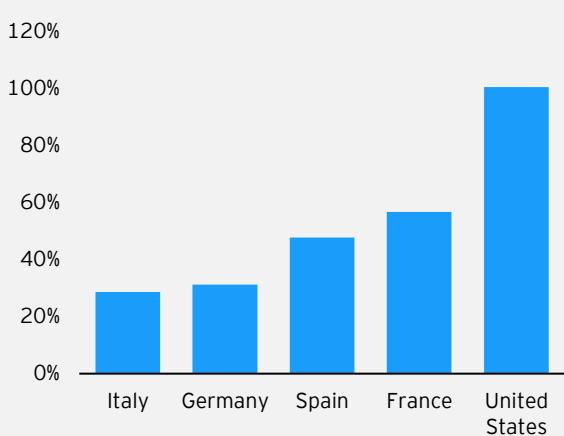


Figure 60: Growth in value added per employee - 1980-2024



Source: EY-Parthenon elaborations on AMECO data (European Commission).

In relation to the points described above, the International Monetary Fund (IMF) offers an interesting indicator for assessing the level of preparedness of numerous economies for the use of AI.

The AI Preparedness Index (AIPI) assesses the level of "AI preparedness" in 174 countries, based on various indicators relating to digital infrastructure, human capital and the labor market, innovation and economic integration, as well as regulation and ethics. The AIPI is therefore configured as the sum of four dimensions considered relevant to AI adoption: (i) digital infrastructure, (ii) human capital, (iii) technological innovation, and (iv) regulation.⁷³

Figure 61: AI Preparedness Index by macro-region

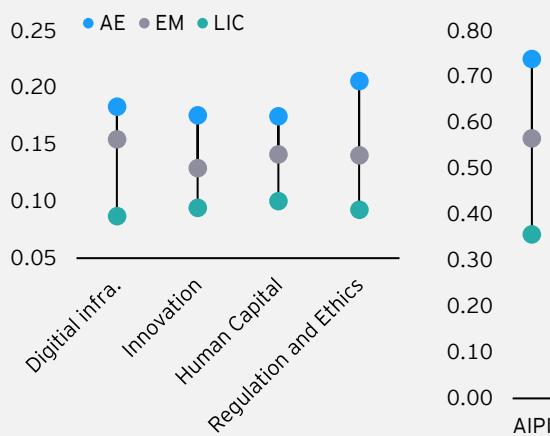
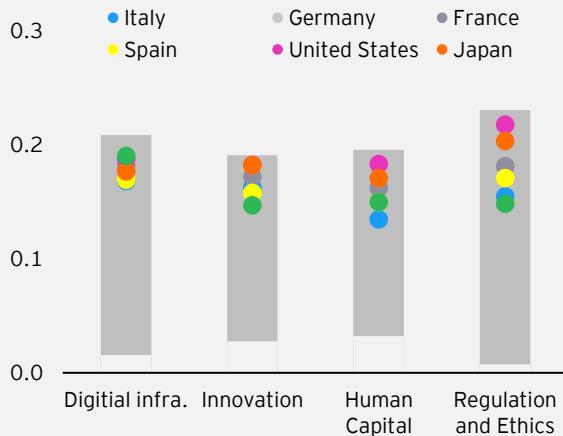


Figure 62: AI Preparedness Index components and detail for selected countries



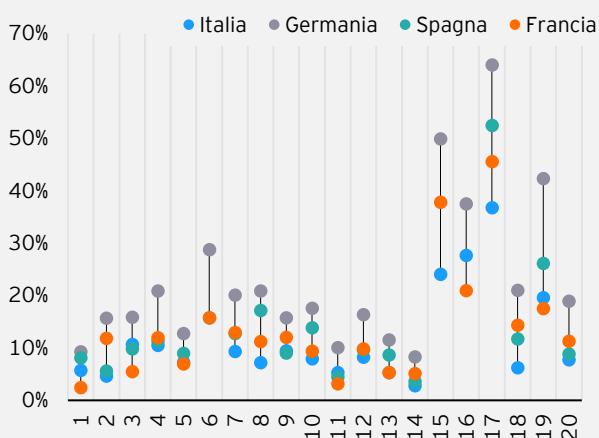
Source: EY-Parthenon elaborations on International Monetary Fund and World Bank data. AE: Advanced Economies; EM: Emerging Markets; LIC: Low-Income Countries. The gray bars represent the range of values for the countries analyzed.

⁷³IMF AI Preparedness Index (AIPI), <https://www.imf.org/external/datamapper/datasets/AIPI>.

Data provided by the IMF show that advanced economies are better positioned than emerging economies and low-income countries to reap the benefits of AI in all aspects analyzed, from infrastructure to regulation, although there is still some heterogeneity even within advanced economies.

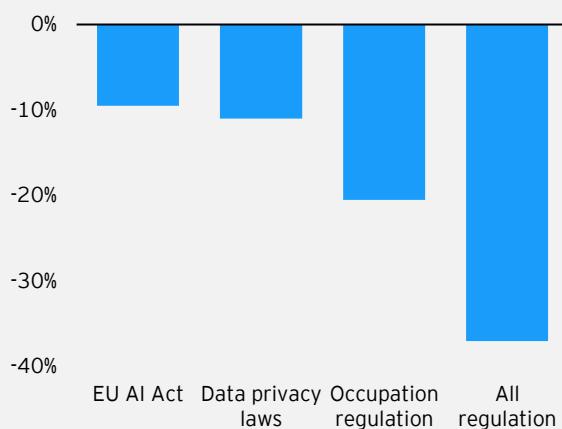
Regarding the sectoral composition of different countries and their exposure to AI, data provided by Eurostat show that in the main Eurozone countries, the sectors that have adopted one or more AI-related technologies are concentrated in the services sector, specifically ICT services, publishing and audiovisual, professional activities, and telecommunications services, with approximately 40% of companies reporting they are using an AI system. Despite the importance of these sectors within the economies analyzed, the remaining sectors still show low adoption rates, which could mean it takes longer to realize the benefits.

Figure 63: Adoption of at least one AI technology by sector and country of reference



Source: EY-Parthenon elaborations on Eurostat data, Misch et al. (2025). 1: Food, beverages and tobacco; 2: Textiles, clothing, leather; 3: Wood, paper, printing; 4: Petroleum, chemicals, pharmaceuticals, rubber, plastics, non-metallic minerals; 5: Basic and processed metals; 6: Computers, electronics, optics; 7: Electrical appliances, machinery; 8: Vehicles and transport; 9: Furniture, jewellery, instruments, toys; repairs; 10: Energy, water, waste; 11: Construction; 12: Wholesale and retail trade; vehicle repairs; 13: Transport and storage; 14: Accommodation and food services; 15: Publishing, cinema, television, recordings; 16: Telecommunications; 17: Software and IT services; 18: Real estate activities; 19: Professional, scientific and technical activities; 20: Administrative and support services.

Figure 64: Reduction of AI benefits to Total-Factor Productivity in different regulatory scenarios - deviation from a no-regulation scenario, percentage points



Estimating the impact of AI on productivity is not a trivial exercise, given the variables mentioned above. While estimates vary depending on numerous factors and the specificities of the economies under analysis, it is nevertheless possible to refer to recent studies for quantification. In this regard, Acemoglu (2024) estimates that the overall effects appear modest, though not negligible: the increase in total factor productivity (TFP)⁷⁴ would not exceed 0.71% over 10 years. These effects may be overestimated, as they consider tasks that are easy to automate, while in the future the impacts will concern complex tasks, influenced by contextual factors and lacking objective performance measures. Consequently, the expected gains in TFP over the next decade could be more modest, less than 0.55%.⁷⁵

Another study of interest in this regard is that of Misch et al. (2025), which confirms a modest increase in productivity in European countries of around 1% cumulative in the medium term, with significant differences between countries.⁷⁶

⁷⁴Total factor productivity is defined as the ratio between a measure of the volume of value added and a measure of the volume of total employment of capital and labor services. For more information, see https://www.istat.it/it/files/2011/02/nota_metodologica.pdf.

⁷⁵Acemoglu, D. (2025). The simple macroeconomics of AI. *Economic Policy*, 40 (121), 13-58.

⁷⁶Misch, F., Park, B., Pizzinelli, C., & Sher, G. (2025). AI and Productivity in Europe. IMF Working Papers, 2025(067), A001. Retrieved Oct 28, 2025, from <https://doi.org/10.5089/9798229006057.001.A001>.

Overall, analyzing the economic literature, it is possible to identify a range of impacts on productivity for European countries, that varies from a potentially zero increase to a maximum of approximately 3 percentage points of cumulative increase in productivity over five years.⁷⁷

The reported results depend, as mentioned, on numerous factors, thus making the estimates subject to a high degree of uncertainty. Consider, for example, the costs of implementing artificial intelligence systems which, if they were to decrease more rapidly or if they were lower than those considered in Acemoglu's baseline scenario (2024), could lead to higher rates of AI adoption and an increase in benefits.⁷⁸ Svanberg et al. (2024),⁷⁹ for example, estimate that the AI adoption rate in the United States could be around 80%, about three and a half times higher than the 23% assumed in Acemoglu's baseline scenario (2024), with an increase in productivity benefits of the same magnitude.

Another factor to consider is regulation, which can reduce the impact on total factor productivity growth.

Labor market and inequality

The ever-increasing diffusion and implementation of artificial intelligence solutions raises questions about their potential impact on the labor market. Here too, the economic literature offers some insights, but a consensus has yet to emerge (see, for example, Acemoglu and Restrepo, 2019;⁸⁰ Webb, 2020;⁸¹ Acemoglu, 2024⁸²). From this perspective, it should be considered that, on the one hand, AI can broaden the scope of automatable activities, thus leading to a reduction in employment in some specific activities; on the other hand, AI can lead to increases in productivity in some sectors where the penetration of this technology is greater, increasing the demand for labor in non-automated activities.

AI is also leading to the emergence of new professional roles, which could become increasingly widespread in the coming years (e.g., *data scientists*). To date, the literature has often addressed the topic of AI's impact on the labor market from a microeconomic perspective, that is, from a strictly business perspective (see the study by Acemoglu et al., 2022b;⁸³ Copestake et al., 2023;⁸⁴ Hui et al., 2023;⁸⁵ Abis and Veldkamp, 2024;⁸⁶ Babina et al., 2024⁸⁷), although there is no shortage of studies that address the topic from a macroeconomic point of view.

An ECB study, for example, suggests that approximately 25% of jobs in European countries are highly exposed to automation (via artificial intelligence), while a further 30% have a lower but still significant degree of exposure.⁸⁸ Other research finds that *knowledge-intensive* services, particularly finance and insurance, advertising, consulting, and IT, are most exposed to the impact of artificial intelligence.⁸⁹ While it is sometimes possible to identify the sectors most exposed to the use of this technology, the ultimate impact on employment remains uncertain and will likely depend on the ability to equip the workforce with skills that complement AI.

⁷⁷ Let's do this about reference Eloundou, T, S Manning, P Mishkin, and D Rock (2024), "GPTs Are GPTs: Labor Market Impact Potential of LLMS", Science 384, no. 6702: 1306-8, <https://doi.org/10.1126/science.adj0998>; Gmyrek, P, J Berg and D Bescond (2023), "Generative AI and Jobs: A Global Analysis of Potential Effects on Job Quantity and Quality", ILO Working Paper 96; Felten, E, M Raj, and R Seamans (2021), "Occupational, Industry, and Geographic Exposure to Artificial Intelligence: A Novel Dataset and its Potential Uses", Strategic Management Journal, 42(12), 2195-2217; Webb, M (2019), "The Impact of Artificial Intelligence on the Labor Market", SSRN Electronic Journal, <https://doi.org/10.2139/ssrn.3482150>.

⁷⁸ Nathan, A, J Grimberg, and A Rhodes (2024), "Gen AI: Too Much Spend, Too Little Benefit?", Goldman Sachs Global Macro Research Report 129.

⁷⁹ Svanberg, M, W Li, M Fleming, B Goehring, and N Thompson (2024), "Beyond AI Exposure: Which Tasks Are Cost-Effective to Automate with Computer Vision?", Working Paper, Massachusetts Institute of Technology.

⁸⁰ Acemoglu, Daron and Pascual Restrepo (2019) "Automation and New Tasks: How Technology Displaces and Reinstates Labor," Journal of Economic Perspectives, 33 (2), 3-30.

⁸¹ Webb, Michael (2020) "The Impact of Artificial Intelligence on the Labor Market," Manuscript.

⁸² Acemoglu, Daron (2024) "The Simple Macroeconomics of AI," NBER Working Paper.

⁸³ Acemoglu, Daron, David Autor, Jonathan Hazell, and Pascual Restrepo (2022b) "Artificial Intelligence and Jobs: Evidence from Online Vacancies," Journal of Labor Economics, 40 (S1), 293-340

⁸⁴ Copestake, Alex, Ashley Pople, Katherine Stapleton, and Max Marcinek (2023) "AI and Services-Led Growth: Evidence from Indian Job Adverts," Manuscript, International Monetary Fund.

⁸⁵ Hui, Xiang, Oren Reshef, and Luofeng Zhou (2023) "The Short-Term Effects of Generative Artificial Intelligence on Employment: Evidence from an Online Labor Market," CESifo Working Paper.

⁸⁶ Abis, Simona and Laura Veldkamp (2024) "The Changing Economics of Knowledge Production," The Review of Financial Studies, 37 (1), 89-118.

⁸⁷ Babina, Tania, Anastassia Fedyk, Alex He, and James Hodson (2024) "Artificial Intelligence, Firm Growth, and Product Innovation," The Journal of Financial Economics, 151, 1-26.

⁸⁸ Albanesi, S. et al. (2023) "New technologies and jobs in Europe" Working Paper Series, No 2831, ECB

⁸⁹ Organization for Economic Co-operation and Development (2024), "The impact of Artificial Intelligence on productivity, distribution and growth: Key mechanisms, initial evidence and policy challenges", OECD Artificial Intelligence Papers, No 15, 16 April.

The adoption of Artificial Intelligence (AI) also has complex effects on inequality, operating through distinct channels. On the one hand, it tends to reduce wage inequality by automating tasks performed by higher-paid workers, narrowing the gap between higher-income and lower-income workers. An International Monetary Fund study on the United Kingdom showed that approximately 60% of workers in the 90th percentile of income holds a job in which most tasks can be performed by AI, while only 15% of those in the 10th percentile are in this situation.⁹⁰

A further issue related to the labor market concerns the effects that AI adoption may have on inequality, given that wealthier households have a greater share of their income derived from capital (shares, funds, investments) and that these assets tend to benefit from increased returns due to the potential benefits of AI. In this regard, Rockall et al. (2025) estimate a reduction in the Gini coefficient for wages of 1.73 percentage points, but an increase in the Gini coefficient for asset wealth of 7.18 percentage points.⁹¹

Energy demand and cost

In addition to the aspects just mentioned, the use of artificial intelligence technologies also raises questions about the increase in energy consumption in the coming years and, consequently, the trend in energy prices. Energy consumption when using Large-Language Models (LLM), for example, is composed of two main elements: the energy required to train the models and the energy required to ensure that the models respond to user prompts.⁹²

Figure 65: Electricity consumption from data centers and consumption for selected countries, 2023 - thousands TWh

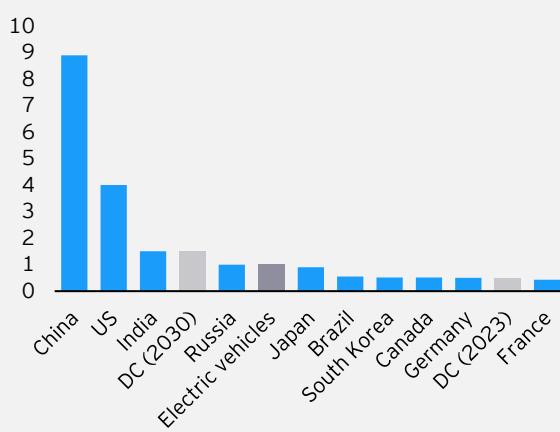
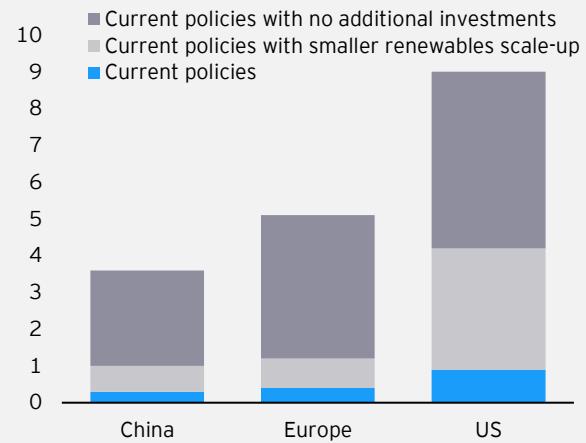


Figure 66: Change in electricity prices, 2030 (percentage points)



Source: Bogmans et al. (2025).

Consider, in this regard, that in the United States, the country expected to see the largest increase in electricity demand linked to AI, the expansion of AI alone could increase electricity prices by up to 9% by 2030. Furthermore, holding current energy policies unchanged, the increase in electricity demand related to AI could add 1.7 GT (billion metric tons) of greenhouse gas emissions between 2025 and 2030, a value similar to the energy-related greenhouse gas emissions produced by Italy over a five-year period.⁹³

⁹⁰Emma J Rockall, Marina Mendes Tavares, and Carlo Pizzinelli. "AI Adoption and Inequality," IMF Working Papers 2025, 068 (2025), accessed October 28, 2025, <https://doi.org/10.5089/9798229006828.001>.

⁹¹Emma J Rockall, Marina Mendes Tavares, and Carlo Pizzinelli. "AI Adoption and Inequality," IMF Working Papers 2025, 068 (2025), accessed October 28, 2025, <https://doi.org/10.5089/9798229006828.001>.

⁹²Korinek, Anton and Jai Vipra (2024). Concentrating Intelligence: Scaling and Market Structure in Artificial Intelligence. Tech. rep. 33139. Cambridge, MA: National Bureau of Economic Research.

⁹³Christian Bogmans, Patricia Gomez-Gonzalez, Ganchimeg Ganpurev, Giovanni Melina, Andrea Pescatori, and Sneha D Thube. "Power Hungry: How AI Will Drive Energy Demand," IMF Working Papers 2025, 081 (2025), accessed October 9, 2025, <https://doi.org/10.5089/9798229007207.001>

The increase in energy demand (and potentially prices) is confirmed by academic literature. Pilz et al. (2025)⁹⁴ predict that global energy demand from AI-driven data centers could reach 327 GW by 2030; Roucy-Rochegonde and Buffard (2025)⁹⁵ conclude that global data center electricity consumption could reach 1,100-2,000 TWh by 2030, while Aljbour et al. (2024)⁹⁶ estimate that data center energy demand in the US alone could reach 252-400 TWh by 2030. Burian and Stalla- Bourdillon (2025)⁹⁷ estimate that increased electricity demand from AI-driven data centers could increase gas prices by approximately 9% in Asia and Europe and 7% in the US by 2026, while Chandramowli et al. (2024)⁹⁸ predict that electricity demand in the United States could increase by 9% by 2028, with a potential increase in electricity costs of 19%.

Overall, artificial intelligence and related technologies/solutions are expected to impact various areas of the economy, from productivity to the labor market, to energy consumption and related prices. While there is currently no clear consensus on the expected effects on the various variables, it is important to consider that this technology is evolving at a significant pace, which could translate into an overall impact that is not immediately predictable.

⁹⁴ Pilz, Konstantin F, Yusuf Mahmood, and Lennart Heim (2025). "AI's Power Requirements Under Exponential Growth: Extrapolating AI Data Center Power Demand and Assessing Its Potential Impact on US Competitiveness." RAND Corporation: Santa Monica, CA, USA.

⁹⁵ Roucy-Rochegonde , Laure de and Adrien Buffard (2025). AI, Data Centers and Energy Demand: Reassessing and Exploring the Trends. Ifri Papers. Ifri .

⁹⁶ Aljbour , Jordan, Tom Wilson, and P Patel (2024). "Powering Intelligence: Analyzing Artificial Intelligence and Data Center Energy Consumption". EPRI White Paper no. 3002028905.

⁹⁷ Burian, Vlad and Arthur Stalla-Bourdillon (2025). "The increasing energy demand of artificial intelligence and its impact on commodity prices". Economic Bulletin Boxes 2.

⁹⁸ Chandramowli , Shankar, Patty Cook, Justin Mackovyak, Himali Parmar, and Maria Scheller (2024). Power Surge: Navigating US Electricity Demand Growth. New York: ICF.

The Italian Economy: GDP and EY Forecasts

In the third quarter of 2025, Italy recorded a quarterly GDP growth (compared to the previous quarter) of 0.1%, following a 0.1% contraction in the second quarter. This result was primarily due to significant export growth (2.6%) following the contraction in the previous quarter (-1.7%). Export growth was accompanied by growth in imports (1.2%), resulting in an overall positive contribution from foreign demand to growth of 0.5 percentage points. Another driver of growth in the third quarter was investment, which, with quarterly growth of 0.6%, contributed approximately 0.1 percentage points to overall growth, similar to that recorded for private consumption.

From a year-over-year perspective, analyzing the performance compared to the same quarter of the previous year, household consumption and public consumption supported growth with contributions of 0.5 and 0.1 percentage points, respectively. These, combined with the strong acceleration in investment (5.1%, corresponding to a growth contribution of 1.1 percentage points), a virtually zero contribution from foreign demand, and a significant negative contribution from inventories, led to a year-over-year GDP growth of 0.6%.

Figure 67: GDP components, Italy - contributions to growth, percentage points

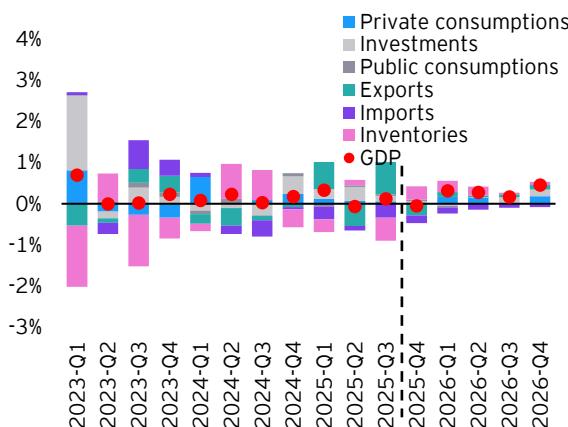
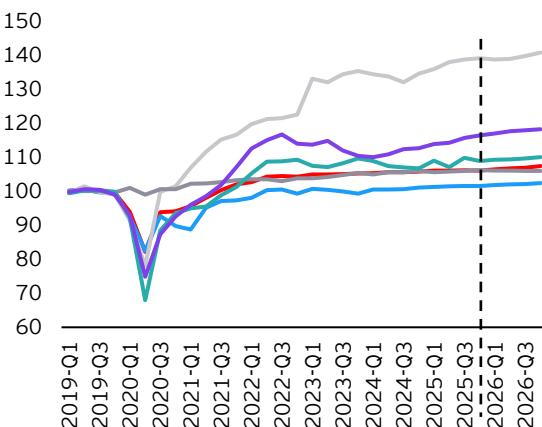


Figure 68: GDP components, Italy - index, quarterly average 2019 = 100



Source: EY-Parthenon elaborations on Eurostat data and EY forecasts. The dotted line represents the forecast horizon. EY forecasts begin in the second quarter of 2025. "Investments" refer to public and private investments and include gross fixed capital formation, acquisitions less disposals of valuable assets, and depreciation.

Based on the information reported in the previous sections and the latest available data, we can outline the EY's outlook for the Italian economy. A substantial stagnation (0.0%) is expected in the fourth quarter, primarily due to a contraction in exports (0.9%), following the strong growth of the previous quarter. This will lead to a negative contribution from net foreign demand of approximately 0.5 percentage points, coupled with stagnant growth in private consumption and weak growth in investment (0.2%).

Overall, 2025 is expected to close with growth of 0.5%, primarily driven by strong investment growth (3.2%, for a positive contribution of 0.7 percentage points) and, to a more modest extent, by the positive performance of private consumption, which is expected to grow by 0.8% (for a positive contribution of 0.4 percentage points). Export growth (1.2%) and the more significant growth in imports (3.2%) will lead to an overall negative contribution from net foreign demand (0.5 percentage points), while public consumption is expected to contribute positively to growth (0.1 percentage points).

In 2026, a slightly more dynamic growth is expected (0.7%) due to growth in private consumption (0.6%, corresponding to a contribution of 0.4 percentage points), a slowdown in investments (1.2%) and a slightly smaller negative contribution from foreign demand (-0.4 percentage points).

Table 1: Forecasts for the Italian economy

	2021	2022	2023	2024	2025	2026
GDP, % change	8.8%	5.0%	1.1%	0.5%	0.5%	0.7%
Private consumption, % change	5.8%	5.3%	0.6%	0.6%	0.8%	0.6%
Investments, % change	21.5%	7.7%	10.3%	0.0%	3.2%	1.2%
Exports, % change	14.2%	10.6%	0.1%	-0.6%	1.2%	0.8%
Imports, % change	16.0%	13.6%	-1.6%	-1.1%	3.2%	2.3%
Unemployment rate	9.5%	8.1%	7.7%	6.6%	6.3%	6.3%
Consumer Price Index, % change	1.9%	8.2%	5.6%	1.0%	1.7%	1.5%
Deficit, % of GDP	-8.9%	-8.1%	-7.1%	-3.4%	-2.8%	-2.7%
Public debt, % of GDP	146.1%	138.4%	133.9%	135.1%	137.6%	136.6%

Source: Forecasts from EY Italy's Macroeconometric Model, "HEY- MoM". The gray area represents the forecast horizon. Changes in GDP and its components are calculated in real terms. "Investments" refer to public and private investments, and include gross fixed capital formation, acquisitions less disposals of valuables, and depreciation. Historical growth rates may not match ISTAT's data; this is due to statistical effects from aggregating quarterly data (used in the HEY- MoM model), which lead to possible discrepancies with annual values.

Regarding investment trends, it is important to note that growth in 2025 is largely supported by public investment (9.5% growth), while private investment is less dynamic (2.0%). These differences are expected to persist in 2026, where private investment is expected to grow at a moderate pace (0.6%) while public investment will continue to support growth (3.9%). A more detailed analysis of investment categories shows that the weakness in private investment is essentially linked to a contraction in housing investment (-4.0% in 2025 and -2.7% in 2026), in turn due to the expiration of public incentives (e.g., the "Superbonus 110%").

Other investment categories are expected to grow: investments in non-residential buildings are expected to experience strong growth (12.6%) in 2025 and more moderate but still significant growth in 2026 (3.8%); investments in machinery are expected to record more moderate growth in the two years analyzed (2.7% and 2.5%); finally, investments in intangible assets will continue on their growth path, with rates of 4.3% and 1.3%.

Regarding the labor market, the unemployment rate is expected to be 6.3% in 2025 and 2026; inflation is expected to reach 1.7% in 2025 and decline in 2026 (to 1.5%). The public deficit is projected at 2.8% in 2025 and 2.7% in 2026. This deficit, combined with weak growth, will lead to a slightly decreasing debt-to-GDP ratio (from 137.6% in 2025 to 136.6% in 2026). The forecasts remain subject to significant uncertainty and therefore present significant risks, both downside and upside, primarily related to the underlying global macroeconomic environment.



Assumptions to forecasts

The forecasts and analyses are based on data available as of December 10, 2025.

The forecasts described above are based on a series of assumptions that outline the baseline scenario. Specifically, the following hypotheses were considered:

- **Foreign demand for Italian goods:** overall growth of around 2.5% is expected in 2025, followed by less dynamic growth in 2026 (at 1.7%);
- **Natural gas:** The price of natural gas (based on the Dutch Title Transfer Facility) is assumed to be around \$12.1/mmbtu in 2025; an average price of \$10.6/mmbtu is assumed for 2026;
- **Oil:** The average oil price is assumed to be around \$69.2 per barrel in 2025, reaching an average price of around \$64.5 per barrel in the fourth quarter of 2025, and to decline further in 2026 (average price of \$61.5 per barrel);⁹⁹
- **Exchange rate:** the euro/dollar exchange rate is assumed at 1.16;
- **Public spending:** the information contained in the Public Finance Planning Document on the budget policy for October 2025 and the latest public sector data from ISTAT national accounts were considered;¹⁰⁰
- **Monetary policy and interest rates:** We assume a reduction in interest rates of around 0.25 percentage points by the first few months of 2026, constant until the end of 2026. We also expect the long-term interest rate (10 years) to show a stable differential with the short-term rate.

Finally, given the current scenario characterized by strong uncertainty, some downside and upside risks are listed below to support a more complete view of what could happen during the forecast period.

Upside risks

- Reduction of trade tensions: Trade tensions could partially ease and reduce over time, resulting in a resumption of trade, supporting the economy of Italy and its main trading partners;
- Labour market: a lower pressure of the wage component on the price level can lead to a reduction in the risk of persistence of the inflation rate;
- Monetary policy: An acceleration of monetary policy easing by the European Central Bank could support growth in the Eurozone countries;
- Lower commodity prices: Lower commodity prices could lead to easier inflation management and expansionary monetary policy, with positive effects on growth;
- Acceleration of foreign demand: greater economic growth of important trading partners such as China, Germany and the United States, also thanks to the end of uncertainty over trade policies, would translate into a greater contribution of foreign trade to Italian growth;
- Technology: The adoption of new technological solutions could support growth more than expected through several channels, for example through productivity growth.

⁹⁹ We refer to the price of Brent.

¹⁰⁰ Public Finance Programming Document, October 2025. For more information, https://www.dt.mef.gov.it/export/sites/sitodt/modules/documenti_it/analisi_progammazione/documenti_programmatici/doc_prog_fp_2025/DPFP_2025.pdf.

Downside risks

- Escalation of geopolitical tensions: Current conflicts may not find resolution in the short or medium term, adding uncertainty to an already fragile global environment. This could be compounded by worsening tensions in the Middle East. In the event of involvement by additional countries, humanitarian and economic repercussions would become even more significant, with potential negative consequences for energy prices (primarily oil) and other commodities;
- Heightened trade tensions: Trade frictions could intensify, with adverse effects on global trade;
- More restrictive monetary policy: The ECB and other major central banks could revert to a tighter monetary stance if inflation proves persistent or new price pressures emerge. This could translate into a prolonged low-growth risk, driven by weaker consumption and investment discouraged by high interest rates;
- Stress in the financial system: Elevated interest rates, even if gradually declining, may result in greater strain on financial institutions, with consequent impacts on savers and tighter credit conditions, both in the United States and the Eurozone;
- High public debt: The increase in public debt following the pandemic, combined with interest rates higher than pre-pandemic levels, poses new challenges to fiscal sustainability in Eurozone economies, particularly in highly indebted countries such as Italy. Ultimately, this could lead to heightened risks of financial market stress;
- Monetary policy transmission channels: Structural factors such as a high share of households with fixed-rate debt or an economy dominated by the services sector may hinder monetary policy transmission mechanisms, requiring more time for effects to materialize;¹⁰¹
- Slower growth for China, Germany, and the United States: A future slowdown in China, Germany, and the United States could result in weaker foreign demand for Italian goods;
- High commodity prices: A slowdown in the decline of commodity prices or, alternatively, an increase in price levels due to external factors (e.g., geopolitical tensions) could lead to higher inflation, rising interest rates, and slower economic growth;
- Technology: The adoption of new technological solutions may fail to support growth as expected, delivering benefits less significant than anticipated.

¹⁰¹ ECB, the risks of a stubborn inflation, June 2023, https://www.ecb.europa.eu/press/key/date/2023/html/ecb.sp230619_1~2c0bdf2422.en.html.

Technical Appendix

HEY-MOM: Hybrid EY Model for the Macroeconomy¹⁰²

The construction of a new macro-econometric model required the optimisation of an inevitable trade-off between building a model that emphasizes the information of the data (such as the ARIMA and VAR models, which do not make any use of economic theory) or a model that pays attention only to the foundations on which its relationships are based (in the extreme case, the calibrated RBC-DSGE models that do not pay attention to the data of their variables). ¹⁰³This trade-off has been underlined several times in the literature, see for example the reflections in Granger (1999) and Pagan (2003).

In building HEY-MOM, we tried not to neglect either of the two ingredients mentioned above (economic theory and data), in an attempt to produce a hybrid model with a careful balance in the specification of relationships (a) based on micro-founded economic behaviors and at the same time (b) careful in the application of rigorous techniques for evaluating statistical information. An example of a hybrid model is MARTIN, the model currently in use at the Australian Central Bank (see Cusbert and Kendall, 2018).

In a nutshell, the role of HEY-MOM is to unify the analytical structure of macroeconomics in EY. To do this, the model refers to the main aggregates of the Italian economy, based on empirical data, of a non-monetary nature, with explicit long-term relationships between the variables it studies, and mainly oriented to the definition of short-term forecasts (over a two-year horizon).

The economic foundations

Rigidity in the movement of prices and wages implies a rigidity in the speed with which macroeconomic systems adjust to unexpected shocks. Thus, on the one hand in the model, market demand drives short-run fluctuations, as outlined by Keynesian theories, while in the long run, supply determinants drive the state of the economy.

Long-run output (the economy's potential) depends on the combined effect of trends in total factor productivity, labour supply and hours, and capital stock. These factors are combined by a "Cobb-Douglas" technology with constant returns to scale. The demand for inputs is which minimises cost given a planned level of output in the context of an oligopolistic competitive economy, where firms are free to set prices based on a markup over labour costs and, at those prices, are collectively willing to meet any level of market demand. Wages are set on a "Phillips curve" driven by the inertia of the inflation rate, labour productivity, and the gap between the actual and natural unemployment rates (defined by the long-run state of the labour market). Actual output is composed of the following items of domestic and foreign demand: private (household) and public consumption; private and public investments by type of asset (residential and non-residential buildings, machinery and equipment, and research and development expenditure); imports and exports.

In each period, the gap between actual and potential output feeds back into prices (through changes in margins) which, in turn, interact with the demand components. In this way, equilibrium between supply and demand is achieved.

¹⁰²The model was created in collaboration with the Department of Economics of the University of Bologna.

¹⁰³"ARIMA" stands for "Autoregressive integrated moving average", "VAR" for "Vector autoregression", "RBC-DSGE" for "Real Business Cycle - Dynamic Stochastic General Equilibrium".

Data evaluation techniques

The speed with which the economic dynamics outlined above evolve over time is estimated with econometric methods based on the actual time series of the variables of interest in the model.

To this end, the model uses a combination of the approaches of the London School of Economics and Fair's (2004) revision of the Yale Cowles Commission approach. The synthesis realised in HEY-MOM uses cointegration methods (Engle and Granger, 1987, and Johansen, 1995) to estimate long-run relationships between non-stationary variables (Dickey and Fuller, 1979), interpretable in the light of economic theory and identified by state relations whose parameters are estimated on the basis of error correction models (Hendry et al., 1984, and Pesaran et al., 2001). In the absence of exogeneity of some explanatory variables of the model, the relationships are first inspected following the instrumental variables estimation approach, and then definitively estimated in three stages (Hsiao, 1997).

The overall result is a model composed of 74 equations, of which 29 stochastic and 45 accounting identities. The forecasts and analyses carried out are conditional on the delineation of scenarios for 65 exogenous variables classifiable as: fiscal and monetary policy instruments, foreign bloc, and cyclical indicators.

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