Box 1

THE EUROPEAN CENTRAL BANK'S MONETARY POLICY IN 2024 AND 2025 TO DATE, AND ITS MACROECONOMIC IMPACT

The global inflationary episode that began in 2021 triggered a cycle of extraordinary monetary tightening by the main central banks.[1] Between July 2022 and September 2023, the European Central Bank (ECB) raised the euro area deposit facility rate[2] from -0.5% – the level at which it had held since September 2019 – to 4%.

As a result of the ECB's resolute response, and despite headline inflation in the euro area surging to more than 10% in October and November 2022 (10.6% and 10.1%, respectively), economic agents' medium-term inflation expectations remained anchored at around the 2% target rate. This proved crucial to euro area inflation starting to moderate, once some of the negative supply shocks that had contributed to the initial uptick in inflation began to fade.[3] For example, at end-2023 headline inflation declined to 2.9% and underlying inflation, which had peaked at 5.7% in March that year, fell to 3.4%.

This easing in inflationary pressures – which continued throughout 2024 H1 – prompted the ECB to cut its key interest rates by 25 basis points (bp) at its June 2024 meeting and to start gradually moderating its restrictive monetary policy stance (Figure 1).

In recent quarters, this moderation has been consistent with the euro area inflation's gradual convergence towards its medium-term target of 2% (see Section 2.1). Indeed, in this period, the ECB has maintained a data-dependent approach and has adopted its interest rate decisions meeting by meeting, based on its assessment of the inflation outlook in light of incoming economic and financial data, the dynamics of underlying inflation and the strength of monetary policy transmission. All this without pre-committing to a particular rate path.

Thus, between June 2024 and March 2025 the ECB lowered the deposit facility rate by 150 bp to 2.5% (Chart 1).

At the same time, over the last few quarters the ECB has pressed ahead with normalising the Eurosystem's balance sheet, a process that began in 2022. This measured and predictable reduction in the balance sheet has been underpinned by the early repayment and maturing of targeted longer-term refinancing operations (TLTROs) and, increasingly, by maturities in the monetary policy asset portfolio (Chart 2).

For instance, reinvestments under the Asset Purchase Programme (APP) were discontinued as of July 2023. The size of the Pandemic Emergency Purchase Programme (PEPP) portfolio decreased at a pace of €7.5 billion per month in 2024 H2, and reinvestments came to an end in early 2025.

As a result, by April 2025 the Eurosystem's balance sheet had declined by almost 30% from its mid-2022 peak. Similarly, excess liquidity decreased by almost 40% in the same period, although the level of bank reserves remained abundant.

In March 2024 the ECB made a series of changes to the operational framework for implementing monetary policy to ensure that it remains appropriate as the Eurosystem balance sheet normalises. In particular, the changes will affect how central bank liquidity will be provided in the context of a gradual reduction of excess liquidity in the banking system, even if it will remain significant over the coming years.[4]

Latest European Central Bank decisions

Since early April the escalation in global trade tensions and their impact on global financial markets (see Section 2.2.2) have constituted an extraordinary shock, significantly distorting the global macro-financial and geopolitical landscape and complicating the ECB's monetary policy conduct.

As discussed in Section 4.1 of this report, there is currently considerable uncertainty regarding (i) the size and scope of the tariffs that will prevail over the coming quarters between the major global economies, and (ii) the main channels of transmission (supply-side vs demand-side channels) through which these trade measures could impact global economic activity going forward, which

1 Banco de España. (2023). "Chapter 3.The current episode of price pressures in the euro area, the monetary policy response and its effects". In Banco de España, *Annual Report 2022,* pp. 140-180. https://repositorio.bde.es/handle/123456789/29664

2 The deposit facility rate is currently the key rate used to steer the monetary policy stance in the euro area.

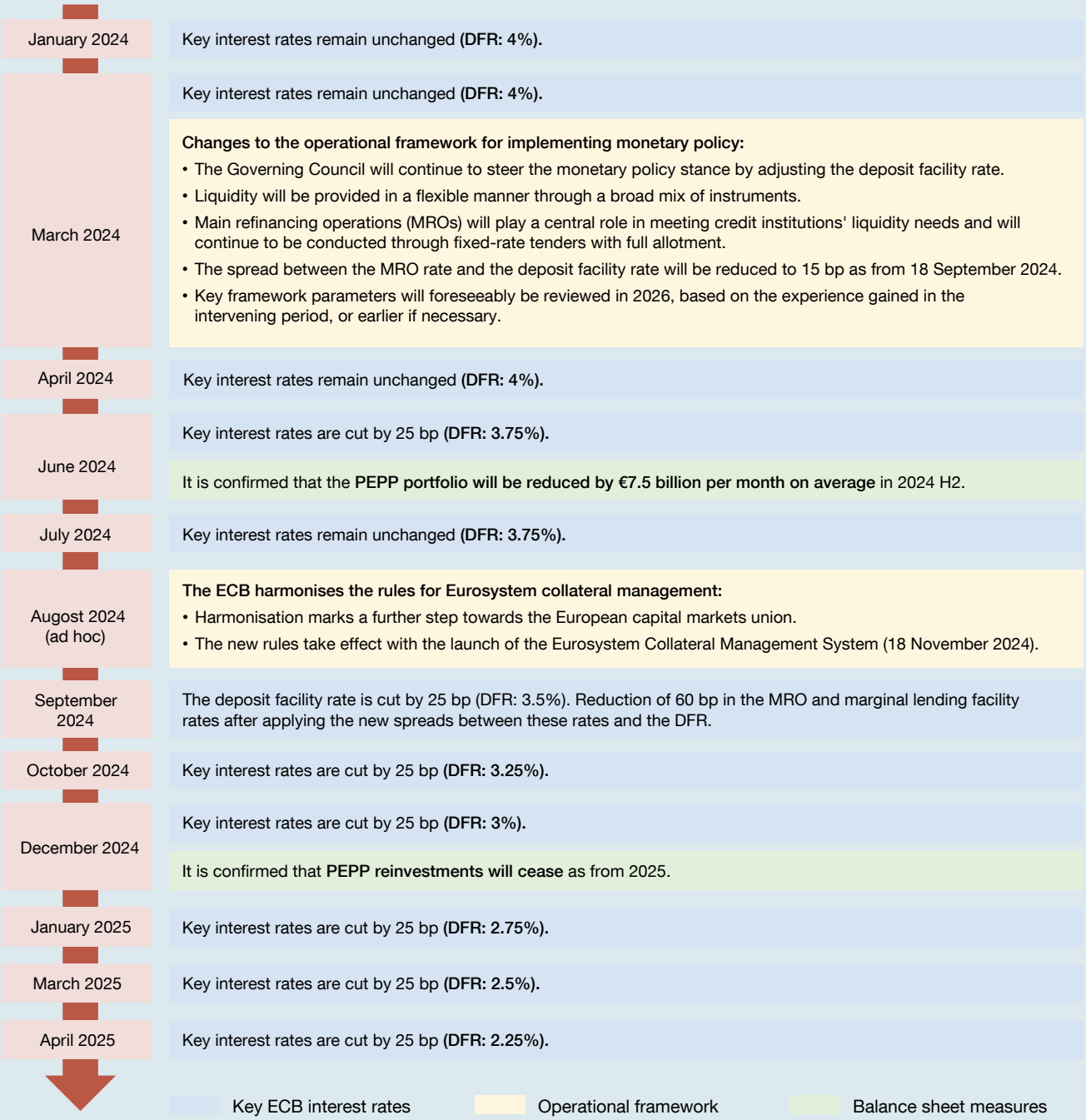
3 For example, through the moderation of energy prices and easing of the supply bottlenecks that had for some time hampered the functioning of global production and supply chains.

4 The ECB also narrowed the spread between the main refinancing rate and the deposit facility rate from 50 bp to 15 bp to limit the potential scope for volatility in money market rates, a decision that had no implications for its monetary policy stance and came into effect in September 2024.

Box 1

THE EUROPEAN CENTRAL BANK'S MONETARY POLICY IN 2024 AND 2025 TO DATE, AND ITS MACROECONOMIC IMPACT (cont'd)

Figure 1
Monetary policy measures and other measures adopted by the ECB since 2024



SOURCE: Banco de España.
NOTE: "DFR" refers to the deposit facility rate and "PEPP" to the Pandemic Emergency Purchase Programme. During the period under review, the ECB has also extended and rolled over swap and repo lines with non-euro area central banks to meet possible euro liquidity needs. Moreover, in April 2024 the ECB confirmed that the remuneration ceiling for euro area government deposits was set at the euro short-term rate (€STR) minus 20 bp, and adjusted the remuneration of other non-monetary policy deposits, so that the limited amount of non-monetary policy deposits not yet aligned to this uniform rate are aligned accordingly.

Box 1

THE EUROPEAN CENTRAL BANK'S MONETARY POLICY IN 2024 AND 2025 TO DATE, AND ITS MACROECONOMIC IMPACT (cont'd)

largely depends on the (uncertain) response of financial markets and economic agents to those measures.

According to the economic literature, the monetary policy response could differ depending on which are the dominant transmission channels: supply-side channels (reducing growth but raising inflationary pressures) or demand-side channels (dampening both activity and prices).

Against this background, the ECB Governing Council agreed at its 17 April meeting to cut its key interest rates by a further 25 bp, putting the deposit facility rate at 2.25%.

Chart 1
Deposit facility rate, EURIBOR and market expectations (a)

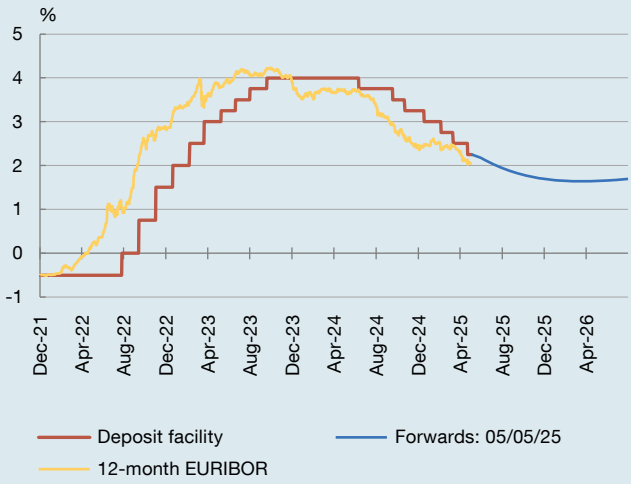


Chart 2
Eurosystem balance sheet and excess reserves (b)

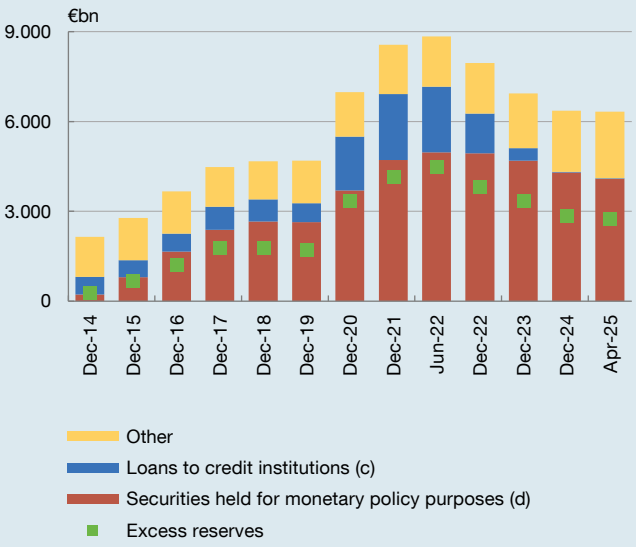
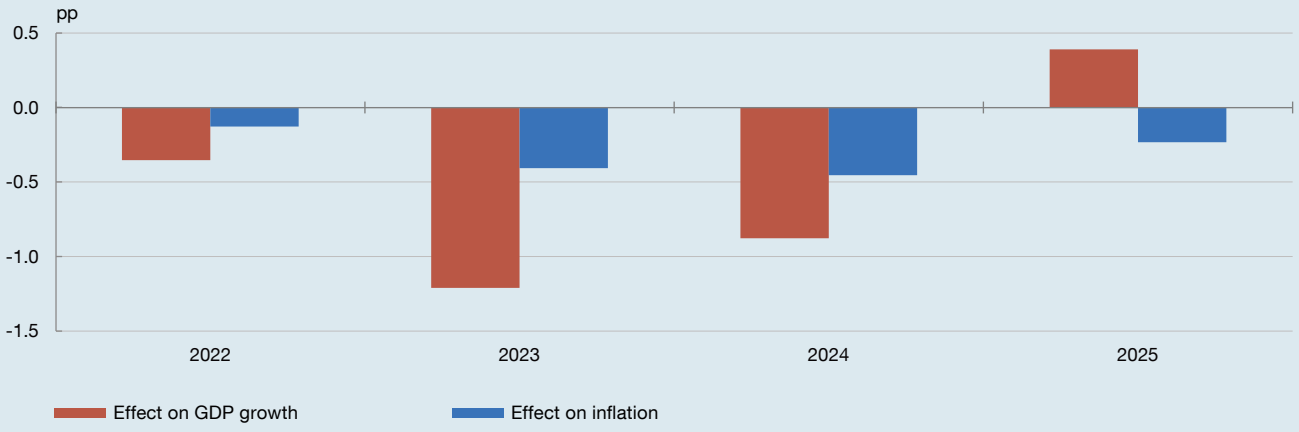


Chart 3
Estimated impact of the ECB's monetary policy tightening since 2021 on GDP and inflation in Spain (e)



SOURCES: ECB, Banco de España and LSEG Datastream.

a Instantaneous forwards estimated based on market data on OIS rates at different maturities using the Svensson (1994) parametric model and adding the spread between the policy rate and the overnight interest rate at the estimation date.
b Year-end data, except for June 2022 (which captures the peak level of 23 June 2022) and the latest available figure (April 2025).
c Includes main refinancing operations, longer-term refinancing operations and the marginal lending facility.
d ECB purchase programmes: SMP, CBPP3, ABSPP, PSPP, CSPP and PEPP.
e Estimated using the MTBE.

Box 1
THE EUROPEAN CENTRAL BANK'S MONETARY POLICY IN 2024 AND 2025 TO DATE, AND ITS MACROECONOMIC IMPACT (cont'd)

In any event, as underlined by the ECB President in her post-meeting press conference, readiness and agility are key attributes to ensure an appropriate response to new developments. Now more than ever it is important to maintain a data-dependent approach, with decisions made meeting-by-meeting and without pre-committing to a particular rate path.

Macroeconomic impact of the European Central Bank's monetary policy

The remainder of this box examines how the ECB's monetary policy since 2021, described above, appears to have impacted GDP and inflation in the Spanish economy in recent years.[5]

This exercise is an update of that presented in Section 4.4 of Chapter 3 of the Banco de España *Annual Report 2022.* It consists of introducing into the Quarterly Macroeconometric Model of the Banco de España (MTBE, by its Spanish abbreviation)[6] shocks to interest rates, household income, exchange rates and stock prices. These shocks are calibrated to capture the effects of the changes in ECB monetary policy between December 2021 and March 2025.

Based on these shocks, the MTBE generates a counterfactual scenario in which the different channels included in the model whereby monetary policy affects the economy (the intertemporal substitution effect, the exchange rate effect, the wealth effect, the income effect and the trade channel with the rest of the euro area) act in line with the empirical regularities historically observed in Spain, in a general equilibrium setting.[7]

In relation to these channels, as discussed in Chapter 3 of the Banco de España *Annual Report 2022,* the transmission of monetary policy decisions to economic activity and inflation takes place in two stages. The first stage affects financial conditions and becomes evident relatively quickly. In fact, this stage begins somewhat before monetary policy decisions are made, to the extent that financial asset prices reflect investor expectations about potential future changes in monetary policy. For instance, interbank market rates and bond yields at different horizons partly reflect investor expectations about the future path of policy rates.

In the second stage, changes in financial conditions impact real activity and, ultimately, consumer prices and inflation. These effects typically appear with something of a lag, which can be as long as two years.[8]

Taking into account these channels and stages, the simulations conducted using the MTBE (which, as with any model that only partially captures highly complex economic dynamics, should be treated with caution) suggest that the contractionary effects of the monetary tightening deployed by the ECB in recent years reduced Spanish GDP growth by around 1 percentage point (pp) both in 2023 and 2024 (Chart 3). In 2025, conversely, the net effect on Spain's economic activity would be slightly positive thanks to the recent monetary easing.

Meanwhile, the ECB's monetary policy appears to have reduced the average annual inflation rate in Spain by approximately 0.5 pp in 2023 and 2024. In line with historical regularities, this policy is also likely to be mitigating inflationary pressures this year, albeit to a lesser extent.

One striking aspect of this disinflation episode – in Spain, the euro area and other advanced economies alike – is that the "sacrifice ratio" (i.e. the cost in terms of reduced GDP resulting from efforts to lower inflation through monetary tightening) is relatively low compared with the historical regularities and consensus expectations.[9, 10]

5 For a similar exercise conducted for the euro area as a whole using multiple models, see Philip R. Lane. (2024). *The 2021-2022 inflation surges and the monetary policy response through the lens of macroeconomic models.* European Central Bank. https://www.ecb.europa.eu/press/key/date/2024/html/ecb.sp241118_1~2c31ddbaa8.en.html

6 The latest release of the MTBE is used. See Pablo Aguilar, Corinna Ghirelli and Samuel Hurtado. (2025). "MTBE v2025: New version of the Quarterly Model of the Banco de España". Documentos Ocasionales, Banco de España. Forthcoming.

7 The exercise only partially captures the positive impact (for economic activity and price stability in the medium term) that the ECB's monetary policy tightening between 2022 and 2023 had in keeping medium-term inflation expectations anchored at around 2%.

8 For example, see Philip R. Lane. (2022). *The transmission of monetary policy.* https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp221011~5062b44330.en.html

9 Corinna Ghirelli, Javier J. Pérez and Daniel Santabárbara. (2025). "Inflation and growth forecast errors and the sacrifice ratio of monetary policy in the euro area". Documentos de Trabajo, 2516, Banco de España. https://repositorio.bde.es/handle/123456789/39441

10 Deutsche Bundesbank. (2024). ("The global disinflation process and its costs". *Monthly Report - July 2024"),* whose estimation data end in 2023 Q4. https://publikationen.bundesbank.de/publikationen-en/reports-studies/monthly-reports/monthly-report-july-2024-935476?article=the-global-disinflation-process-and-its-costs-935482.

Box 1

THE EUROPEAN CENTRAL BANK'S MONETARY POLICY IN 2024 AND 2025 TO DATE, AND ITS MACROECONOMIC IMPACT (cont'd)

Two possible factors behind this lower sacrifice ratio in Spain and the euro area stand out: (i) the fact that medium-term inflation expectations remained anchored at the ECB's target of 2% throughout the inflationary episode, and (ii) the increased frequency of price adjustments by firms during that period, which may have steepened the Phillips curve.[11]

11 For evidence concerning the frequency of price adjustments, see, for example, Eduardo Gutiérrez Chacón and Pau Roldán Blanco. (2024). "The inflationary spike in Spain between 2021 and 2023: evidence from micro data". *Economic Bulletin - Banco de España,* 2024/Q1, 05. https://doi.org/10.53479/36135. See also Alberto Cavallo, Francesco Lippi and Ken Miyahara. (2023). "Large Shocks Travel Fast". CEPR Discussion Paper Series, 18413, Centre for Economic Policy Research. https://cepr.org/system/files/publication-files/DP18413.pdf

Box 2

QUANTIFYING THE DETERMINANTS OF THE SURPRISES IN THE GDP GROWTH FORECAST FOR 2024

In 2024 Spanish GDP grew at an annual average rate of 3.2%, well above the rate projected by both the Banco de España and the analysts' consensus in early 2024 (Chart 1). This box analyses the various determinants of the 1.3 percentage point (pp) difference between the annual average growth rate projected for 2024 in the Banco de España's March 2024 projection exercise[1] (1.9%) and the growth rate ultimately recorded (3.2%). Specifically, the contributions of the different components of domestic and external demand to the surprises in GDP growth are quantified, stripping out the effect of statistical revisions.

Chart 1
Changes in projections for 2024 over the course of the year. GDP rates of change (a)

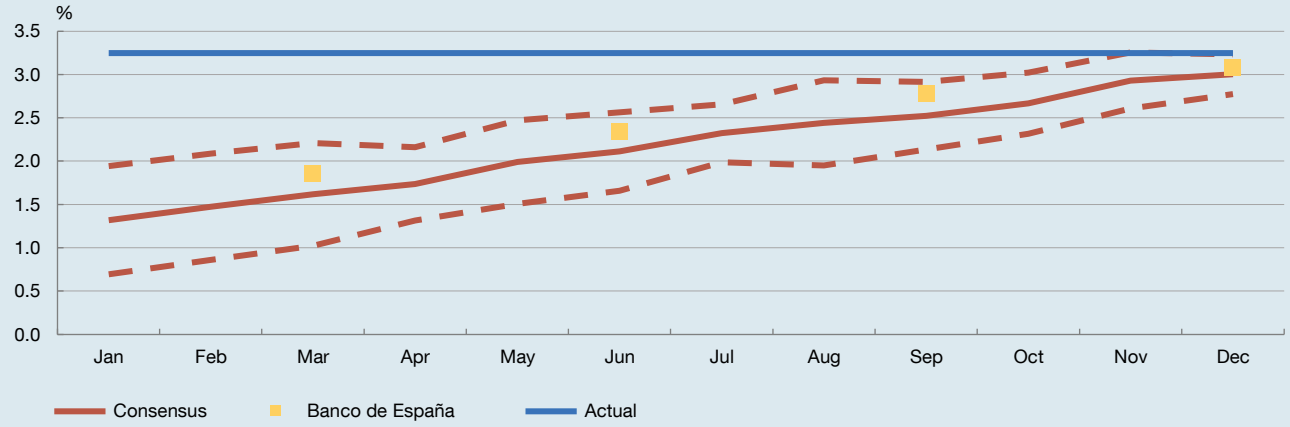
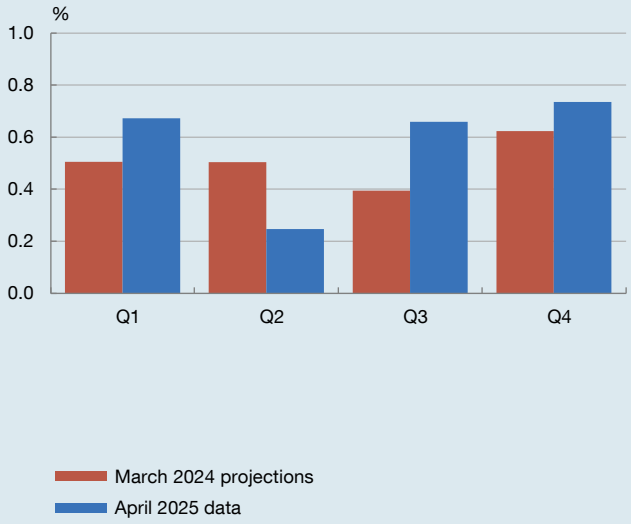
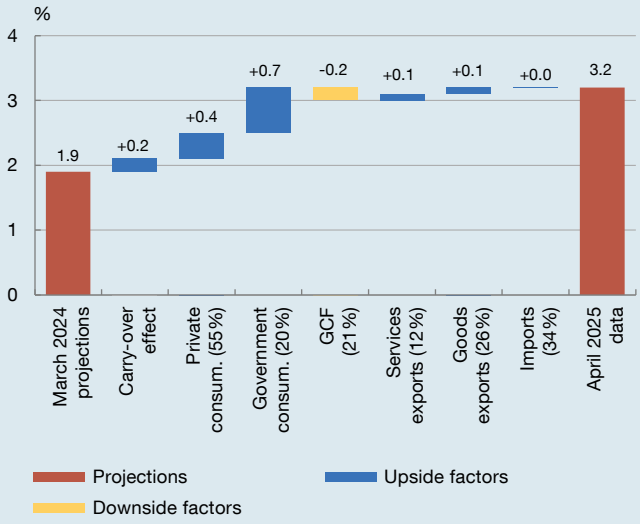


Chart 2
Determinants of revisions to the 2024 GDP growth rate

2.a Quarterly GDP growth in 2023



2.b Revision vis-à-vis March 2024 macroeconomic projections (b)



SOURCES: Banco de España, Consensus Economics and INE.

a The dotted lines represent the maximum and minimum among the institutions comprising the Consensus panel.
b The weight of each component in 2023 GDP is shown in brackets.

1 The March projections are considered as they were the first where complete information for 2023 was available.

Box 2
QUANTIFYING THE DETERMINANTS OF THE SURPRISES IN THE GDP GROWTH FORECAST FOR 2024 (cont'd)

First, some of the difference between the annual average GDP growth rate currently available for 2024 and the rate forecast in March 2024 owes to revisions to the quarterly GDP growth rates for 2023 that became known after the March 2024 projection exercise had concluded.[2] The impact of these revisions on GDP growth in 2024, known as the "carry-over effect", depends not only on the corrected average growth rate for 2023 but also the quarterly profile of growth over that year.[3]

According to the latest information available, in 2023 GDP grew at an average pace of 2.7%, versus the 2.5% envisaged on the information available in March 2024. In addition, the quarter-on-quarter growth rates in the final two quarters of 2023 were also revised up significantly (Chart 2.a).

As a result of these revisions, even if the quarter-on-quarter growth rates in 2024 had matched the March forecasts, GDP growth would have been 0.2 pp higher than anticipated at the start of the year (Chart 2.b).

Second, stripping out the effect of these statistical revisions, some components of domestic demand did not perform as expected.

In 2024 as a whole, private consumption was stronger than initially anticipated. Among the various factors behind this surprise, two in particular should be noted.

- First, stronger than expected growth in real disposable income (4.5% versus the 1.5% projected early in the year). In employment income, the surprise is mainly attributable to the growth in compensation per employee (5% versus 3.9% forecast), since employment was in line with forecasts (up 2.2% versus 2.1% envisaged in March). Meanwhile, non-labour income grew substantially, and far more than initially projected (11.2% versus 1.6% expected early in the year).
- Second, consumption was once again underpinned by the population, which grew by 1% (0.4 pp more than forecast in March).

All told, the stronger private consumption than envisaged in March explains around 0.4 pp of the higher GDP growth in 2024 (Chart 2.b). This positive surprise happened for the second year in a row: according to estimates in the *Annual Report 2023,* private consumption contributed 0.2 pp to the GDP surprise in 2023.[4]

Government consumption in 2024 also outpaced early-year forecasts. The surprise partly[5] owed to the nominal increase in government consumption, which, while broad-based across components, was particularly marked in consumption of fixed capital, intermediate consumption and transfers in kind.

As a result of these developments, the upward deviation in government consumption explains around 0.7 pp of the surprise in GDP growth in 2024 (Chart 2.b). It is worth noting that strong government consumption contributed similarly to the GDP growth surprise in 2023.

Conversely, investment was less robust than expected over the course of 2024 (stripping out the effect of the statistical revisions to 2023 data). Several factors could explain this negative surprise in investment, which has occurred repeatedly since the outbreak of the pandemic.

First, according to the results of the Banco de España Business Activity Survey (EBAE by its Spanish acronym) for 2024 Q2,[6] the main obstacles to investment are economic policy uncertainty, the outsourcing of production processes (which reduces the investment activity of firms that outsource) and business regulation (and the associated red tape).

Second, regarding the use of NextGenerationEU funds, despite the EBAE results indicating a relatively high degree of additivity, up to 24% of firms report that they

2 José Luis Fernández, Enrique Moral-Benito and Alberto Urtasun. (2024). "An overview of the Spanish economy's performance since the pandemic following the revision of national accounts: a European comparison". *Economic Bulletin - Banco de España,* 2024/Q4, 05. https://doi.org/10.53479/38878

3 Specifically, higher growth rates in the second half of the year have a larger impact on activity in the following year. For more details, see José González Mínguez and Carmen Martínez Carrascal. (2019). "The relationship between average annual and quarter-on-quarter GDP growth rates: implications for projections and macroeconomic analysis". *Economic Bulletin - Banco de España,* 3/2019, Analytical Articles. https://repositorio.bde.es/handle/123456789/10782

4 Banco de España (2024). "Box 1.1. Quantifying the determinants of the surprises in the GDP growth forecast for 2023". In Banco de España, *Annual Report 2023,* pp. 84-87. https://doi.org/10.53479/36513

5 Another factor behind the upward surprise in real government consumption growth in 2024 was the smaller rise in the government consumption deflator (2.2 pp less than expected at the start of the year).

6 Alejandro Fernández Cerezo, Sergio Puente Diaz and Rubén Veiga Duarte. (2025). "Weak business investment in Spain following the pandemic: an analysis based on the EBAE". *Economic Bulletin - Banco de España,* 2025/Q1, 02. https://doi.org/10.53479/38999

Box 2
QUANTIFYING THE DETERMINANTS OF THE SURPRISES IN THE GDP GROWTH FORECAST FOR 2024 (cont'd)

would have implemented the investments even without the support of the NGEU programme. This implies that private productive investment may have increased by less than initially expected, since some of it would have happened even without these funds.

Overall, the sluggishness of investment is estimated to have held back GDP growth in 2024 by around 0.2 pp compared with the early-year forecasts. This downside surprise in investment was also seen in the 2023 GDP growth projections.

Third, with regard to external demand, exports of services grew more robustly in 2024 than expected. The strong momentum in this heading owed mainly to exports of travel services, buoyed by the ongoing diversification of destinations across Spain's regions and a higher number of foreign tourists during the low season months.

In any event, exports of non-travel services have also exhibited considerable strength, amid competitiveness gains and more effective use of Spain's digital infrastructure. All told, the growth in services exports explains around 0.1 pp of the positive surprise in the 2024 GDP growth rate (Chart 2.b).

In sum, aside from the positive carry-over effect resulting from the statistical revisions of the growth rates for the last two quarters of 2023, the Spanish economy's higher than expected GDP growth in 2024 owed primarily, and in this order, to the upward surprises in government consumption, private consumption and exports of services. Conversely, investment was weaker than initially expected.

Lastly, by way of conclusion, it is worth noting that this surprise in activity developments has only very partially fed through to other variables of interest.[7]

First, inflation performed in line with expectations (see Section 3.2). Specifically, lower food inflation offset the upward surprise in services inflation (partly driven by a strong performance in tourism, which likely generated additional price pressure for tourism-related activities).

Second, the unemployment rate stood at 11.3% in 2024, compared with 11.6% expected in March 2024. The divergence between the positive GDP surprise and the scant unemployment surprise owes mainly to the stronger than expected increase in apparent labour productivity (0.9% in 2024).

7 For a description of the various factors that have shaped the budget deficit in Spain in 2024, see Section 3.6 of this report.

Box 3

THE ECONOMIC IMPACT OF THE FLASH FLOODS

On 29 October 2024, Spain was hit by a "cut-off low", a meteorological phenomenon that caused severe flash floods in several regions, particularly in Valencia province.

This extreme weather event led to a significant loss of human life and caused substantial economic damage.[1] The damage affected not only public infrastructure but also a huge number of firms and individuals, resulting in significant disruption to mobility and economic and social activities in the affected areas.

Areas affected

Royal Decree-Law 6/2024 of 5 November 2024 adopting urgent measures in response to the damage caused by the flash floods identified 74 municipalities in Valencia plus the districts to the south of the city of Valencia as the most affected areas. Three municipalities outside Valencia were also included: Alhaurín de la Torre (Málaga), Letur (Albacete) and Mira (Cuenca).

Together, these municipalities account for around 2% of the Spanish population, total employment and firms (and a slightly higher share – 2.7% – of industrial sector firms).

The Banco de España's response

Since the first day after the catastrophe hit, the Banco de España has taken diligent action to attempt to identify, in real time, the multiple adverse impacts of the flash floods and work on mitigating them as much as possible. In particular, the Banco de España has taken action in several different areas.

First, as part of its responsibility to oversee the functioning of the payment system, it implemented daily monitoring of payments and deposits, as well as cash withdrawals from ATMs and transactions at point-of-sale terminals in the affected areas. This continuous vigilance ensured that the payment system operated smoothly and that people's access to their money was not disrupted.

Similarly, the Banco de España introduced a more streamlined process for exchanging banknotes damaged by the floods, enabling credit institutions to deposit damaged notes worth over €13.4 million at its Valencia branch.

Second, since the onset of the disaster and in the scope of its microprudential and macroprudential functions, the Banco de España has monitored the credit exposure of Spanish banks to the affected areas and how that exposure has developed.

In this regard, it is noteworthy that, according to data at end-September 2024,[2] banks operating in Spain had exposure of approximately €27.5 billion in the affected municipalities[3] (2.2% of the financial system's total exposure), of which €17.4 billion corresponded to households (2.5% of the total exposure to households) and just over €10 billion to non-financial corporations (NFCs) (1.7% of the total exposure to NFCs). So far, the Banco de España's monitoring of these credit exposures suggests that there have been no significant variations in the months following the disaster (Chart 1).

Third, in terms of economic situation analysis, the Banco de España has been performing continuous and real-time monitoring of multiple high-frequency indicators to attempt to quantify the impact of the flash floods on the economy as a whole and on the financial system, thereby contributing to the preparation of the aid packages deployed by the authorities.

In this monitoring, special attention has been paid to bottlenecks and supply chain disruptions caused by the floods and changes in employment in the affected areas and, in particular, the number of short-time work schemes (ERTE by their Spanish initials) approved, which eventually affected more than 30,000 workers. Additionally, the Banco de España Business Activity Survey (EBAE, by its Spanish acronym) was used to gauge the expectations of firms in Valencia province regarding turnover and employment.

Support measures rolled out by the authorities

The severity of the emergency caused by the flash floods required an exceptional level of operations and

1 According to the scientific community, climate change is contributing to the frequency of such extreme weather events increasing. This trend is expected to continue globally in the coming years. See Intergovernmental Panel on Climate Change. (2023). *Climate Change 2023.* https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf.

2 September 2024, the month before the floods, is taken as the baseline for starting point exposures.

3 For this analysis, the monetary volume of loans granted by any bank operating in Spain is considered. The affected areas are classified based on the postcodes of the municipalities listed in Royal Decree-Law 6/2024. The approach taken is intended to include any potential affected borrower. An operation is deemed to have been affected by the flash floods if any counterparty belongs to one of the postcodes of the locations considered affected or if a property located in one of the affected areas serves as mortgage collateral for the loan or credit in question.

Box 3
THE ECONOMIC IMPACT OF THE FLASH FLOODS (cont'd)

considerable mobilisation of resources. These measures, which are mostly set out in Royal Decree-Laws 6/2024 and 7/2024, notably included suspending interest and principal repayments and creating guarantee facilities

Chart 1
Financial institutions' credit exposure remained stable in the municipalities affected by the flooding (a) (b)

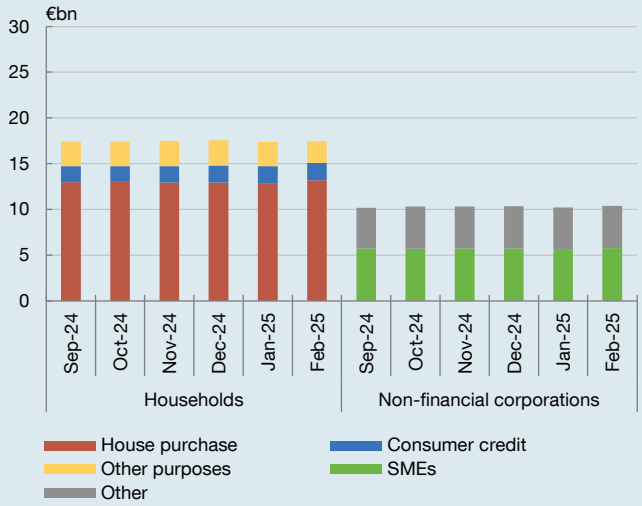


Chart 2
The flooding caused the supply bottlenecks index to rise, similar to the impact of Hurricane Katrina in the United States in 2005, although the index dropped significantly after the first fortnight

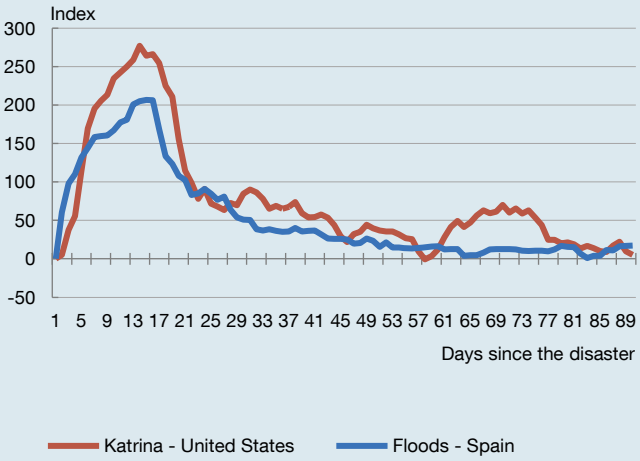


Chart 3
Employment in Valencia province has shown similar performance as in the previous 12 months, following the small disparity that appeared in November 2024

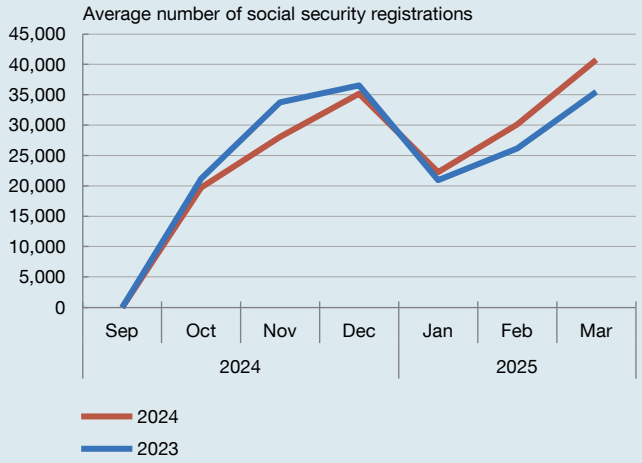
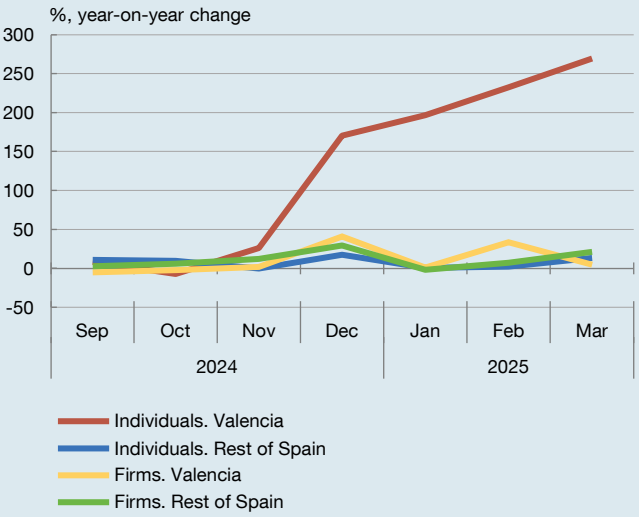


Chart 4
The uptick in vehicle registrations in Valencia after the flooding reflects the rebound effect of the replacement of damaged capital



SOURCES: Banco de España, Ministerio de Inclusión, Seguridad Social y Migraciones and Asociación Española de Fabricantes de Automóviles y Camiones.

a The exposure is shown in billions of euro in the areas affected by the flooding. The household sector includes individuals, sole traders, neighbourhood associations and other households (excluding non-profit institutions serving households) with loans that reside in the affected areas or if a property located in one of the affected areas serves as collateral for the loan or credit in question. The non-financial corporations category encompasses all non-financial firms with loans or real estate collateral in the affected areas.
b Other purposes of lending to households includes all loans to sole traders.

Box 3
THE ECONOMIC IMPACT OF THE FLASH FLOODS (cont'd)

managed by the Official Credit Institute (ICO, by its Spanish initials).[4] Direct aid and tax benefits for households and firms were also approved, in addition to compensation from the national insurance compensation consortium (Consorcio de Compensación de Seguros (CCS)).[5]

Overall, it is estimated that the increase in public spending linked to these aid packages amounts to around 0.5 percentage points (pp) of GDP, split between 2024 and 2025. In the 2024 public finances position, the costs linked to the flooding attributed to that year amount to 0.35 pp of GDP. The impact on Spanish public finances may be mitigated to the extent that a portion of the expenses is set to be covered by European funds.

Overall economic impact

Based on all available information and the analysis of past similar disasters, the Banco de España's December 2024 macroeconomic projections incorporated a negative impact caused by the flash floods of between 0.1 pp and 0.2 pp on the quarter-on-quarter GDP growth rate in 2024 Q4.[6]

Nevertheless, based on the historical evidence available for similar events, this adverse impact was expected to be transitory and, provided the support measures for affected households and firms are rolled out swiftly and effectively, reversed in 2025 H1.[7]

In this regard, in the weeks following the disaster, various real-time indicators appear consistent with this forecast of a predominantly temporary impact of the flash floods. They even point to a somewhat earlier recovery than initially expected – although much work remains to be done for a full recovery in the affected areas.

One of the key indicators pointing in this direction is the supply bottlenecks index[8] which, after a sharp initial spike in the first 15 days similar to that observed in the United States after Hurricane Katrina in 2005, then decreased considerably (Chart 2).

Another significant indicator is social security registrations, which have recently shown a pattern similar to 12 months earlier in Valencia province, after the small disparity that appeared in November 2024 (Chart 3).

Lastly, vehicle registrations are a useful indicator of the rebound effect entailed by the replacement of capital damaged by the flash floods. Vehicle registrations by private individuals have picked up strongly in Valencia province in recent months, in contrast to their more contained change in the rest of the country (Chart 4).

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4 By March 2025, more than 31,300 applications for moratoria had been submitted, of which 95% had already been approved. Furthermore, by late April 2025, 2,679 guarantees had been formalised, with a total of €610 million.

5 By April 2025, more than 246,000 applications had been registered, amounting to approximately €2.8 billion. Comparing this with other extraordinary disasters managed by the CCS vividly illustrates the exceptional nature and magnitude of this emergency. For example, cumulative payments are eight times higher than the total payments resulting from the volcano eruption in La Palma, while the total number of payments is two and a half times higher than that for the Lorca earthquake and the La Palma eruption combined.

6 All of this is in addition to the losses incurred in the stock of capital and wealth in the affected areas. According to the Valencian Institute of Economic Research, such losses could amount to more than €17 billion.

7 There is a consensus in the literature that natural disasters, such as floods, have significant negative impacts on GDP in the short term, but negative long-term effects are not observed. This is owing to the fiscal stimulus from support measures and increased spending on capital replacement and durable goods by households and firms. See Eduardo Cavallo and Ilan Noy. (2010). "The Economics of Natural Disasters: A Survey". IDB Working Paper Series, IDB-WP-124, Inter-American Development Bank. https://doi.org/10.18235/0010924; Tamim Bayoumi, Saad N. Quayyum and Sibabrata Das. (2021). "Growth at Risk from Natural Disasters". IMF Working Papers, WP/21/234, International Monetary Fund. https://doi.org/10.5089/9781513597652.001; and Sehrish Usman, Guzmán González-Torres Fernández and Miles Parker. (2024). "Going NUTS: the regional impact of extreme climate events over the medium term". ECB Working Paper Series, 3002, European Central Bank. https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp3002~a77b495fa8.en.pdf.

8 Constructed using the methodology described in Pablo Burriel, Iván Kataryniuk, Carlos Moreno Pérez and Francesca Viani. (2024). "A New Supply Bottlenecks Index Based on Newspaper Data". *International Journal of Central Banking,* 20(2), pp. 17-69. https://www.ijcb.org/journal/ijcb24q2a2.pdf.

Box 4
RECENT HOUSING MARKET DYNAMICS

The Banco de España conducted a comprehensive analysis of the housing market in Chapter 4 of its *Annual Report 2023,* which was later supplemented by two additional papers that extended and updated it.[1] This box documents recent developments in the main indicators of activity in the Spanish housing market.

1 **Developments in housing demand.** Housing demand remains robust, driven by demographic growth, purchases by non-residents and a favourable macroeconomic environment.

- **Demographic growth.** Potential demand for housing increased as a result of high migratory flows. Spain's resident population grew notably in 2024 (0.9%) and has increased by nearly 2.7 million in cumulative terms since 2016. Amid the gradual decline in residents born in Spain, this increase owes to the arrival of new foreign-born residents.[2] This demographic growth is greater in cities, where the population has tended to concentrate over the last decade.[3]
- **Net household formation.** Demographic dynamics have driven demand for both rented and owner-occupied housing through the formation of new households. Provisional figures indicate that in 2024 the number of households rose by 180,000. As a percentage of total households, this represents a 0.9% increase,[4] below the figures for 2022 and 2023, but higher than the annual average increase observed in the period 2013-21. Specifically, in the period 2022-23, the number of households increased by 245,000 (1.3%) per year on average, compared with 80,000 between 2013 and 2021.
- **Demand from non-residents.** House purchases by non-residents play a significant role in the strength of demand, although this varies across regions. Around 60,000 houses were purchased annually by non-residents since 2022, with these transactions accounting for 8.4% of total purchases in 2024. This proportion is higher in tourist areas, such as the islands and the Mediterranean coast, due to the high demand for second homes from non-residents.[5] In the overall housing stock more than 500,000 homes are owned by foreign-born non-residents, representing 2% of the total. This figure can be as high as 11% and 8.5% in the provinces of Alicante and Málaga, respectively. In addition, tourist rentals exert further demand pressure in tourist areas and the centres of large cities. The available estimates suggest that the number of tourist dwellings increased by 50,000 units on average in 2024, compared with 2023.[6]
- **Macroeconomic context.** Housing demand in 2024 was underpinned by significant growth in employment (2.2%) and per capita real gross disposable income (3.5%). Moreover, households' net worth has improved, conditions for accessing mortgage lending have eased and interest rates have gradually decreased,[7] all of which contribute to boosting demand for home ownership.

2 **Residential real estate supply indicators.** Residential real estate supply indicators showed signs of greater

1 See Andrés Lajer Barón, David López-Rodríguez and Lucio San Juan. (2024). "El mercado de la vivienda residencial en España: evolución reciente y comparación internacional". Documentos Ocasionales, 2433, Banco de España. https://doi.org/10.53479/37873, and Dmitry Khametshin, David López-Rodríguez and Luis Pérez García. (2024). "El mercado del alquiler de vivienda residencial en España: evolución reciente, determinantes e indicadores de esfuerzo". Documentos Ocasionales, 2432, Banco de España. https://doi.org/10.53479/37872

2 Foreign-born residents are estimated to have grown by around 540,000 in 2024 and by around 3.5 million since 2016, compared with a fall in Spanish-born residents of around 85,000 in 2024 and 800,000 since 2016. See INE. (2025). *Continuous Population Statistics.* https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736177095&menu=ultiDatos&idp=1254735572981

3 For more details, see Banco de España. (2021). "Chapter 4. The spatial distribution of population in Spain and its economic consequences". In Banco de España, *Annual Report 2020,* pp. 249-284. https://repositorio.bde.es/handle/123456789/16610. See also Banco de España. (2024). "Chapter 4. The Spanish housing market: recent changes, risks and affordability problems". In Banco de España, *Annual Report 2023,* pp. 110-113. https://repositorio.bde.es/handle/123456789/36494

4 INE. (2025). *Continuous Population Statistics.* https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736177095&menu=ultiDatos&idp=1254735572981

5 For example, these ratios are 35.5% in the province of Alicante, 28.5% in Málaga, 26% in the Balearic Islands and 22% in Santa Cruz de Tenerife.

6 INE. (2025). *Experimental statistics. Measurement of the Number of Tourist Dwellings in Spain and their Capacity.* https://www.ine.es/en/ experimental/viv_turistica/experimental_viv_turistica.htm?L=1

7 Keeping real interest rates on mortgages for house purchase at historically low values.

Box 4
RECENT HOUSING MARKET DYNAMICS (cont'd)

momentum in 2024, even though quantitatively the increases were relatively modest and their impact in terms of boosting housing supply will materialise in the coming years.

- **New housing.** In 2024 building permits were issued for around 127,500 new dwellings, up 16.7% on the previous year. This increase was driven by a rise in the construction of flats (20%), with single-family homes experiencing lower growth (5%). The single-family home segment, which increased significantly after 2021, still accounts for around 20% of new builds and uses up more of the land available for construction. Within around two years this growth in activity is expected to lead to an increase in housing completions, which stood at around 100,000 in 2024.
- **Employment and residential investment.** Employment in real estate and construction increased in 2024 to 8.2% of total employment (7.5% in the euro area) and residential investment stood at 5.8% of GDP, in line with that of the euro area. This increase in real estate activity could be constrained by the relative shortage of skilled labour for housing construction.[8]
- **Housing rehabilitation.** Rehabilitation permits were issued for around 24,000 dwellings in 2024, up 7.3% on the previous year. However, these figures are significantly below the annual targets set in the Spanish Recovery, Transformation and Resilience Plan (300,000 dwellings per year until 2030).
- **Government-subsidised housing.** The supply of government-subsidised housing has also gathered momentum, although the starting levels are low. For example, the number of government-subsidised housing units officially certified as such, promoted through State and regional housing plans, increased by 5,500 in 2024, to roughly 14,500 dwellings. In addition, government-subsidised housing starts, which will be completed over the next two years, grew by around 11,500 units in 2024, to approximately 24,000 dwellings.
- **Land and productive capacity.** The availability of urban land for construction is essential to increase housing supply. The available information to 2024 suggests that in recent years there have been no large urban developments at any of the various stages of land development that have boosted the production of build-ready land in large cities.[9] At the same time, the construction and housing development sector is dominated by highly-leveraged small and medium-sized enterprises with limited recourse to own funds to finance new housing developments. Moreover, industrialised construction appears to have little penetration in Spain, against a backdrop of declining productivity – measured, for example, by total factor productivity (Chart 1) – and a shrinking skilled labour pool in the construction sector.
- **Residential rental supply.** The rental housing stock grew strongly boosted by an increase in market rentals of more than one million dwellings over the last decade. This growth was underpinned by a substantial increase in supply based on investments by individuals, in contrast to the decrease in the market share accounted for by institutional investors and public administrations. For example, in 2023 (the latest available figure), the stock of market-price rental housing owned by natural persons increased by more than 90,000 dwellings, the highest figure since 2019, but below the annual average increase in 2014-19 (130,000 units).[10] This increase in investment took place in a context where the non-risk-adjusted gross returns on private residential investment by individuals exceeded gross returns on alternative financial assets (such as shares, bonds and deposits).[11]
- **Non-residential rental supply.** Housing supply for alternative uses (such as seasonal, room or tourist

8 According to the Banco de España Business Activity Survey (EBAE), in 2024 55% of firms in the construction sector reported that labour shortages were a limiting factor for their activity.

9 The data on urban land and its development status from the Urban Information System (Sistema de Información Urbana) can be used to analyse how these developments unfold.

10 The public administrations own around 300,000 rental housing units and corporations own around 210,000.

11 Gross returns on residential investment in real terms were 8.5% per year between 2015 and 2022, according to the calculations in Dmitry Khametshin, David López-Rodríguez and Luis Pérez. (2024). "El mercado del alquiler de vivienda residencial en España: evolución reciente, determinantes e indicadores de esfuerzo". Documentos Ocasionales, 2432, Banco de España. https://doi.org/10.53479/37872

Box 4

RECENT HOUSING MARKET DYNAMICS (cont'd)

Chart 1
Change in total factor productivity (TFP)

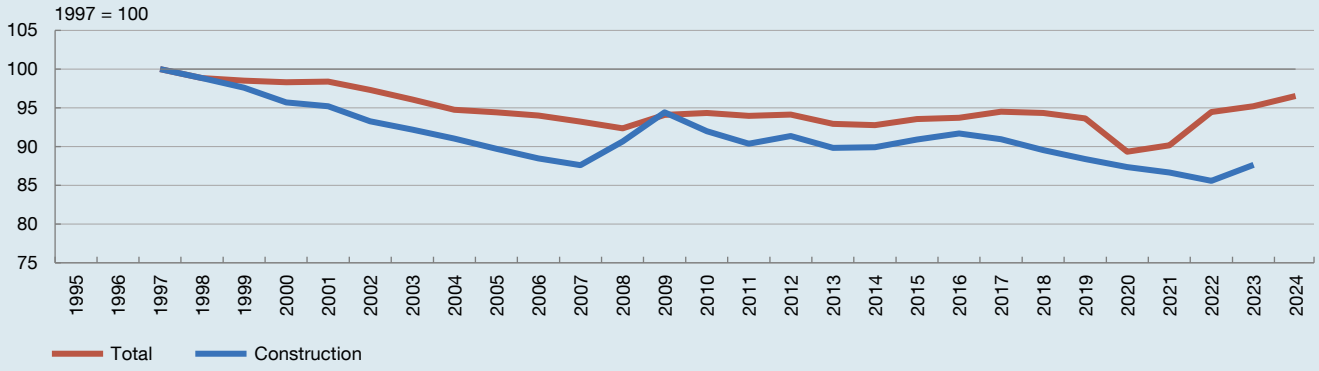


Chart 2
Maximum capacity of the housing stock in 2024 to absorb residential demand (a)

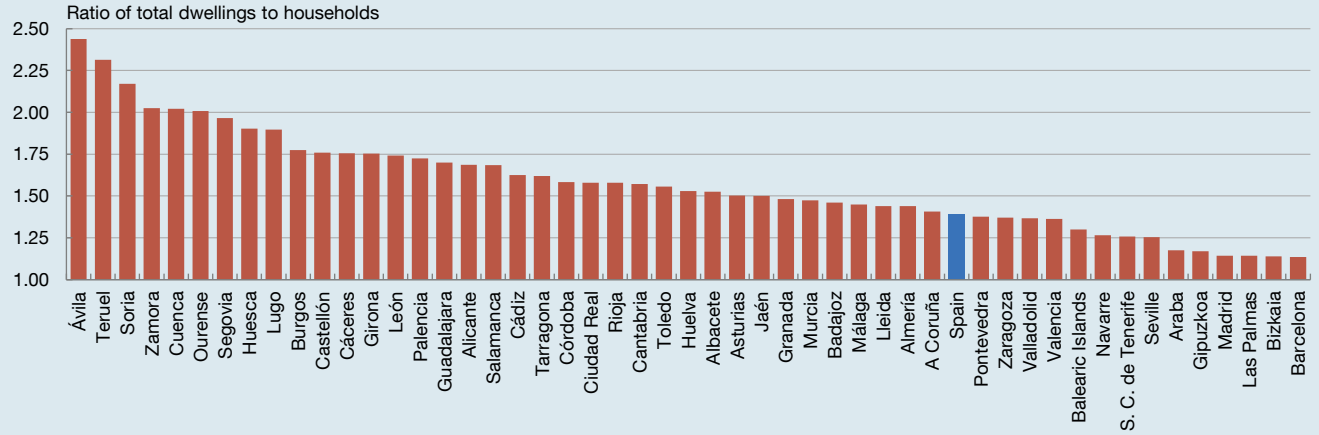
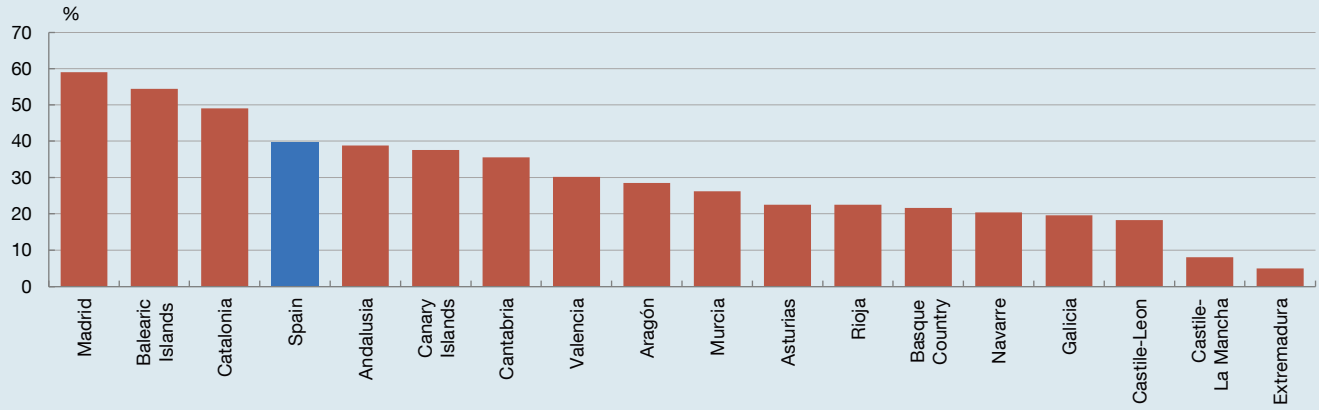


Chart 3
Real house price growth between 2014 and 2024, by region (b)



SOURCES: Comin, Quintana, Schmitz and Trigari (2025) and Banco de España drawing on data from Catastro, Ministerio de Transportes y Movilidad Sostenible and INE.

a Provincial housing stock figures are estimates for 2024. The figures for households are the provisional number of households resident in each province at 1 January 2025 published in the Continuous Population Statistics.
b Average price growth between 2014 Q1 and 2024 Q4. Nominal prices are deflated using the quarterly average of the consumer price index by region.

Box 4
RECENT HOUSING MARKET DYNAMICS (cont'd)

rentals) continued to trend upward in 2024.[12] The increase in these categories could limit residential rental supply growth against a backdrop of subdued public and private institutional investment in the rental housing market.

3 **Mismatch between housing supply and demand developments.** Stronger growth in housing demand than in housing supply is fuelling the rise in house prices and increasing the supply shortfall in properties for sale and rent.

- **House purchases.** House purchases grew strongly in 2024 (by 12%, to around 715,000). This growth was underpinned by the notable buoyancy in the second-hand market, which accounts for almost 90% of transactions.
- **New housing shortfall.** Housing supply growth, measured as the number of new housing completions in the recent period, has lagged behind the strong growth in residential demand, proxied by net household creation. For example, the cumulative differential between these two aggregates between 2022 and 2024 ranged between 400,000 and 450,000 housing units. The mismatch is particularly significant in five provinces (Madrid, Barcelona, Valencia, Alicante and Malaga), which account for just over 50% of this gap.[13] This suggests that in these areas a significant number of houses are being repurposed for residential use (for example, second and vacant homes) and that properties are being converted from tertiary to residential use.
- **The housing stock.** Available non-residential houses in Spain as a whole currently account for 39% of total households.[14] However, this housing availability is highly heterogeneous across provinces (Chart 2). For example, the proportion of existing dwellings that could be used to potentially increase the number of resident households is significantly more limited in provinces with high demographic pressure, such as Barcelona (13.2%) and Madrid (14.3%). In these provinces, if all second homes, homes with alternative uses (tourist and seasonal rentals) and, to a lesser extent, other vacant homes were mobilised to bring the current housing stock to its maximum capacity, it would be able to accommodate 310,000 additional households in Barcelona and 390,000 in Madrid.[15] The residential housing shortage is also observed in the Basque provinces and Las Palmas, and contrasts with the excess housing capacity relative to the number of households in Spain's inland provinces. Meanwhile, potential residential housing ratios are also high in the Mediterranean coastal provinces and the islands, although in these areas second homes owned by residents and non-residents and tourist rentals play a large role. When tourist dwellings and houses owned by non-residents are taken into account, residential housing capacity decreases by over 50% in the Balearic Islands and the Canary islands, 40% in Malaga and 35% in Alicante.[16]
- **House prices.** The persistent mismatch between the growth of supply and demand helps to support rising house prices. The year-on-year growth rate of average real house prices in Spain increased to 8.7% in 2024 Q4, bringing the cumulative rise in real house prices to 39.8% since the low recorded at the end of the real estate market correction in 2014 Q1. In this period, real prices of new housing increased at a higher rate (62.1%) than those of existing housing (36.4%). In addition, there is significant geographical heterogeneity in these price developments. For example, real house prices rose most in cumulative terms in regions with the highest growth in economic activity and

12 Studies based on data from property websites suggest that the number of advertisements for seasonal and room rentals has risen, particularly in large cities and tourist areas, and that these types of rentals have increased among younger people. The estimated increase in tourist dwellings and their geographical distribution can be found in INE. (2025). *Experimental statistics. Measurement of the Number of Tourist Dwellings in Spain and their Capacity.* https://www.ine.es/en/experimental/viv_turistica/experimental_viv_turistica.htm?L=1

13 Andrés Lajer Barón, David López-Rodríguez and Lucio San Juan. (2024). "El mercado de la vivienda residencial en España: evolución reciente y comparación internacional". Documentos Ocasionales, 2433, Banco de España. https://doi.org/10.53479/37873

14 This calculation does not take into account the state and livability of these houses, which is not known.

15 The latest available estimate of the number of vacant homes, based on 2020 data, stands at close to four million. However, many of these dwellings are in areas with low population growth and only 400,000 of them were in municipalities with a population of more than 250,000. INE. (2023). *Population and Housing Censuses 2021.* https://www.ine.es/en/prensa/censo_2021_jun_en.pdf

16 In Spain as a whole, these dwellings represent 11.5% of the potential residential housing capacity.

Box 4
RECENT HOUSING MARKET DYNAMICS (cont'd)

tourism where the population tends to concentrate in cities (Chart 3).

- **Rental prices.** Based on the data available, the average cost of real rent per square metre for rented housing stock in the common fiscal territory (i.e. all Spanish regions excluding the Basque Country and Navarre) climbed by 12.5% in cumulative terms between its low in 2015 and 2023. This growth varies considerably by geographical area, with higher increases in large cities and tourist areas, where the mismatch between supply and demand is greater.[17] Furthermore, the prices in new rental contracts point to future surges in the average cost of rent. For example, the estimated entry prices of the rental market indicate significant buoyancy in 2022-23, with year-on-year growth of more than 10% in the real prices of new contracts.[18] Similarly, the flash indicators for 2024 and 2025 Q1, based on asking rental prices on the main property portals, also indicate that rents grew strongly by around 10% in nominal terms.
- **Mortgage lending.** Recourse to mortgages to finance house purchases increased in 2024, against a backdrop of falling borrowing costs, in line with the looser monetary policy stance. Thus, the cost of financing of new loans to households for house purchase declined progressively over 2024 by an average of 95 basis points (bp) year-on-year at end-2024. These developments in financing conditions contributed to a significant rise in the number of new residential mortgages in 2024 (24.6%) and of new mortgages for house purchase (17.6%).
- **Purpose of mortgages for house purchase.** In 2024, most mortgages granted by financial institutions operating in Spain to households for house purchase were intended for the purchase of their principal residence (86.5% of the total). In particular, 73% of the total were for first-time purchase of a principal residence and 13.5% related to households which moved or changed the mortgage loan on their principal residence. Among the other purposes of taking out a mortgage, buy to rent accounted for 1% of the total and other purchases, for example, buying a second home, represented 12.5%.[19]
- **Financing of real estate and construction activity.** The stock of bank credit for real estate and construction activity climbed modestly (by 0.7%) in 2024. In addition, real estate market analysts indicate that alternative financing via investment funds spurred growth in 2024 in segments expected to have high returns in residential housing development.[20]
- **Credit standards.** The buoyant housing market and patterns of borrowing and lending in real estate in 2024 are not linked to laxer credit conditions. Specifically, there have been no warning signs about the situation of the mortgage market or the credit standards of security for loans, which are stringent by historical standards.[21] For example, the loan-to-price (LTP) ratio was similar to previous years: it averaged 76.5% and stood at less than 80% for nearly 60% of loans for house purchase. At the same time, no significant changes were observed in the loan-to-income (LTI) ratio and loan-service-to-income (LSTI) ratio indicating an easing of lending standards for households with new mortgages.

4 **Housing affordability difficulties:** the imbalance between supply and demand in residential housing

17 For example, real average rents per square metre increased between 2015 and 2023 by 35.9% in Valencia, 28.8% in Málaga, 27.3% in Palma and by around 25% in Alicante and Castellón de la Plana.

18 Calculations based on information on the annual average rent per square metre provided by the Spanish tax authorities (AEAT) for the rented property stock owned by individuals; the rental CPI, which approximates updated prices of contracts in force; and the available data indicating that newly signed contracts account for between 25% and 30% of total contracts during this period.

19 These amounts increase, respectively, to 1.1% and 15.5% when mortgages for house purchases granted to sole proprietors and corporations are also included. Consequently, around 83.5% of these transactions in 2024 were linked to the purchase of a principal residence, in line with the average observed in the period 2016-24.

20 This growth was noted, for example, in the report prepared by EY Spain in The Living Property Telescope 2024.

21 Historical comparisons of lending standards generally started in 2004, when granular information became available for performing this analysis. A more detailed analysis of these standards can be found in Banco de España. (2024). Financial Stability Report. Autumn 2024. https://https://doi.org/10.53479/37958

Box 4
RECENT HOUSING MARKET DYNAMICS (cont'd)

contributes to the worsening of housing affordability indicators which is sharper among young people and in those geographical areas where economic activity is concentrated.

- **Housing affordability indicators.** The aggregate indicator which approximates house purchase affordability, measured in terms of the years of gross annual income required by a median household to buy an average housing unit, stood at 7.2 at end-2024.[22] This ratio is in line with the average affordability of the last three years and that recorded on average in 2024. However, the current cycle shows considerable differences across geographical areas. For example, the housing affordability indicator for renting households is higher in those provinces where economic activity and tourism are concentrated. In these provinces, in 2022 the house price-to-income ratio stood at more than nine years of gross annual income in city centres and among lower-income groups (such as households below 35 years of age or foreign-born households).[23]

- **Housing affordability and mortgage lending.** The improvements in affordability based on household income growth and looser financial conditions in 2024 were constrained by the increase in house prices (Chart 4). The difficulties of financing a house purchase with a mortgage appear to be even greater among those groups living in rented properties. For example, approximately three-quarters of renting households do not have sufficient savings to cover the initial costs of buying an average house in the municipality where they reside or their mortgage repayment would exceed the recommended ceiling of 35% of net household income.[24] These figures are estimated to be higher in the larger metropolitan areas of Barcelona and Madrid where demand for residential housing among households without access to a mortgage has seemingly shifted to the rental market.

- **Housing affordability for young people.** Although in recent years the real average wages of young people have increased faster than those of other employees, the cumulative growth in real house purchase prices and rents has been even higher (Chart 5).[25] At the same time, despite recent improvements in their employment status, in 2024 the employment rate for young people under 30 was still low (43.2%) and the unemployment and part-time employment rates for them were still high (20.2% and 25.3%, respectively, compared with 11.3% and 13.6% for the whole economy). Young people's employment status makes it difficult for them to obtain a mortgage and to rent a property. These housing affordability difficulties could help to explain why young people are leaving home at a later age than they used to before 2008,[26] and the fall in the relative weight of house purchases by buyers aged between 18 and 30, which has declined from 24.5% in 2007 to 10.4% in 2024.[27] Likewise, these housing affordability problems are reflected in the growing intergenerational inequalities in the accumulation of wealth and the increasing importance of family members donating and transferring property free of charge in wealthier households.

- **Affordability indicators in the rental market.** Renting is growing among lower-income households and is predominant among young people and the foreign-born population.[28] These households spend

22 The changes in this indicator and the methodology used to calculate it can be found in the Summary indicators of the real estate market.

23 These affordability indicators are obtained by combining household gross income and geographical location data for 2022 taken from the Household Panel (INE and AEAT, Fiscal Studies Institute), average house prices calculated on the basis of property sales microdata provided by the Colegio de Registradores (Association of Registrars), and housing tenure data provided by the AEAT.

24 Banco de España. (2024). "Chapter 4. The Spanish housing market: recent changes, risks and affordability problems". In Banco de España, Annual Report 2023, pp. 210-264. https://repositorio.bde.es/handle/123456789/36494

25 The estimated year-on-year growth rate of real prices for new rental contracts, which is particularly important for young people wanting to leave the family home, was around 10% over the last four years.

26 In 2023, 65.6% of young people between the age of 18 and 34 were living in the family home. This ratio stands 16 pp above the EU27 and has increased by 13 pp since 2008, which is the biggest rise among the large European economies.

27 Calculations provided by the Consejo General del Notariado (General Council of Notaries). (2025). Centro de Información Estadística del Notariado.

28 A total of 73% of households whose head is under 30 and 84% of households comprising non-EU27 nationals resided in private-market and low-cost housing (including rent-free accommodation) in 2024. This share stands at 26.4% for the total economy. See INE. (2025). Encuesta de condiciones de vida. https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176807&menu=resultados&idp=1254735976608

Box 4
RECENT HOUSING MARKET DYNAMICS (cont'd)

a greater proportion of their income on rent, although the relatively limited supply drives this indicator for all renting households. For example, the proportion of household gross income earmarked for private-market rent was higher in Spain than the total median proportion and by income percentile relative to the EU27 and the large European economies in 2022.[29] These ratios are elevated for the median renting household across most of Spain, although they are even higher in provinces popular with tourists and large cities, where households on average have to spend between 25% and 30% of gross income on rent. They give rise to persistent overburdening and social vulnerability, particularly among households living in rented properties.[30]

5 **The challenge of housing affordability and public policies.** The imbalances in the residential housing market are in line with those diagnosed in Chapter 4 of the Banco de España Annual Report 2023. Thus, the economic policy recommendations in that report remain valid in the current setting.

Accordingly, the measures adopted should include a long time frame and they should be designed together by the various tiers of general government responsible for housing. In particular, the priority for mitigating the current housing affordability problems would be to adopt measures to increase the housing supply, especially in the rental segment.

The most effective economic policy measures to increase housing supply include the following: (i)

Chart 4
House purchase affordability for buyers with mortgage financing (a) (b)

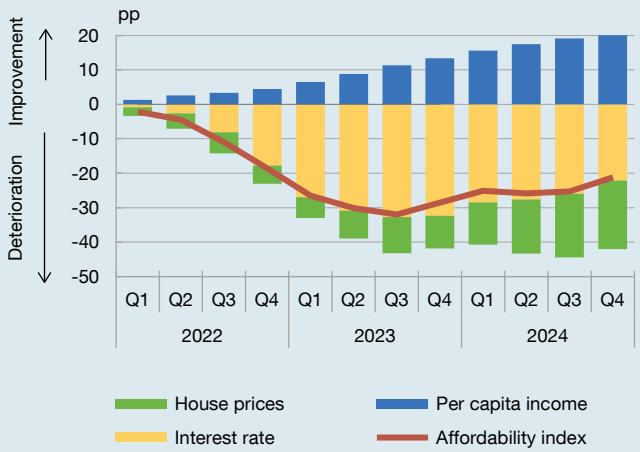
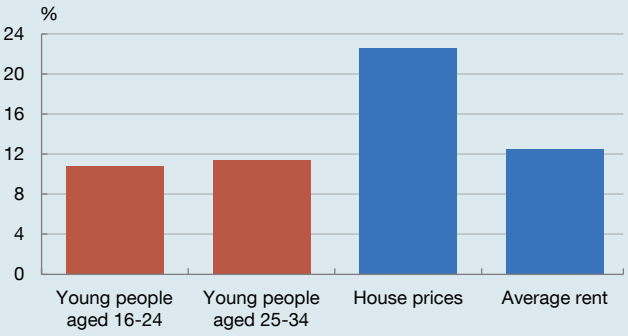


Chart 5
Cumulative growth of wages and real estate prices in real terms between 2015 and 2023 (c)



SOURCE: Banco de España drawing on data from INE, Colegio de Registradores and Servicio de Estudios Tributarios y Estadísticas de la AEAT.

a Index calculated following the methodology used in the Home Ownership Affordability Monitor (HOAM) Index of the Federal Reserve Bank of Atlanta. The change in the index and its components is expressed in percentage points of the change in their respective logarithms. The level of the index in 2021 Q4 is 100.
b House prices are measured with the INE's House Price Index, per capita income is the ratio of seasonally adjusted gross disposable income to population and the interest rate is the cost of new loans to households for house purchase.
c Wage growth is calculated based on the monthly gross average wages of workers' main job by age group in the Spanish Labour Force Survey (LFS); house price growth relates to growth in the House Price Index and the increase in rents relates to income per square metre for the average housing stock leased according to AEAT data. The nominal values are deflated using the annual average of the CPI.

29 Eurostat. (2024). EU statistics on income and living conditions [Dataset]. https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions

30 Eurostat (2024) considers that households are overburdened when they spend more than 40% of their gross income on housing, including utility costs. Households at risk of poverty or social exclusion are defined as those whose income does not exceed 60% of the median equivalised income after social transfers.

Box 4
RECENT HOUSING MARKET DYNAMICS (cont'd)

creating a stable regulatory and contractual framework to ensure legal certainty in the housing market; (ii) encouraging public and private sector collaboration to sustainably increase the stock of affordable rental housing; (iii) reducing administrative and regulatory friction in the production of land for development and housing construction; (iv) lowering housing production costs by promoting industrialised construction; and (v) designing new public insurance programmes and rental income compensation schemes for landlords.

These actions could be more effective where they are accompanied by measures in areas such as urban transport policy – which increases the potential supply of housing – and structural reforms to improve the purchasing power of lower-income households.

Box 5

A PRELIMINARY ANALYSIS OF THE INCREASE IN TEMPORARY SICK LEAVE IN SPAIN

Since the pandemic, the percentage of workers on temporary sick leave (TSL) has risen, from 2.7% in 2019 to 4.4% in 2024 (Chart 1.a)[1] on Spanish Labour Force Survey (LFS) data. Although TSL has also increased in other European countries, in 2023 it was higher in Spain (4.1%) than in France (3.6%), Germany (3.1%) and Italy (1.3%) (Chart 1.b).

As Table 1 shows, the pre-pandemic incidence of TSL in Spain was higher among women (3.3%, compared with 2.2% for men), Spanish nationals (2.9%, compared with 1.7% for the foreign population) and older workers (5%, more than double the figure for younger workers).

Over the past five years there has been a widespread increase in TSL across all population groups. It has risen by around 1.5 percentage points (pp) among men and by around 2 pp among women, and by age group, by 2.5 pp among those over 55, by 1.6 pp in the 30-54 age group, and by 1.1 pp among those under 30 years. The increase has been higher among Spanish workers (1.8 pp) than among foreign nationals (1.4 pp).

Considering other characteristics, such as sector of activity or region of residence, a fairly widespread increase in TSL is also observed, albeit with some nuances. For instance, between 2019 and 2023 TSL declined in extractive industries and energy supply activities, but it rose in agriculture, manufacturing, construction, wholesale and retail trade and transport, and increased sharply in water supply and sanitation (Chart 2.a).

By region, the Basque Country, Galicia, Cantabria and Murcia recorded the highest growth, well above that observed in Asturias, Madrid and, especially, Navarre (Chart 2.b).

The reasons for this increase in TSL are complex and multidimensional and are still under discussion. But it is widespread across personal characteristics, sector of activity and region, which suggests that there are common factors that are affecting all workers in a relatively similar way.

These potential factors include, first and foremost, health and demographics, such as the post-pandemic deterioration in health and population ageing (insofar as health tends to deteriorate with age).

Other possible causes not strictly related to the deterioration in workers' health include the business cycle itself (as historically the incidence of TSL tends to increase in periods of economic expansion), greater congestion in health services (which delays both healing and the return to work) and potential shifts in desired working hours or working conditions.[2]

Accurately measuring the contribution of each of these factors is extremely complex and would require a level of data granularity – both nationally and internationally – that is currently not available. The rest of this box tentatively explores the qualitative importance of some of the above-mentioned factors as explanations for this increase in TSL in Spain.

As regards how the health status of the population has evolved, the healthcare barometer of the *Centro de Investigaciones Sociológicas* (CIS, by its Spanish initials) shows that, between 2019 and July 2024, the percentage of people who reported having a chronic health problem rose by more than 17 pp. This pattern was observed across all the age brackets considered.

Meanwhile, the Survey of Health, Ageing and Retirement in Europe (SHARE) data point to marked differences in health status in Spain by gender, level of education and employment status from the age of 50, with women, people with a lower level of education and those outside the labour market all showing greater health deterioration. Among the over-50s, the probability of those who are in good health transitioning to poor health in the next wave of the survey is around 10%. For those already in poor health, the probability of remaining in poor health is at least 60 pp higher.[3] Consequently, poor health appears to be persistent, and health-impairing factors, such as the pandemic, could have very long-lasting consequences.[4]

1 Defined as the percentage of the employed who did not work in the reference week on account of illness, accident or temporary sickness, as a proportion of all persons employed.

2 See, for instance, R. Jason Faberman, Andreas I. Mueller and Ayşegül Şahin. (2022). "Has the Willingness to Work fallen during the Covid Pandemic?". *Labour Economics,* 79, 102275. https://doi.org/10.1016/j.labeco.2022.102275. The authors find that most demographic groups would like to see a widespread reduction in working hours, which they link to the impact of the pandemic on workers' lifestyle preferences.

3 Moreover, both women and people with a lower level of education are relatively more likely to fall into poor health in the future. See Laura Crespo, Angela Denis and Juan Francisco Jimeno. (2023). "The health status of the retirement-age population: a first approach". *Economic Bulletin – Banco de España,* 2023/Q4, 04. https://doi.org/10.53479/34892

4 Samuel Hurtado and Mario Izquierdo. (2023). "Economic effects of a possible prolonged deterioration in the general health of the Spanish population". *Economic Bulletin – Banco de España,* 2023/Q1, 20. https://doi.org/10.53479/29818

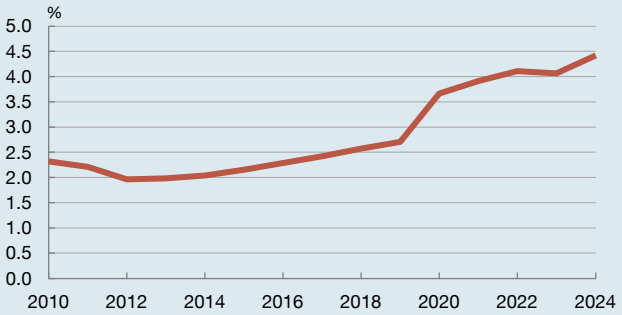
Box 5

A PRELIMINARY ANALYSIS OF THE INCREASE IN TEMPORARY SICK LEAVE IN SPAIN (cont'd)

As Chart 3.a shows, if the health status of the working-age population is proxied by the percentage of employed people reporting a chronic health problem, there is a clear positive correlation between this variable and TSL, especially in the post-pandemic period. This correlation holds if other health indicators are used, such as the percentage of the working-

Chart 1
In 2023, 4.1% of the employed were on temporary sick leave (TSL) in the reference week, one of the highest figures in the EU

1.a Percentage of the employed on TSL in Spain



1.b Percentage of the employed on TSL

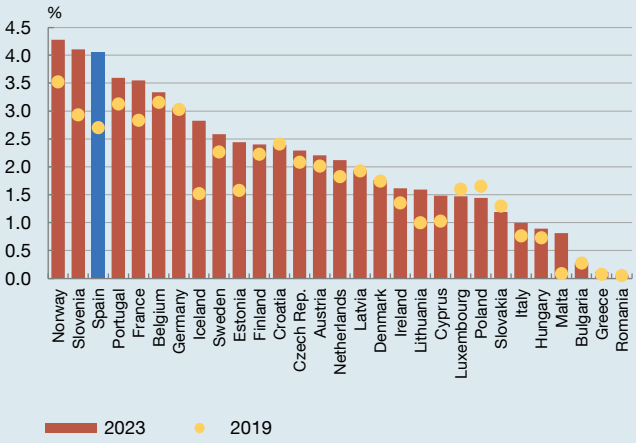
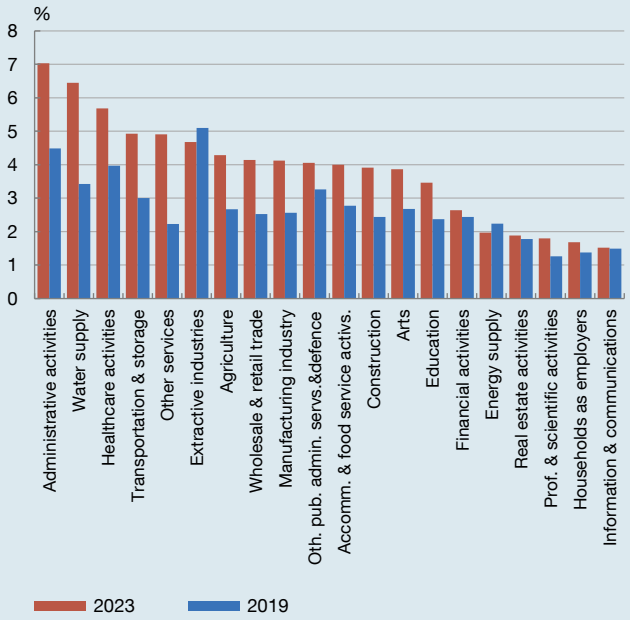
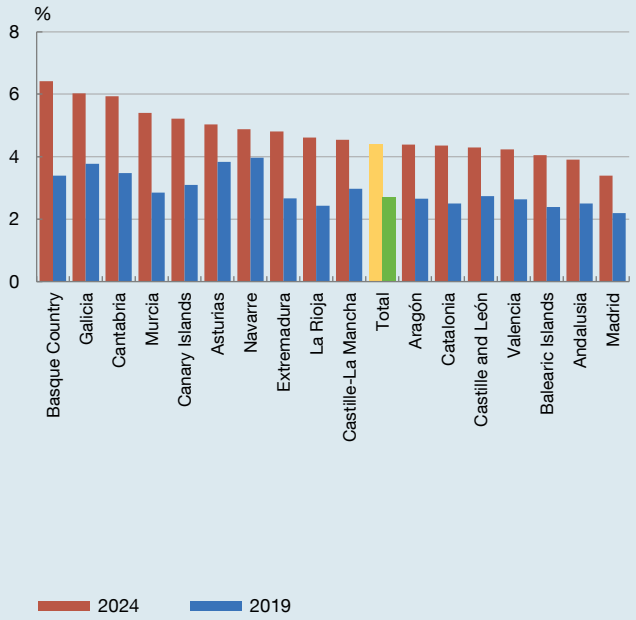


Chart 2
The incidence of TSL increased in all sectors of activity and across all Spanish regions and was most intense in administrative activities, water supply and health care and in northern Spain

2.a Percentage of the employed on TSL by sector of activity



2.b Percentage of the employed on TSL by region



SOURCES: Banco de España, drawing on data from the EU-SILC, the Labour Force Survey (Eurostat) and the Spanish Labour Force Survey (INE). See Arregui and Montero (2025).

Box 5
A PRELIMINARY ANALYSIS OF THE INCREASE IN TEMPORARY SICK LEAVE IN SPAIN (cont'd)

age population who report their health status as "fair" or "poor", or the frequency of primary care visits.[5]

Chart 3.b depicts how TSL and the unemployment rate (inverted scale) have evolved and illustrates the tight correlation between the two variables.

The increase in TSL has various economic implications, with negative effects for firms and for general government. From a fiscal perspective, the cost of TSL payments has risen sharply (by 78.5%) since 2019 and currently stands at just over €15 billion,[6] verging on 1% of GDP.

In comparative terms, this level of expenditure is among the highest in the European Union – alongside that of the Netherlands, Germany or Sweden where it amounted to between 1.5% and 2% of GDP in 2022 – and it has also seen one of the largest increases since 2019.[7] Thus, on comparable data to 2022, expenditure in Spain rose by around 0.3 pp of GDP, similar to the increase in the Netherlands, Sweden or Slovenia, whereas in other economies, such as France or Italy, this expenditure ratio held relatively stable over the same period.

For firms, TSL has both a direct cost, relating to the sums paid to absent workers, and an indirect cost, linked to the workforce restructuring they may need to make to continue their activity.

The Quarterly Labour Costs Survey (ETCL, by its Spanish initials) provides information on the payments firms make to workers on TSL, and the possible supplements.[8] These payments can be combined with LFS employee data to approximate the total direct cost. Specifically, it is estimated that the direct cost for firms has risen by 62%, from around €2,840 million in 2019 to some €4,613 million in 2024.[9]

In view of this sharp increase in expenditure, along with the worsening health status indicators and growing health system congestion, the social security authorities have implemented a series of measures to control spending

Table 1
Proportion of the employed on TSL

%	2019	2024
Men	2.2	3.7
Women	3.3	5.2
Age group		
16-29	1.1	2.3
30-44	2.2	3.8
45-54	2.7	4.3
55+	5.0	7.0
Nationality		
Spanish	2.9	4.7
Dual nationality	2.3	4.2
Foreign	1.7	3.2

SOURCE: Banco de España (Arregui and Montero, 2025), drawing on Spanish Labour Force Survey data (INE).

5 The frequency of primary care visits is the number of patients visiting primary care services as a proportion of the total population covered by the primary care health system.

6 These figures relate to non-professional contingencies. Including payments for professional contingencies the total is €16.48 billion.

7 José María Arregui and José Manuel Montero. (2025). Banco de España. Forthcoming.

8 This cost consists of the sums paid between day 4 and day 15 of the leave (60% of the regulatory base wage), plus possible supplements (potentially including payment from day 1 if so established in the applicable collective agreement or voluntarily decided by the employer) and the corresponding social security contributions.

9 This calculation excludes employees in agriculture, forestry and fisheries, so the estimated increase would be a lower bound.

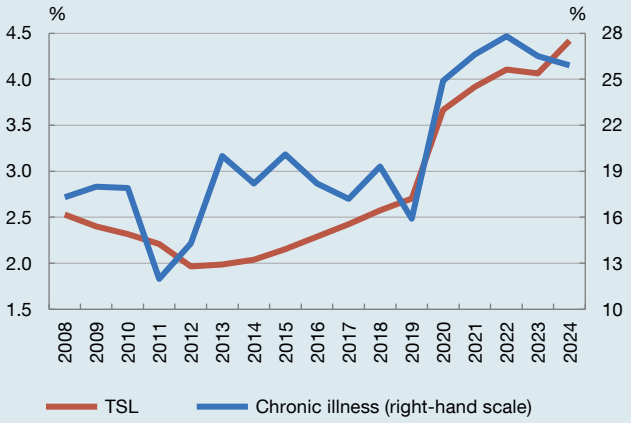
Box 5
A PRELIMINARY ANALYSIS OF THE INCREASE IN TEMPORARY SICK LEAVE IN SPAIN (cont'd)

and strengthen health services. These measures notably include renewing the bilateral agreements between the National Social Security Institute (INSS, by its Spanish initials) and the Spanish regions[10] for control of TSL (2025-28). In addition, cooperation agreements on non-professional contingencies are to be signed between the above-mentioned institutions and the mutual insurance companies that collaborate with the social security authorities, aimed at improving workers' health and ensuring that TSL is not prolonged unnecessarily in the case of traumatology/orthopaedic injuries. To this end, mutual insurance companies will be allowed to provide all diagnostic tests and medical treatments considered necessary.

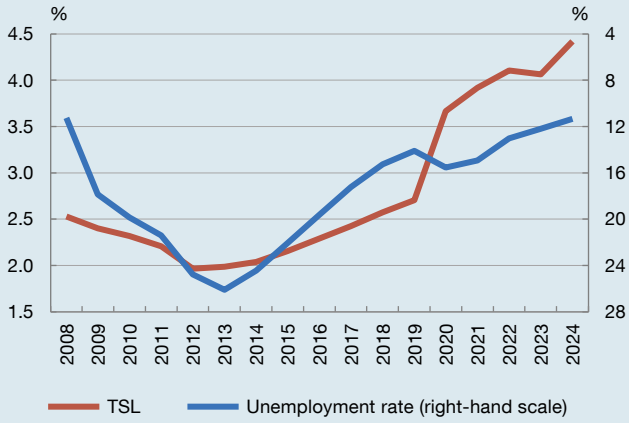
Future analysis of this question will seek to ascertain to what extent these various initiatives can help to mitigate the recent increase in TSL in Spain.

Chart 3
Health status and the cyclical position could explain a large part of the recent increase in absence from work

3.a Percentage of the employed on TSL and those with chronic health problems



3.b Percentage of the employed on TSL and the unemployment rate



SOURCES: Banco de España, drawing on data from the EU-SILC, the Labour Force Survey (Eurostat) and the Spanish Labour Force Survey (INE). See Arregui and Montero (2025).

10 Excluding Navarre and the Basque Country and including the National Institute of Health Management (INGS, by its Spanish initials).

Box 6

MIGRATORY FLOWS TO SPAIN IN RECENT YEARS: MAGNITUDE AND KEY DETERMINANTS

The immigrant population in Spain has increased significantly in recent years, especially since the end of the pandemic. In 2023, the net balance of immigrants stood at 642,000. Although this figure is high, it is lower than that recorded a year earlier (727,000) (Chart 1.a). For 2024, a preliminary estimate based on the partial information available indicates a net inflow of between 550,000 and 650,000 persons.

All told, according to the Continuous Population Survey, in the period 2009-2024 the share of foreign-born residents in Spain increased by 5.6 percentage points (pp) to 19.1% of the total population. During the same period, the share of working-age foreign-born individuals (between age 16 and 67) rose by 5.6 pp, to 22.3% of the total working-age population resident in Spain.

Thus, foreign-born residents in Spain are reaching a share in the total population similar to that in other countries that have traditionally been large recipients of immigrants (Chart 1.b).

To understand the causes underlying these migratory flows,[1] the economic literature usually distinguishes between pull and push factors.

Pull factors are linked to the socio-economic situation of the destination country. These include, for instance, better job opportunities, higher income prospects, flexible immigration policies and an established network of compatriots already living in the destination country who can help the new immigrants settle rapidly.

Push factors, however, are linked to the socio-economic situation of the country of origin. Noteworthy among these are, for example, the level of political instability, the occurrence of natural disasters or food crises and, in general, any aspects that can influence the current and future economic situation of the country of origin.

Chart 1
Net external migration (a)

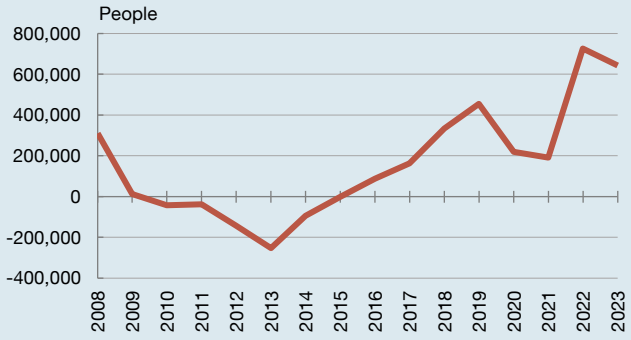
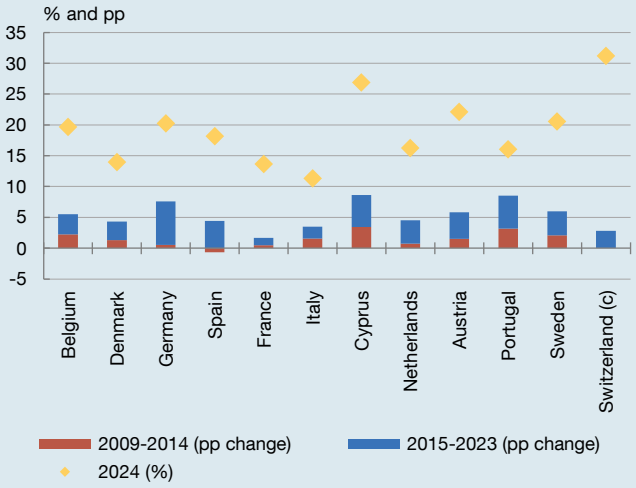


Chart 2
Proportion of immigrant population (b)



SOURCES: INE (migration statistics) and Eurostat.

a Net external migration is comprised of the number of foreigners who become residents in Spain and the number of persons who leave Spain to take up residence abroad.
b Immigrant population is defined by country of birth.
c No data are available for the period 2009-2014.

1 Beyond the size of these flows, a recent paper by the Banco de España shows that those arriving in Spain in recent years are older and have a higher education level than those who arrived in previous waves. Pilar Cuadrado, Ángel Luis Gómez and Teresa Sastre. (2024). "Comparing the characteristics of migratory flows to Spain and other European Union countries". *Economic Bulletin - Banco de España,* 2024/Q3, 06. https://doi.org/10.53479/37432

Box 6

MIGRATORY FLOWS TO SPAIN IN RECENT YEARS: MAGNITUDE AND KEY DETERMINANTS (cont'd)

The relative importance of the push and pull factors can be analysed by adapting the methodology proposed by Amiti and Weinstein[2] to separate the portion of bilateral migrant flows determined solely by factors related to the country of origin from that determined only by factors specific to the destination country.

Chart 3
Breakdown of migratory flows to Spain into push and pull factors (a)

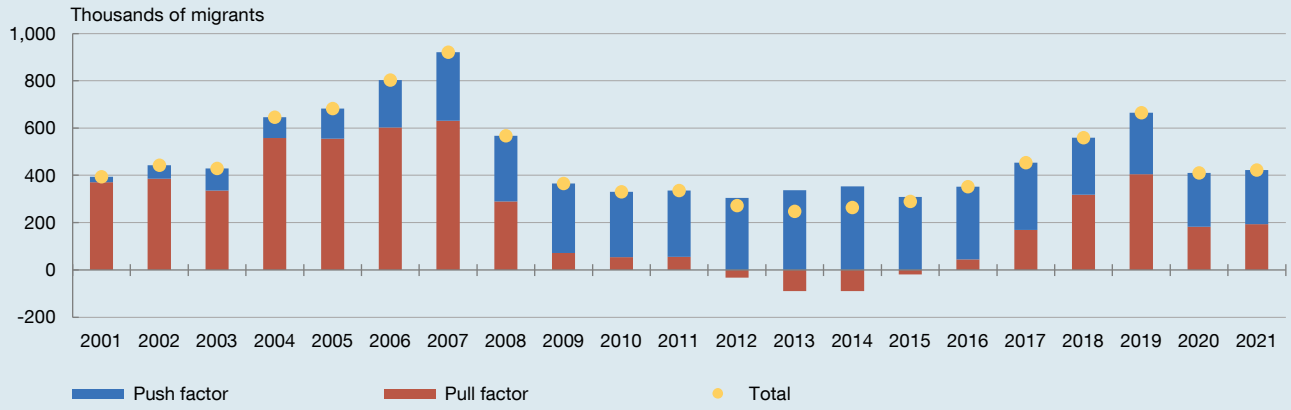


Chart 4
Impact of pull factors on inflows (b) (c)

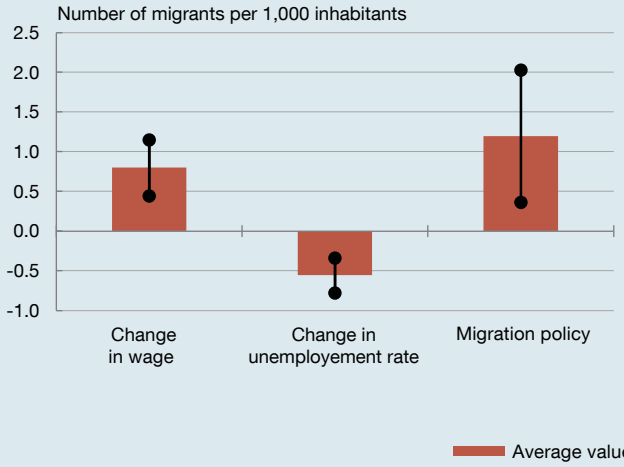
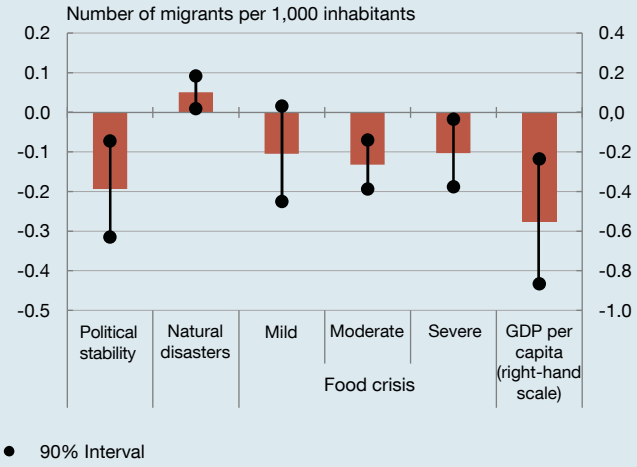
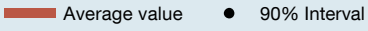


Chart 5
Impact of push factors on outflows (b) (c)





SOURCES: OECD, Banca d'Italia and Banco de España.

a Amiti and Weinstein (2013, 2018).
b Estimates based on regressions with fixed country and time effects for the pull component in migratory inflows and for the push component in outflows. The explanatory variables are standardised and one-period lagged.
c Including information from 34 countries receiving migrants, mainly advanced economies, and around 200 countries of origin of migrants arriving in OECD countries. The data on migratory flows are not harmonised, reflecting each country's criteria in their population and migration statistics (OECD (2024). "Statistical annex". In OECD, *International Migration Outlook 2024).*

2 These authors break down the growth of bank lending to firms into the parts which relate to demand shocks specific to firm borrowers and to bank loan supply shocks, using individual data disaggregated at a bilateral bank-firm level and applying a series of statistical assumptions and "additivity restrictions". See Mary Amiti and David E. Weinstein. (2013). "How much do idiosyncratic bank shocks affect investment? Evidence from matched bank-firm loan data". NBER Working Paper Series, 18890, National Bureau of Economic Research. https://doi.org/10.3386/w18890, and Mary Amiti and David E. Weinstein. (2018). "How much do idiosyncratic bank shocks affect investment? Evidence from matched bank-firm loan data". *Journal of Political Economy,* 126(2), pp. 525-587. https://doi.org/10.1086/696272

Box 6

MIGRATORY FLOWS TO SPAIN IN RECENT YEARS: MAGNITUDE AND KEY DETERMINANTS (cont'd)

A recent Banco de España study[3] suggests that, except in the period preceding the global financial crisis, the push factors (linked to the countries of origin) have historically played a greater role in migrant inflows to Spain than the pull factors (associated with the Spanish economy). However, in the recent rise in immigration observed in Spain, pull factors have gained relative importance (Chart 2.a). This indicates that immigrant inflows to Spain – generally considered exogenous items in demographic analyses and projections, as well as in many economic models – are also influenced by characteristics specific to the country's economy.

To understand what aspects or conditions in the countries of origin and destination affect inflows to the advanced economies, an analysis was conducted using panel data.[4] The results of this exercise suggest that the main pull factors driving recent migratory flows to Spain include a lower unemployment rate, average wage increases and changes in Spain's migratory policies, which have fostered better social and employment integration (Chart 2.b).

In any event, the determinants specific to the countries of origin still have an important effect on migratory flows. As mentioned above, these push factors include most notably political instability and per capita income (Chart 2.c).

3 Teresa Sastre, Marta Suárez-Varela, Pilar Cuadrado and Enrica Di Stefano. (2025). "Factores que influyen sobre los flujos migratorios hacia España y otras economías avanzadas". *Boletín Económico - Banco de España.* 2025/T2, 08. https://doi.org/10.53479/39845. This study applies the Amiti-Weinstein decomposition to annual bilateral migrant flows. Further, panel data for a large number of countries are analysed to identify the aspects or conditions of the countries of origin or destination that influence migrant inflows and outflows.

4 Two panel regressions are conducted: the first one to explain the pull component in inflows to advanced economies and the second one to explain the push component in outflows from about 200 countries. In the first case, the explanatory variables relate to the characteristics of countries receiving migrants, while in the second, the explanatory variables are related to specific aspects of the countries of origin. The regressions include fixed country and time effects.

Box 7

TOTAL FACTOR PRODUCTIVITY IN SPAIN: MEASUREMENT AND RECENT DEVELOPMENTS

Total factor productivity (TFP) is a key determinant of the economy's long-term growth and cyclical behaviour and, given its importance, is among the variables most analysed within the research community.

However, any empirical analysis of TFP and its determinants must first address the challenge posed by its measurement, a complex task not least because, unlike turnover or wages, TFP is not directly observable.

The most widely used measure of TFP growth is the "Solow residual",[1] which represents the difference between a country's output growth and the growth in the weighted sum of observable inputs (such as capital stock and hours worked). This residual therefore encompasses elements as diverse as a country's institutional quality (see Box 8), firms' organisational and management capacity, innovative capacity and other intangibles that add value to firms' output.

The Banco de España has used this measure, with series estimated by Eurostat, in various analyses and reports.[2] But such measurements rest on a number of simplifying assumptions that, for various reasons, do not reflect the evidence available. First, they consider only the change in the aggregate number of hours worked, without factoring in changes in the composition of the labour force attributable to differences in skill levels. Second, the estimates assume perfect competition in the product markets, ignoring potential business profits and the bias these may introduce to the weight of capital stock in output. Lastly, standard TFP measures do not capture changes in factor utilisation (i.e. the intensity with which inputs are used), which may result in positive spurious correlation between changes in output and changes in productivity over different phases of the cycle.

In this setting, a recent Banco de España study[3] presents a new estimate of TFP growth for European economies, which relaxes the three above-mentioned assumptions. Specifically, it estimates annual industry-level and aggregate TFP growth series, based on assumptions that are more in line with the empirical evidence than the other TFP measures available. It also provides, for the first time, quarterly TFP series for the major European economies, which has the added advantage of making available up-to-date information on how TFP is evolving in different European countries with a relatively short time-lag.[4]

These new series entail various adjustments to the standard estimates (including the Eurostat estimates). First, they consider changes in the working week of different groups of workers (differentiated by education, age and gender) and of types of capital, estimating different output elasticities to each type of labour and capital.[5]

Second, these series also relax the perfect competition assumption considered in standard measurements and allow for profits. To this end, the use cost of capital is estimated for each sector of activity, which makes it possible to calculate profits in each sector and, therefore, to adjust the cost share of each factor. Thus, positive profits imply a lower output elasticity to capital and a higher output elasticity to labour.[6]

Lastly, the new series also consider cyclical changes in factor utilisation,[7] by adjusting the Solow residual using

1 Robert M. Solow. (1956). "A Contribution to the Theory of Economic Growth". *The Quarterly Journal of Economics,* 70(1), pp. 65-94. https://doi.org/10.2307/1884513

2 Banco de España. (2020). "Chapter 5. Challenges for the Spanish economy in the post-pandemic scenario". In Banco de España, *Annual Report 2019,* pp. 159-216. https://repositorio.bde.es/handle/123456789/13778

3 Diego Comin, Javier Quintana, Tom Schmitz and Antonella Trigari. (2025). "Revisiting Productivity Dynamics in Europe: A New Measure of Utilization-Adjusted TFP Growth". *Journal of the European Economic Association,* jvaf003. https://doi.org/10.1093/jeea/jvaf003

4 This means that the TFP series can be updated when the quarterly National Accounts data are published (generally with a lag of only one quarter), rather than when the annual series are published (usually with a lag of over a year). The new series will be updated regularly and made available to the public on the Banco de España's website: https://www.bde.es/wbe/en/areas-actuacion/analisis-e-investigacion/recursos/europrod-ua.html.

5 This type of adjustment is already included in some TFP growth series, such as the EUKLEMS series (F. Bontadini, C. Corrado, J. Haskel, M. Iommi and C. Jona-Lasinio. (2023). "Sources of growth and productivity trends: methods and main measurement challenges". EUKLEMS & INTANProd: industry productivity accounts with intangibles. (https://euklems-intanprod-llee.luiss.it/wp-content/uploads/2023/02/EUKLEMS_INTANProd_D2.3.1.pdf) for European economies and the U.S. Bureau of Labor Statistics' series for the United States (https://www.bls.gov/news.release/prod3.toc.htm).

6 Standard measures of the Solow residual calculate the use cost of capital as a residual, by subtracting labour costs and input costs from total turnover (all of which are easily observable in the data). However, where positive profits exist, the value of turnover exceeds the value of costs and, therefore, this approach overestimates the weight of capital in total costs.

7 Fernald (2014) ("A Quarterly, Utilization-Adjusted Series on Total Factor Productivity". Working Paper Series, 2012-19, Federal Reserve Bank of San Francisco. https://doi.org/10.24148/wp2012-19) estimates utilisation-adjusted productivity series for the United States, using the number of hours per worker as a proxy for the utilisation rate. However, given the characteristics of European labour markets, Comin, Quintana, Schmitz and Trigari (2025) ("Revisiting Productivity Dynamics in Europe: A New Measure of Utilization-Adjusted TFP Growth". *Journal of the European Economic Association,* jvaf003. https://doi.org/10.1093/jeea/jvaf003) argue that this variable is not a well-suited proxy for Europe or, specifically, for Spain.

Box 7

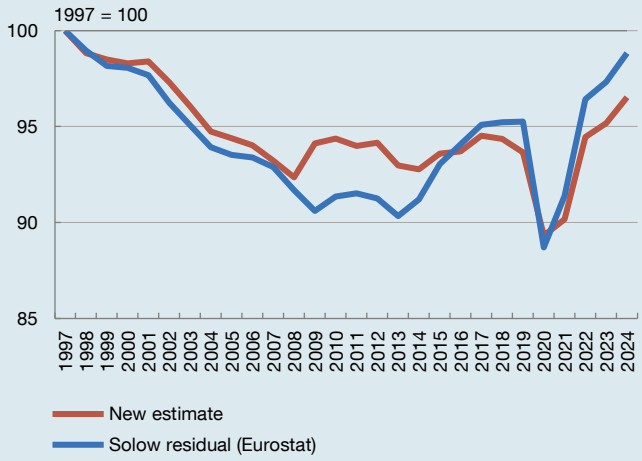
TOTAL FACTOR PRODUCTIVITY IN SPAIN: MEASUREMENT AND RECENT DEVELOPMENTS (cont'd)

information obtained from capacity utilisation surveys of firms operating in different sectors.[8]

Chart 1.a shows TFP in the Spanish economy estimated under the new methodology, compared with the series estimated by Eurostat using the standard method.[9] According to the results obtained, although the two series yield relatively similar estimates over a long-term horizon, there are marked differences in cyclical behaviour. The new TFP series are less volatile and have lower correlation with cyclical GDP fluctuations than those normally used

Chart 1
New estimates of TFP

1.a New TFP series under Comin, Quintana, Schmitz and Trigari (2025) and Solow residual (a)



1.b Contribution of the various adjustments to the differences between series (b)

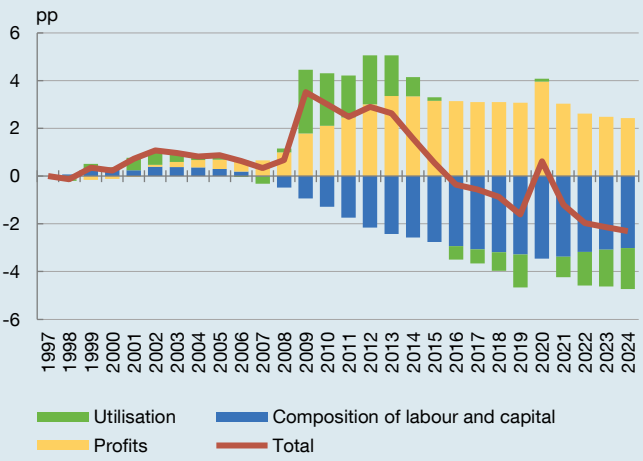
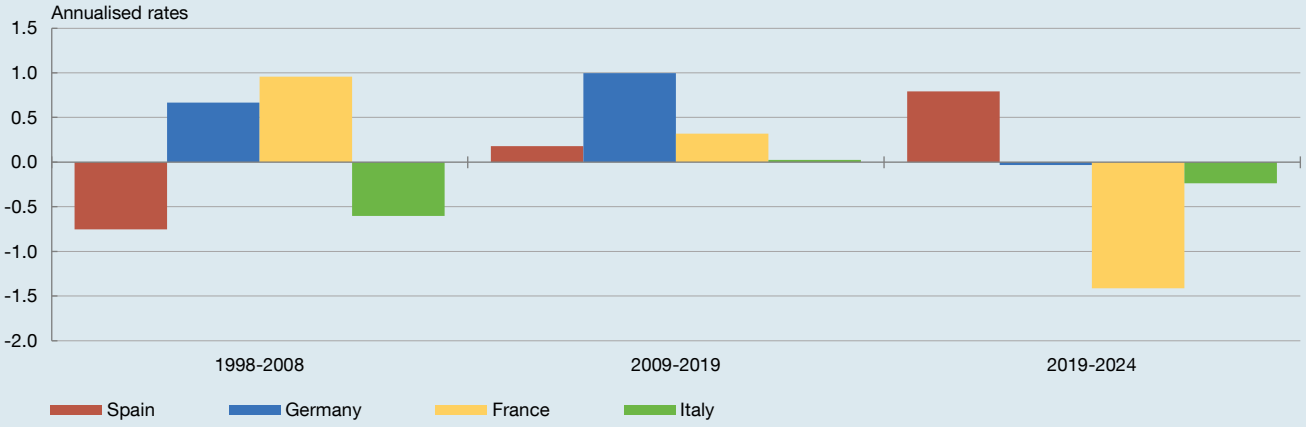


Chart 2
TFP growth in large European economies by period



SOURCES: Comin, Quintana, Schmitz and Trigari (2025) and Eurostat.

a TFP series for Spain estimated under the methodology in Comin, Quintana, Schmitz and Trigari (2025) and Solow residual estimated under the Eurostat methodology.
b Contribution, in percentage points, of each adjustment to the differences between the new TFP series and the Solow residual estimated under the

8 More specifically, it considers a regression where the dependent variable is the change in the composition- and profit-adjusted Solow residual and the independent variable is the change in the factor utilisation rate, implemented through demand shock variables to remove any possible endogeneity. The residual of this regression is the measure of TFP adjusted for composition, profits and utilisation.

9 To facilitate the comparison, both series are presented under the Eurostat method, applied to the market economy excluding agriculture and mining. The new series runs to 2024 (not currently available in the series published by Eurostat).

Box 7
TOTAL FACTOR PRODUCTIVITY IN SPAIN: MEASUREMENT AND RECENT DEVELOPMENTS (cont'd)

(such as the Eurostat series). The new series' lower cyclicality appears to be in line with what would be expected of a measurement of true technological progress.

Chart 1.b shows the contribution of each of the three adjustments described above to the differences between the two series. First, the new methodology considers changes in the composition of inputs (labour and capital) and enables them to be distinguished from changes in TFP (i.e. from the efficiency with which these inputs are combined). Specifically, this adjustment entails a secular reduction in TFP growth in Spain, particularly in the years after the real estate crisis, by separating changes in TFP from the changes in output owing to the relative increase in hours worked per skilled worker.[10]

Second, the adjustments for changes in capacity utilisation and profits play a more relevant role in the cyclical behaviour of TFP. The main differences occur when correcting for changes in capacity utilisation levels. During recessions, a considerable part of the fall in firms' output stems from lower capacity utilisation, which subsequently recovers during periods of growth. Measures that do not include this margin of adjustment will therefore tend to create a spurious correlation between changes in GDP and TFP, ascribing to changes in productivity what in reality are changes in factor utilisation.

For its part, the profit adjustment reduces the cost share of capital and increases that of other inputs (such as labour). Measures that do not include this adjustment therefore tend to overestimate the level of output that may be expected at times when the relative level of capital stock outpaces the number of hours worked. Given that in a recession the number of hours worked falls more sharply than capital stock, standard measures tend to overestimate the decrease in TFP in those periods and, in turn, to overestimate its growth during the recovery, again creating a spurious relationship between this variable and GDP growth.

In sum, the new TFP estimates improve on the measures currently used in various ways. First, they isolate secular changes in the composition and quality of inputs and provide a closer estimate of the efficiency with which they are combined in the economy. Second, the new measure is less volatile and yields a lower correlation between changes in TFP and in GDP, which is to be expected of a variable that truly captures technological change.

According to the new estimates, since 1998 TFP has performed less well in the Spanish economy than in other large European economies, such as Germany and France, but there are clear differences across time periods.

In this regard, Chart 2 shows the annual TFP growth rates by period. As can be seen, productivity in the Spanish economy underperformed in the period 1998-2008, when high economic growth was based on increases in the workforce and investment, but TFP declined on average by 0.8% per annum. TFP performed poorly across all sectors of the Spanish economy, but it was also hampered by a sectoral specialisation in industries with particularly low productivity levels. In comparison, TFP in Germany and France saw annual average growth of 0.7% and 1%, respectively, in the same period.

In the decade following the financial crisis, although the decrease observed in the previous cycle came to a halt, Spain saw no substantial increase in TFP, with the growth rate averaging around 0.2% per annum. In comparison, annual average TFP growth stood at 0.3% and 1% in France and Germany, respectively.

Since the pandemic, however, Spain has been the only large European economy that has seen significant TFP growth.[11] Although this improvement is still difficult to accurately quantify, it appears to be in part associated with a slight shift in activity towards certain services sectors with higher relative productivity (see Sections 3.1 and 3.3).

This better performance of TFP in Spain in recent years has helped narrow, but not fully close, the productivity gap vis-à-vis the other large European economies. Specifically, after widening by 17 percentage points (pp) between 1998 and 2019, the gap with the average of the other three large European economies had only narrowed to 10 pp by 2024.

10 It is, however, important to note that the measure of TFP is still a GDP residual that cannot be explained by directly observable factors. The advantage of including additional adjustments (such as changes in the composition of the labour force) is that it cleans up the residual and yields a measure that more closely reflects true technological or organisational changes or efficiency gains. Consequently, the new TFP measures do not imply changes in GDP levels, but instead provide more accurate information on the factors behind such changes.

11 The latest data available are for 2024 Q3.

Box 8
INSTITUTIONAL QUALITY AND PRODUCTIVITY

There is consensus in the economic literature about the positive association between institutional quality and the levels and rates of productivity growth. Institutional quality refers to the effectiveness of the rules and systems that societies establish to govern political, social and economic relationships. Institutions are the constraints that humans have created to control interactions between individuals and groups, establishing a structure that determines the incentives and constraints for economic agents.[1]

Various types of mechanism underpin this positive association between institutional quality indicators and productivity growth levels and rates.

First, better institutions help to boost investor confidence by providing a more stable and predictable legal framework to foster innovation and lower transaction costs.[2]

Second, higher quality institutions are often associated with lower levels of corruption, enabling a more efficient allocation of public and private resources.[3]

Third, more efficient bureaucracy can make it quicker and less costly to set up, launch and run a business, thereby fostering business investment.[4]

Fourth, institutions can have an impact on innovation and on the winners and losers from technological change. Indeed, the literature available indicates that higher institutional quality encourages both the creation of new technologies (invention and innovation) and their adoption and efficient use.[5]

Lastly, institutional quality can affect economic decision-making not only via the aforementioned effects, but also through economic agents' perception of the institutions. For instance, any corruption perceived by economic agents, whether justified or otherwise, can have similar adverse effects on their economic decisions as actual corruption.[6]

Measuring institutional quality is complex and typically relies on value judgements regarding the relevance of its multiple dimensions. Commonly used institutional quality indicators include the World Bank's Worldwide Governance Indicators, essentially based on surveys of businesses and households on how they perceive various aspects of the functioning of the public and private sectors in around 200 countries, and the V-Dem Institute's V-Dem Dataset, which measures the functioning of democracy in a country.

Complementary to these indicators, a recent Banco de España study[7] uses a dataset comprising 32 developed Organisation for Economic Co-operation and Development (OECD) member countries, a broad selection of institutional variables and a principal component analysis to build institutional quality indicators to explore the differences between countries with similar development levels to Spain.

Two exercises are conducted. First, an institutional quality indicator (IND1) is constructed using the sample of OECD countries with similar development levels to Spain and all the institutional quality variables available. A second indicator (IND2) is then constructed taking European Union (EU) countries only and institutional quality variables pertaining exclusively to government effectiveness, the quality of laws and other regulations and the independence of public institutions.

The period under review is 2000-2021. The data used were compiled by the Quality of Government Institute at Gothenburg University. The initial dataset comprises 1,126 variables, 306 of which measure various aspects related to institutional quality. After analysing the variables, the study was narrowed to 74 that offer sufficient

1 Douglass C. North. (1990). *Institutions, Institutional Change, and Economic Performance.* Cambridge University Press. https://doi.org/10.1017/CBO9780511808678

2 Gilbert Cette, Jimmy Lopez, Jacques Mairesse and Giuseppe Nicoletti. (2024). "Trust, Intangible Assets, and Productivity". NBER Working Paper Series, 32513, National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w32513/w32513.pdf

3 Manuel García-Santana, Enrique Moral-Benito, Josep Pijoan-Mas and Roberto Ramos. (2020). "Growing like Spain: 1995-2007". *International Economic Review,* 61(1), pp. 383-416. https://doi.org/10.1111/iere.12427

4 Balázs Égert. (2016). "Regulation, Institutions, and Productivity: New Macroeconomic Evidence from OECD Countries". *American Economic Review,* 106(5), pp. 109-113. https://www.aeaweb.org/articles?id=10.1257/aer.p20161026

5 Daron Acemoglu. (2025). "Institutions, technology and prosperity". NBER Working Paper Series, 33442, National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w33442/w33442.pdf

6 Nicholas Charron. (2015). "Do corruption measures have a perception problem? Assessing the relationship between experiences and perceptions of corruption among citizens and experts". *European Political Science Review,* 8(1), pp. 147-171. https://doi.org/10.1017/S1755773914000447

7 Juan F. Jimeno and Carlos Sanz. (2025). "Institutions and Macroeconomic Performance". Documentos de Trabajo, Banco de España. Forthcoming.

Box 8
INSTITUTIONAL QUALITY AND PRODUCTIVITY (cont'd)

information by country and over time, along with adequate variability in the data.

The information provided by these 74 variables is synthesised using a principal component analysis and the first principal component of this exercise is used as institutional quality index IND1.

Table 1 shows the ten variables with the highest weight in IND1. The variables with the highest weighting relate to issues such as the state's capacity to manage public affairs and public perceptions about the prevalence of corruption in all its forms.

The second indicator (IND2) – capturing differences in government effectiveness, the quality of legislation and the independence of public institutions within the EU – is constructed using an approach similar to that for IND1 but limiting the sample to EU countries and selecting just ten variables relating to those three dimensions of institutional quality (Table 2).[8]

The results place Spain in an intermediate position, albeit below the average, among the countries analysed (Chart 1).

For instance, in 2020[9] the leading countries in institutional quality according to the IND1 indicator were Denmark, New Zealand and Norway. Spain ranks 19th out of the 32 countries considered, with a similar level to France and ahead of Italy and Portugal, but behind Germany.

Similarly, in the 2020 ranking according to the IND2 indicator, Denmark, Finland and Luxembourg held the top positions, while Spain stood below the average with institutional quality levels close to those of Portugal, the Czech Republic and Lithuania.

Looking at the time profile of these measures of institutional quality, between the first decade of this century (2000-2010) and the second (2011-2021) both deteriorated, on average, somewhat more markedly in Spain than in most of the other countries analysed (Chart 2).[10]

Specifically, of the 32 countries considered Spain recorded the fifth largest drop in the IND1 indicator, with only Hungary, Poland, the United States and Iceland posting larger declines in recent years. The same applies to the IND2 indicator: Spain, along with Greece and Hungary, is among the three countries experiencing the largest decrease.

These measures of institutional quality are positively correlated with levels of productivity and GDP per capita, both between countries and over time. For example, Chart 3 and 4 illustrate the correlation between IND1 and IND2 and levels of productivity and GDP per capita in 2019, respectively.[11]

Additionally, to examine the impact of institutional quality on productivity growth, the authors estimate the usual convergence equations found in the economic growth literature, which also take into account that productivity growth depends on its initial level. In particular, the following specification is estimated:

$$\Delta \ln y_{ct} = \alpha_c + \delta_t + \beta \ln y_{c,t-5} + \gamma CI_{c,t-5} + \varepsilon_{ct},$$

where c indicates the country; t (2005, 2010, 2015, 2019) indicates the year; α_c and δ_t are country and year fixed effects; $\Delta \ln y_{ct}$ is productivity growth between year t-5 and year t; $y_{c,t-5}$ is the TFP in year t-5; and CI is the institutional quality in year t-5.

Table 3 shows the results for each of the two institutional quality indicators constructed. A positive correlation is observed between institutional quality and productivity growth, such that an improvement in institutional quality is associated with subsequent higher productivity growth.

The coefficient of the IND1 indicator is statistically significant at the 10% level and indicates that an improvement of one standard deviation in the initial institutional quality is associated with 3.4% higher cumulative productivity growth over the following five years.

The estimated impacts are even larger for the IND2 indicator. Specifically, an increase of one standard deviation in the initial institutional quality is associated with 9.6% higher cumulative productivity growth over the

8 The correlation between IND1 and IND2 is 0.9. The correlations of IND1 and IND2 with the World Bank's Government Effectiveness Index are 0.85 and 0.96, respectively. The variance explained by the principal components used to build IND1 and the IND2 is 3% and 72%, respectively. The difference owes to IND1 considering a much larger set of variables to select the principal component than IND2.

9 The latest year for which information is available for the United States.

10 The variables that account for the majority of this deterioration are, in the case of IND1, those associated with control of corruption, voice and accountability and the rule of law. In the case of IND2 they are the variables relating to the rule of law, political stability and regulatory quality.

11 The data refer to 2019, the latest year with data available for the measure of productivity used here. Productivity refers to total factor productivity (TFP) at purchasing power parity according to the Penn World Tables.

Box 8
INSTITUTIONAL QUALITY AND PRODUCTIVITY (cont'd)

Table 1
Variables with the highest weight in the IND1 institutional quality index

	IND1		
Variable	Weight	Correlation	Source and description
Control of corruption, estimation	0.192	0.911	Worldwide Governance Indicators. Measures perceptions of corruption, defined as the exercise of public power for private gain. The aspects gauged vary from how often irregular additional payments are required to get things done, through to the effect of corruption on the business environment and widespread corruption in politics.
Voice and accountability, estimation	0.191	0.907	Worldwide Governance Indicators. Includes indicators for aspects such as the political process, civil liberties and political rights, as well as media freedom. These indicators assess citizen participation in selecting the government and the media's role in holding authorities to account.
Basic state capacity, loads based on PCA	0.190	0.899	"Leviathan's Latent Dimensions: Measuring State Capacity for Comparative Political Research" (Hanson and Sigman, 2021). Based on three dimensions: extractive capacity, coercive capacity and administrative capacity. The authors use Bayesian latent variable analysis to assess state capacity drawing on indicators related to these dimensions.
Political corruption index	-0.187	-0.887	V-Dem Dataset. On a scale from 0 to 1, with higher values indicating more corruption. Includes six different types of corruption across the executive, legislative and judicial sectors, differentiating between bribery and embezzlement, and between corruption at the highest levels of the executive and in the public sector in general.
Legal system and property rights (panel data)	0.187	0.886	Economic Freedom of the World (Fraser Institute). On a scale from 0 to 10, where 0 denotes "no judicial independence", "no protection of intellectual property", "military interference in rule of law" and "no integrity of the legal system", and 10 denotes "high judicial independence", "reliable legal framework", "protection of intellectual property", "absence of military interference in rule of law" and "integrity of the legal system".
Rule of law, estimation	0.186	0.881	Worldwide Governance Indicators. Includes indicators that measure confidence in and adherence to the rules of society, such as perceptions of crime, the legal system's efficiency and predictability and the enforceability of contracts. These indicators assess the success of a society in creating an environment with fair and predictable rules and in protecting property rights.
Public sector corrupt exchanges	0.184	0.872	V-Dem Dataset. Measures how routinely public sector employees grant favours in exchange for bribes or other material inducements. The scale ranges from extremely common corrupt exchanges to hardly ever.
Legislature corrupt activities indicator	0.183	0.869	V-Dem Dataset. Measures whether legislators abuse their position for financial gain. The scale ranges from common corrupt activities to hardly ever.
Bayesian Corruption Index (BCI)	-0.183	-0.868	Bayesian Corruption Index (Sherppa, Ghent University). Measures corruption levels, with values between 0 (no corruption) to 100 (maximum corruption). In contrast to the PCI and Worldwide Governance Indicators, where a higher figure means a lower level of corruption, the Bayesian Corruption Index uses an absolute scale: 0 indicates there is no corruption at all and 100 indicates that corruption is as bad as it can get.
Public sector theft	0.182	0.861	V-Dem Dataset. Measures how often public sector employees steal, embezzle or misappropriate public funds or other state resources for personal or family use. The scale ranges from constant theft to hardly ever.

SOURCE: Jimeno and Sanz (2025).

Box 8
INSTITUTIONAL QUALITY AND PRODUCTIVITY (cont'd)

Table 2
Variables with the highest weight in the IND2 institutional quality index

	IND2		
Variable	Weight	Correlation	Source and description
Rule of law, estimation	0.359	0.964	Worldwide Governance Indicators. Includes indicators that measure confidence in and adherence to the rules of society, such as perceptions of crime, the legal system's efficiency and predictability and the enforceability of contracts. These indicators assess the success of a society in creating an environment with fair and predictable rules and in protecting property rights.
Government effectiveness, estimation	0.358	0.960	Worldwide Governance Indicators. Combines in a single group responses on the quality of the provision of public services, bureaucratic quality, the competence of civil servants, the independence of the civil service from political pressures and the credibility of the government's commitment to policies. The index primarily focuses on the "inputs" required for the government to formulate and implement sound policies and deliver public goods.
Legal system and property rights (panel data)	0.355	0.952	Economic Freedom of the World (Fraser Institute). On a scale from 0 to 10, where 0 denotes "no judicial independence", "no protection of intellectual property", "military interference in rule of law" and "no integrity of the legal system", and 10 denotes "high judicial independence", "reliable legal framework", "protection of intellectual property", "absence of military interference in rule of law" and "integrity of the legal system".
Regulatory quality, estimation	0.347	0.930	Worldwide Governance Indicators. Includes indicators reflecting the impact of market-unfriendly policies, such as price controls or unsound banking supervision, along with perceptions of the burdens caused by excessive regulation in areas such as foreign trade and business development.
Voice and accountability, estimation	0.346	0.927	Worldwide Governance Indicators. Includes indicators for aspects such as the political process, civil liberties and political rights, as well as media freedom. These indicators assess citizen participation in selecting the government and the media's role in holding authorities to account.
Governance quality indicator	0.342	0.917	International Country Risk Guide (ICRG) - The PRS Group. Measures the quality of governance, assessing corruption, the rule of law and bureaucratic quality. Higher values indicate better quality governance. Corruption is gauged in terms of bribery and nepotism, rule of law in terms of the impartiality of the legal system, and bureaucratic quality in terms if its capacity to operate without political interference.
Basic state capacity, loads based on PCA	0.310	0.831	"Leviathan's Latent Dimensions: Measuring State Capacity for Comparative Political Research" (Hanson and Sigman, 2021). Based on three dimensions: extractive capacity, coercive capacity and administrative capacity. The authors use Bayesian latent variable analysis to assess state capacity drawing on indicators related to these dimensions.
Credit, labour and business regulation (panel data)	0.260	0.698	Economic Freedom of the World (Fraser Institute). On a scale from 0 to 10, where 0 indicates low private bank participation, a high rate of foreign bank licence rejections and government control of interest rates, while 10 indicates strong private bank participation, a low rate of foreign bank licence rejections and interest rates determined by the market.
Political stability and absence of violence/terrorism, estimation	0.228	0.611	Worldwide Governance Indicators. Measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.
Freedom to trade internationally (panel data)	0.211	0.567	Economic Freedom of the World (Fraser Institute). On a scale from 0 to 10, where 0 indicates high taxes on international trade, slow import/export processes, small trade sectors, exchange rate controls and capital controls, while 10 indicates the absence of specific taxes on international trade, quick import/export processes, large trade sectors, the absence of black-market exchange rates and the absence of capital controls.

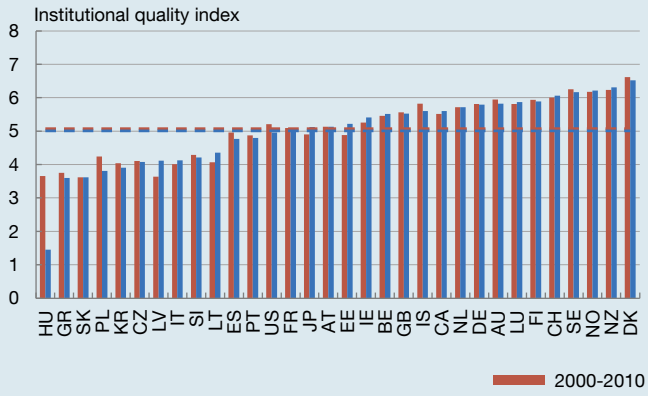
SOURCE: Jimeno and Sanz (2025).

Box 8

INSTITUTIONAL QUALITY AND PRODUCTIVITY (cont'd)

Chart 1
Time profile of the institutional quality indicators

1.a Time profile of IND1



1.b Time profile of IND2

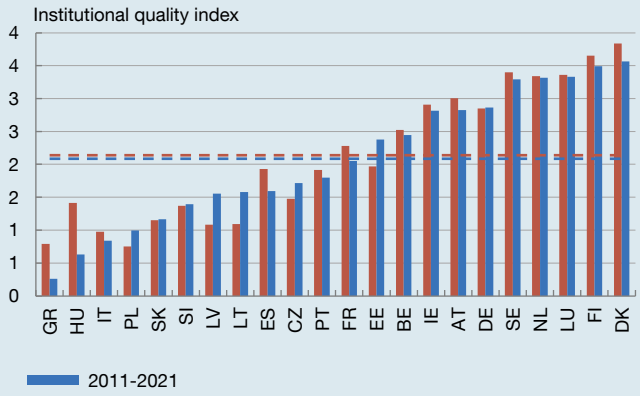


Chart 2
Time profile of the institutional quality indicators

2.a IND1. Difference between decades (2000-2010 vs. 2011-2021)

2.b IND2. Difference between decades (2000-2010 vs. 2011-2021)

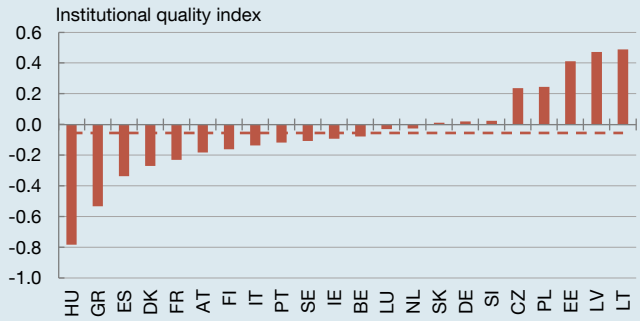
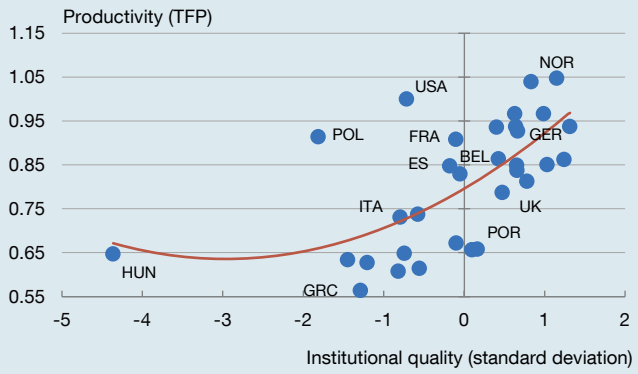
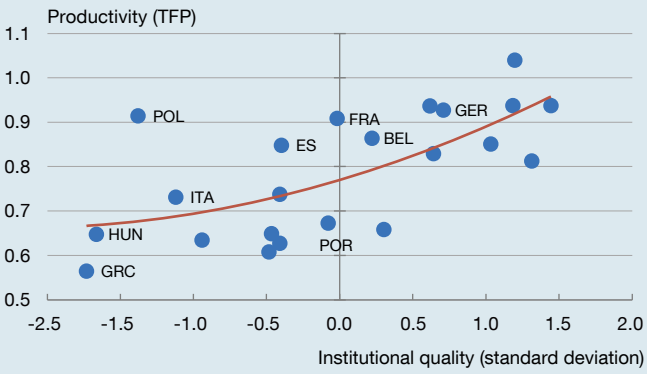


Chart 3
Correlation between institutional quality and productivity

3.a IND1



3.b IND2



SOURCE: Jimeno and Sanz (2025).

Box 8
INSTITUTIONAL QUALITY AND PRODUCTIVITY (cont'd)

subsequent five years, with this coefficient being statistically significant at the 1% level.

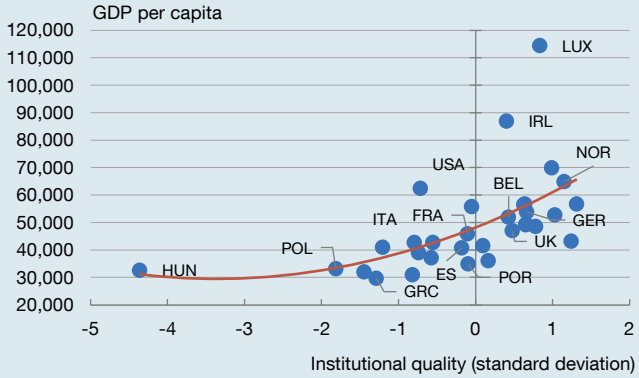
These results suggest that the productivity gains from enhancing institutional quality could be substantial. While the results do not necessarily demonstrate causal effects of institutional quality, they do offer some empirical evidence to support the hypothesis of a positive relationship between improvements in institutional quality and productivity growth.

If the above effects were causal and Spain's institutional quality were to match Denmark's according to the IND1 indicator, productivity growth in Spain over the subsequent five years could increase by 5.5% (were institutional quality the only determinant of productivity). This would suggest an increase in the average annual growth rate of TFP during that period of 1.1 percentage points (pp).

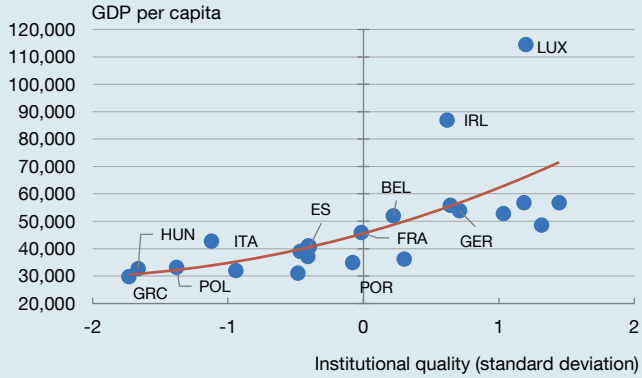
Conducting the same exercise with the IND2 indicator suggests that productivity growth in Spain over the next five years could be 19% higher, implying an increase in the average annual TFP growth rate during that period of 3.8 pp.

Chart 4
Correlation between institutional quality and GDP per capita

4.a IND1



4.b IND2



SOURCE: Jimeno and Sanz (2025).

Table 3
Effect of institutional quality on productivity convergence equations (a)

	IND1	IND2
	(1)	(2)
Initial productivity	-0.59***	-0.80***
	(0.088)	(0.14)
Initial institutional quality	0.034*	0.096***
	(0.018)	(0.032)
N	128	88

SOURCE: Jimeno and Sanz (2025).

a Robust standard errors in parentheses. Asterisks denote the significance level of the parameters. *** 1% ** 5% * 10%.

Box 9

A MEASURE OF THE DEGREE OF POLITICAL POLARISATION IN THE MAIN EURO AREA COUNTRIES

Political polarisation can be defined as a significant widening of the ideological divide between different political parties or their voters.[1]

According to the specialised literature,[2] polarisation tends to intensify partisan conflict and weaken cooperation between the different political actors, which can lead to legislative gridlock given the difficulty in reaching consensus on key issues of general and economic policy. This can delay necessary reforms, give rise to inefficient public spending and heighten uncertainty about economic stability.

Polarisation can also lead to frequent changes in economic policy, reducing predictability in the business environment, inhibiting investment and inducing volatility in the financial markets.

Furthermore, polarisation tends to distort the public's perception of the economic situation, affecting consumer confidence levels and spending decisions. It can also harm diplomatic relations and the stability of international relations in the countries concerned.

Political polarisation can be measured in various ways, depending on whether the focus is placed on the political elites or on the public at large, and on whether texts, surveys or other types of data are used. For example, Gentzkow, Shapiro and Taddy (2019)[3] extract a polarisation index by using text analysis on parliamentary speeches. Mason (2015)[4] and Iyengar, Sood and Lelkes (2012)[5] draw on opinion surveys, such as the Eurobarometer, to measure ideological perception. Bakshy, Messing and Adamic (2015)[6] use economic and social metrics, such as the Gini coefficient, residential segregation or social media analysis, to assess fragmentation in social interaction. These tools allow for comprehensive analysis of institutional, social and economic polarisation.

Although polarisation has been widely studied in the United States, there are no robust indicators for Europe to quantify and monitor political polarisation in the region and to assess its implications.

It is against this backdrop that this box presents polarisation indicators for Germany, France, Italy and Spain, developed according to the text-based methodology used by Azzimonti (2013)[7] for the United States. The Factiva database and its advanced search tools are used to systematically retrieve relevant newspaper articles. For each country, its main newspapers are selected, a dictionary of terms relating to polarisation and public policies is defined, and the number of newspaper articles containing references to both categories are counted. Lastly, the index is normalised by dividing this value by the total number of articles published in a given period, thus allowing for consistent comparison over time and between countries.

The results of this exercise are presented in Chart 1, which shows a steady rise in political polarisation in the four countries analysed, albeit following different trajectories in each case. In France, polarisation has gone from being a sporadic phenomenon to becoming a structural feature of the political landscape, growing continuously since 2010 without any signs of levelling off. The same is true in Italy, where polarisation has been on the rise since 2014.

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1 The discussion and indicators presented in this box are based on Marina Diakonova, Corinna Ghirelli and Javier J. Pérez. (2025). "Political polarization in Europe". Forthcoming.

2 Marina Azzimonti, Marco Battaglini and Stephen Coate. (2016). "The costs and benefits of balanced budget rules: Lessons from a political economy model of fiscal policy". *Journal of Public Economics,* 136, pp. 45-61. https://doi.org/10.1016/j.jpubeco.2016.03.001; Marina Azzimonti, Laura Karpuska and Gabriel Mihalache. (2020). "Bargaining over taxes and entitlements". NBER Working Paper Series, 30044, National Bureau of Economic Research. https://doi.org/10.3386/w30044; Marina Azzimonti, and Nirvana Mitra. (2023). "Sovereign default and tax-smoothing in the shadow of corruption and institutional weakness". NBER Working Paper Series, 31943, National Bureau of Economic Research. https://doi.org/10.3386/w31943; William Ginn and Jamel Saadaoui. (2025). "Divided We Fall: The Hidden Costs of Political Polarization on Macroeconomic Performance". https://dx.doi.org/10.2139/ssrn.5119306

3 Matthew Gentzkow, Jesse M. Shapiro and Matt Taddy. (2019). "Measuring Group Differences in High-Dimensional Choices: Method and Application to Congressional Speech". *Econometrica,* 87(4), pp. 1307-1340. https://doi.org/10.3982/ECTA16566

4 Lilliana Mason. (2015). "'I Disrespectfully Agree': The Differential Effects of Partisan Sorting on Social and Issue Polarization". *American Journal of Political Science,* 59(1), pp. 128-145. https://doi.org/10.1111/ajps.12089

5 Shanto Iyengar, Gaurav Sood and Yphtach Lelkes. (2012). "Affect, Not Ideology: A Social Identity Perspective on Polarization". *Public Opinion Quarterly,* 76(3), pp. 405-431. https://doi.org/10.1093/poq/nfs038

6 Eytan Bakshy, Solomon Messing and Lada A. Adamic. (2015). "Exposure to ideologically diverse news and opinion on Facebook". *Science,* 348(6239), pp. 1130-1132. https://doi.org/10.1126/science.aaa1160

7 Marina Azzimonti. (2013). "The Political Polarization Index". Working Paper, 13-41, Federal Reserve Bank of Philadelphia. http://dx.doi.org/10.2139/ssrn.2343139

Box 9

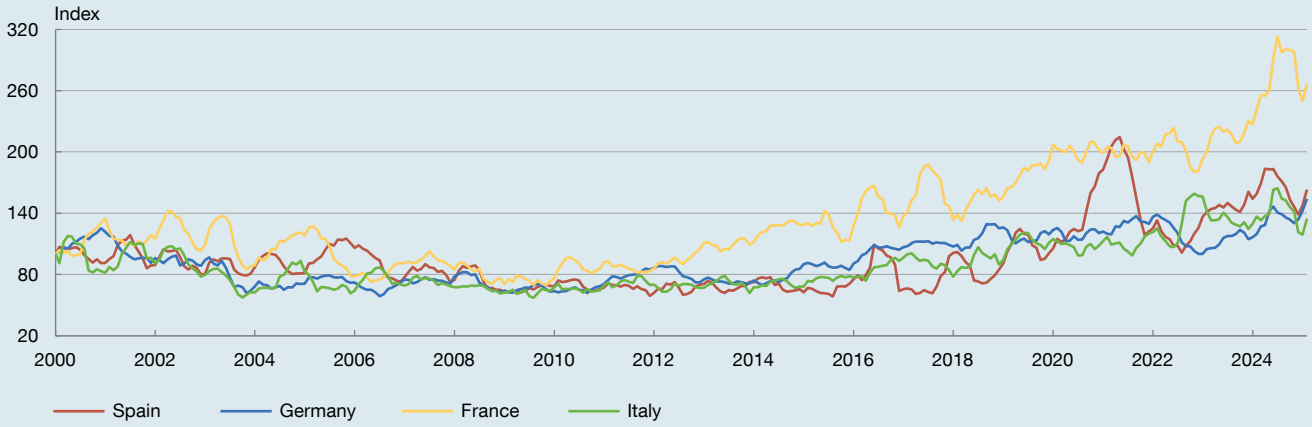
A MEASURE OF THE DEGREE OF POLITICAL POLARISATION IN THE MAIN EURO AREA COUNTRIES (cont'd)

In Germany, after declining in the first decade of this century, polarisation began to rise again from 2010 on, amid the euro area sovereign debt crisis, and has increased further in recent years.

In Spain, this measure of polarisation underwent the most significant change after 2015, rising steadily until 2021,[8] when it declined temporarily. However, polarisation levels have been on the rise again since 2022.

In all cases, the current levels of polarisation are considerably higher than two decades ago, suggesting a profound transformation in the political dynamics of these countries. For the reasons given at the beginning of this box, the increase in polarisation is a cause for concern and should be constantly monitored, both to assess the scale of the problem and also to understand its multiple implications and, potentially, to look at strategies to mitigate its effects on political and economic stability in Europe.

Chart 1
Changes in political polarisation indices in euro area countries (a)



SOURCE: For details of the methodology used, see Diakonova, Ghirelli and Pérez (2025).

a The series are monthly and shown as a six-month moving average.

8 The increase in the polarisation index in Spain between 2020 and 2021 is due to a combination of factors, including the political tensions triggered by the handling of the COVID-19 crisis and the motion of no confidence passed in the Spanish Parliament.

Box 10

THE EUROPEAN UNION'S PRIORITIES IN THE FIELD OF CAPITAL MARKETS

Europe is growing, but slowly and with weak productivity gains, losing share in the global economy. The European Union's (EU) negative gap in GDP to the United States nearly doubled between 2002 and 2023, expanding from -17% to -30% (Draghi, 2024).[1, 2] The European economy's weak performance is linked to a persistent deficit in productive investment in new technologies and innovation. To reactivate its growth and ensure its autonomy and continued prosperity in an increasingly adverse external context, Europe must close the investment and innovation gap with its major global competitors (the United States and China). This requires the implementation of an ambitious and coordinated agenda including structural actions across multiple areas. The financing of private investment is one of the main aspects requiring attention.

The banking sector is a fundamental pillar of the EU's financial system. Bank loans represent 92% of the total debt of European firms and will remain crucial in financing the required boost to private investment. However, the nature of the banking business, which is subject to strict prudential regulation, means that bank lending alone cannot finance all the necessary investments. Financing very long-term projects, or those involving high risk and uncertainty, such as firms emerging in the new technology sector, can and should be undertaken by the capital markets, which are a better fit for such projects. European companies have been increasing their market financing with debt issuances, which now account for 8% of their total debt, but this figure remains well below that of other regions such as the United States, where it stands at 39%.

In short, to significantly boost the financing of private investment, Europe needs to further develop its capital markets, equipping them with the liquidity and scale necessary to take on a new wave of investing. To achieve this, it must make effective progress towards the capital markets union. This is not a new objective for the EU – two action plans have been launched in recent years – but it has proven difficult to achieve. The new initiative of the European Commission, the savings and investment union (SIU), which brings together the capital markets union and the banking union under one plan, aims to avoid the mistakes of previous attempts. Its clearly defined objective is to improve the channelling of European savings towards the financing of productive investment. The proposed SIU calls for combined action at the EU and Member State level to strengthen capital markets through several lines of action[3] and advocates the completion of the banking union.

Venture capital

One of the priorities identified in the SIU is to facilitate access to financing for technological and innovative firms early on in their development, creating an ecosystem that allows them to grow and scale up within the European market. Against this backdrop, developing the venture capital market is fundamental since it is the main way to finance innovative projects in strategic sectors, such as technology and the energy transition. The financing gap in this segment remains considerable, as European early-stage investment markets are approximately six times smaller than their US counterparts and are concentrated in a few countries (Germany, France and Sweden).[4]

In the early stages of innovation, government backing plays an important complementary role as a way of sharing risks. To maximise its impact, venture capital funds must have incentives to take advantage of the opportunities arising from this public support. Agile investment instruments that accurately put a value on projects' financial and technological aspects are also required to leverage the potential of European funds for co-investment and to attract private capital. These instruments must be complemented by measures that reduce regulatory barriers.

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1 For an overview of the Draghi Report, see Pilar L'Hotellerie-Fallois. (2024). "The Draghi report: a plan for the economic future of Europe". Banco de España blog, 2 December 2024. https://www.bde.es/wbe/en/noticias-eventos/blog/el-informe-draghi-un-plan-para-el-futuro-economico-de-europa.html.

2 Data at constant 2015 prices.

3 Areas of action: (i) develop investment instruments that channel retail savings into capital markets and incentivise the participation of institutional investors, such as pension funds and insurers; (ii) facilitate access to financing for European firms, paying special attention to innovative firms and start-ups, eliminating regulatory and tax barriers; (iii) promote European-level integration of trading and settlement infrastructures and facilitate cross-border activity of asset managers; and (iv) move towards efficient market supervision.

4 Sweden has the deepest capital market in the EU, with a stock market capitalisation equivalent to 170% of its GDP, compared to the EU average of 60%. A key factor has been the integration of its stock exchange into Nasdaq Europe (a regional platform that operates the markets of Sweden, Finland, Denmark and Iceland) and the implementation of a dual model, which combines a main market with a more flexible growth segment – the Nasdaq First North Growth Market – that makes it easier for small and medium-sized enterprises to access market financing.

Box 10
THE EUROPEAN UNION'S PRIORITIES IN THE FIELD OF CAPITAL MARKETS (cont'd)

It is also necessary to expand the financing options available to support these firms in subsequent growth stages, either by creating specific stock market segments that support their access to public equity markets or by promoting secondary private capital markets. The participation of institutional investors (pension funds and insurers) in these types of markets is also essential to achieve the required liquidity and create a financial ecosystem conducive to innovation.

Securitisations

Another key piece of the SIU is the revitalisation of the securitisation market. Securitisation is a way for banks to transfer credit risk from their balance sheets to other investors outside the banking system, such as insurance companies and asset managers. This favours proper risk management and frees up capital for new loans.

The current regulatory framework for securitisations has benefitted the market and the financial system significantly.[5] Since this framework has been in place, the securitisation market has performed well, with a moderately upward trend in recent years, driven mainly by the greater share of synthetic securitisations. However, the market has developed more gradually than expected and the volume of issuances in Europe remains low. According to the Draghi report, the annual volume of issuances in Europe stood at 0.3% of GDP in 2022, compared with 4% of GDP in the United States. Even considering the particularities of both markets, such as the role of state agencies in the United States[6] and that of covered bonds in Europe,[7] the difference between the two regions is considerable.

Within the SIU framework, the European Commission plans to launch a legislative proposal in 2025 Q2 to introduce greater proportionality in and simplify transparency requirements for originating banks and due diligence requirements for investors. Additionally, it will propose adjustments to the prudential capital requirements for banks and insurers, all of which should help to stimulate this market. It is essential to strike a balance between promoting market activity and ensuring financial stability. In the medium to long term, consideration is being given to establishing a pan-European securitisation platform to facilitate the issuance of standardised securitised bonds, thereby enhancing liquidity and market depth.

5 Regulation 2017/2402 introduced new transparency, due diligence and risk retention requirements and also created simpler, more transparent and standardised (STS) securitisations.

6 In the US securitisation market, a significant portion of securitisations are guaranteed by state agencies such as Fannie Mae or Freddie Mac.

7 Covered bonds are debt instruments issued by a credit institution that are backed by a pool of mortgage loans or public sector debt, giving investors a preferential right in case of default. They constitute a highly significant source of financing for European credit institutions.

Box 11

BUILDING A DIGITAL EURO

Safe and efficient payments are a pre-condition for the economy to function properly. Payment systems and instruments are both strategic and critical. In recent decades, against a backdrop of growing globalisation and digitalisation, this strategic dimension has become ever more important.

Central banks play an essential role in the world of payments. They provide the settlement asset and the unit of account on which all other payment instruments are based, namely central bank money. And they guarantee the public good embodied by the proper functioning of payments.

This activity is organised around two areas: retail payments, which are traditionally identified with cash, and wholesale payments (i.e. between financial institutions), which are channelled through the central bank. In both cases, digitalisation and the recent geostrategic turbulence pose significant challenges.

As Chart 1 shows, cash is losing ground in day-to-day payments, on account of the digitalisation of the economy and e-commerce, where the use of cash is not possible.

Cards and other digital transactions crucially depend on a small number of non-European companies. For instance, 72% of card payments in Europe are channelled through international non-European brands.

These trends can erode the trust base that cash and the central bank provide to the payment ecosystem, and they exacerbate the euro area's strategic dependence.

In consequence, in 2020 the Eurosystem started to reflect on the desirability of adapting cash to the digital age. This culminated in the digital euro project, which aims to take the necessary steps to be ready to distribute a digital euro if it is finally deemed necessary.

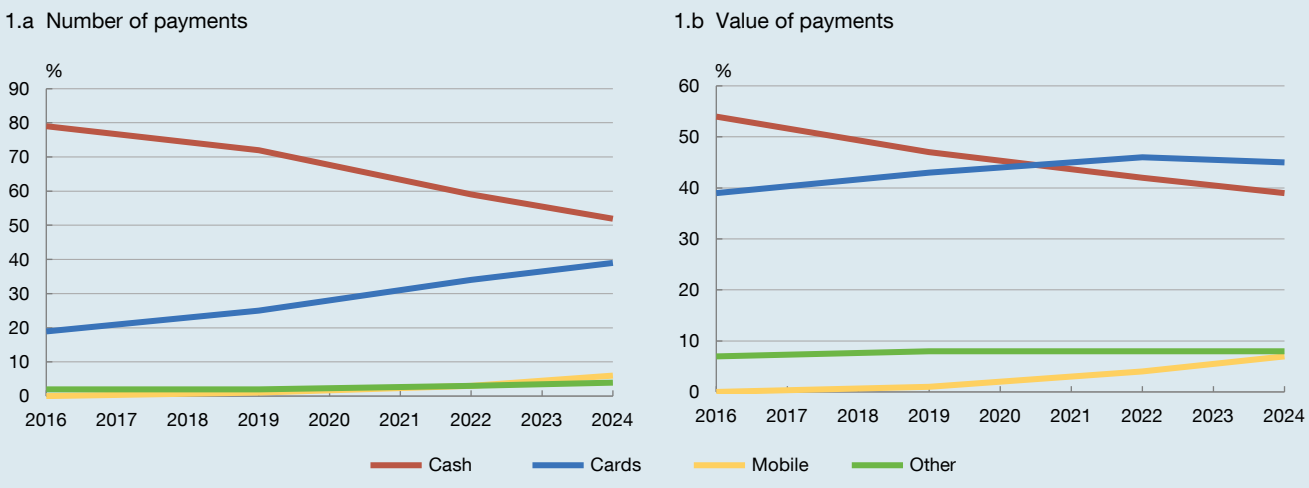
The digital euro would co-exist with other private means of payment as just another alternative, accessible to all euro area citizens at all times and in all places. Like cash, it would be a safe, fast, reliable and easy-to-use means of payment that could be used in a multitude of situations: in store, online or for peer-to-peer payments (Figure 1). And like cash, it too would be free to use for all consumers.

A digital euro would strengthen European identity and help deepen the integration of the single market, providing for the private initiatives under way – which to date have lacked momentum – a new impulse for the creation of a pan-European retail payment solution.

Considerable progress has been made in the technical preparation of the digital euro. The main design features and technical specifications have been established. For instance, it would be distributed through intermediaries, so supervised private providers would act as a gateway to this new means of payment, providing an added safeguard.

The digital euro would even work in places where there is no internet connection or limited connectivity (offline mode) and would not necessarily require a bank account.

Chart 1
Percentage of point-of-sale payments. Euro area



SOURCE: ECB (2024).

Box 11
BUILDING A DIGITAL EURO (cont'd)

In addition, special care is being taken in its design to ensure that people with disabilities, functional limitations or limited digital skills and other vulnerable groups are not excluded.

To give shape to all these elements, the Eurosystem has carried out numerous technical experiments and tests and is in constant contact with market stakeholders and civil society representatives and organisations. Privacy is one of the key points addressed in these fora.

The technical configuration of the digital euro will ensure that the central bank stores only the information needed to settle transactions and detect fraud patterns or money laundering schemes. In no case will it store or have access to personal data, thus guaranteeing user privacy, an issue that is especially important for end users.

The digital euro requires that a legal framework be established to regulate its operation. The European co-legislators (the European Council and the European Parliament) are working on a proposal for a regulation. The Eurosystem collaborates in this process, providing technical assistance and support.

In parallel, the Eurosystem continues to make progress on other essential aspects of the project, such as finalising the digital euro scheme rulebook and selecting providers to develop the necessary platform and infrastructures. The Banco de España aspires to play an important role in this regard.

The Eurosystem is also defining an objective and transparent methodology for calibrating the holding limits, i.e. the maximum amount of digital euro that users may hold in their wallets. This is an essential mechanism, included in the proposed legislation, to safeguard financial stability and the effective transmission of monetary policy impulses by preventing disruptive deposit outflows.

Lastly, on the wholesale side (relating to the large-value payments that support financial market operations), the Eurosystem has also launched a work stream aimed at preserving the role of central bank money as the main settlement asset.

In this case, the challenge posed by digitalisation is not the issuance of a new asset (the wholesale euro has been digital since its inception), but how to adapt the infrastructures that support these payments. It is a matter of finding an appropriate response to recent developments such as asset tokenisation and the use of distributed ledger technologies (DLT) whose market presence, albeit still limited, is growing significantly.

To this end, the Eurosystem central banks – both collectively and individually – have launched initiatives to draw up and, where appropriate, deploy concrete solutions to ensure interoperability between private DLT-based platforms and TARGET services.

In 2024, under the leadership of the European Central Bank (ECB) and with the participation of market

Figure 1
Use cases of different means of payment

	Cash		Domestic payment schemes (cards or direct debit)		International payment schemes (cards or direct debit)		Digital euro	
	Domestic	Euro area	Domestic	Euro area	Domestic	Euro area	Domestic	Euro area
Peer-to-peer payments (P2P)	✓ (a)	✓ (a)	Some	✗	✗	✗	✓	✓
In store	✓	✓	Some	✗	✓ (b)	✓ (b)	✓	✓
E-commerce	✗	✗	Some	✗	✓ (b)	✓ (b)	✓	✓

SOURCE: ECB (2024).

a Exclusively for proximity payments (save when sent by post).
b Subject to acceptance.

Box 11
BUILDING A DIGITAL EURO (cont'd)

stakeholders, a programme of exploratory work on new technologies was developed, enabling a wide variety of use cases and interoperability solutions to be tested.

The results of this exploratory work led the ECB's Governing Council to decide, in February this year, to intensify its efforts in this area, taking a two-track approach. First, by developing a safe and efficient platform for settling DLT-based transactions through a link with TARGET services. Second, by exploring a more integrated long-term solution for this same purpose. The aim is to support the use of innovative technologies in financial market infrastructures, to enable them to modernise without compromising on safety.

The Banco de España has been party to this effort and has completed its own programme of exploratory work on wholesale digital tokens. This initiative was developed in collaboration with external parties and has allowed it to conduct a variety of experiments in a simulated environment. As a result, it has broadened its knowledge of the opportunities, limitations and challenges that these technologies may pose in terms of efficiency, safety, transparency and other relevant dimensions.