ANNUAL REPORT

2023

BANCO DE ESPAÑA
Eurosistema

ANNUAL REPORT 2023

https://doi.org/10.53479/36513

Cut-off date for data: 26 April 2024.
Publication date: 30 April 2024.

FOREWORD BY THE GOVERNOR 9

Annual Report: Digest 30

1 THE RESILIENCE OF THE SPANISH ECONOMY IN THE EUROPEAN CONTEXT

Takeaways 42

1 Introduction 43

2 The global and euro area economic context 45

3 ECB monetary policy and its pass-through to financing conditions 51

4 The Spanish economy 60

References 82

Boxes

1.1 Quantifying the determinants of the surprises in the GDP growth forecast for 2023 84

1.2 The vulnerability of households and firms to a tightening of financing conditions 88

2 STRUCTURAL CHALLENGES FACING THE SPANISH ECONOMY

Takeaways 93

1 Introduction 94

2 Productivity 96

3 Business size and demographics 99

4 Human capital 104

5 Capital investment and innovation 110

6 Institutional framework 114

7 Population ageing 116

8 Inequality and pockets of vulnerability among households 122

9 Public finances 127

9.1 Recent trends 127

9.2 Challenges facing the public pension system 130

9.3 New European fiscal rules 133

9.4 Fiscal consolidation plan 136

10 Green transition 141

References 145

Boxes

2.1 The heterogeneous impact of inflation on personal income tax revenue 151

2.2 The impact of the new incentives to delay retirement on social security pension expenditure 155

3 THE SPANISH LABOUR MARKET: CURRENT DEVELOPMENTS, STRUCTURAL TRENDS AND LABOUR MARKET POLICIES

Takeaways 162

1 Introduction 163

2 Spanish labour market: current developments 165
- 2.1 Employment (number of persons employed) 165
- 2.2 Some key traits of the composition of employment 166
- 2.3 Employment (hours worked) 170
- 2.4 Productivity, compensation per employee and unit labour costs 172
- 2.5 The unemployment rate and indicators of labour market tightness 178

3 Impact of technological and demographic change on the labour market 182
- 3.1 New technologies, the organisation of labour, employment and wages 182
- 3.2 Ageing of the labour force 186

4 Labour market policies 192
- 4.1 Active and passive labour market policies 192
- 4.2 Other institutional aspects of the labour market 198

References 202

Box
- **3.1** The recent behaviour of the temporary employment ratio and other indicators proxying job stability 205

4 THE SPANISH HOUSING MARKET: RECENT CHANGES, RISKS AND AFFORDABILITY PROBLEMS

Takeaways 210

1 Introduction 211

2 Recent housing market developments 212
- 2.1 The housing purchase market 212
- 2.2 The residential rental market 216

3 The main drivers of the dynamics observed 219
- 3.1 House demand momentum 219
- 3.2 The rigidity of housing supply 226

4 The implications of these dynamics for financial stability 232

5 Housing affordability difficulties 237
- 5.1 Housing affordability for young people 237
- 5.2 Home ownership affordability 239
- 5.3 The rent cost burden 244

6 Housing affordability: the public policy challenge 248
- 6.1 Economic and social implications 248
- 6.2 Public policies 250
  - 6.2.1 Recent public policy measures adopted 251
  - 6.2.2 A preliminary assessment of the measures adopted on the basis of evidence from the economic literature 253
  - 6.2.3 Possible future measures 255

References 261

Boxes
- **4.1** The commercial real estate market and its financial stability implications 265
- **4.2** An analysis of alternative public policies to reduce the problems of housing affordability 269

Index of photographs 273

Banco de España publications 274

Acronyms and abbreviations 275

INDEX OF TABLES

1.1 The authorities have presented a broad raft of measures aimed at countering the effects of the rise in the prices of various goods and services on the incomes of households and firms. The total estimated budgetary cost of these measures is €48.3-€57.1 billion over the period 2021-2025 (3.5-4.1% of GDP) 71

INDEX OF CHARTS

1.1 Global economic activity was shaped by falling energy prices, clearing bottlenecks and tightening monetary policy 46

1.2 Global economic activity slowed somewhat in 2023, albeit with marked unevenness across regions, as headline inflation continued to fall 48

1.3 The ECB gradually slowed the pace of the increases in its key interest rates over the course of 2023 until they reached 4% in September, keeping them unchanged since then 52

1.4 Financial market expectations shifted in 2023 Q4, envisaging the timing of the first policy interest rate cuts being brought forward 53

1.5 The increase in the cost of new lending eased in 2023 H2. The cumulative increase between December 2021 and October 2023 was smaller in Spain than in the euro area and smaller than suggested by historical regularities 54

1.6 Loan supply and demand in Spain continued to contract in 2023, although in Q4 loan supply ceased to do so in most of the segments 56

1.7 Households' and firms' debt ratios continued to fall and now stand at levels close to those of the start of the 21st century and below those in the euro area 58

1.8 Economic growth in Spain, which was greater on aggregate than in per capita terms, has shown some resilience in recent quarters and has been stronger than in the rest of the euro area 61

1.9 The Spanish economy grew at faster rates than the euro area in 2023, mainly because of domestic supply and demand factors 62

1.10 Employment grew strongly in 2023, exceeding its pre-pandemic level. However, this strength translated into a decline in apparent labour productivity 64

1.11 Consumption was the main driver of growth in 2023, with notable increases in the expenditure items that were furthest from their pre-pandemic levels at the start of the year 65

INDEX OF CHARTS

1.12 Spain is the only euro area economy where investment in capital goods fell despite having a negative gap relative to 2019 levels 66

1.13 Tourism in Spain is becoming more diversified in terms of both seasons and regions, compared with the pre-pandemic period 68

1.14 Spanish goods exports to Germany grew notably in 2023, amid a slight improvement in Spain's competitiveness indicators compared with the euro area 69

1.15 The correction of the Spanish general government deficit moderated in 2023, with a much smaller contribution from the economic cycle and a broadly neutral fiscal policy stance 72

1.16 The Spanish economy's productive structure has shifted towards services 73

1.17 In Spain, inflation followed a slowing path throughout 2023, owing primarily to the energy component 74

1.18 Inflation followed a steeper easing path over the course of 2023 than had been forecast at end-2022, mainly due to the unexpected drop in energy prices 77

1.19 ULCs were up signifcantly in 2023 against a backdrop of declining productivity, while unit GOS growth slowed sharply 78

2.1 The Spanish economy has seen a more pronounced slowdown in productivity growth than other developed countries. Notable explanatory factors include low growth among active firms and the small contribution of net firm entry 97

2.2 Spain has a lower business churn rate than the EU because its entry and exit rates are lower 101

2.3 There is a significant and positive economic return to education, and it seems to be increasing over time. There appears to be some mismatch between the supply of and demand for places at conventional public universities 105

2.4 In the most recent period, investment in intangible assets and ICT has grown strongly, whereas investment in machinery and equipment has been weak 111

2.5 Demographic trends in Spain have been marked by a significant drop in both fertility and mortality rates. In addition, in terms of healthy life expectancy, Spain lags behind Germany, France and Italy 117

2.6 In recent years, net foreigner arrivals have become practically the only source of population growth in Spain 119

2.7 In 2019, Spain had one of the highest levels of disposable income inequality among the European and North American countries reviewed, outranked only by the United States. However, since the health crisis, income inequality has declined significantly in Spain 123

2.8 The correlation between the years spent in education by parents and their adult offspring declined in the second half of the 20th century, suggesting greater intergenerational mobility and, hence, more equality of opportunity. However, the size of this correlation varies significantly across municipalities and provinces 125

2.9 In recent years, public debt has increased more markedly in Spain than in the rest of the euro area. The Spanish general goverment fiscal imbalance has a high structural component 128

2.10 Pension expenditure is expected to continue to climb in the coming decades 131

2.11 The new fiscal rules could entail significant fiscal adjustments in the coming years for some countries (7-year adjustment programme) 135

2.12 The macroeconomic and fiscal dynamics of the Spanish economy highlight the need to implement, without delay, a medium-term fiscal consolidation plan that strengthens the sustainability of public finances 137

2.13 Energy efficiency eases the impact on activity of higher energy prices 143

INDEX OF CHARTS

3.1 The sound performance of the labour market since the crisis is qualitatively similar in Spain and the euro area. Employment has outstripped GDP in both areas 166

3.2 During the pandemic, employment rates fell and unemployment rates increased much less than might have been expected after economic activity collapsed 167

3.3 Employment has performed differently across sectors and occupations, partly because of the necessary reallocation of employment during the pandemic 168

3.4 Employment rates have grown more in the regions where they were lower, above all due to the contribution of the population group with high educational attainment levels 169

3.5 Public sector employment and immigrant inflows are other factors that have contributed to employment's buoyancy 170

3.6 Compared with the robust growth of the number of persons employed, the recovery in total hours worked has been more modest 171

3.7 Hours worked per person employed in Spain and the EA-19 have grown moderately since the pandemic, still weighed down by a high incidence of sick leave 172

3.8 Productivity is stuck at 2019 levels, both in Spain and in the euro area, and fell in 2023 173

3.9 Compensation per employee grew by 5.3% in 2023, with sizeable wage growth and a notable contribution from social security contributions. Real compensation per employee grew more moderately 174

3.10 The higher growth in ULCs in 2023 was due to both an increase in compensation per employee and a decrease in productivity 176

3.11 There is a positive association between wages and productivity, despite lower aggregate growth in wages than in productivity since 1990 177

3.12 Youth unemployment remains almost twice that of the rest of the population. This difference is somewhat more pronounced among men 179

3.13 Labour shortages are a constraint on business activity. The job vacancy rate has increased in Spain and the EU-27 180

3.14 Employment has increased more in the occupations most exposed to robotics and AI developments, whose impact on wages depends on their complementarity with workers' occupational skills 184

3.15 The fall in the birth rate between 1977 and 1997 and longer working lives have led to a significant increase in the average age of the working population 187

3.16 The ageing of the Spanish working population will drag down the aggregate employment growth rate over the coming decades 188

3.17 Youth employment rates are higher in countries where the employment rate of the population approaching retirement age is also higher 190

3.18 Unemployment benefit coverage relative to the unemployment rate is comparatively low in Spain, and the unemployment benefit replacement rate is relatively high compared with other EU countries 193

3.19 The coverage offered by active policies relative to the unemployment rate is comparatively low in terms of both programme participant numbers and spending 195

3.20 By international standards, severance payments for fair dismissals are relatively high in Spain. However, the additional costs of unfair dismissal are not among the highest 200

3.21 Productivity gains allow for shorter working hours and higher wages. Accordingly, the correlation between the two variables is found to be negative at international level 201

4.1 House purchases have fallen recently, although they remain high from a historical perspective and are especially strong in the second-hand market 213

4.2 Average house prices have recovered notably since 2014, although in real terms they stand more than 28.5% off their 2007 peak 214

INDEX OF CHARTS

4.3 Considerable geographical heterogeneity (at municipality level) in house price growth, compared with less dispersion in rent price growth 215

4.4 The proportion of households living in rented dwellings has grown markedly in the last decade, driven by this market's growing share among young people 217

4.5 Since 2022, new housing production has lagged well behind demographic dynamics 220

4.6 The lower buoyancy of housing completions relative to net household formation has led to a new housing deficit since 2022, concentrated in certain regions 221

4.7 Net external migration is driving demographic growth, particularly in urban areas 221

4.8 The municipalities with the strongest population growth have recorded the sharpest increases in house and rental prices 222

4.9 Increase in the proportion of workers living and working in different areas, driving up mobility and the need for transport infrastructure 223

4.10 House purchases by non-resident foreigners are mainly on the Mediterranean coast and the islands 224

4.11 House prices and rents tend to rise most sharply in municipalities with less land available for construction 229

4.12 Tourist rentals account for a considerable share of housing in certain urban areas and in the central districts of major cities with the most tourist activity 231

4.13 The synthetic risk indicator currently stands at a moderate level 233

4.14 The indicators of house price imbalances point to a moderate level of overvaluation 233

4.15 No indications of the real estate and mortgage markets becoming oversized 234

4.16 Mortgage lending standards in relation to house prices and the value of mortgage collateral remain at prudent levels 235

4.17 Cohorts born after 1980 leave the family home at an older age, suggesting that young people face growing housing affordability problems, whether to buy or to rent 238

4.18 Over the last decade, Spanish young people have notably delayed the decision to move out, with the share living in rented accommodation rising markedly 239

4.19 The indicators that proxy the theoretical burden associated with house purchase remain at high levels by historical standards 240

4.20 Significant geographical heterogeneity in home ownership affordability difficulties 241

4.21 House purchase affordability has deteriorated due to price growth outpacing income growth and higher financing costs 243

4.22 Housing cost overburdening is concentrated in the rental market, with Spain in a worse position than other major European economies 244

4.23 Renter households spend a higher share of their income on housing costs than mortgaged households. This cost burden is substantially larger (and growing) among lower-income renter households 245

4.24 Significant geographical heterogeneity in the rent cost burden 246

4.25 Gross rental yields tend to be higher in municipalities with a lower average household income 247

4.26 Spain has the highest percentage in the EU27 of people living in rented accommodation that are at risk of poverty or social exclusion 249

4.27 Greater housing affordability problems coincide with lower median net wealth accumulation among young households compared with net wealth accumulation among previous cohorts 250

4.28 Spain stands out among the advanced economies for its shortage of social rental housing 256

Foreword by the Governor

Pablo Hernández de Cos

The Banco de España's *Annual Report* takes stock of the developments in the Spanish economy in 2023 and in 2024 to date, setting them against the global and European context, and assesses the outlook and the main risks in the short and medium term (see Chapter 1). Taking a longer perspective, this report spells out the main structural challenges facing Spain and that have continued to hamper convergence with the euro area in recent decades, and the policies and reforms needed to make up for lost time (see Chapter 2).

The report also includes two thematic chapters. Chapter 3 focuses on the Spanish labour market, reviewing its recent developments, before analysing the challenges associated with the technological and demographic changes under way (which are common to other advanced economies) and discussing labour market policies as they currently stand and possible avenues to improve them so as to tackle both these and the more idiosyncratic challenges within the Spanish labour market (e.g. its persistently higher unemployment rate than in other European countries). Chapter 4 describes the recent changes in the Spanish housing market and analyses the associated risks to financial stability. It also looks at the housing affordability problems of recent years and examines possible courses of action to address them.

The *Annual Report* thus supplements the specific analysis of the Spanish financial sector carried out by the Banco de España, presented every six months in the *Financial Stability Report*, the latest edition of which was published in April.

Recent macroeconomic developments

Despite the restrictive stance of monetary policy and the high level of geopolitical uncertainty, in 2023 the world economy grew more than expected. This resilience, which varied across geographical areas, was partly underpinned by strong employment in most economies and, in some regions, fiscal policy support.

Mention should also be made of disinflation, which was mainly driven by the fall in energy commodity prices, the fading of the supply shocks observed in recent years and monetary policy tightening. Against this background, central banks in emerging economies started to ease their restrictive monetary policy stance, while their counterparts in the main advanced economies paused their interest rate hiking cycles.

However, euro area economic activity was observably weak, with the German economy notably sluggish and even contracting slightly. Inflation slowed more than expected and has fallen by 8.2 percentage points (pp) since October 2022 (2.8 pp since March 2023 in the case of core inflation), as the monetary policy of the European Central Bank (ECB) – which set the deposit facility rate at 4% in September – continued to be transmitted forcefully to financing conditions.

Amid monetary tightening, weak euro area growth and high uncertainty, the Spanish economy stood out as it recorded growth (2.5%) significantly above the euro area average (0.4%) and initial expectations. As a result, at end-2023 GDP was around 3% higher than its pre-pandemic level. However, GDP per capita in Spain had only risen by 0.3% since end-2019 (against a background of high immigration flows over the last two years), in contrast to the euro area where it stood 2% above its pre-pandemic level.

GDP growth was mainly driven by buoyancy in household spending (underpinned by strong job creation amid sliding productivity), government consumption and external demand, while business investment proved considerably sluggish. The high growth rates of tourism-related services explained around one-half of growth in 2023.

Meanwhile, the private sector has continued to deleverage, with its debt now down 94 pp of GDP from the peak of 2010. In addition, Spain's current account surplus increased and its negative net international investment position decreased by 7 pp, to 52.8% of GDP, 45 pp below the all-time high recorded in 2014. Meanwhile, the budget deficit and government debt as a percentage of GDP also fell, but they nevertheless remain at high levels.

The disinflation process, which began in 2022 Q3, continued in 2023, driven mainly by lower energy prices, while food and core inflation slowed more gradually. In addition, the slowdown in unit profits cushioned the impact of the growth of compensation per employee.

The outlook for the coming years

Against a backdrop of high geopolitical uncertainty, global economic growth is expected to stabilise at around 3.2% over the coming years, significantly below that observed over the last two decades (3.8%). Some cross-region differences are expected to persist, and inflation around the world will continue to ease.

Turning to the euro area, the ECB staff macroeconomic projections envisage a slow and gradual recovery, to 0.6% in 2024 and around 1.5% in 2025 and 2026, which will be underpinned above all by private consumption, boosted by the increase in real household income resulting from robust wage growth and lower inflation. Government consumption is also projected to continue increasing and external demand is forecast to fare well, against the backdrop of an improvement in the euro area's terms of trade. Financial markets expect the restrictive monetary policy stance to be eased gradually. Nevertheless, the risks to this growth scenario are tilted to the downside, particularly those associated with the war in Ukraine and the conflict in the Middle East.

Inflation is expected to continue to slow over the coming quarters, although in 2024 it will come down more slowly due to upward base effects, the gradual withdrawal of the fiscal measures adopted during the energy crisis and the more persistent services inflation, in line with historical patterns. All things considered, the projections envisage inflation easing to 2.3% in 2024 and to around 2% in 2025 and 2026, which is consistent with the ECB's medium-term target. The risks to these inflation projections are balanced.

Given this situation, we on the Governing Council of the ECB consider that, provided the inflation outlook remains unchanged, it would be appropriate to start to reduce the current level of monetary policy restriction in June. In any event, given the level of uncertainty, we will continue to follow a data-dependent and meeting-by-meeting approach and we are not pre-committing to a particular rate path.

As for the Spanish economy, the latest Banco de España macroeconomic projections forecast GDP growth falling from 2.5% in 2023 to 1.9% in 2024 and 2025 and to 1.7% in 2026, rates which are above the economy's potential growth.

The main drivers of this projected growth are the European economy's gradual recovery, the fading of the adverse impact of monetary tightening on activity, the recovery in economic agents' real income, forecast population growth and the fiscal impulse from the Next Generation EU (NGEU) programme.

Conversely, markedly weak investment and lacklustre productivity, in addition to the waning of some of the tailwinds that have recently driven growth (related to the sharp correction in some of the adverse supply shocks that weighed on activity in 2021 and 2022), will hold back the future rate of growth.

In any event, a high level of uncertainty surrounds these projections.

First, as in the euro area, the uncertainty stemming from the geopolitical tensions should be noted.

Second, given the persistence of a large structural budget deficit and high government debt, compliance with the new European fiscal rules will require the implementation of a fiscal consolidation plan that gradually corrects these imbalances. Strict compliance with the European rules is key to reducing this vulnerability of the Spanish economy; however, the impact of this consolidation plan would foreseeably result in a lower than expected degree of economic growth. This could be cushioned by designing the plan to foster the economy's potential growth and accompanying it with a package of ambitious structural reforms and the investments – supported by the full implementation of the NGEU programme – needed to improve growth capacity.

Third, unit labour costs have grown significantly despite the contained rise in wage settlements (in line with the recommendations established in the fifth Employment and Collective Bargaining Agreement). This is because compensation per employee in the market economy has in recent quarters grown more than negotiated wage increases under collective agreements. Against a backdrop of higher non-wage costs (for example, social security contributions) and weak productivity, this compensation growth has meant that unit labour costs have risen more in Spain than in other euro area countries since the start of the pandemic, which could ultimately affect the price competitiveness of Spanish firms.

Fourth, the results of the latest waves of the Banco de España Business Activity Survey show that in recent quarters firms have perceived a rise in economic policy uncertainty. This has become the main constraint on business activity, affecting 58% of firms. Should this continue, it could have a negative bearing on decisions concerning business investment, which has been very weak in recent years, and the future growth path.

Lastly, the projections are particularly influenced by the execution of the NGEU programme, the boost from which is expected to gather pace in 2024 and 2025.

The structural challenges facing the Spanish economy and the role of economic policies

Beyond the short and medium-term outlook, the Spanish economy's growth capacity over the years ahead will be highly influenced by a number of far-reaching structural challenges. These notably include boosting productivity growth, bringing down the high structural unemployment rate, ensuring the sustainability of public finances, reducing the vulnerabilities in certain household segments (in particular in relation to housing affordability), tackling the many challenges posed by the green transition and further strengthening the resilience of Spain's financial system. At the same time, Spain should actively contribute to deepening European integration, which will help us to successfully address the numerous global challenges that we face.

As I have pointed out on other occasions, addressing these challenges calls for the design and implementation of a comprehensive strategy of ambitious and lasting reforms, underpinned by broad consensus. As recently noted by IMF staff in the Concluding Statement of the 2024 Article IV Mission, the absence of such consensus, amid high political fragmentation, could hinder the design and implementation of structural reforms and fiscal consolidation, and could have a detrimental impact on the economic growth outlook. This risk was illustrated when the general State Budget – which plays an instrumental role in defining economic policy for the year – for 2023 was rolled over into this year, thus confirming that the uncertainty indicated by business surveys is real.

1 Driving productivity growth

In recent decades, the Spanish economy has seen a slowdown in productivity growth that has been significantly more pronounced than in other developed countries. Sluggish productivity represents one of Spain's main structural challenges, and is one of the reasons, along with high unemployment rates, why the country has been unable to converge with euro area per capita income in recent decades.

Chapter 2 of this report examines Spain's lacklustre productivity, showing it to be the product of many interacting factors that should be addressed simultaneously. These factors notably

include those shaping firm size and demographics, the reallocation of factors of production across sectors and firms, the level of human capital in the population, the technological capital stock and investment in innovation, and the regulatory and institutional framework.

The establishment of the Productivity Board, whose tasks include conducting economic and statistical analyses of the Spanish economy's productivity and competitiveness, could pave the way for future reforms. If the Board is to be effective, it will need to ensure the independence and expertise of its members, and sufficient resources will have to be available to undertake rigorous analyses.

1.1 Increasing firm size and facilitating cross-sector and cross-firm reallocation of productive resources

Larger firms are typically more productive and more diversified than their smaller competitors, not only in terms of their products and customers, but also their sources of financing. Accordingly, one reason for Spain's low productivity is the high proportion of smaller firms in the economy compared with other European countries. In 2021, 76.8% of Spanish firms had between one and four employees, the highest percentage in the European Union (EU) and far higher than the figures seen, for example, in Germany (63.2%), France (70.4%) and Italy (72.5%). This gap has been relatively stable over recent decades and cannot be wholly attributed to the specific sectoral composition of the Spanish economy.

In terms of business demographics, the low productivity growth among active firms and the small contribution of net firm entry stand out. Similarly, firm entry and exit rates (a mechanism that is typically one of the main contributors to productivity gains), have declined, particularly in the most recent period.

Many obstacles shaping firm size and demographics in Spain have been identified. These notably include those related to the quantity and complexity of regulations (which sometimes also create obstacles to market unity), certain regulatory thresholds arbitrarily linked to firm size, low access to non-bank financing, inefficient insolvency proceedings and public tender procedures that tend to result in contracts being awarded to large firms. Removing these obstacles could significantly boost productivity growth.

As described in Chapter 2, various initiatives have been approved in recent years in an attempt to bolster business growth and smooth the efficient reallocation of factors of production.

However, it is still too early to accurately assess whether these initiatives will be able to correct the weaknesses identified.

1.2 Fostering the accumulation of human capital

The level and quality of human capital are key determinants of economic growth. At individual level, there is a clear positive return to education, one that seems to be increasing over time. For instance, in 2019 an upper secondary education or intermediate vocational training provided a return – in terms of future labour income – of 18% for men and 26% for women compared with compulsory secondary education alone.

Despite improving in recent decades, the population's educational attainment level remains below the European average. Spain continues to have one of the highest early school leaving rates among European countries, its results in international educational assessments (such as the OECD's PISA) are relatively mediocre and the educational attainment level among adults (employees, employers and the self-employed alike) is low.

Public policies should encourage students to remain in school and improve their performance at lower levels of education. Indeed, various tutoring programmes are already available and have proven helpful. Furthermore, the public sector should provide students (and their families) with sufficient information on the employment returns to education to help them to make informed decisions. Enhancing the Spanish population's financial literacy, which remains low, would also further this objective.

The educational system must also be readier to adapt to the structural shifts in the labour market. Conventional (i.e. on-site) public university education seems to be responding only very slightly to changes in demand, which could hold back the economy's productive capacity and constrain equality of opportunity.

Meanwhile, high-quality vocational training could be a very effective means of reducing both the early school leaving rate and some of the existing supply and demand mismatches in the labour market, which could increase in the future. The dual vocational training system has proven effective in improving employability, wages and job retention rates. If the targets set in the Recovery, Transformation and Resilience Plan for increasing the number of training positions are to be met, firms must be provided with the right incentives to generate these positions. However, at international level, there is no clear evidence that the better short-term returns to the dual model continue over the working life, particularly

in a context of rapid technological change. Therefore, the continuing professional development system should be reinforced at the same time as the dual vocational training system is rolled out.

1.3 Promoting investment in physical and technological capital and innovation

The low share of innovation in Spain's economy has also contributed to the country's lacklustre productivity. Spain has a lower percentage of innovative firms than other European countries, even when the firms' smaller size and sectoral distribution are taken into account.

Since the outbreak of the health crisis, the recovery in investment in intangible assets in Spain has been stronger than in the other investment components. However, it has not grown enough to significantly close the gap with average euro area levels. In 2023, investment in machinery and equipment in Spain was more than 8 pp below its pre-pandemic level, whereas in the euro area it stood 3% above the pre-pandemic figure.

In order to promote business investment and innovation, efforts are required to smooth access to external financing, develop venture capital markets and review the efficiency and design of tax incentives for innovation. The recent measures rolled out in this area, such as the Law on Developing the Ecosystem of Emerging Businesses and the Law on Science, Technology and Innovation, could further these objectives. A stable regulatory framework and institutional environment must also be provided.

1.4 Improving institutional quality and trust

The institutional framework, its quality and, in particular, the degree of trust that institutions instil among economic agents are key in determining long-run growth. According to various indicators, institutional quality and trust in Spain have deteriorated since the financial crisis, more so than in other European countries.

Action is therefore needed to boost the efficacy and efficiency of Spanish public administrations, including the judicial system. The future approval of the statute of the Public Policy Assessment Agency should pave the way for ex ante and ex post assessments of central government policies and programmes (any ex post public spending reviews will be performed by the Independent Authority for Fiscal Responsibility (AIReF)). Furthermore, public policy assessments would ideally be extended to all tiers of government.

2 Reducing the high structural unemployment rate

Between 2019 Q4 and 2023 Q4, 1.28 million jobs were created in Spain. The employment rate (the number of employed persons relative to the population aged 16 to 64) increased from 63.7% to 65.9% in that same period. Meanwhile, the temporary employment ratio decreased to 16.5% (from 25.4% at end-2021), thus converging significantly towards the euro area average, although it remains close to 30% in the public sector. However, outflows from employment into unemployment (which proxy job stability) are still significantly higher than those observed for the euro area as a whole.

Employment has grown with considerable heterogeneity across sectors, occupations and regions, with the largest increases concentrated in the public sector, among people with a higher educational attainment and in the regions with the lowest employment rates. Foreign nationals accounted for 72% of the labour force increase between the start of 2022 and end-2023 (788,000 people) and 54% of the 1.06 million new persons employed in this period.

As a result, the unemployment rate has trended downwards since mid-2020. However, at end-2023 it was still 11.8%, twice that of the EU27. This difference is especially marked in terms of youth unemployment, the incidence of long-term unemployment and the employment status of workers approaching the retirement age. And, despite this high unemployment rate, labour shortages can be seen in certain sectors.

A considerable portion of the cross-country differences in unemployment rates are related to labour market institutions and policies. These typically include the design of active labour market policies (which should mainly aim to make the unemployed more employable) and passive labour market policies (which should offer an appropriate level of protection for the unemployed while providing sufficient incentives for them to return to work), and other factors that influence both the rate of job creation and job stability (e.g. the different types of contracts available, the level of termination costs and many factors with a bearing on collective bargaining).

The labour market is undergoing profound changes, from both a technological and demographic standpoint. The technological changes stem mainly from advances in robotics and artificial intelligence. The demographic shifts are above all related to the ageing workforce, resulting from lower numbers of new entrants in the labour market and a longer working life. Both factors have important implications for labour supply and demand and for the effectiveness of labour market and, more generally, economic policies.

Given this situation, reviewing labour market policies is a priority. Specifically, in line with the new Employment Law, the public employment services should introduce new techniques for job profiling and for matching job-seekers to the available vacancies. Training and job intermediation programmes should be assessed continuously to improve both their design and the allocation of resources, and to evaluate possible partnerships and synergies with the private sector. Meanwhile, unemployment benefits should afford the unemployed appropriate protection, but without disincentivising job-seeking and labour mobility. This could be achieved, for example, by allowing certain benefits to be compatible with employment and by reducing their amount over time.

In addition, to foster the necessary sectoral and occupational reallocation of employment, more headway should be made in defining the objective grounds for dismissal and in making such processes less uncertain. To the same end, collective bargaining should allow for a degree of flexibility to enable employment conditions to cater to firms' individual circumstances.

Longer working lives should be encouraged not just by increasing the statutory retirement age, but also by doing away with certain aspects that, in practice, serve to drive older workers out of the labour market.

The national minimum wage has risen by 54% since 2018 and now exceeds 60% of the gross median wage, with wide disparity across provinces. It is estimated that 12.7% of workers will earn the national minimum wage in 2024. At these levels, it would be advisable for potential future increases in the national minimum wage to take into account (through a detailed ex ante analysis) the possible adverse effects that, in the absence of productivity gains, such increases could have on employment for certain groups of workers, firms and regions.

Finally, moving forward with the reduction of the statutory working week without taking into account either the considerable differences in working hours across firms and sectors or productivity gains – which are ultimately what make wage increases and shorter working hours possible – would pose risks to employment growth.

3 Ensuring the sustainability of public finances

Although the public debt-to-GDP ratio has declined from its pandemic peak of 120.3% in 2020 to slightly below 108% at end-2023, this level is historically very high and around 30 pp above the euro area arithmetic mean (17 pp higher than the euro area weighted average).

The general government deficit declined from 4.7% of GDP in 2022 to 3.6% in 2023. In a setting in which public spending remained high, this reduction was attributable to the continuing strong growth in revenue. Since 2019, tax and social contribution receipts as a share of GDP increased by 2.5 pp, reaching a level slightly above the EU arithmetic mean (although 3 pp below the weighted average).

Strong government revenue growth over the last four years has been predominantly driven by personal income tax, due to real growth in both the number of taxpayers (employed persons and pensioners) and the nominal tax base (wages, social benefits and other household income), which is being boosted by the inflationary episode. Indeed, nominal growth in the personal income tax base may trigger an increase in the effective average tax rate when the parameters determining the tax liability are not fully updated in line with growth in the taxable base. This effect, known as "fiscal drag", means that a given percentage increase in income results in tax payable rising by an even higher percentage. Overall, effective average personal income tax rates are estimated to have risen from 12.8% in 2019 to 14.7% in 2023, with 70% of this increase attributable to fiscal drag. The impact appears to have been most pronounced for taxpayers in the middle of the income distribution.

The increase in revenue, however, has been more than offset by the rise in expenditure. As a result, according to Banco de España estimates, the Spanish general government structural deficit increased from 3.1% of GDP in 2019 to 3.7% of GDP in 2023.

3.1 Designing and implementing a medium-term fiscal consolidation plan

Correcting the large imbalance in public finances requires the prompt implementation of a medium-term fiscal consolidation plan.

The consolidation plan will need to be aligned with the new EU fiscal framework. Under this framework, each Member State will prepare budgetary plans, which may span up to seven years under certain conditions (carrying out structural reforms that improve growth potential or making public investments aligned with the EU's common priorities). According to Banco de España estimates, compliance with the new fiscal framework would require an average annual reduction in Spain's primary structural deficit of around 0.5 pp of GDP between 2025 and 2031.

The plan should also be grounded on prudent macroeconomic projections and specify the revenue and expenditure measures that will allow the deficit targets to be achieved. This would increase confidence in the consolidation process and certainty about economic policies.

As for the elements of the plan, it is essential to increase efficiency on the public expenditure side, in line with the recommendations of the AIReF's Spending Review, and to optimise the distribution of expenditure across the different items in order to promote robust and equitable economic growth. On the revenue side, a comprehensive review of the tax system should be carried out to improve its effectiveness and efficiency. The reform should increase the relative share of consumption and environmental taxation (which is low compared to that of other European economies), reduce the substantial tax benefits and improve international tax coordination.

The consolidation plan will also require the involvement of all tiers of general government. Furthermore, a reform of the regional government financing system is still pending to correct some of the shortcomings it has displayed over the past decades. This reform should ensure that the Spanish regions have sufficient resources available for their actual spending needs (based on objective calculations), and that there is fiscal co-responsibility and transparency in the various parameters that determine the functioning and development of the system. Strict implementation of fiscal rules at all levels of government is also crucial. In this regard, a possible cancellation of some of the debt accumulated by Spanish regions in recent decades could reduce the incentives for them to maintain fiscal discipline in the future. The reform should also address the system's lack of stability, which has created an incentive to pursue negotiations as a means of securing more funding.

3.2 Ensuring the sustainability of the pension system

The Spanish economy is undergoing a process of population ageing that will intensify over the coming decades and will be more pronounced than in other European countries. Drawing on Eurostat projections, between 2023 and 2053 the dependency ratio (the ratio of the population aged over 66 to those aged 16-66) in Spain will rise by 27.2 pp to 53.8%, compared with an average increase of 16.6 pp, to 45.8%, in the EU.

Meanwhile, although migration flows have surged in recent years, it seems unlikely that this will offset population ageing, or effectively smooth any mismatches that might arise in the labour market.

From the standpoint of public finances, this demographic growth will lead to a substantial increase in pension expenditure over the coming decades. According to AIReF projections, under a baseline scenario pension expenditure will climb from 13.6% of GDP in 2021 to 16.2% in 2050, while the European Commission's 2024 Ageing Report sets pension expenditure in that year at 17.3% of GDP under its baseline scenario.

In this setting, between 2021 and 2023 a new pension system reform was implemented that included, among other measures, CPI-based pension revaluation enshrined in law, elimination of the sustainability factor, greater incentives to delay the retirement age and increased social security resources from higher contributions from both employers and workers. Moreover, in the event of future financial imbalances in the pension system, increasing contributions becomes the adjustment process by default (the backstop mechanism).

An overall analysis of the main regulatory changes made – albeit subject to considerable uncertainty – points to higher expenditure obligations in the long term that are not fully offset on the revenue side. The backstop mechanism introduced in the new reform will be reviewed in 2025. Our estimates suggest that, should it be necessary to activate the backstop, making the necessary adjustment purely by raising social security contributions could be detrimental to employment and to the competitiveness of the Spanish economy.

Looking ahead, an in-depth analysis of the different regulatory changes made would be desirable. Regarding the incentives to postpone the retirement age, this report includes an analysis which suggests, as a first approximation, that there would be no major reduction in pension expenditure as a result. It would also be important to analyse: first, the effects of the increase in social security contributions on the labour market and the competitiveness of Spanish firms, and the consequences for intergenerational equity; second, alternative measures, including those affecting replacement rates which are high by international standards; and third, developments in private retirement saving and its ability to complement public pensions.

4 Reducing vulnerabilities observed in some household segments

Data from the Spanish Living Conditions Survey suggest that, against a backdrop of strong employment growth, in 2022 income inequality in Spain was very similar to, and even lower than, that observed before the start of the global financial crisis.

However, there are pockets of vulnerability among certain groups, largely related to difficulties finding employment and housing. Indeed, Spain is the European economy with the highest percentage of people living in rented housing at risk of poverty or social exclusion, specifically 45% in 2022, compared with an average of 31% in the EU27.

In 2020, according to data from the Banco de España's Spanish Survey of Household Finances, 54.3% of the economy's total net wealth held by Spanish households was concentrated among

the wealthiest 10% of the population, compared with 43% in 2002. This is, however, a substantially lower percentage than that observed in other countries. On a global scale, in 2021, for example, the wealthiest 10% of the population held 76% of total wealth.

In addition, the correlation between parents' level of educational attainment and that of their adult offspring decreased in the second half of the 20th century, suggesting greater intergenerational mobility and, therefore, more equality of opportunity. Nevertheless, the level of this correlation varies significantly across municipalities and provinces.

Addressing the challenges posed by these pockets of vulnerability among Spanish households requires public policy actions across a broad range of spheres. In particular, it is vital that the high structural unemployment rate be reduced and that human capital be strengthened through improvements in the quality of the Spanish education system.

Moreover, income and transfer policies can play an important role in mitigating the adverse effects associated with high levels of inequality or vulnerability, although their capacity to attain the proposed goals must be analysed, along with their implications in terms of efficiency and equity. In this respect, some AIReF studies suggest that there is scope for improved integration of the minimum income scheme, the various local and regional subsistence income schemes and unemployment assistance benefits.

4.1 Alleviating housing affordability problems

In recent years there has been a growing supply and demand mismatch in the residential housing market – in the house purchase and the rental segment – owing to both demand strength and relative supply rigidity.

Demand has been driven by demographic growth, largely associated with significant external migration flows which have intensified since 2022 and are concentrated in certain regions and in the main urban areas. It has also risen as a result of strong demand from non-residents, both for home ownership and rentals (mainly in the holiday segment). And all this in a favourable macroeconomic environment in which, despite the monetary tightening that began in 2021, house purchases and new mortgage credit flows in 2023 were above their 2019 levels.

By contrast, growth in the residential housing supply has been more lacklustre. New housing in particular has made a limited contribution to the aggregate residential housing supply, among

other factors owing to construction workforce shortages, rising production costs and the lack of investment in acquiring and developing new urban land available for construction. The relative supply rigidity is also explained by the low capacity for housing renovation, the mismatch between empty housing and current household preferences, regulatory uncertainty and the rise in alternative housing uses, such as holiday or seasonal rentals.

As a result of these residential housing supply and demand mismatches, prices have risen continuously since 2014, especially in the large urban and tourist areas which are those that have experienced most increase in demand.

The supply and demand mismatches are particularly acute in the residential rental segment in the city centres. Housing demand among lower-income groups, such as young people and the foreign-born population, is concentrated in the rental market. This is partly because these groups do not have sufficient savings or income to be able to obtain a mortgage.

Although the proportion of individual landlords in the residential rental supply has increased significantly, the market has not grown sufficiently to absorb the surge in demand, in a setting in which professional agents and social rentals account for only a small market share. The supply shortage and the problems in the way the rental market works are reflected, for instance, in the fact that rental prices are high compared with house prices, especially in areas where there is a high concentration of lower-income households.

From the financial stability standpoint, the associated vulnerabilities and risks are contained. This is largely due to the prudent mortgage lending credit standards applied by banks, which have prevented the build-up of imbalances such as those that led to the 2008-2013 real estate and banking crisis. In this respect, there are no warning signs in relation to the credit market and no signs of real estate activity becoming oversized. Moreover, according to the latest data, housing valuation indicators appear, on average, to be close to equilibrium.

By contrast, housing affordability difficulties have increased in recent years. These problems are greater for lower-income households and those with scant saving capacity, groups that include a high proportion of young people and foreign-born population. By geographical area, the difficulties are most acute in areas that are more economically buoyant and those with higher levels of tourism.

However, the proportion of home-owner households with a mortgage that are overburdened by their housing costs is low. This appears to reflect, at least in part, sound selective lending

by banks, which only extend credit to households that have sufficient savings and income relative to the price of the property concerned. By contrast, the percentage of renter households that are overburdened by their housing costs is very high, above the EU27 average.

Housing affordability problems have adverse social and economic effects. In particular, if households are overburdened by their housing costs their ability to save is limited and this may distort their consumption and investment decisions, among others, and also their decisions on where to live, whether to have children and whether to continue their education. In consequence, housing affordability difficulties may give rise to lower aggregate productivity and lower economic growth.

Considering the scale of the problem, it seems unlikely that isolated short-term actions may be sufficient to significantly reduce today's housing affordability difficulties. At the same time, measures such as rent controls, which may have relatively limited effectiveness in the short term, could ultimately have significant unwanted effects, for instance by reducing the housing supply.

Instead, the reforms adopted should ideally extend over a long time horizon and involve the different tiers of government with responsibility for housing, in a coordinated manner and in collaboration with private initiative. These measures should focus on stimulating the housing supply – especially rental and social rental housing – and on prioritising allocation of the available resources to the most vulnerable groups. In addition, other areas that affect the housing market, such as the functioning of the labour market, productivity growth and tax and transport policies, should also be considered.

5 Tackling the green transition

The fight against climate change and the transition towards a more sustainable economy are among the key challenges facing society. Spain has taken on ambitious environmental commitments, in line with those established in the EU and in other advanced economies.

The Banco de España has developed an intense research agenda that seeks to delve into the diverse implications of this issue for the Spanish economy. Indeed, a specific chapter of our *Annual Report 2021* was dedicated to environmental matters, which was complemented by an analysis of the implications of the energy crisis in the *Annual Report 2022*.

These analyses confirm the high economic costs of staying on the current path of global greenhouse gas emissions. They also underline the fact that delaying action will drive up both the physical and transition costs involved. This calls for adopting a mitigation strategy that is ambitious, timely, orderly and predictable. And if it is to be effective, this strategy needs to be global. Governments must play a leading role in this process, through environmental taxation, public investment and regulation of economic activity. Specifically, it will require the large-scale deployment of renewable energy sources, for which Spain has a very favourable climate. It will also call for making a determined commitment to improving energy efficiency which, in turn, will help ease the green transition's adverse impact on activity.

It should also be borne in mind that climate change and the transition to a more sustainable economy will have a highly heterogeneous impact across regions, sectors, firms and households and may hit the most vulnerable particularly hard. Consequently, particular care must be taken to temper distributional effects. Otherwise, not only would the green transition be more costly in economic terms, but the pace and ambition of the process could also be constrained by episodes of social unrest.

6 Continuing to strengthen the Spanish banking sector's resilience

The banking sector in both Spain and the EU as a whole has proven resilient over the past year. Banks' financial position has benefited from their adaptation to the macro-financial environment of monetary tightening that has brought an end to the prolonged period of low interest rates in which they had operated for close to a decade. One contributing factor in this respect, in addition to strong economic growth, has been their robust financial position in the face of the interest rate hiking cycle, facilitated by the international regulatory framework developed over the last few years, which has proved itself effective.

Specifically, Spanish banks have managed to significantly improve their profitability, thanks mainly to growth in their net interest income, and also to their contained impairment losses, especially in their business in Spain.

The sound performance of net interest income has, in turn, been underpinned by the asymmetric pass-through of the interest rate rises to bank credit and deposits. Although there has been a slight contraction in credit, in line with its higher cost following the monetary policy tightening, this has not been sufficient to weigh on banks' earnings.

Moreover, the banking system's liquidity position has held at levels well above minimum requirements. As regards solvency, despite the slight improvement, the unfavourable gap with respect to the average of the main European banking systems has not narrowed.

But banks' sound performance should not be cause for complacency, especially given the still high level of uncertainty.

First, it is important to recognise that the improvement in net interest income associated with the interest rates hikes has likely already peaked. Consequently, net interest income could level off or even decline, if the bank lending-deposit spread were to gradually narrow. Second, there may be a lag before the bulk of the adverse effects of the recent monetary tightening, such as the deterioration in credit portfolio quality, materialise.

Banks should therefore take advantage of their favourable profitability situation to improve the sector's solvency. This would help preserve their bank intermediation capacity, should the aforementioned risks materialise.

In this setting, the Banco de España is analysing the possibility of setting a positive rate for the countercyclical capital buffer (CCyB) in those instances when cyclical systemic risks are at a standard level (i.e. between a high and low level). Early activation of the CCyB would provide more capital that can be released in adverse phases of the cycle, which would help sustain the flow of credit to the real economy during downturns and contribute to the objective of macroeconomic stabilisation. The Banco de España will announce its conclusions on this matter around when this *Annual Report* is published.

In tandem, banks should continue to address the many medium and long-term challenges they face, not least those associated with technological change, interconnections with the non-bank financial sector, financial risks from climate change and cyber risks.

7 Strengthening European integration

The national agenda of economic reforms needed in Spain will have a greater impact if it is accompanied by deeper economic integration at European level, enabling the EU as a whole to tackle our shared challenges.

The world today is more complex and integrated than when the European single market or even the Economic and Monetary Union (EMU) was created, and economic and geopolitical

competition between the different global players has become stronger. This calls for further integration in the EU, so that it can reap the maximum benefit from its potential scale, and the way to achieve this is a more integrated single market and a more complete union.

7.1 Advancing towards a fiscal union and ensuring budgetary stability

The challenges currently facing the EU are common to all the Member States and, as such, call for joint action. National solutions are not enough. This is particularly true in areas such as defence and security, energy infrastructure and the fight against climate change, and support for certain global providers of strategic technological capabilities.

As these are European public assets, such needs should be funded through common policies and resources. Funding them at the national level would be inefficient, as it would not properly internalise the needs and priorities of the EU as a whole. It would also be insufficient and distortionary, as it would depend on each country's individual fiscal space or on the introduction of differential incentives in the form of State aid that could distort competition within the European common market.

Beyond guaranteeing an optimum stock and efficient supply of these European public assets, it will also be necessary for the euro area to have cyclical mechanisms that ensure an appropriate aggregate fiscal policy stance at all times. Past experience has shown that, on their own, mechanisms for coordinating the fiscal policies of individual Member States, such as the Stability and Growth Pact (SGP), have failed to achieve this goal.

All this without forgetting that budgetary stability is essential to the functioning of the EMU. Following the approval of the SGP reform, the success and credibility of the new framework will hinge on its effective application by all Member States.

7.2 Completing the banking union and creating a capital markets union

The economic and geopolitical challenges facing the EU also call for sizeable private investments, particularly in the areas of digital transformation, the green transition and technological innovation. To this end, the EU's capital markets must be expanded and become more integrated. Meeting both of these goals would ensure that the substantial domestic saving in Europe could be efficiently channelled towards profitable investment projects that are conducive

to growth. Specifically, the capital markets have shown that they can offer financial products that are more tailored to high risk-return research and innovation activities than bank financing, which is, however, more predominant in Europe than in other more dynamic economies such as the United States.

In order to increase the depth of the capital markets, private pension schemes in the EU must be properly promoted and channelled towards productive investment, which would also help address some of the challenges associated with population ageing. In this respect, households' pension savings assets are far higher in the United States (137% of GDP in 2022) than in the EU (less than 30% of GDP), demonstrating the difference in scale of the US capital markets vis-à-vis their European counterparts. There is also a high degree of heterogeneity across EU Member States.

The EU's capital markets are not only shallow, but also fragmented, which prevents achieving an efficient scale and appropriate risk-sharing within the private sector across EU countries. The literature estimates that the degree of risk-sharing in the United States is double that in the EU. Moreover, the private capital markets play a key role in smoothing shocks in the United States, in contrast to their very small role in Europe.

Reducing fragmentation in these markets calls for a wide range of initiatives and, in any case, reinforcing European regulatory and supervisory measures to accelerate integration. The existence of a pan-European safe asset with sufficient market depth could contribute to capital market integration, insofar as it would enable a more accurate reflection of the fundamental risks of debt securities or equities in their prices. This would ease the flight-to-quality episodes that characterise fragmentation processes during periods of financial stress, which ultimately distort price formation and can even impede the proper transmission of monetary policy.

As regards the banking union, significant advances have been made over the past ten years, with the creation of the Single Supervisory Mechanism, the Single Resolution Mechanism and a single regulatory framework. However, work remains to be done, as the creation of a fully mutualised European Deposit Insurance Scheme (EDIS) is still pending. The lack of such a pillar means that Europeans do not enjoy the benefits of greater financial stability and a stronger common financial safety net. In addition to boosting public and market trust in the banking union, implementing the EDIS would contribute to more efficient risk-sharing in the euro area and would, therefore, help to reduce potential fragmentation episodes. Also, from a political-institutional standpoint, it would help to align financial responsibility with the supervision and resolution decision-making mechanisms, which are already centralised.

7.3 Pressing ahead with a dynamic and competitive common market

Beyond further integration of Europe's financial markets through the banking union and the capital markets union, the main driver of economic integration and economies of scale in the EU is the European common market. In view of the risks of global economic fragmentation, the EU needs to reduce any internal fragmentation.

The single market should also serve to maximise the impact of an ambitious pan-European agenda of liberalisation and structural reforms, to counter the succession of adverse supply-side shocks that have affected Europe's economy in recent years, such as the pandemic, the energy crisis and the shifts in globalisation patterns.

As highlighted in the Letta report on the future of the European single market,[1] moving to a deeper single market entails giving greater emphasis to the role of European policies, to the detriment of national ones. Moreover, European initiatives that seek to develop specific strategic sectors should be designed so as to maximise their effectiveness and efficiency and avoid distortionary effects.

In short, the EU and Spanish economies both face very significant challenges. In terms of economic dynamism, Europe is lagging behind the other major world economies, and for more than a decade now Spain has been unable to maintain a sustained per capita income convergence path with our European partners. Reversing these trends will take ambition and major political agreements, to ensure that the reforms needed can be consolidated over time. The analysis and proposals set out in the *Annual Report 2023* seek to contribute to the social debate that should help achieve such broad consensus.

Pablo Hernández de Cos

Governor of the Banco de España

Foreword to the Annual Report 2023.

30 April 2024.

1 Enrico Letta. (2024). "Much more than a market".

Annual Report: Digest

Chapter 1

The resilience of the Spanish economy in the European context

Global inflation has continued to ease, owing especially to falling energy prices, while global economic activity has remained somewhat buoyant

— Falling energy commodity prices and the fading of previous years' adverse supply shocks influenced developments in the global economy in 2023.

— The central banks of the main developed economies continued to tighten their monetary policy throughout 2023, before pausing policy rate rises in the second half of the year.

— In this setting, global economic activity slowed somewhat over the course of 2023, although it remained more dynamic than initially expected, except in the euro area, where growth was more lacklustre than anticipated.

— Headline inflation rates have been falling worldwide, although underlying inflation has declined more gradually.

— Looking ahead, the forecasts available envisage global economic growth stabilising somewhat, as well as the European economy recovering gradually and global inflation continuing to ease.

The raising of the European Central Bank's (ECB) key interest rates increased the cost of new financing for households and firms in 2023. However, these cost increases tapered off in the second half of the year and had a limited impact on household and firms' vulnerability and the credit quality of banks' balance sheets

— The ECB continued to reduce the size of the Eurosystem's balance sheet throughout 2023 and raised key interest rates up to September 2023, when the deposit facility rate reached 4%, keeping them unchanged since then.

— Over the course of 2023, the interest rates on new financing for Spanish households and firms increased in step with risk-free rates. Nevertheless, this growth tapered off in the second half of the year and even reversed in Q4.

— The cumulative increase in interest rates on new lending in the current monetary policy tightening cycle has been weaker than in the euro area and also smaller than what the historical regularities would suggest.

— Loan supply and demand and the outstanding amount of financing contracted in all segments in Spain in 2023, with the exception of consumer credit, which continued to rise.

— The current rate hiking cycle has had a limited impact on households' and firms' vulnerability (amid an increase in household income and firms' profits) and the credit quality of Spanish banks' balance sheets and has lifted the latter's net interest income.

The Spanish economy showed strong momentum in 2023 – more so than other euro area countries and more than expected in early 2023 – driven by robust government and private consumption and services exports, while investment has been weak

— Growth in Spain was notably resilient in 2023, with GDP growth at 2.5%, more than the 1.6% forecast at the beginning of the year and outstripping the euro area overall (0.4%).

— The upward surprises in exports of travel services and government consumption, along with the positive carry-over effect resulting from the statistical revisions that affected 2022, were the main drivers of the higher than expected GDP growth.

— The boost provided by domestic demand and greater resilience to the energy shock explained Spain's stronger economic activity compared with the euro area as a whole.

— Job creation in Spain remained highly buoyant, amid declines in apparent labour productivity and some labour market tightening.

— Household spending was the main driver of GDP growth, while investment was notably weak.

— Net external demand bolstered activity, thanks to the strength of exports – especially travel services – and weakness in imports, which widened Spain's current account surplus.

— Government consumption and social benefits further underpinned activity, although the partial withdrawal of some of the support measures implemented in response to the energy crisis and the strength of Government revenues resulted in a slightly contractionary fiscal stance.

— The high growth rates in tourism-related services sectors accounted for around half of the overall growth in 2023, standing in contrast to the sluggishness recorded in the industrial sectors, thus continuing Spain's secular shift towards a more services-based economy.

Headline inflation in Spain remained on the easing path that began in 2022 Q3 – which was even more pronounced than anticipated owing to the unexpected decline in energy prices – while underlying inflation and compensation per employee surprised slightly on the upside over the course of 2023

— The drop in energy prices has been decisive in shaping the disinflationary path in Spain, although food prices and underlying inflation have displayed greater downward stickiness.

— Inflation followed a steeper easing path during 2023 than had been forecast at end-2022, mainly due to the unexpected drop in energy prices.

— Compensation per employee increased significantly in 2023 – more than initially expected –, although the corresponding impact on domestic inflationary pressures was cushioned by the slowdown in unit operating surpluses.

Looking ahead, expectations point to the Spanish economy remaining notably buoyant and inflation continuing on its moderating path

— The gradual revival of the European economy, the moderation in inflation and the subsequent recovery in agents' real incomes, together with the fiscal impulse stemming from the NextGenerationEU (NGEU) programme, will help to underpin activity in Spain over the coming years. However, the uncertainty surrounding the economic outlook is very high.

— One particularly important source of uncertainty for Spain's economic outlook is the vulnerability associated with fiscal sustainability, especially with the EU fiscal rules coming back into force.

— In addition, the lack of convergence towards the level of per capita income in the euro area as a whole highlights the need to address a series of structural challenges linked to the persistent weaknesses seen in the Spanish economy in recent years (see Chapter 2 of this report).

Chapter 2

Structural challenges facing the Spanish economy

The Spanish economy's growth capacity over the years ahead will be influenced by a number of far-reaching structural challenges

— The structural challenges facing the Spanish economy are linked to sluggish productivity growth (which in turn is associated with the need to build up human and technological capital and strengthen the institutional framework), population ageing and the sustainability of public finances, and the green transition, all in a setting in which pockets of vulnerability persist among certain groups.

— If these challenges are to be successfully addressed, rigorous analysis of the different areas, together with design and implementation of a comprehensive strategy of ambitious and lasting structural reforms, based on broad consensus, is needed.

— The Next Generation EU (NGEU) programme and the Spanish Recovery, Transformation and Resilience Plan (RTRP) present a unique opportunity to develop this strategy, via a rigorous selection of the investment projects to be funded through the NGEU and ambitious implementation of the other reforms and milestones pending under the RTRP.

Productivity, firm size and firm demography

— In recent decades, the Spanish economy has seen a productivity slowdown that has been significantly more pronounced than in other developed countries.

— The factors behind the slow aggregate productivity growth in the most recent period notably include the small contribution of net firm entry – compared with other European countries – on account of the lower business churn rate.

— However other factors, such as the small size and low growth of active firms in Spain, also limit aggregate productivity dynamics, while the reallocation of resources between firms and sectors has played a more minor role in recent years.

— The recent initiative to create a National Productivity Board could be an important lever to enhance analysis of the productivity of the Spanish economy and foster proposals for policies to boost productivity, although if it is to be effective, it will need to ensure the independence and professional expertise of its members and be endowed with sufficient resources to undertake rigorous analyses.

Human capital

— Despite the improvement observed in recent decades, the educational attainment level of the Spanish population remains below the European average, so structural measures must be adopted to continue to encourage students to remain in education.

— There appears to be some mismatch between the supply of and demand for places at conventional (classroom-based) public universities.

— It is essential to ensure that Spanish firms have the right incentives to create sufficient places for students on the dual vocational training system.

Capital investment and innovation

— In recent decades, the low level of innovation and technological capital in the Spanish economy is a key explanatory factor of the relative sluggishness of Spanish productivity.

— In this setting, although there has been strong growth in intangible investment in recent years, this momentum has not been sufficient to close the gap with average euro area levels.

— To encourage business investment and innovation, providing a regulatory framework and a stable institutional environment, smoothing access to external financing and reviewing the efficiency and design of the system of tax incentives for innovation would all be desirable.

Institutional framework

— According to different indicators available, institutional quality and trust have deteriorated since the financial crisis and this has had a negative impact on long-term growth.

— Action is needed to boost the efficacy and efficiency of Spanish general government; this would help lift productivity and would have a positive spillover effect on private sector expenditure, investment and innovation decisions.

Population ageing

— In recent decades, demographic trends in Spain have been marked by a significant drop in both fertility and mortality rates. As a result, life expectancy has increased and is now higher in Spain than in other developed countries, although this is not the case in terms of healthy life expectancy.

— In this setting, the population ageing process has gathered considerable pace, and will continue to do so over the coming decades, more so in Spain than in other European countries.

— Migration flows have surged in recent years, but it seems unlikely that this will offset population ageing in Spain or effectively smooth any mismatches that might arise in the Spanish labour market.

Inequality and pockets of vulnerability among households

— In recent years, income inequality has declined significantly in Spain, against a backdrop of strong employment growth. However, some pockets of vulnerability, largely linked to housing affordability difficulties, have been observed among some groups.

— The correlation between parents' level of educational attainment and that of their adult offspring decreased in the second half of the 20th century, suggesting greater intergenerational mobility and, therefore, more equality of opportunity.

Public finances

— The public finances imbalance remains very high, both by historical and international standards, and has even worsened since 2019, as the notable growth in public revenue has been more than offset by the sharp increase in public expenditure.

— The pension system is one of government's most important expenditure items and one that has seen the most growth in recent years. An overall analysis of the major regulatory changes introduced between 2021 and

2023, while subject to considerable uncertainty, points to higher long-term expenditure obligations that are not fully offset on the revenue side.

— In this setting, the macroeconomic and fiscal dynamics of the Spanish economy highlight the need to implement, without delay, a medium-term fiscal consolidation plan that strengthens the sustainability of public finances.

— Moreover, it is essential that the Spanish economy take advantage of economic upturns to build up fiscal space that will allow it to counter the recessionary effect on activity of any future adverse macro-financial shocks.

— In this respect, the new European fiscal governance framework will require, in the coming years, significant fiscal adjustments in some countries in the form of medium-term budgetary plans prepared by Member States setting a multi-year expenditure path.

Green transition

— The fight against climate change and the transition to a more sustainable economy is one of the key challenges facing society today. In particular, the Iberian Peninsula could be significantly affected by the physical risks associated with climate change.

— The energy transition will not only require large-scale deployment of renewable energy sources and improved energy interconnections within the EU, but also a determined commitment to energy efficiency gains.

— The green transition also presents a considerable challenge for central banks and the financial system, insofar as this profound structural change could significantly affect monetary policy conduct and pose considerable risks to financial stability.

Chapter 3

The Spanish labour market: current developments, structural trends and labour market policies

Recent Spanish labour market developments have mainly been marked by employment's considerable momentum

— According to the Spanish Labour Force Survey, between 2019 Q4 and 2023 Q4 1.28 million jobs were created in Spain, 783,000 of them in 2023, and the employment rate (proportion of the population aged 16-64 in employment) rose by 2.2 pp, from 63.7% to 65.9%.

— Employment has grown with considerable heterogeneity across sectors, occupations and regions.

— Employment has grown more in the public sector than in the private sector. In 2019-2023 the number of salaried workers in the Spanish public sector increased by 340,000, at an average annual growth rate of 2.4%, compared with 1.7% in the private sector.

— The recovery in migratory flows has contributed considerably to employment's recent strength. Foreign nationals accounted for 54% of the 1.06 million new persons employed in 2022-2023.

— Compared with the considerable buoyancy of the number of persons employed, hours actually worked have grown considerably less and hours worked per person employed have decreased.

— In contrast to employment, labour productivity has barely increased. This, coupled with growth in compensation per employee, has driven the rate of growth of unit labour costs higher than that observed in the euro area as a whole.

The labour market is showing signs of tightness, despite the unemployment rate in the Spanish economy remaining excessively high

— The unemployment rate was 11.8% at end-2023, the lowest since 2008, but still double that of the EU-27.

— A considerable portion of the cross-country differences in unemployment rates are related to the very institutions and policies that have a direct impact on the functioning of the labour market.

— Firms perceive labour shortages as one of the main constraints on their productive activity.

— The reasons for the labour market tightness vary across sectors and occupations.

A new wave of technological change will prompt a shift in the division and organisation of labour. Productivity will be boosted, but to the detriment of employment in certain sectors and occupations

— The development of robotics and artificial intelligence (AI) could make it possible to automate productive tasks across all occupations, including those requiring a higher level of professional qualification.

— Labour demand has so far increased relatively more in occupations that are potentially more exposed to robotics and AI developments.

— Exposure to new technologies and their degree of complementarity with human work will determine which workers will be displaced and which will benefit from further increases in productivity.

— Complementarity with robotics and AI will foreseeably be greater for workers who understand how these new technologies work and who are able to provide added value to the tasks carried out by robots and algorithms. Conversely, those workers who are limited to a small number of tasks – whether routine, manual or otherwise – are likely to be displaced by the new technologies.

— Demographic shifts are profoundly changing the composition of the working population by age group and will continue to do so in the future.

— Demographic and technological changes interact with each other, meaning that the economic impacts of these two structural processes will be closely interrelated.

— The ageing of the Spanish working population has a negative impact on the rate of growth of the aggregate employment rate and productivity and, therefore, on potential economic growth.

— Population ageing also shapes labour demand through changes in household consumption patterns and the emergence of new activities related to the "silver economy".

— Migration flows, the extension of working lives and education and labour market policies may help to reduce some of the adverse effects of population ageing.

The high unemployment rate and the technological and demographic change under way mean that labour market policies need an overhaul

— Labour market policy must be considered in its entirety. The ability of each instrument to efficiently meet its goals rests on the extent to which it complements the others.

— Active and passive labour market policies are a cornerstone of the welfare state. However, these policies have proven to be largely ineffective.

— The level of coverage/protection that passive policies afford the unemployed has been relatively low in Spain compared with other European economies. However, the unemployment benefit replacement rate is fairly high by international standards.

— When set against the unemployment rate, both the extent to which the unemployed participate in active policies and the amounts spent on such policies are low compared with other developed countries.

— In the light of the technological and demographic changes currently under way, which will lead to major shifts in the sectoral and occupational structure of employment, it is crucial to improve the performance of active and passive labour market policies.

— Other aspects of the institutional framework of the Spanish labour market should also be reconsidered to enable a smoother adjustment of labour supply and demand.

— Longer working lives should be encouraged by doing away with certain aspects that, in practice, serve to drive older workers out of the labour market.

— Collective bargaining should allow for a degree of flexibility to cater to firms' individual circumstances.

— The regulations governing termination costs must ensure that workers are adequately protected, while at the same time facilitating mobility across sectors and occupations.

— The working week follows a downward secular trend and is set to continue declining.

— Any reduction to the statutory working week should take into account the considerable heterogeneity across the different types of firms and sectors and its effects on employment.

Chapter 4

The Spanish housing market: recent changes, risks and affordability problems

Robust housing demand, along with relative supply rigidity, has caused sustained growth in purchase and rent prices since 2014

— Housing purchases are remarkably robust, despite the slowdown observed since 2022 Q4, against a favourable macroeconomic backdrop and tighter financial conditions since early 2022.

— Demographic growth is a key factor in explaining the strong demand for both owner-occupied and rental residential housing.

— This population growth is largely explained by significant net external migration, which has intensified since 2022.

— Net household formation is concentrated in certain regions and in the main urban areas, where the highest house price and rent increases have been observed.

— The increase in the demand for a main residence has been accompanied by the strength of demand from non-residents, whether for owner-occupied or rental (but mainly holiday) housing.

— Recourse to mortgage financing for purchases has declined since the start of monetary tightening, although the number of new residential mortgages was higher in 2023 than in 2019.

— Banks seem to have maintained prudent credit standards when extending mortgage loans, thus avoiding the build-up of imbalances such as those that led to the 2008-2013 real estate and banking crisis.

— Prudent credit allocation in recent years, along with house price and labour market dynamics, have contributed to a notable shift in housing demand among the lower-income groups towards a rental market that is relatively small in the context of the EU-27.

— Despite the significant increase in the privately owned rental supply, it seems to have been insufficient to absorb the strength of demand, with a low proportion of professional agents and social rentals.

— The contribution of new housing to aggregate supply has been limited, owing to, among other factors, construction workforce shortages, rising production costs and a lack of investment to acquire and develop new urban land available for construction.

— Residential housing supply rigidity is also explained by the low house renovation capacity, empty houses not matching current household preferences, regulatory uncertainty and the rise of alternative housing uses, such as holiday or seasonal rentals.

— The lacklustre housing supply in the recent period, compared with the robustness of demand, has significantly underpinned house purchase and rental price growth.

— However, cumulative growth is uneven and stronger in new housing, large urban areas and tourist areas.

Despite the notable dynamism of residential housing market activity, the vulnerabilities and risks to financial stability associated with this market are contained

— There are no indications of the real estate market becoming oversized. The share of the construction sector in total employment and the ratio of residential investment to GDP are low by historical standards.

— Nor have any warning signs been observed in relation to the credit market. In general, credit standards related to collateral and maturity are at prudent levels.

— Indicators of loan repayment capacity based on borrower income also stand at prudent levels, although some deterioration has been observed in the most recent period.

— The latest data (for 2023 Q4), suggest that the average house price valuation indicator stands close to the equilibrium level.

Housing affordability difficulties have become more pronounced over the last few years, particularly for certain types of households and in certain geographical areas

— By cohorts, housing affordability poses greater challenges for lower-income households and those with scant saving capacity, groups that include a high proportion of young people and foreign residents.

— The housing affordability difficulties owe to property prices rising faster than these cohorts' income, which tends to be subject to more uncertainty due to their labour market situation.

— By geographical area, the difficulties are most acute in areas that are more economically buoyant and those with higher levels of tourism.

— The proportion of mortgaged households overburdened by their housing costs is low.

— The lesser burden on mortgaged households appears to reflect, at least in part, sound selective lending by banks, which only extend credit to households that have sufficient savings and income relative to the price of the property.

— By contrast, the percentage of renter households that are overburdened by their housing costs is very high, above the EU-27 average.

— Lower-income households, which cannot afford home ownership, face high rental costs relative to property prices. This partly owes to problems in the functioning of this market.

The adverse social and economic consequences of these difficulties warrant the adoption of economic policy measures geared to correct them

— Housing cost overburdening limits households' ability to save and may influence not only their consumption and investment decisions but also their decisions on where to live, whether to have children and whether to continue their education.

— In consequence, housing affordability problems may have both short and long-term negative implications and may give rise to lower aggregate productivity and lower economic growth.

— Considering the scale of the problem diagnosed here, it seems unlikely that isolated short-term actions may be sufficient to significantly reduce today's housing affordability difficulties.

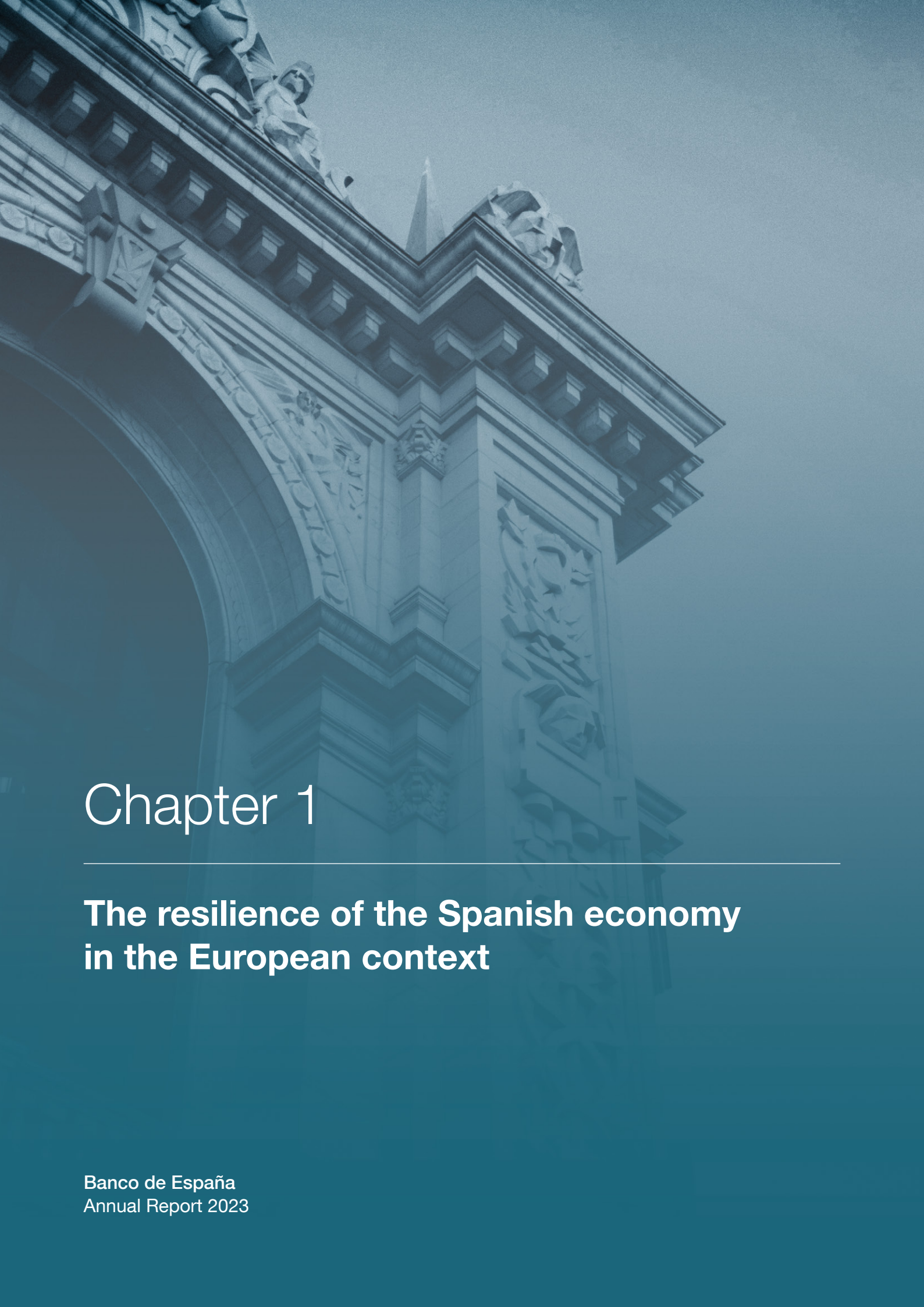
— At the same time, public policies should be designed to ensure that actions that may have relatively limited effectiveness in the short term do not ultimately have significant unwanted effects that hinder the functioning of this market in the medium and long term.

— Insofar as today's housing affordability problems are the result of imbalances that have built up over many years, they must be addressed via a combination of multiple structural policies in different areas.

— In particular, the measures adopted should:

- envisage a broad time horizon for design, implementation and evaluation of the public policies;
- involve all the various tiers of government with responsibility for housing, in a coordinated manner and in collaboration with private initiatives;

- focus, in particular, on stimulating housing supply, especially in the rental market and social rentals, prioritising allocation of the available resources to the most vulnerable groups; and
- consider other aspects that affect the housing market, such as those relating to the functioning of the labour market, the strength of economic productivity and tax and transport policies.



Chapter 1

The resilience of the Spanish economy in the European context

Contents

Takeaways 42

1 Introduction 43

2 The global and euro area economic context 45

3 ECB monetary policy and its pass-through to financing conditions 51

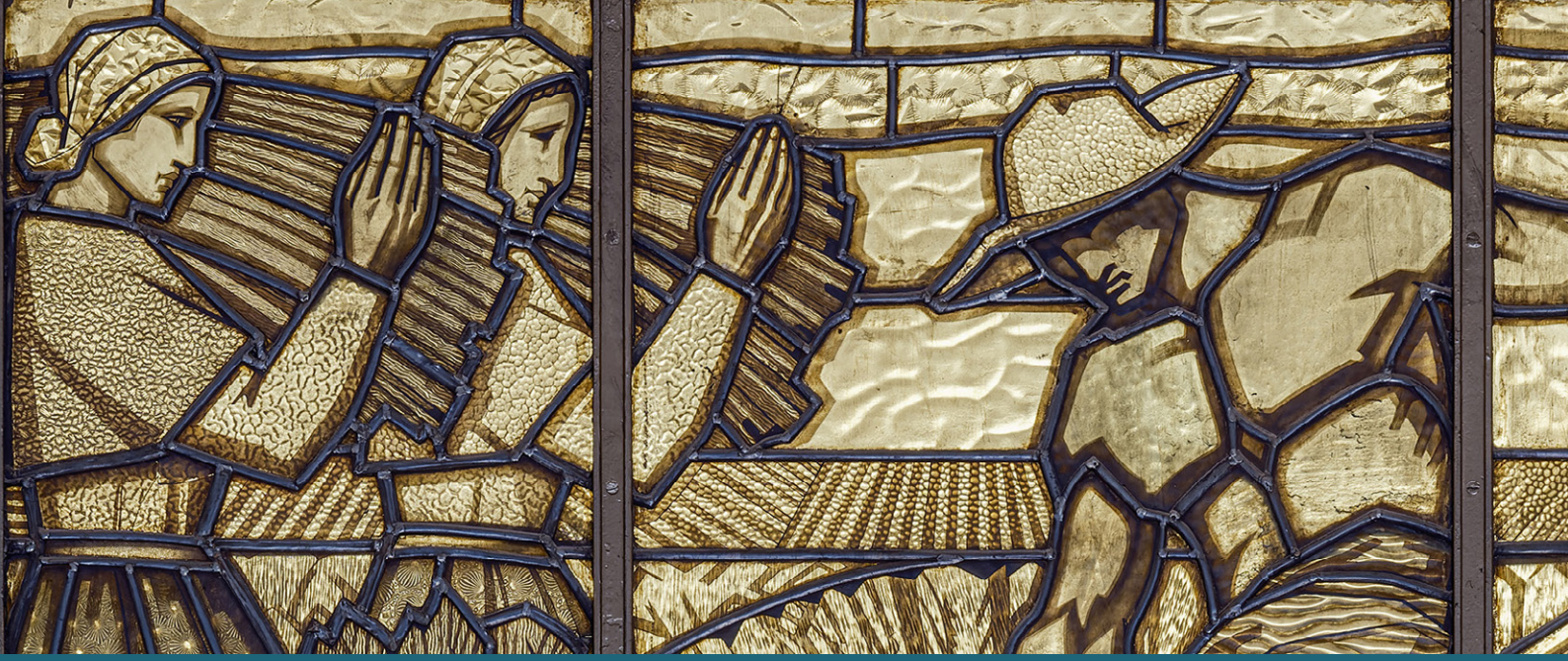
4 The Spanish economy 60

References 82

Boxes

1.1 Quantifying the determinants of the surprises in the GDP growth forecast for 2023 84

1.2 The vulnerability of households and firms to a tightening of financing conditions 88



Chapter 1
Takeaways

— Global inflation has continued to ease, owing especially to falling energy prices, while global economic activity has remained somewhat buoyant.

— The raising of the European Central Bank's key interest rates increased the cost of new financing for households and firms in 2023. However, these cost increases tapered off in the second half of the year and had a limited impact on households' and firms' vulnerability and the credit quality of banks' balance sheets.

— The Spanish economy showed strong momentum in 2023 – more so than other euro area countries and more than expected in early 2023 – driven by both robust government and private consumption and services exports, amid weak investment.

— Headline inflation in Spain remained on the easing path that began in 2022 Q3 – which was even more pronounced than anticipated owing to the unexpected decline in energy prices – while underlying inflation and compensation per employee surprised slightly on the upside over the course of 2023.

— Looking ahead, expectations point to the Spanish economy remaining notably buoyant and inflation continuing on its moderating path.

1 Introduction

In 2023 and in 2024 to date, global economic developments have been shaped by the continuing decline in inflation. First, the sharper than initially expected falls in energy commodity prices and the gradual clearing of global trade bottlenecks following the pandemic have contributed to prices easing. Second, the tightening of global monetary policy into restrictive territory, where it remains, along with its pass-through to financing conditions, have also helped to lessen inflationary pressures.

Against this backdrop, while global economic activity slowed somewhat over the course of 2023, it remained stronger than initially expected, owing partly to the considerable vigour of labour markets in most global economies and, in some regions, to fiscal policy support. However, there was significant unevenness across regions, with, for example, the acceleration seen in the United States and China standing in contrast to the sharp slowdown (more marked than expected at the beginning of 2023) in the euro area, which was notably weak. Among the European countries, the German economy was particularly subdued and even contracted slightly.

Looking to 2024, global economic dynamism is expected to remain close to current levels, with growth rates relatively lacklustre by historical standards and varying across regions. Growth is expected to lessen slightly in China and other emerging economies, compared with a slight uptick in the case of the United States and the euro area, although the latter continued to be one of the regions with more subdued economic activity. Global inflation is expected to continue to slacken, albeit somewhat less so than in recent quarters. In line with this global economic outlook, the cumulative tightening of monetary policy helped to contain inflationary pressures, while still having a relatively limited cost in terms of dampening activity growth and the labour market. In this context, international financial markets anticipate that the central banks of the major advanced economies – including the European Central Bank (ECB) – will lower policy rates before long, having held them unchanged since 2023 H2.[1]

Activity in the Spanish economy has shown marked resilience in recent quarters, despite the tightening of financing conditions and muted activity in the euro area. In particular, the slowdown in GDP growth in 2023 as a whole was less marked than envisaged in the projections available at the beginning of the year (see Box 1.1). Moreover, GDP growth was significantly stronger in Spain than in the euro area as a whole, owing, at least in part, to the fact that Spanish GDP was further below its pre-pandemic level at end-2022 and because the impact of the energy crisis – linked to the Russian invasion of Ukraine – appears to have been less severe on the Spanish

1 A case in point is the Bank of Japan, which, at its March meeting, tightened its monetary policy stance by, among other things, choosing to raise interest rates (for the first time since 2007) into slightly positive territory (for the first time since 2016) and abandon its yield curve control strategy, which sought to keep long-term interest rates low. These decisions were taken in a setting in which, according to the Bank of Japan's Outlook for Economic Activity, published in January 2024, the price surge in recent years will be conducive to achieving the price stability target of 2% in a sustainable and stable manner towards the end of the projection period.

economy than on its European peers. Thus, at end-2023, GDP stood around 3% higher than at end-2019 in both Spain and the euro area, despite the Spanish economy's relatively sharper contraction during the pandemic. However, in an environment of high immigration flows over the last two years, Spanish GDP per capita was 0.3% above its end-2019 level, lagging behind that of the wider euro area, which stood 2% above its pre-pandemic level.

Buoyant government consumption and household spending, together with the robust performance of net exports, appear to have been the main drivers of activity in Spain, while business investment has been notably weak. First, household spending decisions appear to be underpinned by strong employment,[2] which, together with the slowdown in inflation, contributed to real income growth in a setting of population growth and widespread use of consumer credit. Second, despite the slowdown in the main Spanish export markets, net exports made a positive contribution to GDP growth in 2023, owing to the strength of international tourist arrivals in a context of very weak imports. Lastly, increases in firms' perceived uncertainty and tighter financing conditions appear to have had a negative impact on their investment decisions, despite rising profits. In any event, growth in household income and firms' profits appears to have mitigated the increase in households' and firms' vulnerability associated with the cumulative interest rate rises since 2021, while the non-financial private sector continued reducing its debt (see Box 2). In addition, private sector deleveraging and the increase in the current account surplus in 2023 led to a significant drop in Spain's negative net international investment position (IIP) vis-à-vis the rest of the world. However, the general government structural budget deficit is still expected to remain above that of 2019, while government debt remains high, at 107.7% of GDP at end-2023.

Looking ahead, the Spanish economy's growth outlook remains relatively favourable over the 2024-2026 horizon.[3] The progressive dissipation of the negative impact of monetary policy tightening on activity will contribute to the gradual revival of the European economy as a driver of external demand and growth in the Spanish economy. In addition, the moderation in inflation and the subsequent recovery in agents' real incomes, together with the fiscal impulse stemming from the NextGenerationEU (NGEU) programme, will help to underpin domestic demand.

In any event, the lack of convergence towards the level of per capita income in the euro area as a whole highlights the need to address a series of structural challenges linked to persistent weaknesses in the Spanish economy in recent years. These include lacklustre productivity and high government debt and deficits (see Chapter 2 of this report), high structural unemployment in a context of significant labour market challenges related to population ageing and the digital transition (see Chapter 3 of this report), and mounting housing affordability difficulties faced by households (see Chapter 4 of this report).

2 For more details on recent developments in the Spanish labour market and its future challenges, see Chapter 3 of this report.

3 See Banco de España (2024d).

2 The global and euro area economic context

Falling energy commodity prices and the fading of previous years' adverse supply shocks influenced developments in the global economy in 2023.

— The sustained easing in commodity prices contributed significantly to the disinflationary process throughout 2023. In terms of energy commodities, the Brent oil price fell from its peak of $120/barrel in June 2022 to around $80/barrel at end-2022, hovering around that level throughout 2023, as anticipated by futures markets in early 2023.[4] In the case of natural gas, high European Union (EU) inventories, combined with an increase in non-Russian gas supplies, helped prices to fall from €75/MWh in January 2023 to €28/MWh at the end of the year, a significantly steeper drop than expected by futures markets at the beginning of the year (see Chart 1.1.a). Turning to agricultural commodities, prices also fell somewhat more sharply than was initially priced in by futures markets.

— In 2023 the progressive clearing of bottlenecks in global value chains and declining energy prices contributed to a marked slowdown in industrial goods prices. This easing of supply chain strains and industrial producer prices was also furthered by cooling demand for this type of goods, amid the ongoing shift in household consumption towards services. However, since mid-December 2023, tensions rising in the Middle East as a result of the war in Gaza have prompted fresh disruptions to international trade flows in the Red Sea, driving up shipping times and costs. So far, these disruptions have had a relatively limited impact on supply chain bottlenecks, according to the index developed by the Banco de España, which still stands below its all-time highs during the pandemic (see Chart 1.1.b).[5]

Economic activity was also affected by the tightening of monetary policy in the main advanced economies in 2022 and 2023.

— In the context of slowing global inflation (as discussed below), the central banks of the main developed economies continued to tighten their monetary policy throughout 2023, before pausing policy rate rises in H2. In particular, between January and September 2023, the ECB raised the deposit facility rate by 200 basis points (bp) to 4%, the Federal Reserve System raised its policy rate range by 100 bp to 5.25-5.50% and the Bank of England raised its bank rate by 175 bp to 5.25% (see Chart 1.1.c). Since then, the central banks of the major advanced economies have kept policy rates unchanged,[6] although global financial markets expect them to pivot to rate cuts in 2024.[7]

4 For more details on the drivers of oil price changes in 2023, see Alonso (2024).

5 For an analysis of the impact of the Red Sea crisis on bottlenecks, see Viani (2024). For more details about the bottlenecks index, see Burriel, Kataryniuk, Moreno and Viani (2024).

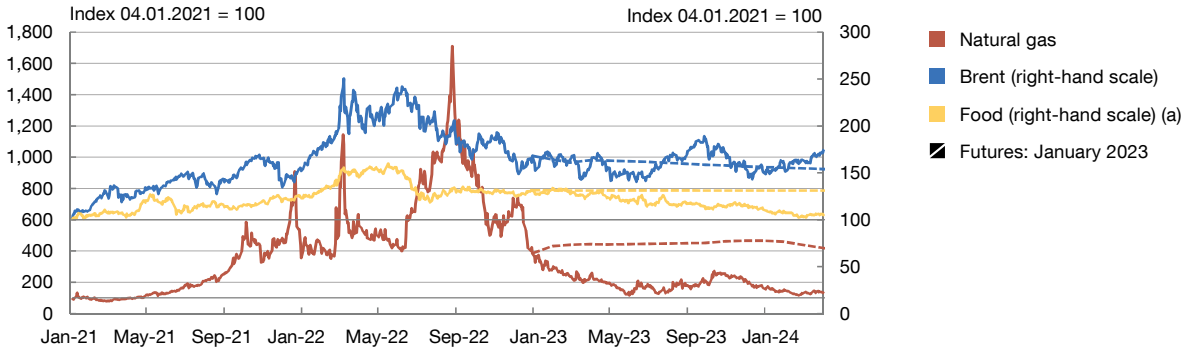
6 The Bank of Japan was a notable exception. At its March meeting, it raised its rates for the first time since 2007, setting them above zero for the first time since 2016.

7 In this context, while the euro rose slightly against the US dollar in 2023, possible divergence in the speed of interest rate cuts may influence exchange rate developments in 2024.

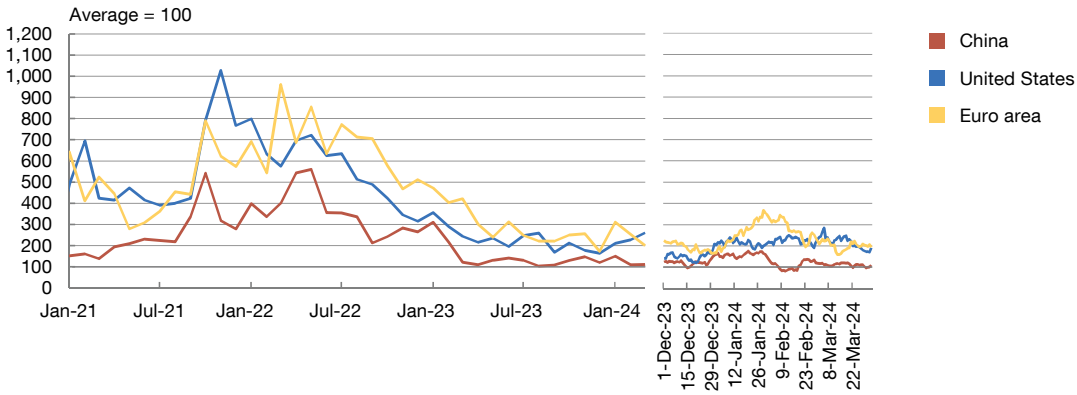
Chart 1.1

Global economic activity was shaped by falling energy prices, clearing bottlenecks and tightening monetary policy

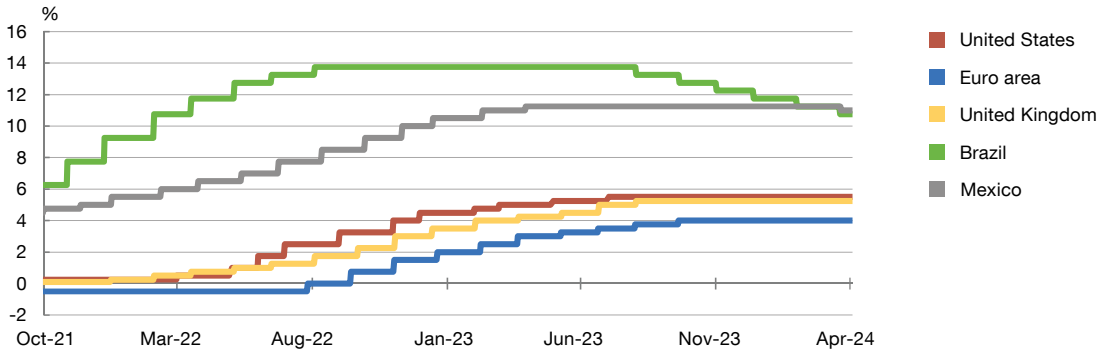
1.1.a Gas, oil and food prices



1.1.b Supply bottlenecks index: Red Sea crisis (b)



1.1.c Policy rates



SOURCES: Banco de España, drawing on Burriel, Kataryniuk, Moreno and Viani (2024), national statistics and Refinitiv.

a Bloomberg Agriculture Spot Index.
b The supply bottlenecks index measures the proportion of newspaper articles that report on supply problems and is indexed to 100 for the period ending in December 2021 (Burriel, Kataryniuk, Moreno and Viani, 2024). The euro area index is calculated as the average of the domestic German, French, Italian and Spanish indices.

DOWNLOAD

— In the case of the emerging market economies, which, broadly speaking, began monetary tightening earlier and more intensely, progress in the disinflationary process also allowed them to begin cutting policy rates earlier. For example, some central banks in Latin America and eastern Europe reduced their policy rates in 2023 H2.

Global economic activity slowed somewhat over the course of 2023, although it remained more dynamic than initially expected and was highly uneven across geographical areas, with particularly lacklustre economic growth in the euro area.

— The global economy grew by 3.2% in 2023, according to the April 2024 World Economic Outlook (WEO) published by the International Monetary Fund (IMF), below the 3.5% recorded in 2022. This slight slowdown in global economic activity was highly uneven across geographical areas, with the surge in the United States and China standing in sharp contrast to the pronounced slowdown in the United Kingdom and the euro area (see Chart 1.2.a).

— In the euro area, GDP growth eased significantly, falling from 3.4% in 2022 to 0.4% in 2023, well below the figure projected in early 2023. The marked weakness in the euro area as a whole masks considerable variation between the countries. There was particularly pronounced fragility in central and northern Europe, with GDP falls in Austria, Finland and Germany, among others, with the latter being especially noteworthy given its large share of euro area GDP. Elsewhere, other major economies, such as France and Italy, saw growth rates slow, standing just under 1% throughout 2023. Lastly, some countries in southern Europe, such as Spain, Greece and Portugal, enjoyed stronger growth, of around 2%, although this too was below that of 2022.

— Such unevenness in the pace of deceleration within the euro area can be explained, at least in part, by the varying impact of the war in Ukraine. In particular, higher energy prices appear to have had a negative impact on all economies, but more so in those that are more dependent on commodities from Russia and in which energy-intensive industries account for a greater share of production, such as Germany. Other determinants in the slowdown in economic activity throughout the euro area include the impact of the cumulative tightening of monetary policy and its pass-through to the real economy, and the decline in confidence.

— Activity picked up in the United States, with GDP growth at 2.5% in 2023, above the 1.9% of 2022 and higher than forecast in early 2023. This mainly owed to strong domestic demand, both from private consumption and investment, which was itself driven by the labour market's resilience, the expansionary fiscal policy stance and greater use of savings buffers built up during the pandemic.[8]

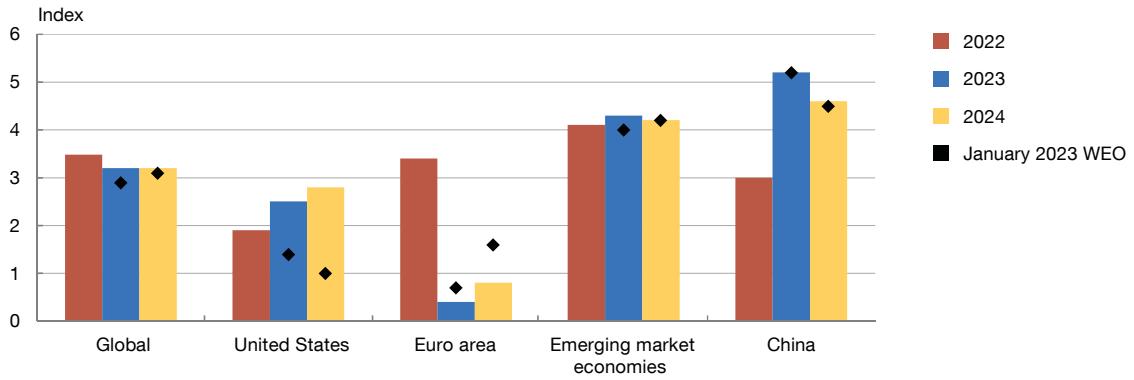
— Developments were also uneven in other developed economies. UK GDP growth rates fell from 4.3% in 2022 to 0.1% in 2023 as a result of, among other factors, high inflation and the

8 For a comparative analysis of the use of savings buffers, see, for example, de Soyres, Moore and Ortiz (2023).

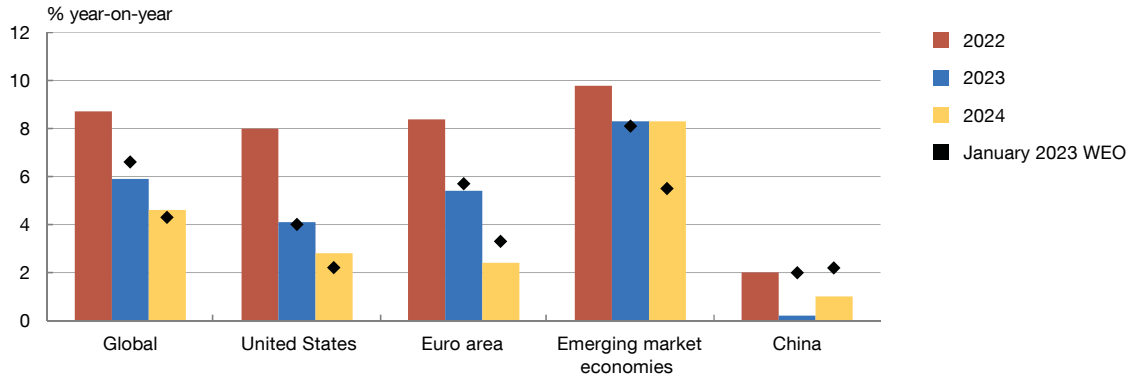
Chart 1.2

Global economic activity slowed somewhat in 2023, albeit with marked unevenness across regions, as headline inflation continued to fall

1.2.a GDP growth: actual and WEO forecasts (a)



1.2.b Inflation: actual and WEO forecasts (a) (b)



SOURCES: IMF (WEO January 2023, WEO April 2023 and WEO April 2024) and national statistics.

a Final figure for 2022, other values are forecasts
b The forecasts for China are those of the WEO (April 2024 and April 2023).

DOWNLOAD

tight monetary policy stance intended to curb it. In Japan, growth in activity rose from 1.0% in 2022 to 1.9% in 2023, against a backdrop of a more expansionary economic policy stance.

— With regard to emerging market economies, there was a noteworthy uptick in the case of China, where GDP grew by 5.2% in 2023 (outstripping expectations), compared with 3% in 2022. In any event, following the pick-up in growth at the beginning of 2023 as the Chinese economy reopened, activity slowed substantially in Q2 (mainly as a result of the real estate crisis)[9] before stabilising in H2 on the back of economic policy support and strong consumption. In addition, the risks associated with real estate market developments

9 See Banco de España (2023c) and Alonso, Santabárbara and Suárez-Varela (2023).

remain significant, as demonstrated by the liquidation of Evergrande, the real estate developer, in late January 2024, although contagion to other institutions has not yet been observed.

— Latin America saw a downturn in activity – from 4.2% in 2022 to 2.5% in 2023 – that was less severe than expected at the beginning of 2023. In particular, the relative buoyancy of the region's two largest economies, Brazil and Mexico, which grew faster than expected at the beginning of the year, stood in contrast to weaker than expected growth in the rest of the region.[10]

Looking ahead, the forecasts available envisage global economic growth steadying somewhat, albeit with marked unevenness across regions.

— In early 2024, the indicators point to a stabilisation in the pace of global economic growth, although significant variation across regions remains, both in terms of recent performance and future outlook, according to the latest forecasts available.

— The March 2023 ECB staff macroeconomic projection exercise points to a slight uptick in euro area GDP in 2024, as a result of the increase in real disposable income amid rising wages and easing inflation. By contrast, investment is expected to contract in 2024 as a result of the negative impact of tight financial conditions. However, a subsequent recovery is expected, driven by the gradual easing of these conditions and the roll-out of NGEU-funded projects.

— In the case of the United States, according to the IMF April 2024 WEO, overall GDP growth is expected to accelerate slightly in 2024 to 2.7%, compared with 2.5% in 2023, owing to resilient domestic demand and the carry-over effect of the momentum seen in late 2023, despite the cumulative effects of tight monetary policy and less expansionary fiscal policy.

— Among emerging market economies, the latest IMF projections indicate a notable slowdown in the Chinese economy, while activity growth in Latin America is expected to stabilise somewhat, at rates similar to those recorded in 2023 (except in Argentina, where a decline is projected).

Global headline inflation rates have been falling, although underlying inflation has done so more slowly.

— Headline inflation generally moderated worldwide over the course of 2023, from an average of 8.9% in September 2022 to 4.2% in December 2023. Underlying inflation also eased globally, from 6.7% in October 2022 to 4.8% in December 2023, albeit with greater downward stickiness and more slowly (see Chart 1.2.b).

10 See Banco de España (2024a).

— Despite inflation easing significantly, it remained high across the different regions. In the euro area, headline inflation dropped from a high of 10.6% in October 2022 to 2.9% in December 2023, while underlying inflation eased from 5.7% in March 2023 to 3.4% in December.[11] In the United States, headline inflation subsided from its peak of 9.1% in June 2022 to 3.4% in December 2023, while underlying inflation reduced from 6.6% in September 2022 to 3.9% in December 2023. In Latin America, the average inflation rate decreased from 10.2% in June 2022 to 5.0% in December 2023, although underlying inflation was more downwardly sticky. In China, by contrast, inflation remained much lower than in other areas and subsided over the course of 2023, to stand at -0.3% in December 2023, owing mainly to falling food prices.

— Alongside softening energy prices and, to a lesser extent, the impact of monetary policy tightening, other factors contributed to a broad-based reduction in inflation rates worldwide. These notably include the base effects in 2023 following the price upsurge of 2022 and, in some regions, such as the euro area, the fiscal measures approved to contain inflation. Nonetheless, the temporary nature of these phenomena suggest that inflation will drop more slowly in the future, as envisaged in projections.

— Early inflation data for 2024 have been generally characterised by downward surprises in the energy component (although smaller than those recorded in early 2023) and by a certain downward stickiness in services inflation.

— Going forward, inflation is expected to continue to moderate across all regions, albeit somewhat less rapidly than in recent quarters. In any event, in both the euro area (in line with the March 2023 ECB staff macroeconomic projection exercise) and in the United States (according to the Federal Reserve System's projections) headline inflation is expected to reach the 2% target level around 2025 H2 and to remain around that figure in 2026.

11 The decline in headline inflation was particularly steep in Italy, Belgium and the Netherlands (with rates below 1% in December 2023), while it was more moderate elsewhere, such as in France, where it ended the year above 4%.

3 ECB monetary policy and its pass-through to financing conditions

The ECB continued raising its key interest rates up to September 2023, when the deposit facility rate reached 4%, and has kept them unchanged since then.

— In line with its data-dependent approach, the ECB slowed the pace of the hikes to its key interest rates as inflation expectations gradually re-anchored towards the target of 2% over the medium term. After raising interest rates by a cumulative 250 bp in 2022, the ECB increased rates by 50 bp on two further occasions (in February and March 2023) and then by a more moderate 25 bp at each of the following four meetings (see Chart 1.3).

— The ECB has kept its key policy rates unchanged since September 2023, once it considered that they were at levels that, if maintained for a sufficiently long duration, would contribute to the return of inflation to its 2% medium-term target.

— More recently, at its April meeting the Governing Council stated that it would be appropriate to reduce the current level of monetary policy restriction if its updated assessment of the inflation outlook, the dynamics of underlying inflation and the strength of monetary policy transmission were to further increase its confidence that inflation was converging to the target in a sustained manner. In any event, future decisions will continue to follow a data-dependent approach and the ECB is not pre-committing to a particular rate path.

The ECB also continued to reduce the size of the Eurosystem's balance sheet throughout 2023.

— First, the balance sheet[12] continued to shrink via repayments of amounts borrowed in the third series of targeted longer-term refinancing operations, such that the stock of these operations has fallen by €2.1 trillion since it peaked in late 2021.

— Second, the ECB has also started to reduce the asset purchase programme (APP) portfolio. From March 2023 the ECB only partially reinvested the principal payments at an average run-off pace of €15 billion per month[13] and had discontinued such reinvestments as of July 2023. Overall, the APP portfolio has decreased by more than €248 billion since March 2023. More recently, in December 2023 the Governing Council announced that it would also start to reduce the pandemic emergency purchase programme (PEPP) portfolio over the second half of 2024.[14]

— Lastly, on 13 March, the Governing Council announced the outcome of the review of the ECB's operational framework.[15] Under the new framework, the Governing Council will

12 For a more detailed explanation of a central bank's balance sheet and the implications of its shrinking, see Nuño (2024).

13 Specifically, holdings of securities acquired under the APP were reduced by €15 billion per month up to July 2023.

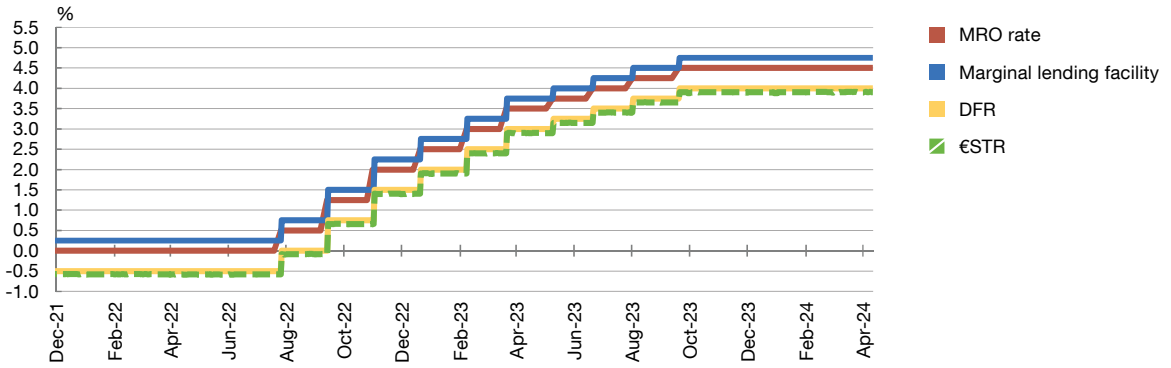
14 The ECB intends to start reducing the PEPP portfolio by €7.5 billion per month on average in July 2024 and, as previously announced, to discontinue reinvestments under the PEPP at the end of 2024.

15 The ECB's operational framework steers short-term money market rates to the levels desired by the Governing Council. For further information on the announced changes to the ECB's operational framework, see ECB (2024).

Chart 1.3

The ECB gradually slowed the pace of the increases in its key interest rates over the course of 2023 until they reached 4% in September, keeping them unchanged since then

1.3.a Key ECB interest rates and the euro short-term rate (€STR)



DOWNLOAD

SOURCES: Banco de España and Refinitiv Datastream. Latest observation: 11 April 2024.

continue to steer its monetary policy stance by adjusting the deposit facility rate (DFR).[16] However, the spread between the DFR and the rate on the main refinancing operations (MROs) will be reduced from 50 bp to 15 bp as from 18 September, with a view to limiting the volatility of market rates. In addition, the Eurosystem will reduce its footprint in the market by providing liquidity to the system through a variety of instruments based on banks' demand for reserves.[17] In any event, the Governing Council will remain vigilant throughout the transition to a system with less abundant reserves and will review the parameters of its operational framework in 2026 or earlier if necessary.

Interbank rates continued to rise in 2023. The increases gradually eased in Q4 as the change in monetary policy expectations took hold, but picked up slightly in early 2024, standing at levels below the peak values of 2023.

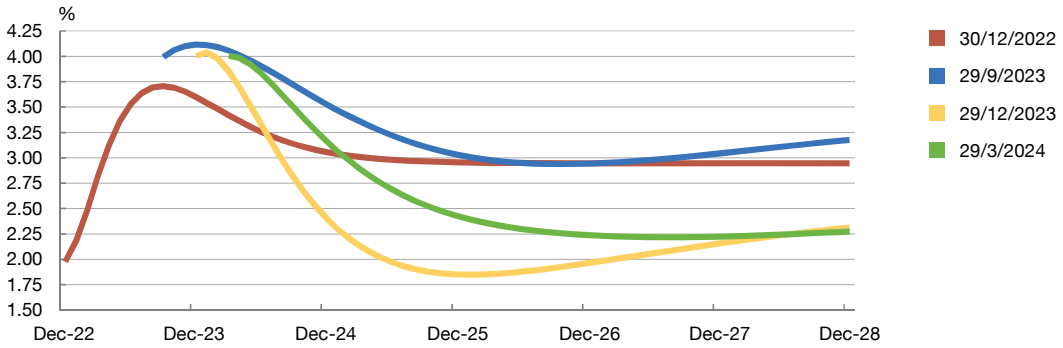
— Financial market expectations shifted in 2023 Q4, envisaging the first policy interest rate cuts being brought forward and lower interest rate levels over the coming years (see Chart 1.4). Despite being revised upwards in early 2024, interest rate expectations remained short of the levels seen in 2023. Meanwhile, the increase in uncertainty over the future path

16 Although media coverage typically singles out the MRO rate, in recent years the DFR has been the key ECB interest rate to which rates in the interbank market and, therefore, in the credit market for consumers and firms, have been more closely linked. For more details, see Martínez-Martín (2023).

17 In particular, the Eurosystem will provide liquidity through a broad mix of instruments, including short-term credit operations and three-month longer-term refinancing operations as well as – at a later stage – structural longer-term credit operations and a new structural portfolio of securities (which will factor in climate-change considerations in line with the ECB's secondary objective of supporting the EU's general economic policies).

Chart 1.4
Financial market expectations shifted in 2023 Q4, envisaging the timing of the first policy interest rate cuts being brought forward

1.4.a Adjusted €STR OIS instantaneous forwards (a)



SOURCES: Refinitiv Datastream and Banco de España.

a Instantaneous forward rates estimated based on market data on OIS rates at different maturities using the Svensson (1994) parametric model and adding the spread between the DFR and the €STR on the estimation date.

of interest rates[18] in 2023 Q4 corrected in the first months of 2024, to stand well below the historically high levels of late 2022.

— In line with the changes in market rate expectations throughout 2023, the 3-month EURIBOR, which typically serves as the reference rate in short-term and floating-rate financing extended to firms, increased by 187 bp between late 2022 and mid-October 2023. Since then it has fallen slightly, by 11 bp, to 3.9% at end-March 2024.

— Meanwhile, the 12-month EURIBOR, the main reference rate for floating-rate mortgages, rose by 94 bp between late 2022 and end-September 2023. However, since then, it has fallen by 56 bp, to 3.7% at end-March 2024.

— The ten-year swap rate, which is typically used as the reference rate for households' and firms' long-term fixed-rate financing, rose by 32 bp between late 2022 and early October 2023. Since then it has fallen by 95 bp, to stand at 2.6% at end-March 2024.

The cost of new financing to households and firms increased in 2023. However, these rises tapered off in the second half of the year, and even reversed in Q4.

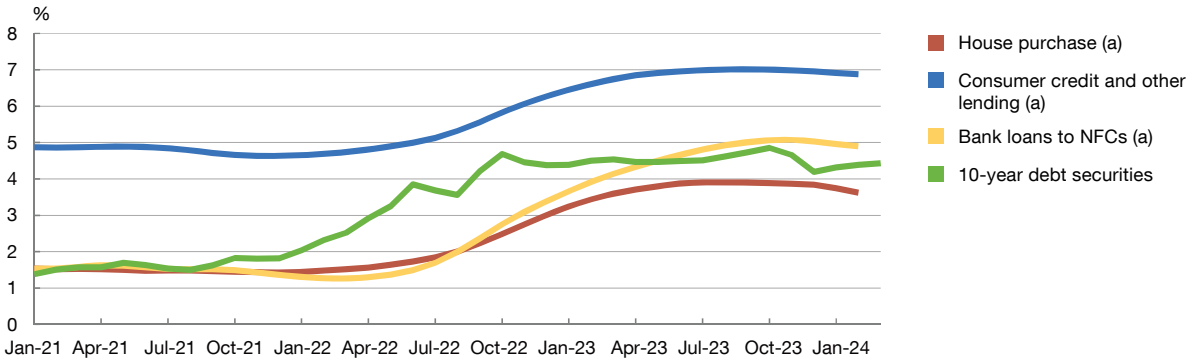
— In the first nine months of 2023, interest rates on new lending to households increased by 90 bp, to 3.9%, in the loans for house purchase segment and by 75 bp, to 7%, in the consumer credit and other lending segment. Subsequently, they fell by 28 bp and 14 bp,

18 Measured on the basis of the normalized volatility of at-the-money three-month options whose underlying assets are one-year interest rate swaps that have the 3-month EURIBOR as the floating rate.

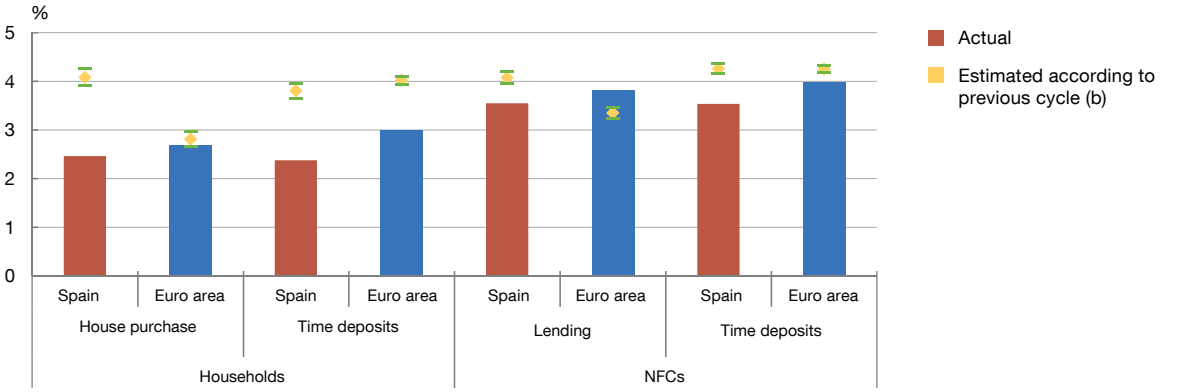
Chart 1.5

The increase in the cost of new lending eased in 2023 H2. The cumulative increase between December 2021 and October 2023 was smaller in Spain than in the euro area and smaller than suggested by historical regularities

1.5.a Cost of new lending to households and NFCs



1.5.b Cumulative change in bank interest rates between December 2021 and October 2023 (a)



SOURCES: ECB and Banco de España.

a Bank interest rates are narrowly defined effective rates, i.e. they exclude related charges, such as repayment insurance premia and fees. In addition, they are trend-cycle rates, i.e. they are adjusted seasonally and for the irregular component (small changes in the series without an identifiable regular pattern or trend).

b Resulting bank interest rate if the current cycle's increase in the market interest rate had been passed through similarly to the previous cycle, according to standard error-correction models estimated for the period between January 2003 and August 2007. A model is estimated for short-term interest rates (up to one year) and long-term interest rates (more than one year). The chart depicts the composite interest rate, weighted by the volume of new lending.

DOWNLOAD

respectively, to stand at 3.6% and 6.9%, respectively, in February 2024. Interest rates on new lending to firms rose by a cumulative 151 bp, to 4.9%, between late 2022 and February 2024 (see Chart 1.5.a).

— Meanwhile, the cost of capital market-based funding for firms (ten-year corporate bond yields) increased by 47 bp between late 2022 and October 2023 and subsequently fell by 43 bp, to stand at 4.4% in March 2024.

The cumulative increase in interest rates on new lending and deposit rates in Spain in the current monetary policy tightening cycle has been weaker than in the euro area, and also smaller than what the historical regularities would suggest.

— Between late 2021 and October 2023, interest rates on new lending in Spain increased by 246 bp, 237 bp and 355 bp in the households for house purchase, consumer credit and other lending and loans to businesses segments, respectively. Broadly speaking, these increases were smaller than those observed on average in the euro area (see Chart 1.5.b). Interest rates on lending in Spain have fallen across all segments since October 2023 and, in February 2024, they stood at levels slightly below the euro area average in most segments.

— The cumulative increase in interest rates on new lending in Spain during the current monetary policy tightening cycle has been smaller than the historical patterns would suggest, given the increase in policy rates. This smaller pass-through has been particularly marked in the case of loans for house purchase (between December 2021 and October 2023 the interest rates on the loans increased by 1.6 pp less than expected on the basis of historical regularities), while these differences have been less pronounced in loans to businesses (0.5 pp less than expected on the basis of historical regularities). These developments in Spain stand in contrast to those in the euro area as a whole, where the increases have been in line with historical regularities or even exceeded them, as in the case of financing granted to non-financial corporations (NFCs) (see Chart 1.5.b).

— The weaker pass-through of the increase in policy rates to the interest rates on new lending in Spain could be related to some of the idiosyncrasies of the banks and the pass-through to deposit rates. According to the findings of a recent Banco de España paper (Mayordomo and Roibás, 2023), Spanish banks have passed through the interest rate hikes to their deposit rates less forcefully mainly because they have less need to raise funds via deposits in order to lend and, to a lesser extent, due to the higher level of concentration. In turn, those banks that have recorded smaller growth in their overall deposit rates have passed through to a lesser extent the increase in market interest rates to their lending rates, particularly mortgage rates.[19] Thus, the lower costs of funds raised via deposits, which are Spanish banks' main source of funding, appear to have resulted in lower interest rates on lending than in the rest of the euro area.

Loan supply and demand in Spain continued to contract in 2023, in both the lending to businesses and the lending to households segments.

— According to the Bank Lending Survey (BLS), credit standards and the overall terms and conditions for new loans in Spain have tightened steadily since mid-2022.[20] However, since 2023 Q4 loan supply has ceased to tighten in most segments (see Chart 1.6). In addition, the Survey on the Access to Finance of Enterprises (SAFE) in the euro area shows that since

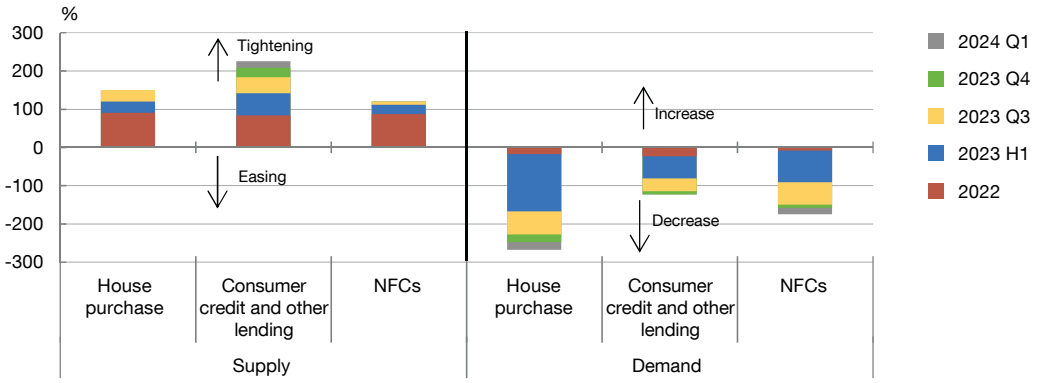
19 For more details on the possible determinants of the differences between Spain and the euro area in the speed of the pass-through of market rates to bank interest rates, see Mayordomo and Roibás (2023).

20 Changes in credit standards for consumer credit and other lending could reflect the tightening of the credit standards for other (non-consumer) lending, which contracted during 2023 due to the fall in lending to sole proprietors. Conversely, consumer credit has recorded positive year-on-year growth rates and strong momentum during the monetary tightening cycle, which appear to be associated with the financing of durable consumption.

Chart 1.6

Loan supply and demand in Spain continued to contract in 2023, although in Q4 loan supply ceased to do so in most of the segments

1.6.a Cumulative change in credit standards and demand for bank loans in Spain. BLS (a)



SOURCES: ECB and Banco de España.

a Percentage of banks reporting a tightening (increase in the case of demand) less percentage of banks reporting an easing (decrease in the case of demand).

DOWNLOAD

April 2022 Spanish small and medium-sized enterprises' (SMEs) perceptions of the availability of bank credit have deteriorated.

— In both Spain and the euro area, banks' credit standards have tightened much more markedly than in the monetary tightening cycle of 2005. According to banks' responses to the BLS, the differences compared with 2005 are explained by their greater risk perception, which is consistent with the importance of the negative supply shocks in the current inflationary episode, unlike the positive demand shocks that prevailed during the monetary tightening cycle of 2005.

— The BLS shows that loan demand fell in Spain in 2023, particularly steeply in the loans to households for house purchase segment, and has continued to do so in early 2024. Demand fell in Spain and the euro area mainly because of higher interest rates. Lower consumer confidence and the deterioration in housing market prospects also exerted downward pressure on loan demand from households. Lower fixed investment did so in the case of firms. Meanwhile, data from the SAFE also reflect a drop in loan demand from firms throughout 2023 and in 2024 Q1, with the percentage of SMEs applying for bank loans reaching its lowest level since the survey began in 2009.

The outstanding amount of financing to firms and loans to households for house purchase continued to decrease in 2023, while that of consumer credit continued to rise.[21]

21 For more details on the factors behind these lending developments, as well as for more information on the uneven behaviour across different household segments, see Banco de España (2024c).

— The contraction in the stock of lending to firms in Spain ramped up throughout 2023, with October seeing the highest year-on-year decline since early 2015 (close to 5%). However, more recently, the pace of the decline has slowed and, in February 2024, the stock contracted by 3.4%. The transmission of monetary policy to the net flows of lending has been stronger than in the past, according to the negative surprises estimated by credit forecasting models.[22] A similar moderating profile has been observed in the euro area, albeit starting from higher growth rates and with the outstanding amount of credit not recording a year-on-year contraction until September.

— The financing obtained by firms through debt securities also continued to decline throughout 2023 in Spain, although in the final months of the year the pace of the year-on-year decrease eased and in the first months of 2024 the declines amounted to less than 1%. No year-on-year declines have been recorded in the stock of this type of financing in the euro area, although its pace of growth has slowed.

— The stock of mortgage lending continued to contract in 2023, albeit more moderately in recent months. This was due to the sluggishness of new mortgage lending and high repayments, the result of the incentives to pay down floating-rate mortgages against the backdrop of higher reference interest rates. In the euro area, the year-on-year growth rate of outstanding mortgage credit slowed in 2023 and fell slightly in early 2024.

— Consumer credit recorded notable growth, associated with the financing of durable goods (e.g. cars) purchases. This pattern is similar to that observed for the euro area. Meanwhile, the contraction in other lending to households intensified because of the fall in loans to sole proprietors.

— The decline in the outstanding amount of financing obtained by households and firms, together with the growth in nominal income, helped lower the debt ratios of both institutional sectors, which stood at levels close to those seen at the start of the 21st century and below those recorded in the euro area. Specifically, in 2023 Q4 those ratios stood at around 65% and 47% of GDP for firms and households, respectively, 3 pp and 7 pp below the ratios observed in the euro area as a whole (see Chart 1.7).

Since the monetary tightening cycle was launched in July 2022, Spanish banks' net interest income has increased considerably[23] and the credit quality of their balance sheets has deteriorated marginally.

— Consolidated net interest income grew by 37.1% in 2023 compared with the annualised figure for 2022 H1. This was because the increase in key policy rates has so far been passed through more forcefully to bank assets – dominated by floating-rate loans – than to bank

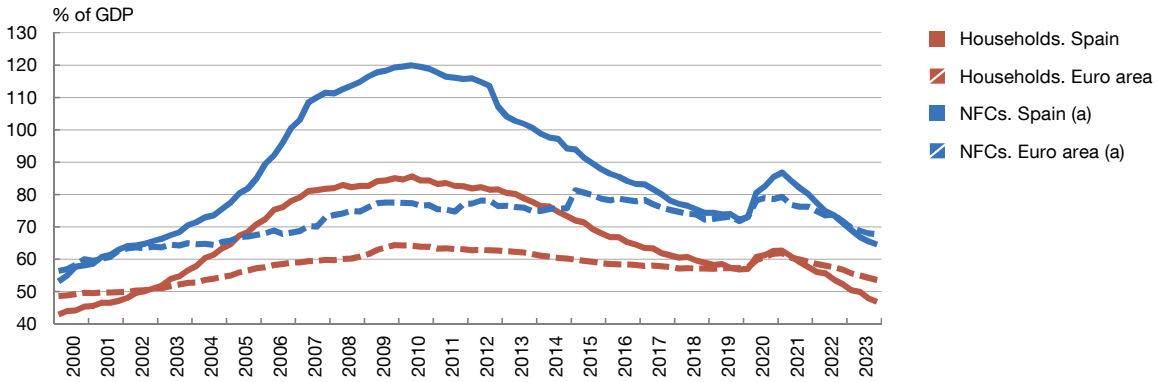
22 These surprises could be related to possible non-linearities in the transmission of monetary policy to credit supply. Indeed, according to García-Posada and Paz (2024), the speed and forcefulness of the increases in interest rates since 2021 have resulted in credit standards tightening more than in other monetary policy tightening episodes.

23 Banco de España (2023a).

Chart 1.7

Households' and firms' debt ratios continued to fall and now stand at levels close to those of the start of the 21st century and below those in the euro area

1.7.a Debt ratio of households and NFCs



SOURCES: ECB and Banco de España.

a Excludes debt positions between NFCs.

DOWNLOAD

liabilities.[24] The importance of retail deposits and a favourable liquidity position have helped contain Spanish banks' cost of liabilities.

— In 2023 the reduction in the stock of lending to the resident private sector tempered – by approximately 6 bp – the growth in the ratio of net interest income in business in Spain to the total assets of Spanish banks in June 2022. In addition, the debt security holdings on banks' balance sheets before the rate hiking cycle was launched have seen a drop in value; this has particularly affected those banks with a higher proportion of this type of asset carried at fair value. Meanwhile, at consolidated level impairment losses increased year-on-year by 22.9% in 2023, mainly because of business abroad (although they also rose in business in Spain).

— The non-performing loan (NPL) ratio and the stage 2 loan ratio for bank lending to the Spanish private sector as a whole stood at 3.4% and 7.6%, respectively, in December 2023. These levels are similar to those recorded 12 months earlier in the case of NPLs and slightly higher (0.5 pp) in the case of stage 2 loans. Broken down into households and firms, the asset quality of both loan portfolios has deteriorated, albeit very moderately.[25] In line with these developments, the higher cost of new lending to households and firms has also had a limited impact on their vulnerability (see Box 1.2).

24 In December 2023 Spanish banks' average cost of liabilities amounted to 2.6%, 1.9 pp higher than in June 2022, just before policy interest rate hiking began.

25 In the case of lending to households, the NPL ratio rose by 0.1 pp, to 2.9%, between December 2022 and December 2023, while the stage 2 loan ratio increased by 0.7 pp, to 6.1%, in the same period. NFCs' NPL ratio fell slightly (by 0.1 pp, to 4.6%) between December 2022 and December 2023. However, in the same period the stage 2 loan ratio rose by 0.4 pp, to 10.1%.

— Overall, net interest income growth dominated the changes in other income statement headings and prompted very favourable developments in Spanish banks' profitability in 2023. Return on assets and return on equity stood at 0.8% and 12.4% in 2023, 15 bp and 230 bp, respectively, higher than at end-2022.

— However, banks have not used the growth in profitability to significantly bolster the sector's solvency: the CET1 ratio stood at 13.2% at end-2023, only 17 bp above its 2022 level.

— Looking ahead, the impact of higher interest rates on bank profitability could be slightly less favourable than observed to date. Thus, net interest income should moderate once the interest rate hiking cycle is complete, as the increase in the cost of liabilities lags slightly behind that in interest income.[26]

— In addition, the materialisation of adverse macroeconomic scenarios marked by lower activity growth rates and/or higher-for-longer interest rates that could result in a further slight deterioration in credit quality cannot be ruled out.[27]

— The latest stress tests show that the Spanish banking sector's overall resilience is high.[28] However, in a highly uncertain environment with risks to growth that remain tilted to the downside, banks are still recommended to use some of the improvement in profitability to buttress their capacity to absorb future losses via provisioning and capital policies.

26 Evidence from prior periods shows that higher net interest income stemming from increases in policy rates tends to be time-limited (Pérez-Montes and Ferrer, 2018).

27 For more details on these risks and on bank profitability and solvency, see Banco de España (2024b).

28 See Banco de España (2023a) and Banco de España (2023d) for a summary of the results of Spanish banks in the Banco de España's Forward Looking Exercise on Spanish Banks and in the European Banking Authority's 2023 test.

4 The Spanish economy

In a context characterised by tighter financing conditions and the slowdown in euro area activity, economic growth in Spain has shown remarkable resilience in recent quarters – compared with both the forecasts available at the start of 2023 and the rest of the euro area – although per capita growth has been more modest.

— Over the course of 2023 the Spanish economy was affected by various constraints, including the growing impact of the cumulative tightening of financing conditions and the marked economic slowdown in the euro area. The petering out of the momentum resulting from the reopening of the economy after the pandemic also contributed to the slowdown in activity in Spain. Thus, the pace of GDP growth slowed in 2023, falling from 5.8% in 2022 to 2.5% in annual average terms.

— The GDP growth rate in 2023 was well above the Banco de España and analysts' consensus forecasts made at the beginning of the year. Two of the factors that contributed to this discrepancy are the positive carry-over effect on the 2023 average growth rate of the revised National Accounts released in September[29] by the National Statistics Institute (INE) and the stronger than initially expected growth of private consumption, government consumption and travel services exports – against a background in which migration flows and population growth grew faster than initially expected (see Box 1.1).

— GDP also grew faster in Spain than in the euro area, which saw GDP growth of 0.4% in 2023, below both the figure for 2022 (3.4%) and the forecast in the March 2023 ECB staff macroeconomic projections exercise (1%).

— Considering a longer time frame, GDP at end-2023 was approximately 3% above its end-2019 level in both Spain and the euro area as a whole, even though the decline during the pandemic was more pronounced in Spain. However, GDP per capita in Spain was barely 0.3% above its end-2019 level, well below the figure for the euro area as a whole, where it was 2% above its pre-pandemic level (see Chart 1.8).

The greater buoyancy of economic activity in Spain compared with the euro area as a whole over the course of 2023 was mainly due to a stronger boost from domestic demand and greater resilience to the energy shock.

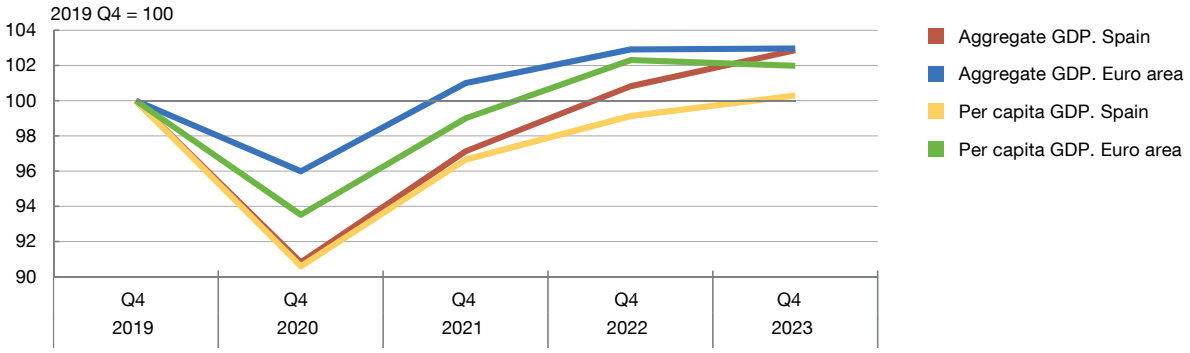
— The determinants of the differences in growth between Spain and the euro area over the course of 2023 can be identified using an econometric model that distinguishes between demand shocks (e.g. shocks to fiscal policy or agents' spending decisions) and supply shocks (e.g. shocks to productivity or to international commodity prices, such as energy

29 Fernández, González Mínguez, Izquierdo and Urtasun (2023).

Chart 1.8

Economic growth in Spain, which was greater on aggregate than in per capita terms, has shown some resilience in recent quarters and has been stronger than in the rest of the euro area

1.8.a Aggregate and per capita GDP in Spain and the euro area



DOWNLOAD

SOURCES: INE and Eurostat.

prices). This model also differentiates between domestic and international shocks, based on the fact that international prices are set on global markets and are therefore not immediately affected by developments in domestic variables.[30]

— The results obtained with this modelling strategy suggest that more than one-half of the difference in GDP growth between Spain and the euro area in 2023 is due to domestic demand shocks (see Chart 1.9.a).

— As discussed below, the importance of domestic demand factors is consistent with the buoyancy of household consumption in Spain in 2023, among other developments. Specifically, compared with the rest of the euro area, the boost provided by the convergence of household consumption to its pre-pandemic levels appears to have been stronger in Spain, as it was the euro area country with the largest negative gap between consumption in 2022 and in 2019 (see Chart 1.9.b).

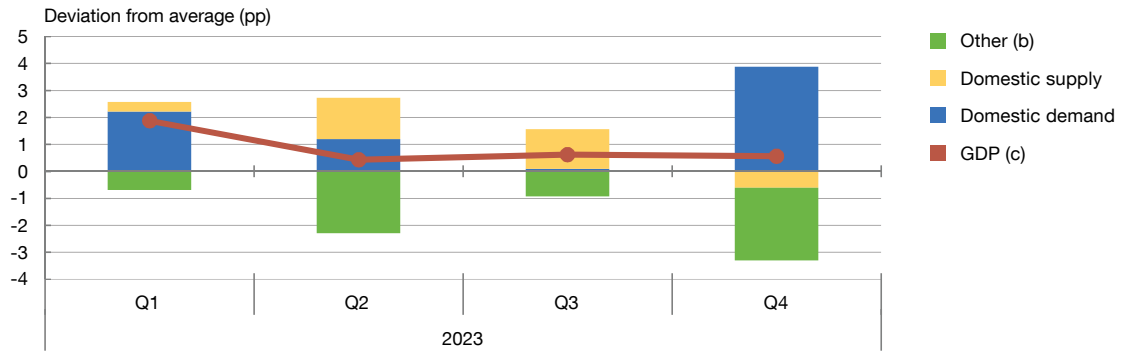
— It is also worth noting the remarkable dynamism of government consumption in Spain over the past year, in contrast to its sluggishness in the euro area. In 2023 real government consumption increased by 3.8% in Spain, compared with 0.7% in the euro area as a whole.

30 In particular, a macroeconometric structural vector autoregression model is considered similar to that used in Leiva-León, Martínez-Martín and Ortega (2022), estimated from a sample covering the period 2002-2023 for each area considered. The model uses sign restrictions to estimate the contribution of the demand and supply shocks, under the assumption that demand shocks drive economic activity in the area under consideration and prices in the same direction while supply shocks drive them in opposite directions. In addition, national and international price series are used to distinguish between shocks originating abroad – which affect all variables in the model contemporaneously – and domestic shocks – which only affect domestic variables.

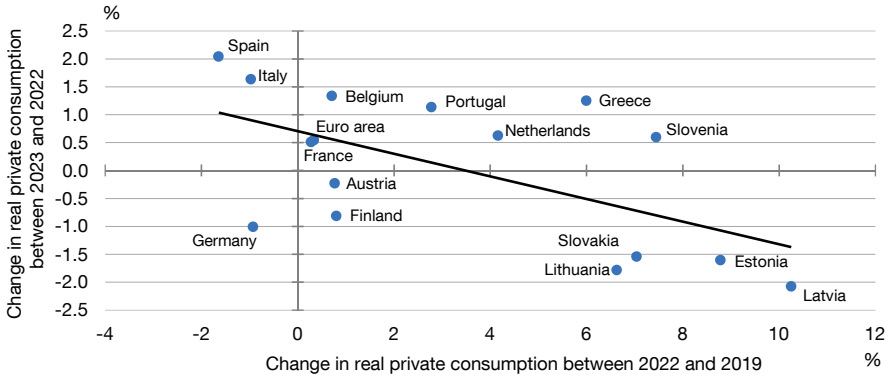
Chart 1.9

The Spanish economy grew at faster rates than the euro area in 2023, mainly because of domestic supply and demand factors

1.9.a Difference in growth between Spain and the euro area (a)



1.9.b Private consumption growth in 2023 versus the consumption gap in 2022 with respect to pre-pandemic levels



SOURCES: Eurostat and Banco de España calculations.

a The breakdown is obtained from a structural vector autoregression model with sign and exclusion restrictions on impact, based on Leiva-León, Martínez-Martín and Ortega (2022). The estimation sample covers the period 2002-2023.
b Global supply and demand, profits and the labour market.
c The lines represent the difference between the deviation of the series from its historical average in Spain and that in the euro area. This difference is very similar to that between the gross series, but it makes it possible to better capture the different behaviour of the two regions.

DOWNLOAD

— Supply shocks have also contributed to the greater buoyancy of activity in Spain, explaining around one-third of the difference in growth between Spain and the euro area as a whole in 2023 (see Chart 1.9.a).

— This is also consistent with a series of recent supply-side developments. In 2023 energy prices slowed down earlier and more sharply in Spain. Indeed, the pass-through of global energy commodity prices to national price indices and, therefore, inflation, has been very different in Spain and the euro area in recent times. For example, at end-2023 the prices of the gas and electricity components of the harmonised index of consumer prices (HICP) in Spain stood below their 2021 levels, while in the euro area they were still 40% to 50% higher. This was mainly due to two reasons. First, the Spanish economy was less exposed to the risk of Russian gas supplies being cut-off, as it had more diversified supply sources.

This reduced uncertainty and the need for industry to find alternative sources of energy.[31] Second, the sharp increase in electricity generated from renewable sources in Spain (from 42% in 2022 to 50% in 2023) drove down wholesale electricity prices more than in the euro area. Moreover, these reductions were passed through to retail prices more quickly in Spain, given its idiosyncratic price-setting mechanisms.[32]

— The differences in the sectoral composition and position in global value chains of the Spanish economy and of other European economies also partly explain the greater boost to activity in Spain from supply-side factors. In particular, the Spanish economy benefited from the fact that services – which grew faster than the industrial sectors, especially those most dependent on energy as an intermediate input – account for a larger share of its productive system.[33]

Job creation in Spain remained highly buoyant throughout 2023, amid some labour market tightening.

— Employment grew strongly in 2023. Over the course of the year, employment increased by 1.9% in terms of hours worked (3.2% in terms of persons employed). However, it slowed down in the second half of 2023 (see Chart 1.10.a).

— The high annual rates of employment growth, measured in terms of persons employed, exceeded GDP growth rates, leading to declines in apparent labour productivity, which has been falling in year-on-year terms since 2022 Q4 (see Chart 1.10.b).

— Despite robust employment growth, the unemployment rate only declined by 1.1 pp, to 11.8% in 2023 Q4. This reflected the strength of the labour force, which grew by 2.5%, driven by the sharp increase in foreign nationals and the working-age population (1.7%).

— Moreover, the temporary employment ratio tended to stabilise in 2023, following the strong decline a year earlier. Nevertheless, the aggregate temporary employment ratio stood at 17.1% on average in 2023, down 8 pp on the 2021 average, although with large differences between the public sector (30.4%) and the private sector (13.8%). However, this lower share of temporary work than in the period before the 2021 labour market reform coexists with high indicators of labour turnover.[34]

— Again, the sharp increase in employment came hand in hand with a reduction in average weekly working hours, which have not yet returned to pre-pandemic levels. This decline reflects the impact of both temporary factors (the greater incidence of leave due to sickness

31 Balteanu and Viani (2023) and Quintana (2022).

32 In particular, under the dynamic pricing system of the regulated rate for small consumers in force in Spain in 2023, wholesale electricity prices are passed on immediately to the consumer, unlike in most European countries. However, the reform of this rate to take into account electricity prices on the futures market, which will enter into force in early 2024, will bring the speed of the pass-through in Spain closer to that in the euro area.

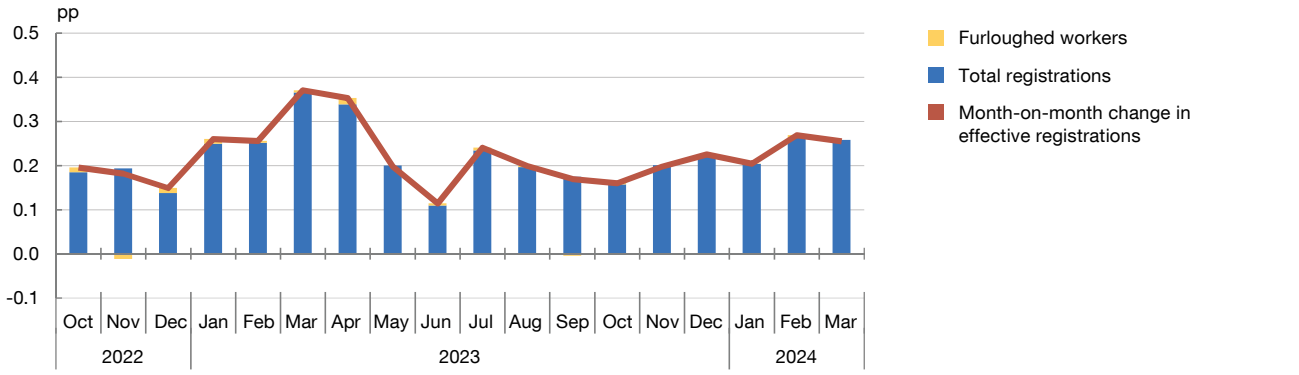
33 For more details, see Fernández Cerezo, Kataryniuk and Rodríguez (2023).

34 See Chapter 3 of this report.

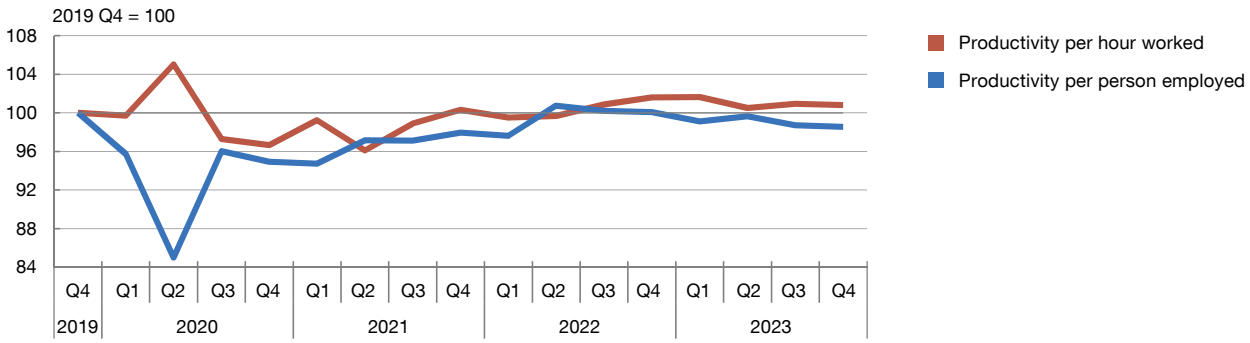
Chart 1.10

Employment grew strongly in 2023, exceeding its pre-pandemic level. However, this strength translated into a decline in apparent labour productivity

1.10.a Monthly change in effective social security registrations (a)



1.10.b Changes in productivity per hour and per person employed since 2019



SOURCES: INE and Ministerio de Inclusión, Seguridad Social y Migraciones.

a Seasonally adjusted monthly rates.

DOWNLOAD

or incapacity for work, in part associated with the consequences of COVID-19) and trend factors (the increase in female participation, the share of the services sector in the economy and part-time work).[35]

— Against this background, the labour market showed some signs of tightening, with increases in the vacancy rate and in the incidence of labour shortages at firms. This tightness in the labour market could be at least partly explained by a certain degree of labour hoarding by firms[36] (see Chapter 3 of this report for more details on these aspects).

GDP growth over the course of 2023 was mainly underpinned by buoyant household consumption expenditure, while investment growth was rather weak.

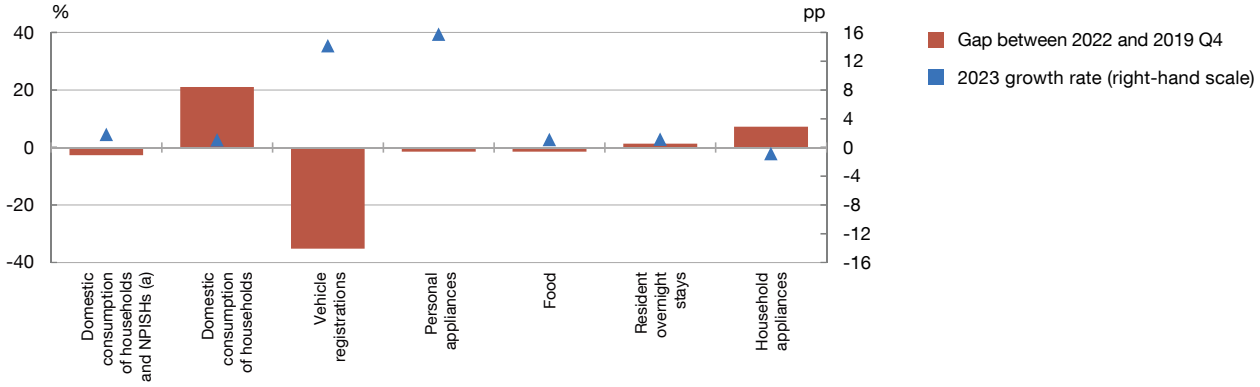
35 Cuadrado (2023).

36 This concept refers to keeping workers on the payroll during slack periods in anticipation of future labour demand needs. The reduced willingness to lay off workers is due to greater recruitment difficulties and the uncertainty built up during the pandemic and the subsequent period of supply shocks.

Chart 1.11

Consumption was the main driver of growth in 2023, with notable increases in the expenditure items that were furthest from their pre-pandemic levels at the start of the year

1.11.a Household spending (annual average, growth in 2023 and difference between the level at end-2022 and that in 2019 Q4)



SOURCES: INE and Eurostat.

a Non-profit institutions serving households.

DOWNLOAD

— Household consumption was one of the main drivers of growth in 2023. Growth in this aggregate (1.8% in annual average terms) meant that it had returned to pre-pandemic levels by the end of the year. Vehicle registrations, which at end-2022 were 35% below their pre-pandemic level, were highly dynamic in 2023, growing by 14% (see Chart 1.11). From a longer time perspective, it can be seen that, since the start of the pandemic, the share of spending on durable goods – for example, on items related to household appliances – has increased at the expense of the other items.

— In addition to some demand pent up from the pandemic (for example in the case of motor vehicles), the factors that contributed to consumption growth include the strength of the labour market and the buoyancy of labour income and inflows of immigrants. Specifically, robust job creation and higher wages, together with the moderating path of inflation, appear to have boosted households' purchasing power somewhat. These developments helped to cushion the negative impact of tighter financing conditions on consumption, in a context in which the stock of consumer credit nevertheless saw some growth.

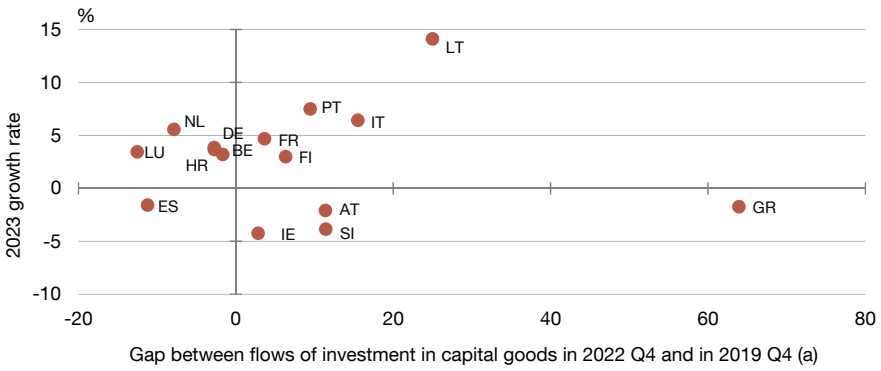
— Indeed, despite this tightening, and according to the information from the ECB's Consumer Expectations Survey, Spanish households – in particular those with a lower liquidity buffer – appear to have resorted to consumer credit to a greater extent – more than in the euro area – and increased their working hours to maintain their consumption levels.[37]

37 Martínez Carrascal (2024).

Chart 1.12

Spain is the only euro area economy where investment in capital goods fell despite having a negative gap relative to 2019 levels

1.12.a Investment in capital goods



SOURCES: INE and Eurostat.

a Except Belgium, where no quarterly series are available for this aggregate and for which the gap between investment levels for the whole of 2022 and 2019 is shown instead.

DOWNLOAD

— This notable increase in household income allowed households in 2023 to combine higher consumption with an increase in their saving rate to levels above its historical average. In addition, households appear to have allocated part of these savings to the early repayment of loans, as rising interest rates provided an incentive to repay variable-rate mortgages.

— Investment in capital goods declined moderately in 2023, while investment in intangible assets was somewhat sluggish.[38] Thus, when the gap in investment rates between 2019 and 2022 is set against investment in 2023, Spain is the only euro area economy where investment fell despite having a negative gap compared with pre-pandemic levels (see Chart 1.12).

— Notable among the factors that have weighed on the dynamism of investment in Spain are the high levels of economic policy uncertainty – according to the Banco de España Business Activity Survey (EBAE) –,[39] the impact of higher interest rates on loans to firms, which intensified over the course of the year more than in the case of consumer credit, and the later than initially planned implementation of NGEU projects compared to what was initially planned (see Box 1.1 for more details).

— Residential investment increased slightly in 2023 compared with 2022, in a context where higher interest rates seem to be having a stronger impact on the mortgage market than on housing demand, which has grown on the back of high immigration flows. In fact, house

38 For a more detailed analysis of investment in capital goods and intangible assets since the start of the pandemic, see Chapter 2 of this report.

39 Fernández Cerezo and Izquierdo (2023).

purchases by foreign citizens as a share of total house purchases reached 19% in 2023, close to the peak of the time series. However, the tightening of credit standards appears to have contributed, at least in part, to a decline in home ownership affordability, especially for young people (see Chapter 4 of this report).

Economic activity was bolstered by net external demand, in a context of remarkably strong Spanish exports, especially travel services, and some weakness in imports, which significantly widened the current account surplus.

— Of note on the exports side was the strength of travel services, in a setting where foreign tourist arrivals in 2023 as a whole were 1.9% above their pre-pandemic levels, reaching an all-time high of over 85 million. In addition, the contribution of travel services exports to output growth benefited from the arrival of foreign visitors with higher purchasing power, as evidenced by their average daily expenditure in real terms, up 2.2% on its 2019 level. The factors behind the strong buoyancy of international tourism in 2023, once it had returned to pre-pandemic levels, included a possible positive impact on tourist arrivals of the geopolitical conflicts in the Middle East[40] and, above all, a more diverse range of destinations across Spanish regions and the greater influx of foreign tourists in the autumn and winter season (see Chart 1.13).[41]

— Meanwhile, exports of goods fell in 2023, against the backdrop of a slowdown in the euro area economies, the main destinations for Spanish exports. However, exports to countries such as Germany remained solid, despite the country's sluggish economic growth and in marked contrast to the weakness of exports to Germany in countries such as France and Italy (see Chart 1.14.a). The relatively favourable performance of the Spanish economy's competitiveness indicators in 2023 compared with the euro area as a whole could at least partly explain this momentum. Specifically, the indicator based on consumer prices points to a slight improvement in the competitiveness of the Spanish economy in 2023, while the indicators based on output prices (GDP deflator) and unit labour costs (ULCs) relative to the rest of the euro area suggest it remained practically stable in 2023, albeit with a slight improvement compared with the 2022 average[42] (see Chart 1.14.b).

— On the imports side, the stagnation of goods imports, despite the rise in domestic demand, is a factor behind the positive contribution of net external demand to output growth. Among the determinants of this stagnation are the subdued growth of the demand components with a higher import content (in particular, investment), changes in the composition of the household consumption basket, with own brands (whose production is more concentrated in Spain) accounting for a greater share, the slight improvement in the competitiveness

40 In the past, conflicts in Mediterranean countries have led to higher increases in tourism flows than estimated using the traditional determinants of these flows. For more details on the factors behind the recent upturn in tourism in Spain, see Hernández de Cos (2023).

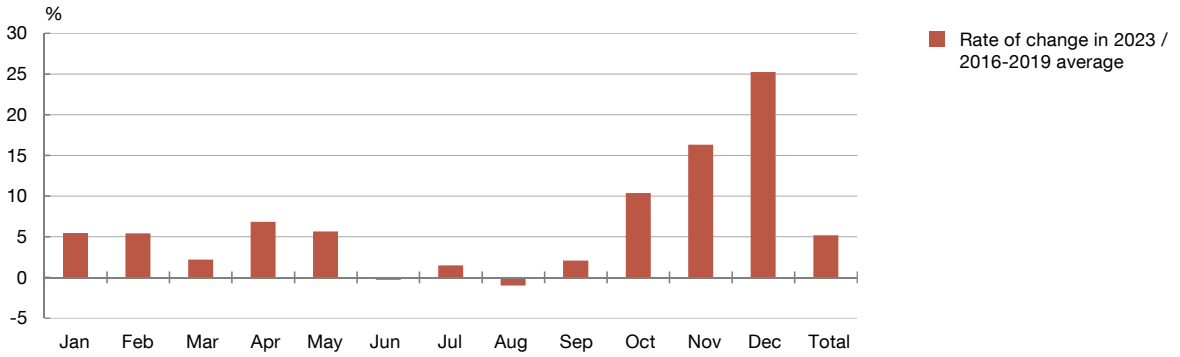
41 For example, arrivals between October and December were 17% higher in 2023 than in the period 2016-2019, while arrivals in the summer months were only 1% higher. For more details, see García Esteban and Jiménez-García (2024).

42 In any event, it should be noted that by end-2023 the ULC-based indicator had not yet recovered from the competitiveness losses recorded during the pandemic.

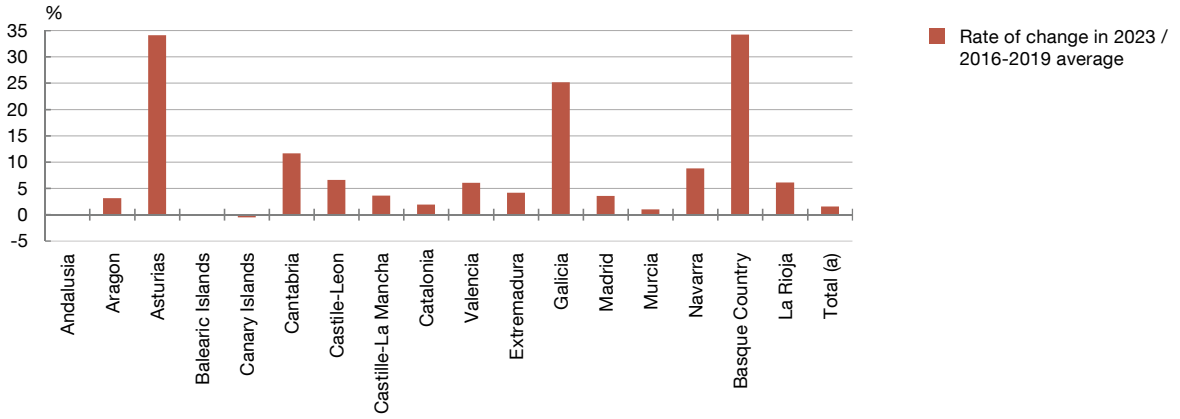
Chart 1.13

Tourism in Spain is becoming more diversified in terms of both seasons and regions, compared with the pre-pandemic period

1.13.a Foreign tourist arrivals, by month. Rates of change in 2023 relative to the 2016-2019 average



1.13.b Overnight stays in hotels by foreign tourists, by region. Rates of change in 2023 relative to the 2016-2019 average



SOURCE: INE.

a Although Ceuta and Melilla are included in the total, they are not included in the breakdown due to their low relative weight in total overnight stays.

DOWNLOAD

indicators of the Spanish economy and greater domestic energy production, in a context in which Spain has comparative advantages to become a supplier to the European countries most dependent on Russian oil and gas.[43]

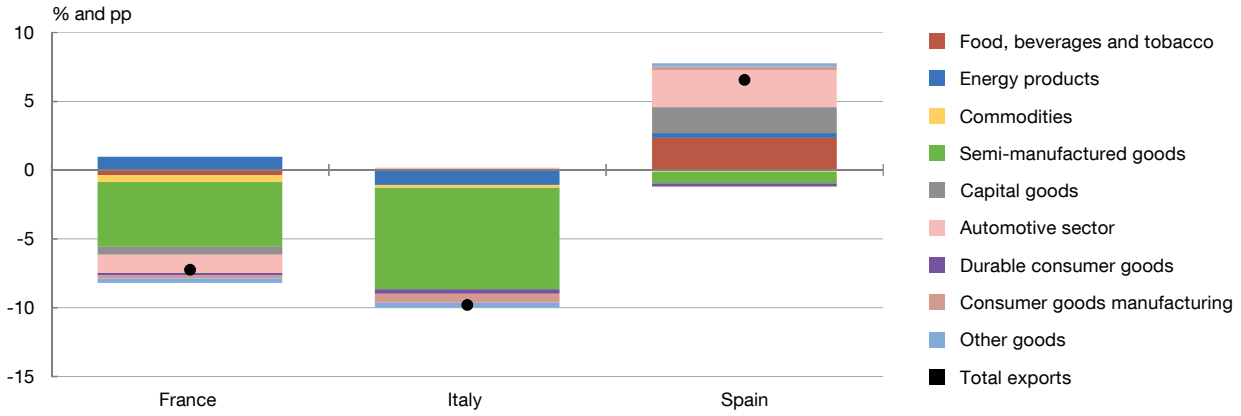
— The external balance for goods and services improved markedly, increasing by 3 pp of GDP, to 4.1% at the end-2023. Thus, in 2023 the Spanish economy's current account surplus increased significantly to around pre-pandemic levels (2.6% of GDP), despite higher interest rates and the sharp widening of the energy deficit, which were more than offset by the increase in the non-energy goods and services balance.

43 García Esteban, Gómez-Loscos and Martín-Machuca (2023).

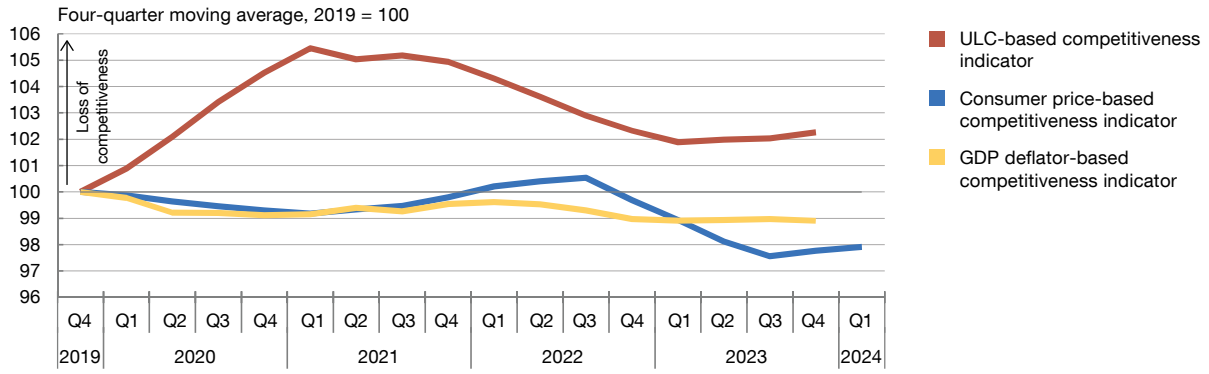
Chart 1.14

Spanish goods exports to Germany grew notably in 2023, amid a slight improvement in Spain's competitiveness indicators compared with the euro area

1.14.a Contribution of each product to the nominal change in exports to Germany between 2022 and 2023



1.14.b Indicators of Spain's competitiveness versus the rest of the euro area (a)



SOURCES: Ministerio de Economía, Comercio y Empresa, Eurostat, ECB and OECD.

a Three harmonised indicators are shown: one calculated using ULCs, another calculated using consumer prices and another calculated using GDP deflators. An increase (decrease) in the indicators implies a competitiveness loss (gain).

DOWNLOAD

— The current account surplus reflects both the positive external balance of goods and services and the positive difference between aggregate saving and investment in Spain. In other words, the rise in the external surplus in 2023 would also stem from the increase in the household saving rate and in firms' profits, in a context of significantly weak investment.

— The sustained current account surpluses of recent years have led to a substantial correction of Spain's negative net international investment position (IIP), amid private sector deleveraging. In particular, the negative net IIP with the rest of the world has fallen by around 45 pp of GDP from its 2009 peak, to 52.8% in 2023 Q4. However, this negative net IIP remains high compared with the euro area, with the public sector accounting for most of it. Indeed, the general government's negative net IIP with the rest of the world in 2023 (39.5%) was higher than in 2009 (by 13.8 pp of GDP).

Government consumption and social benefits further underpinned activity in 2023, although the partial withdrawal of some of the support measures implemented in response to the energy crisis and the strength of government revenues resulted in a slightly contractionary fiscal stance.

— Real government consumption surprised markedly on the upside in 2023, with growth of 3.8%, up from -0.2% in 2022. Government consumption would thus be 1.1 pp of GDP above its 2019 level, meaning that a significant part of the increase in government consumption that occurred in the context of the pandemic has become entrenched.

— Expenditure on pensions, driven by the CPI-indexed revaluation of pensions in 2022 and further increases in minimum and non-contributory pensions, also pushed up the growth rate of government spending. In particular, pensions rose by 10.7% in 2023, compared with 5.1% a year earlier. Meanwhile, the expenditure financed by the NGEU programme is estimated to have risen significantly in 2023, compared with 2021 and 2022, albeit less than expected at the beginning of the year.[44]

— As inflation slowed throughout the year, some of measures taken in response to inflation were allowed to expire in 2023, while others were extended to all of 2024 (see Table 1.1). The withdrawal of some measures with a high cost and a particularly broad scope – such as the blanket discount on fuel prices –[45] helped to improve the efficiency of their overall design in 2023, although untargeted measures with potentially distorting effects on prices remain predominant. The budgetary cost of these measures fell in 2023 – and consequently so too did their impact on activity – but remained high (1.2% of GDP compared to 1.5% in 2022).

— Overall, government revenue saw a notable increase of 9% year-on-year in 2023, up 0.5 pp on 2022. However, this dynamism is partly due to the increase in interest received and investment grants from the EU. Indeed, total revenue from taxes and social security contributions grew by 7.9%, 1.6 pp less than a year earlier and 1.1 pp less than total revenue. This occurred in a context where the growth in the macroeconomic bases of the main taxes, the favourable impact on personal income tax collection of fiscal drag[46] and the almost neutral net effect of the revenue measures were expected to result in an increase similar to that of the previous year. Therefore, the slowdown in tax and social security contribution revenues compared with 2022 is mainly due to a change in the sign of tax residuals – the difference between observed revenue and that expected based on the macroeconomic bases and the measures implemented – from positive in the previous years to negative in 2023. This would suggest that the high revenue growth seen during the pandemic (above

44 Total expenditure adjusted for temporary measures and unemployment is estimated to have increased by 8.5% year-on-year in 2023, compared with 9.9% in the previous year. However, considering the decrease in temporary measures and unemployment developments, unadjusted total expenditure would have increased by 6.4%.

45 García-Miralles (2023).

46 Balladares and García-Miralles (2024).

Table 1.1

The authorities have presented a broad raft of measures aimed at countering the effects of the rise in the prices of various goods and services on the incomes of households and firms. The total estimated budgetary cost of these measures is €48.3-€57.1 billion over the period 2021-2025 (3.5-4.1% of GDP)

Support measures for households and firms in response to the energy crisis and inflation (a)

	Applied from	Expected expiry date	Targeted	Budgetary cost in period 2021-2025 (€m)
(1) Income measures				[-29,550,-25,850]
VAT: temporary reduction in rate on electricity	01.07.2021	31.12.2024	No	[-7,000, -6,000]
Excise duty: temporary reduction in rate on electricity	01.09.2021	30.06.2024	No	[-5,000, -4,000]
VAT: temporary reduction in rate on gas	01.10.2022	31.03.2024	No	[-650, -550]
VAT: temporary reduction in rate on food	01.01.2023	30.06.2024	No	[-3,400, -2,900]
Personal income tax: earned income deduction, reductions for self-employed and regional reductions (b)	01.01.2023	Permanent	Partially	[-13,500, -12,400]
(2) Spending measures				[22,450, 27,550]
Fuel rebate for households and professional drivers (c)	01.04.2022	31.12.2023	No	[6,500, 7,500]
Grant to firms affected by energy price increase (d)	01.04.2022	31.12.2023	Yes	[3,500, 4,500]
€200 cheque for vulnerable households (both packages)	01.07.2022	31.12.2023	Yes	[400, 500]
15% increase in non-contributory pensions (including minimum income scheme)	01.04.2022	Permanent	Yes	[1,000, 1,600]
Public transport subsidy (e)	01.09.2022	31.12.2024	No	[4,000, 5,000]
Student grant expansion	01.09.2022	31.12.2022	Yes	[350, 450]
Subsidies to the electricity/gas sector to reduce bills (f)	01.09.2023	31.12.2022	No	[6,000, 7,000]
Social rebate on heating	01.10.2022	Permanent	Yes	[700, 1,000]
(2-1) Total funds				[48,300, 57,100]
(3) Other measures with no direct budgetary cost				
Suspension of tax on electricity generation (g)	01.07.2021	31.12.2023		
Iberian exception	01.10.2021	31.12.2022		
Price cap for butane gas	15.06.2022	31.12.2023		
Cap on rental increases	01.04.2022	31.12.2023		

SOURCE: Banco de España, drawing on information from the Spanish Government, IGAE, Agencia Tributaria, the EPF and the EFF.

a The estimated budgetary impact of these measures is subject to a high degree of uncertainty and is regularly revised based on incoming data.
b Includes the announced increase in the tax deduction for employment income, with effect from 2024.
c It is estimated that around 50%-60% of this rebate is received by households. Includes the extension from 01 January 2023 until 31 December 2023 for professional drivers.
d Includes support to firms and sectors affected by the increase in energy prices and by the drought.
e Includes the Interrail subsidy.
f Includes the extraordinary subsidy to the electricity sector (from 1 September 2022), assumption of the shortfall arising from the regulated rate for small natural gas consumers (from 1 October 2022) and measures to make electricity and gas contracts more flexible (from 1 January 2023).
g The temporary suspension of the tax on electricity generation (IVPEE by its Spanish initials) is not considered to have a direct budgetary impact as, by law, the receipts are used to cover the electricity sector's costs.

that corresponding to its macroeconomic bases) was somewhat temporary, in line with the lack of conclusive evidence on its driving factors.[47]

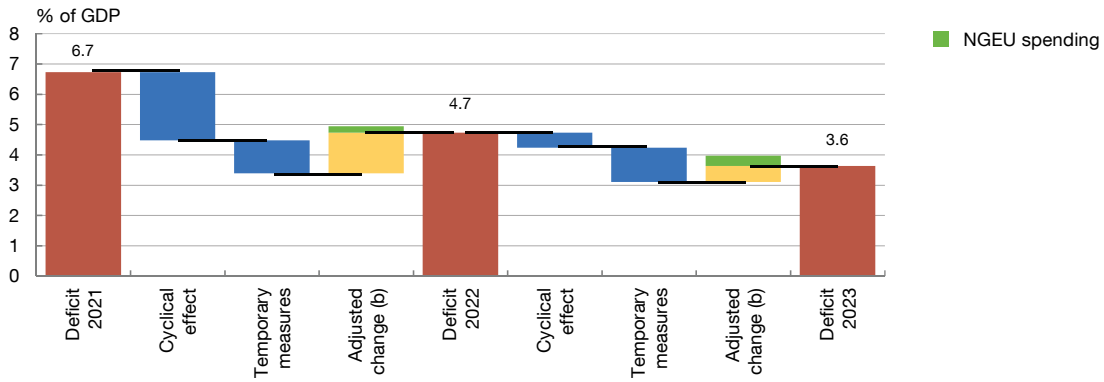
— Overall, 2023 ended with a deficit of 3.6% of GDP, 1.1 pp lower than at end-2022. Thus, the fiscal policy stance – as measured by the change in the cyclically adjusted balance and

47 For more details, see García-Miralles and Martínez-Pagés (2023).

Chart 1.15

The correction of the Spanish general government deficit moderated in 2023, with a much smaller contribution from the economic cycle and a broadly neutral fiscal policy stance (a)

1.15.a General government deficit



SOURCES: IGAE and Banco de España.

a The fiscal policy stance is measured here as the change in the cyclically-adjusted budget balance, which includes the change in temporary measures. Expenditure financed by the NGEU programme is also added. By statistical convention, this expenditure does not have an impact on the national deficit, but it does contribute to the expansionary fiscal policy stance. However, its financing does not, as it is not borne by resident agents.
b Cyclically-adjusted change in the deficit, excluding temporary measures.

DOWNLOAD

taking into account the stimulus from the NGEU programme – appears to have been slightly contractionary, in contrast to the expansionary stance of 2022 (see Chart 1.15).[48]

On the supply side, the high growth rates in tourism-related services sectors (which accounted for around half of the overall growth in 2023) stand in contrast to the sluggishness recorded in the industrial sectors, thus continuing the shift observed in recent years towards a more services-based economy.

— In the services sectors, real gross value added (GVA) grew notably in the more tourism-related services – such as trade, transportation and hospitality – and in arts and recreation services. Overall, the buoyancy of the tourism and entertainment-related sectors was behind almost 50% of total GVA growth in 2023, despite accounting for less than 30% of GVA.

— Industry and construction recorded GVA growth of 1.8% and 2.3%, respectively, in 2023 as whole, whereas the primary sector saw GVA decline by 1.9%. In manufacturing, the most energy-intensive sectors – which were hit hardest by the rise in energy prices in 2021 and 2022 – have been faring relatively better in Spain than in other euro area countries.[49] For instance, in 2023 the industrial production index for electricity-intensive industries[50] recorded an annual

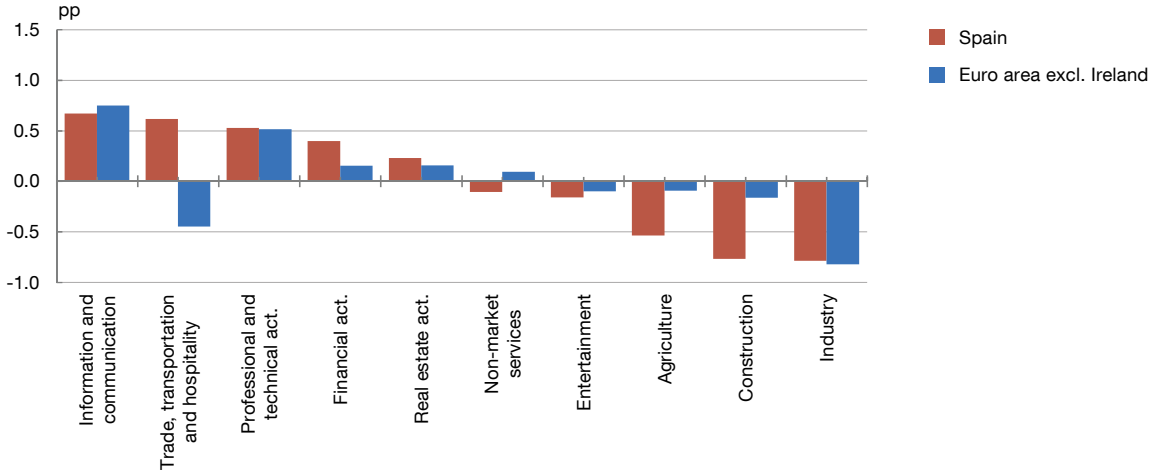
48 The reduction in the size of the temporary measures appears to have contributed to a similar tightening of the fiscal policy stance in both 2022 and 2023. However, in 2022 this was more than offset by growth in cyclically adjusted expenditure and revenue (taking into account the NGEU stimulus and net of temporary measures), while this effect was smaller in 2023.

49 Fernández-Cerezo, Kataryniuk and Rodríguez (2023).

50 According to the definition of the German Federal Statistical Office (Destatis), the electricity-intensive sectors are manufacture of paper and paper products, manufacture of coke and refined petroleum products, chemicals, other non-metallic mineral products and basic metals.

Chart 1.16
The Spanish economy's productive structure has shifted towards services

1.16.a Change in sectors' share in GVA between 2019 and 2023



SOURCES: INE and Eurostat.

DOWNLOAD

decline of 4.1% in Spain (0.1% for the Spanish manufacturing sector overall), compared with the deeper drop observed in the euro area (-7.6%) and in Germany in particular (-10%).

— From a broader time perspective, compared with the pre-pandemic situation, Spain's productive system has shifted towards services as part of the structural transformation that characterises the economic development process.[51] First, as in the euro area as a whole, the share of information and communication services in GVA increased – driven by accelerated digitalisation in the wake of the pandemic – at the expense of the manufacturing sectors. Second, unlike in the euro area overall, the trade, transportation and hospitality sectors gained considerable share in Spain, while the share of construction and agriculture declined notably (see Chart 1.16).[52]

In Spain, inflation has remained on the slowing path that began in 2022 Q3, mainly due to falling energy prices, while food prices have displayed greater downward stickiness.

— In the first half of 2023, inflation, as measured by the year-on-year rate of change in the HICP, continued the easing trend that began in mid-2022, reaching a low in June. It then

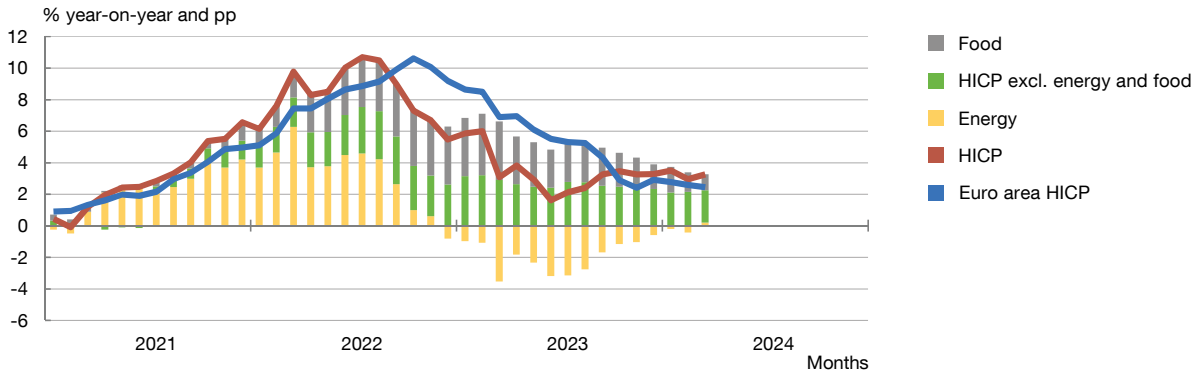
51 González-Díez and Moral-Benito (2019).

52 In particular, the share in total GVA of trade, transportation and hospitality services increased by 0.6 pp in the period 2019-2023, compared with a drop of 0.4 pp in the euro area. In hours worked terms, the drop in Spain (-0.9 pp in 2019-2023) was relatively similar to that in the euro area (-0.6 pp), leading to significant hourly productivity gains in Spain in these sectors (+7%), compared with only a slight gain in the euro area (+0.5%). For a more detailed description of sectoral employment developments since 2019, see Chapter 3 of this report.

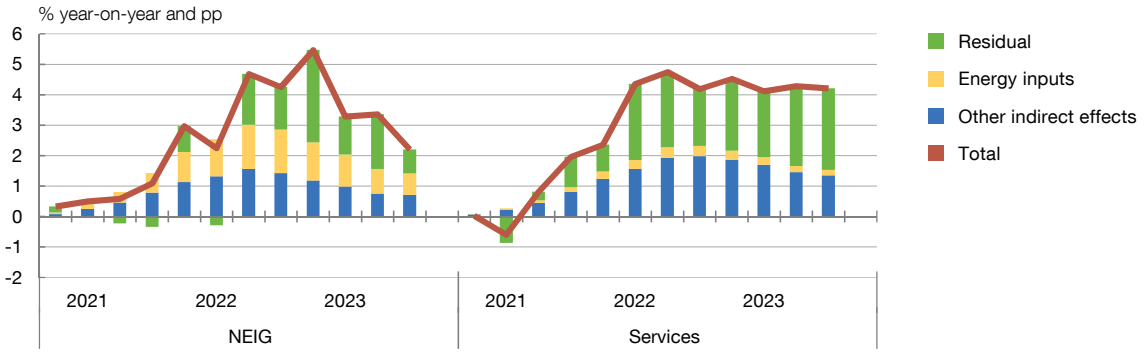
Chart 1.17

In Spain, inflation followed a slowing path throughout 2023, owing primarily to the energy component

1.17.a HICP and contributions



1.17.b Direct and indirect effects of energy on NEIG and services inflation (a)



SOURCES: Eurostat and Banco de España.

a The effects of higher energy prices on the prices of non-energy industrial goods (NEIG) and services are estimated following the ONKIO model proposed in Aguilar, Dominguez-Díaz, Gallegos and Quintana (2024). A shock similar to the energy price shock of 2021-2023 is considered.

DOWNLOAD

rose slightly and subsequently stabilised at around 3% in the closing months of the year (see Chart 1.17.a). Thus, average annual HICP growth stood at 3.4% in 2023, 4.9 pp down on 2022 and 2 pp less than in the euro area as a whole.

— Inflation developments over the course of 2023 were marked by a slowdown in energy prices. Specifically, consumer energy prices fell by 16.1% on average in 2023, compared with the dramatic increase of 27.6% in 2022. This owed both to lower oil, gas and wholesale electricity prices and to the base effects associated with the steep price rise in 2022.[53]

— Food price developments in Spain also helped to temper headline inflation. Specifically, in February 2023 food inflation reached its highest level since the beginning of the monetary union (15.7% year-on-year). It has since been on a gradually easing path, which is likely attributable to lower pressures on input costs, as reflected in the moderation of domestic producer prices and

53 In addition, at the start of 2023 free market contracts were included in the measurement of gas and electricity prices.

import prices for food and beverages.[54] However, adverse weather conditions for the production of certain food items (such as fruit, vegetables and olive oil) may have contributed to some downward price stickiness in the final stretch of 2023 and the early months of 2024.

— In any event, Spanish headline inflation has been significantly influenced by the government measures approved (or extended) in response to the upturn in inflation. Overall, these measures have helped to contain the prices of certain consumption basket items, although their impact on headline inflation in 2023 was limited due to the reversal of some of the energy price measures[55] (see Table 1.1).

— The 2 pp negative inflation differential between Spain and the euro area overall owed primarily to energy prices slowing more markedly in Spain than in the euro area. This was mainly because wholesale electricity prices passed through to consumer prices more rapidly in Spain than in most European countries, as noted above. However, the price differential has turned positive in recent months, especially in the energy and food components.

Since early 2023 core inflation has followed a gradually slowing path. However, it remains high and shows some cross-component heterogeneity.

— Core inflation, measured as the HICP excluding energy and food, peaked at 5.2% in February 2023. It subsequently embarked on a downward path, ending the year at 3.5%. Thus, average inflation in 2023 stood at 4.1%, 0.3 pp higher than in 2022 and 0.8 pp below the euro area average, although that gap narrowed in the second half of the year.

— Non-energy industrial goods (NEIG) inflation was mainly shaped by the fluctuations in energy input prices. Thus, in line with the energy price moderation that began in late 2022, NEIG inflation slowed relatively sharply over the course of 2023 (see Chart 1.17.b).

— In services, whose production is less energy-intensive and more dependent on labour and other non-energy inputs, inflation appears to have been more influenced by the so-called indirect and second-round effects associated with rising production costs (wage and non-wage alike) in an inflationary setting. Therefore, services prices followed a less steep disinflationary path than NEIG prices (see Chart 1.17.b).[56]

Inflation followed a steeper easing path during 2023 than had been forecast at end-2022, mainly due to the unexpected drop in energy prices, which more than offset the slight upward surprises in food and services inflation.

54 Price developments in the early production stages pass through to consumer food prices with a lag of up to 12 months (Borrallo, Cuadro Sáez and Pérez, 2022).

55 Among those having the largest impact on inflation were the discontinuation of the €0.20 per litre fuel rebate from January 2023, which is estimated to have added 0.4 pp to inflation in 2023. Also notable, albeit in the opposite direction, were the reduction in the VAT rates on certain food items and the transport subsidies, each of which would have reduced inflation by 0.2 pp in 2023.

56 The direct and indirect effects of energy on NEIG and services prices are estimated following Aguilar, Domínguez-Díaz, Gallegos and Quintana (2024).

— The outlook for 2023 headline inflation in Spain, proxied by the average year-on-year rate of change in the HICP, has been consistently revised downwards since late 2022. In particular, the Banco de España's December 2022 projection exercise envisaged an average inflation rate of 4.9% in 2023, while the median analyst forecast stood at 4.5%. However, these projections were revised steadily downwards over the course of the year. As a result, in December 2023 the median analyst forecast was down to 3.6%, while the Banco de España's forecast stood at 3.4%, matching the actual figure (see Chart 1.18.a).

— The main driver behind the downward revisions of inflation forecasts in 2023 was the significantly sharper than expected drop in energy prices. In particular, energy commodity prices – which peaked in the second half of 2022 – declined considerably more rapidly in 2023 (particularly in the winter months) than anticipated by futures markets. This was especially true of natural gas prices. The factors behind these developments notably include high EU natural gas inventories (along with an increase in non-Russian gas supplies), milder winter temperatures than expected (which reduced global energy demand) and record levels of electricity generation from renewable energy sources in Spain[57] (associated with better than expected weather conditions for renewable power generation). All of this resulted in a marked and unexpected drop in Spain's electricity prices, causing the HICP energy component to fall by 16.1% on average in 2023, rather than increasing slightly as anticipated at end-2023 (see Chart 1.18.b).

— In the case of food prices, while some measures not envisaged in the December 2022 projections (such as the reduced VAT rate on some staple food items) helped to contain inflation more than expected at that time,[58] other factors exerted more upward pressure on prices over the course of 2023 than had been anticipated at end-2022. First, higher prices of agricultural commodities and other production inputs appear to have passed through to food producer and import prices more robustly than expected at the close of 2022. Second, adverse weather conditions for the production of some food items in 2023 H2 may have slightly dampened the expected slowdown in consumer prices.

— Core inflation, proxied by the rate of HICP excluding energy and food, was slightly more persistent during 2023 than anticipated at end-2022. In a context in which NEIG prices performed as envisaged at end-2022,[59] the slight upward surprises in core inflation mainly

57 The share of renewable electricity generation reached 50.3% in 2023 as a whole, up from 42% in 2022.

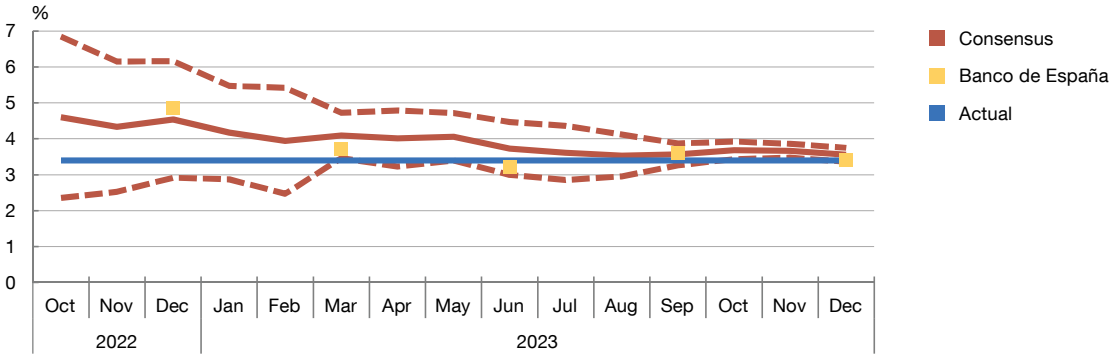
58 Royal Decree-Law 20/2022 of 27 December 2022 reduced the rate of VAT for the following foods from 4% to 0% until 30 June 2023: bread, baking flour, milk, cheese, eggs, fresh fruit, fresh vegetables, legumes, potatoes and cereals. The VAT rate on oil and pasta was reduced from 10% to 5%. This measure was extended by Royal Decree-Law 5/2023 of 28 June 2023 and again by Royal Decree-Law 8/2023 of 27 December 2023. According to the most recent information available, it will end in June 2024. All of these measures contributed to reducing consumer food prices and none of them were envisaged in the Banco de España's December 2022 projection exercise.

59 The absence of any significant NEIG price surprises, amid considerable downward energy price surprises, could point to a smaller pass-through of energy costs to producer and consumer prices than was expected at end-2022. However, quantifying this pass-through is a very complex task, especially in an environment such as the current one, with a confluence of various factors that were not envisaged at end-2022 and that have opposing effects on the price-setting process. In addition to energy price developments, these factors notably include the methodological changes in how the INE calculates the HICP and the price fluctuations of non-energy inputs.

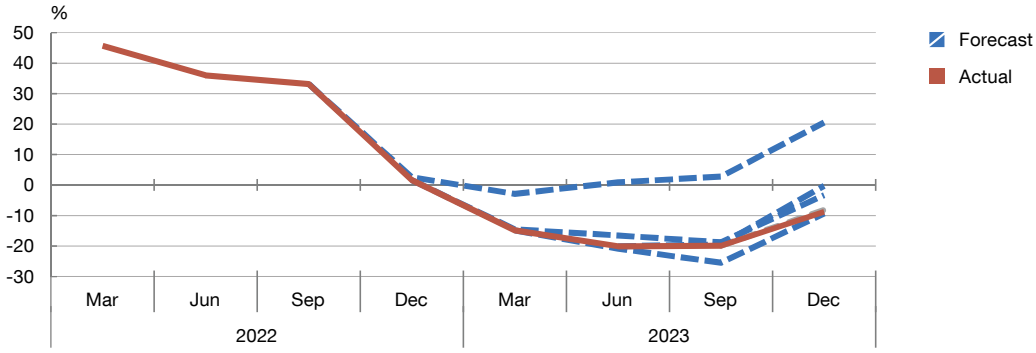
Chart 1.18

Inflation followed a steeper easing path over the course of 2023 than had been forecast at end-2022, mainly due to the unexpected drop in energy prices

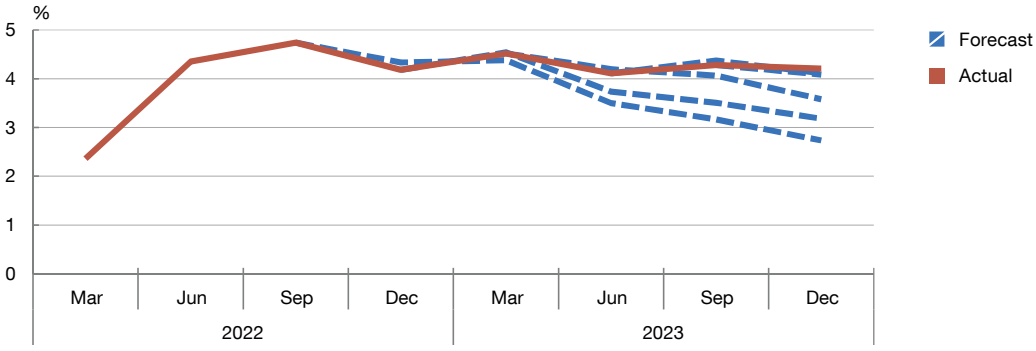
1.18.a Average HICP rate forecast for 2023 (a)



1.18.b Energy HICP: projected paths at the cut-off date of each projection exercise (b)



1.18.c Services HICP: projected paths at the cut-off date of each projection exercise (b)

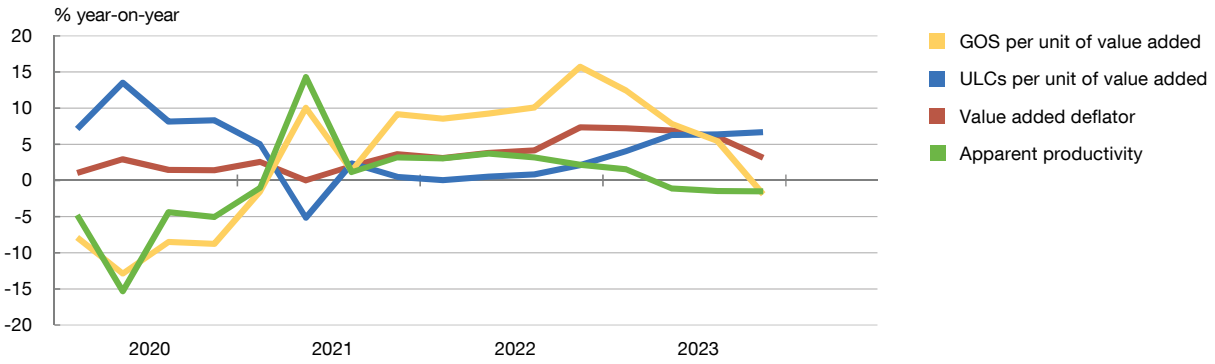


SOURCES: Consensus, INE and Banco de España.

a The dotted lines denote the Consensus panellists' highest and lowest forecast.
b The dotted lines denote the paths forecast in the Banco de España's projection exercises of December 2022, March 2023, June 2023 and December 2023.

Chart 1.19
ULCs were up signifcantly in 2023 against a backdrop of declining productivity, while unit GOS growth slowed sharply

1.19.a Value added deflator. Overall economy



DOWNLOAD

SOURCES: Eurostat and Banco de España.

owed to services showing greater downward stickiness than anticipated (see Chart 1.18.c),[60] probably as a result of two main factors: first, stronger demand for services (especially entertainment, tourism and hospitality services) than initially expected (see Box 1.1), contributing to a less pronounced slowdown in services prices than anticipated; and, second, the relatively high share of labour input in the services sectors, together with compensation per employee proving more buoyant than expected, as discussed below.

Compensation per employee increased significantly in 2023 (more than initially expected and faster than wage settlements), although the corresponding impact on domestic inflationary pressures, measured by the rate of growth in the value added deflator, was cushioned by the slowdown in unit operating surpluses.

— Average annual growth in the value added deflator increased by just over 1 pp (to 5.7%), although it followed a downward path in 2023. This owed to the appreciable moderation in the growth rate of the unit gross operating surplus (GOS), compared with the increase in ULCs (see Chart 1.19).

— Compensation per employee in the market economy grew by 6.3% on average in 2023, up from 4.4% in 2022. Furthermore, this marked increase in 2023 was significantly higher than the 4.1% expected in December 2022 and the negotiated wage increases (3.5% at end-2023), which may be testimony to changes in wage dynamics associated with the labour market

60 It should be noted that this greater stickiness came after the approval (or extension) of public transport measures that were not envisaged in the Banco de España's December 2022 projection exercise, which would have contributed towards downward surprises in services inflation. In particular, Royal Decree-Law 20/2022 of 27 December 2022 provided that multi-trip tickets would be free of charge for regular passengers on public road transport services. It also extended the central government-financed 30% discount on city and intercity public transport (season and multi-trip tickets), albeit contingent on the regional government or local authority financing a further 20% discount. The December 2022 projection exercise did envisage the extension of the 30% discount, but not the additional 20% financed by regional or local authorities.

tightening, especially in certain sectors. Amid weak productivity, this upturn in compensation exerted upward pressure on ULCs, which followed a rising trajectory over 2023.[61]

— Unit GOS developments were reflected in profit margins, measured as the GOS/GVA ratio available in National Accounts, which declined over the course of 2023 in what was a relatively broad-based trend across the sectors.[62] However, the operating margin, proxied as the ratio of gross operating profit (GOP) to turnover, showed a robust recovery profile during the year, which, coupled with the rise in firms' turnover, led to higher aggregate profits.[63]

— Once the impact of supply-side shocks on the cost of certain inputs has been absorbed, the labour market tightening and higher ULCs appear to be gaining in importance as determinants of inflation, and could potentially have a more persistent impact in the future.[64]

— In any event, the rise in household employment incomes have likely helped to limit the impact that the cumulative interest rate increases have had on household vulnerability. Meanwhile, favourable corporate earnings appear to have tempered the rise during 2023 in the percentage of firms that may be deemed vulnerable based on the financial pressure they are under (see Box 1.2).

Looking ahead to the coming quarters, amid a relatively benign global economic and financial outlook, expectations point to the Spanish economy remaining notably buoyant and inflation continuing on its moderating path.[65]

— Broadly speaking, the global economic and financial outlook is relatively positive. In particular, the forecasts for global growth envisage some stabilisation (albeit at modest rates by historical standards and with geographical heterogeneity), while global inflation is expected to remain on a moderating path. In line with these forecasts, international financial markets are discounting policy rate cuts by the main advanced economies' central banks over the course of 2024, which will result in more accommodative financial conditions.

— In the case of the Spanish economy, economic activity has been slightly more subdued in early 2024 than in late 2023, although a mild acceleration is expected over the course of the year, in line with the moderating path of inflation (and the attendant recovery in agents' real incomes), the gradual recovery expected in the European economy and the impetus provided by the roll-out of NGEU-funded projects.

61 See Chapter 3 of this report for an analysis of the potential causes of divergence between real wages and labour productivity.

62 This was consistent with information from the sample of firms in the Banco de España's Central Balance Sheet Data Office Quarterly Survey. See *Observatorio de Márgenes 2023 T3*.

63 Profit margins as a percentage of turnover can be used to analyse the pass-through of production costs to selling prices, while profit margins as a percentage of GVA provide insight into the allocation of profits between capital and labour. Thus, the reduction in energy and other commodity costs in 2023 contributed to the recovery in margins on sales, while higher wages resulted in a lower margin on GVA. For more details, see Banco de España (2024c).

64 Ghomi, Hurtado and Montero (2024).

65 For more details, see Banco de España (2024d).

— After picking up slightly in January 2024,[66] headline inflation has since held at levels similar to those observed at end-2023. Underlying inflation, meanwhile, appears to have continued its downward trajectory, while food prices have shown some downward stickiness. In the coming months inflation is expected to return to a downward path, reflecting a gradual moderation in food and underlying inflation, which will more than offset the contribution of the energy component, which is expected to stabilise.

— In any event, the uncertainty surrounding this economic outlook is very high. The main source of risk is turbulence linked to the armed conflicts in the Gaza Strip and Ukraine. In particular, it is impossible to rule out more adverse scenarios in which these tensions persist or even escalate, giving rise to more severe supply shocks that exert upward pressure on inflation and downward pressure on activity. Another significant source of uncertainty is the potential for monetary policy tightening to ultimately have a larger impact on activity and prices than expected.[67]

One particularly important source of uncertainty for Spain's economic outlook is the vulnerability associated with fiscal sustainability, especially after the EU fiscal rules came back into force.

— Over the last few years, Spain's fiscal imbalances – in terms of both the structural deficit and public debt – have become particularly acute. The fiscal policy response to the pandemic crisis and the inflationary upsurge associated with Russia's invasion of Ukraine led to a substantial deterioration in Spain's public finances. Now that the worst phases of both episodes have been left behind, the latest government consumption developments suggest that part of the higher government spending associated with them is starting to become entrenched, driving an increase in the structural deficit since 2019 despite notable revenue growth.[68] The recent decline in the public debt-to-GDP ratio (from its peak of 120% in 2020) has been fuelled by nominal output growth – itself driven primarily by the economic reopening in 2021 and the price inflation in 2022 and 2023 –, which more than offset the debt growth caused by the budget deficit and interest payments.[69]

— In this respect, running very high public debt ratios for prolonged periods lessens the room for countercyclical fiscal policy measures to address adverse macroeconomic shocks and generates vulnerability to shifts in market sentiment.[70]

66 This pick-up was primarily driven by the partial withdrawal of some of the tax measures adopted by the Government to mitigate the effects of the surge in inflation. Specifically, on 1 January 2024 the VAT rate on electricity and gas increased from 5% to 10% and the excise duty on electricity from 0.5% to 2.5%.

67 Given the considerable lag between monetary policy actions and their effect on activity and inflation, the worst – in terms of the impact of higher interest rates on the real economy – should be over by the end of 2024. For more details, see Banco de España (2023b).

68 Specifically, the 2023 structural deficit is estimated at 3.7% in 2023, compared with 3.1% in 2019 and 4.2% in 2022.

69 In particular, according to Banco de España estimates, of the 13 pp cumulative improvement in the public debt-to-GDP ratio in the period 2020-2023, growth in the denominator contributed 30 pp, more than offsetting the contributions of the structural primary balance and interest payments, which increased the ratio by 8 pp and 7 pp, respectively, in that period.

70 For more details, see Hernández de Cos, López-Rodríguez and Pérez (2018).

— Moreover, looking ahead, a number of factors will exert significant pressure on general government spending and, therefore, on fiscal sustainability. First, the far-reaching demographic shifts under way in Spain will, in the coming decades, drive a considerable increase in spending not only on pensions, but also on health and long-term care. Second, the new investment needs associated with the digital and green transitions, along with the country's defence spending commitments, will also significantly lift government spending requirements. Lastly, although monetary policy tightening has, for the time being, had a limited impact on the general government debt burden – thanks to the lengthening of the average life of debt since 2013 and very strong nominal GDP growth in recent years –, this impact could grow considerably over the coming years, as and when maturities are refinanced at higher interest rates and nominal GDP growth stabilises below current rates.[71]

— Against this background, the introduction of the new EU fiscal rules calls for the design and implementation of a medium-term fiscal consolidation plan, with a view to correcting the structural budget deficit and, consequently, reducing public debt. The economic consequences of such an adjustment plan are uncertain, since they will critically depend on its design, but its implementation will foreseeably result in weaker levels of activity in the short term. However, were the plan to come in concert with a more growth-friendly composition of public spending and revenue, along with the reforms needed to enhance productivity dynamics and lift the employment rate, its positive impact on the economy's potential growth would shore up the sustainability of Spain's public finances. This would significantly reduce the likelihood of adverse scenarios that would have negative consequences for economic growth and public well-being. For more details on this and other structural challenges that will shape the Spanish economy over the coming years, see Chapter 2 of this report.

71 Specifically, in 2023 the general government debt burden (as a percentage of GDP) had risen by just 0.3 pp compared to its 2021 low of 2.1%. However, based on the market expectations for future interest rates envisaged in the Banco de España's latest projection exercise, that figure could rise to 2.8% in 2026.

References

Aguilar, Pablo, Rubén Domínguez-Díaz, José-Elías Gallegos and Javier Quintana. (2024). "A Production Network Perspective on Inflation Developments". Documentos de Trabajo, Banco de España. Forthcoming.

Alonso-Álvarez, Irma. (2024). "Recent developments in the oil market". *Economic Bulletin - Banco de España,* 2024/Q1, 03. https://doi.org/10.53479/35995

Alonso, Irma, Daniel Santabárbara and Marta Suárez-Varela. (2023). "The potential global effects and transmission channels of a slowdown in Chinese growth". *Economic Bulletin - Banco de España,* 2023/Q4, 06. https://doi.org/10.53479/35632C:\Users\q30854\Downloads\. https:\doi.org\10.53479\35632

Balladares, Sofía, and Esteban García-Miralles. (2024). "Progresividad en frío. El impacto heterogéneo de la inflación sobre la recaudación por IRPF". Documentos Ocasionales, Banco de España. Forthcoming.

Balteanu, Irina, and Francesca Viani. (2023). "The energy dependency of the EU and Spain". *Economic Bulletin - Banco de España,* 2023/Q3, 02. https://doi.org/10.53479/30253

Banco de España. (2023a). "Chapter 2. Financial sector risks and resilience". In Banco de España, *Financial Stability Report. Autumn 2023,* pp. 79-115. https://doi.org/10.53479/34656

Banco de España. (2023b). "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. 152-200. https://repositorio.bde.es/handle/123456789/29664

Banco de España. (2023c). "Box 1.1. The slowdown in China's real estate sector and its potential channels of domestic and international transmission". In Banco de España, *Financial Stability Report. Autumn 2023,* pp. 65-70. https://doi.org/10.53479/34656

Banco de España. (2023d). "Box 2.1. Adjustments to the Spanish banking sector's fixed-income portfolio in the face of rising interest rates". In Banco de España, *Financial Stability Report. Autumn 2023,* pp. 116-120. https://repositorio.bde.es/handle/123456789/34696

Banco de España. (2024a). *Report on the Latin American economy. Second half of 2023.* https://doi.org/10.53479/36074

Banco de España. (2024b). *Financial Stability Report. Spring 2024.* https://doi.org/10.53479/36418

Banco de España. (2024c). *Report on the Financial Situation of Households and Firms. Second half of 2023.* https://doi.org/10.53479/35993

Banco de España. (2024d). "Macroeconomic projections for the Spanish economy (2024-2026)". *Economic Bulletin - Banco de España,* 2024/Q1. https://doi.org/10.53479/36150

Borrallo, Fructuoso, Lucía Cuadro-Sáez and Javier J. Pérez. (2022). "Rising food commodity prices and their pass-through to euro area consumer prices". *Economic Bulletin – Banco de España,* 3/2022, Analytical Articles. https://repositorio.bde.es/handle/123456789/22925

Burriel, Pablo, Iván Kataryniuk, Carlos Moreno Pérez and Francesca Viani. (2024). "A New Supply Bottlenecks Index Based on Newspaper Data". *International Journal of Central Banking.* https://www.ijcb.org/journal/ijcb24q3a2.pdf

Cuadrado, Pilar. (2023). "An analysis of hours worked per worker in Spain: trends and recent developments". *Economic Bulletin - Banco de España,* 2023/Q1, 14. https://doi.org/10.53479/29733

De Soyres, Francois, Dylan Moore and Julio Ortiz. (2023). "Accumulated Savings During the Pandemic: An International Comparison with Historical Perspective". FEDS Notes, Board of Governors of the Federal Reserve System. https://doi.org/10.17016/2380-7172.3326

European Central Bank. (2024). Changes to the operational framework for implementing monetary policy. Press release. https://www.ecb.europa.eu/press/pr/date/2024/html/ecb.pr240313~807e240020.en.html

Fernández-Cerezo, Alejandro, and Mario Izquierdo. (2023). "Encuesta a las empresas españolas sobre la evolución de su actividad: segundo trimestre de 2023". *Boletín Económico - Banco de España,* 2023/T2, 10. https://doi.org/10.53479/30209

Fernández-Cerezo, Alejandro, Iván Kataryniuk and Francisco José Rodríguez. (2023). "The Spanish economy's greater resilience vis-à-vis the euro area in 2023: the role of sectoral composition". *Economic Bulletin - Banco de España,* 2023/Q4, 03. https://doi.org/10.53479/34552

Fernández, José Luis, José González Mínguez, Mario Izquierdo and Alberto Urtasun. (2023). "How do the revised National Accounts affect the interpretation of how the Spanish economy has fared since the pandemic?". *Economic Bulletin - Banco de España,* 2023/Q4, 08. https://doi.org/10.53479/35784

García Esteban, Coral, Ana Gómez Loscos and César Martín-Machuca. (2023). "Some explanatory factors of the recent behaviour of goods exports". *Economic Bulletin - Banco de España,* 2023/Q3, 10. https://doi.org/10.53479/33475

García Esteban, Coral, and Blanca Jiménez-García. (2024). "La reactivación del turismo internacional en España: algunos factores explicativos". *Boletín Económico - Banco de España.* Forthcoming.

García-Miralles, Esteban. (2023). "Support measures in the face of the energy crisis and the rise in inflation: an analysis of the cost and distributional effects of some of the measures rolled out based on their degree of targeting". *Economic Bulletin - Banco de España,* 2023/Q1, 15. https://doi.org/10.53479/29769

García-Miralles, Esteban, and Jorge Martínez-Pagés. (2023). "Government revenue in the wake of the pandemic: tax residuals and inflation". *Economic Bulletin - Banco de España,* 2023/Q1, 16. https://doi.org/10.53479/29791

García-Posada, Miguel, and Peter Paz. (2024). "The transmission of monetary policy to credit supply in the euro area". Documentos de Trabajo, Banco de España. Forthcoming.

Ghomi, Morteza, Samuel Hurtado and José Manuel Montero. (2024). "Analysis of recent inflation dynamics in Spain: an approach based on the Blanchard and Bernanke (2023) model". Documentos Ocasionales, 2404, Banco de España. https://doi.org/10.53479/36294

González-Díez, Víctor, and Enrique Moral-Benito. (2019). "The process of structural change in the Spanish economy from a historical standpoint". Documentos Ocasionales, 1907, Banco de España. https://repositorio.bde.es/handle/123456789/13306

Hernández de Cos, Pablo. (2023). "Competitiveness factors in the Spanish tourism sector". *X Foro de Innovación Turística.* https://www.bde.es/wbe/en/noticias-eventos/actualidad-banco-espana/gob-hotusa-2024.html

Hernández de Cos, Pablo, David López-Rodríguez and Javier J. Pérez. (2018). "The challenges of public deleveraging". Documentos Ocasionales, 1803, Banco de España. https://repositorio.bde.es/handle/123456789/6405

Leiva-Leon, Danilo, Jaime Martínez-Martín and Eva Ortega. (2022). "Exchange Rate Shocks and Inflation Co-movement in the Euro Area". *International Journal of Central Banking,* 2022, 72, pp. 239–275. https://www.scopus.com/record/display.uri?eid=2-s2.0-85126810178&origin=inward

Martínez Carrascal, Carmen. (2024). "Spanish and euro area households' response to rising prices". *Economic Bulletin - Banco de España,* 2024/Q1, 07. https://doi.org/10.53479/36134

Martínez-Martín, Jaime. (2023). "Which ECB interest rate affects my loan or mortgage?". *Banco de España Blog,* 25 October. https://www.bde.es/wbe/en/noticias-eventos/blog/cual-es-el-tipo-de-interes-del-bce-relevante-para-mi-credito-o-hipoteca-.html

Mayordomo, Sergio, and Irene Roibás. (2023). "The pass-through of market interest rates to bank interest rates". Documentos Ocasionales, 2312, Banco de España. https://doi.org/10.53479/34572

Nuño, Galo. (2024). "What does a shrinking central bank balance sheet mean for your pocket?", *Banco de España Blog,* 27 February. https://www.bde.es/wbe/en/noticias-eventos/blog/como-afecta-a-su-bolsillo-la-reduccion-del-balance-del-banco-central-.html

Observatorio de Márgenes Empresariales. (2024). *Informe trimestral 2023 T3.* https://www.bde.es/f/webbe/INF/MenuHorizontal/Observatorio_margenes_empresariales/20231218_OME_T3.pdf

Pérez-Montes, Carlos, and Alejandro Ferrer. (2018). "The impact of the interest rate level on bank profitability and balance sheet structure". *Financial Stability Review,* 35, Autumn 2018, pp. 119-148. https://repositorio.bde.es/handle/123456789/11267

Quintana, Javier. (2022). "Economic consequences of a hypothetical suspension of Russia-EU trade". *Economic Bulletin - Banco de España,* 2/2022, Analytical Articles. https://repositorio.bde.es/handle/123456789/21162

Svensson, Lars E.O. (1994). "Estimating and interpreting forward interest rates: Sweden 1992-1994". Working paper, NBER Working Paper Series, 4871. National Bureau of Economic Research. https://doi.org/10.3386/w4871

Viani, Francesca. (2024). "What does the Banco de España's bottleneck index tell us about the economic impact of the tensions in the Red Sea". *Banco de España Blog,* 31 January. https://www.bde.es/wbe/en/noticias-eventos/blog/el-impacto-economico-de-las-tensiones-en-el-mar-rojo--que-nos-dice-el-indice-de-cuellos-de-botella-del-banco-de-espana.html

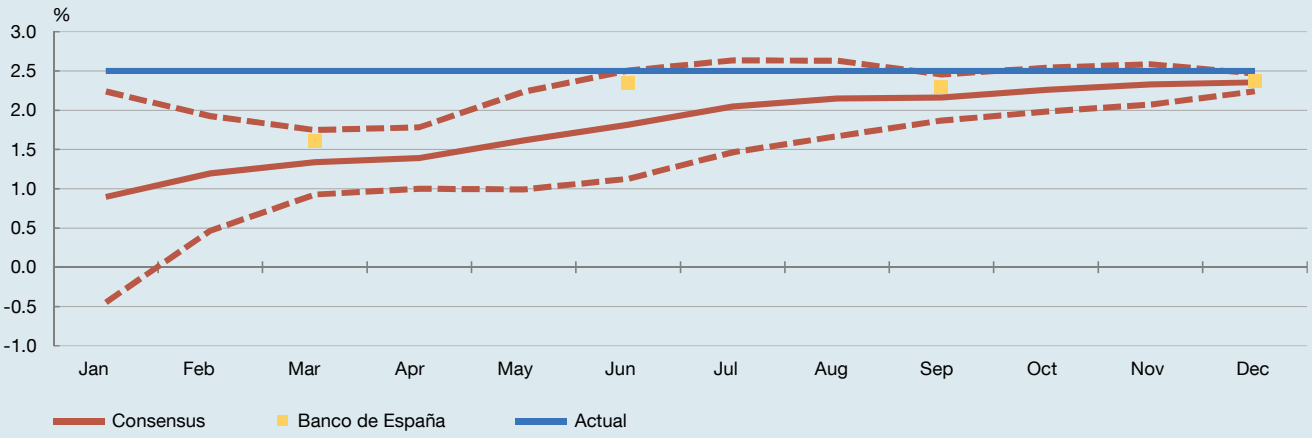
Box 1.1

QUANTIFYING THE DETERMINANTS OF THE SURPRISES IN THE GDP GROWTH FORECAST FOR 2023

In 2023 Spanish GDP grew at an annual average rate of 2.5%, well above the pace of growth projected by the consensus forecast in early 2023 (see Chart 1). This box analyses the various determinants of the 0.9 percentage point (pp) difference between the annual average growth rate projected for 2023 in the Banco de España's March 2023 projection exercise (1.6%)[1] and the growth rate ultimately recorded (2.5%). Specifically, the contributions of the components of domestic and external demand to the surprises in GDP growth in 2023 are quantified, after the effect of statistical revisions has been stripped out,[2] which reduces the size of those surprises from 0.9 pp to 0.5 pp, as described below.

First, mention should be made of the contribution of the new data for 2022 stemming from the revised National Accounts times series released by the National Statistics Institute (INE): some of the differences between the annual average GDP growth rate currently available for 2023 and the rate forecast in March 2023 are due to changes in the 2022 growth rate arising from the new data for 2022 released in 2023. Known as the "carry-over effect", this impact on growth in 2023 depends not only on the revision to average growth in 2022, but also on the quarterly profile of growth that year.[3] In this respect, according to the latest information available, in 2022 GDP grew at an average pace of 5.8%, versus 5.5% on the basis of the information available in March 2023. In addition, the quarter-on-quarter growth rates in the final two quarters of 2022 were also revised up significantly, to 0.5%, from 0.2% on the basis of the information available in March 2023 (see Chart 2.a). As a result of these revisions, even if the quarter-on-quarter growth rates in 2023 had remained unchanged compared with those forecast in March 2023, GDP growth in 2023 would have been 0.4 pp higher, which would explain almost one-half of the total 0.9 pp difference (see Chart 2.b).

Chart 1
Forecasts for 2023 over the year. Rates of change of GDP (a)



SOURCES: Consensus and Banco de España.

a The broken lines denote the Consensus panellists' highest and lowest GDP forecasts.

1 The March 2023 projections are considered instead of the December 2022 exercise because the former is the first exercise in which complete information for end-2022 was available, which allows the role of the new information that became available in 2023 relating exclusively to 2022 to be analysed.

2 Each year the National Statistics Institute releases revised and enhanced National Accounts time series for the three previous years, as additional information becomes available. Thus, revisions to the 2022 time series were published over the course of 2023. For more details, see José Luis Fernández, José González Mínguez, Mario Izquierdo and Alberto Urtasun. (2023). "How do the revised National Accounts affect the interpretation of how the Spanish economy has fared since the pandemic?". *Economic Bulletin - Banco de España,* 2023/Q4, 08.

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.

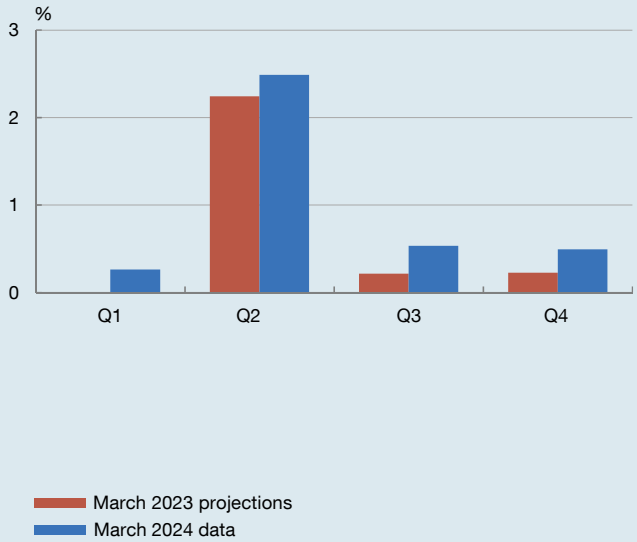
Box 1.1
QUANTIFYING THE DETERMINANTS OF THE SURPRISES IN THE GDP GROWTH FORECAST FOR 2023 (cont'd)

Second, with regard to domestic demand, in 2023 as a whole private consumption grew more than initially expected. Specifically, the average growth rate amounted to 1.8%, 0.6 pp more than projected in March 2023 (see Chart 3.a). Among the various determinants of this surprise, the following should be mentioned. First, the population grew more than expected. Thus, in March 2023 it was expected to grow by 0.5% during the year, but it ultimately grew by 1.1%, mainly as a result of the high momentum of migration flows.[4] Second, consumer credit and other lending performed better than projected, underpinning consumption in a setting in which households, particularly those with low liquidity buffers, borrowed more to cushion the effects of inflation on their spending decisions.[5] Lastly, growth in real disposable income was notably higher than expected (6.5%, versus 1.8% projected in March), as a result of both the high pace of job creation (3.2%, versus the 1.2% initially projected) and the higher than expected increase in compensation per employee (5.4%, versus 4.1%), amid the downside surprises in energy prices (see Section 4 of this chapter). Thus, stronger consumption in 2023 than envisaged in March explains around 0.2 pp of the positive surprise in GDP growth (see Chart 2.b)

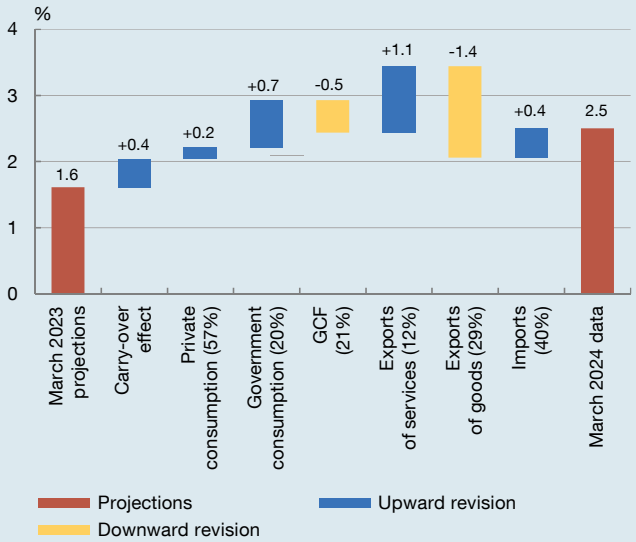
Government consumption also grew more than initially projected, recording average growth of 3.8% in 2023, 3.3 pp more than projected in March 2023 (see Chart 3.a). On data published by the National Audit Office, both intermediate consumption and the compensation of public sector employees grew more than projected (4.0 pp and 1.6 pp, respectively). The indicators available point to public sector employment potentially explaining a large part of the upward surprise in compensation, which in 2023 Q4 stood 10.3% above its pre-pandemic levels according to the Spanish Labour Force Survey. Some of the pandemic-related expenditure in the other components of government consumption has also become somewhat entrenched compared to the March 2023 projections. As a result of these developments, the upward surprises in government consumption explain around 0.7 pp of the surprise in GDP growth in 2023 (see Chart 2.b).

Chart 2
Determinants of the revisions to the GDP growth rate in 2023

2.a Quarterly growth in 2022



2.b Revision compared with the macroeconomic projections



SOURCES: INE and Banco de España.

4 According to Spanish Labour Force Survey data, Spain received around 1.3 million immigrants in 2023 (above the 900,000 expected according to the INE's projections and the average of 500,000 in the period 2016-2019).

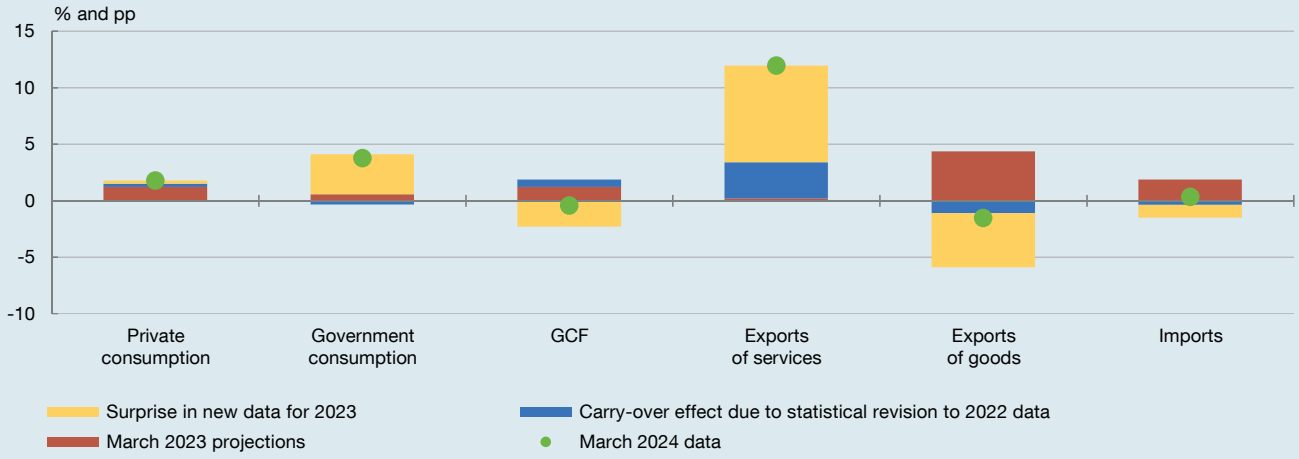
5 Carmen Martínez Carrascal. (2024). "Spanish and euro area households' response to rising prices". *Economic Bulletin - Banco de España*, 2024/Q1, 07.

Box 1.1
QUANTIFYING THE DETERMINANTS OF THE SURPRISES IN THE GDP GROWTH FORECAST FOR 2023 (cont'd)

Investment was weaker than expected, with gross capital formation (GCF) falling by 0.4% in 2023 as a whole, versus the growth of 1.2% projected in March 2023 (see Chart 3.a). One of the potential explanations for this is the pace at which Next Generation EU (NGEU) funds were deployed, which was slower than envisaged in March 2023. Specifically, State revenues from investment grants (a proxy of investment expenditure under the Recovery and Resilience Facility (RRF),[6] the centrepiece of NGEU) stood at 0.6% of GDP in 2023, versus the 1.0% projected. Second, mention should be made of the role of labour shortages and the high level of economic policy uncertainty perceived by firms according to the Banco de España Business Activity Survey, which may have resulted in their investment plans being put on hold and/or delayed.[7] Lastly, unlike in the case of consumers, credit standards for lending to non-financial corporations continued to tighten in 2023, especially in the first three quarters.[8] Considering all these factors, the downside surprises in GCF appear to have deducted around 0.5 pp from GDP growth in 2023 compared with the March 2023 projections (see Chart 2.b).

Third, with regard to external demand, exports of services grew more than expected (12.3% in 2023 as a whole, 11.8 pp more than projected in March 2023) (see Chart 3.a). The strong momentum of this demand component was mainly due to exports of travel services,[9] which, having recovered their pre-pandemic levels, were boosted more than expected by several factors. First, the greater diversification of destinations across Spain's regions and the higher number of inbound tourists in the autumn and winter months.[10] Second, the diversion to Spain of flows of tourists who perceive it as a safer destination during times of geopolitical uncertainty in the Middle East (as occurred, for example, during the Arab

Chart 3
Growth rates of the components of GDP and contributions



SOURCES: INE and Banco de España.

6 In the National Accounts, RRF funds are always channelled through the central government, regardless of which general government entity spends them, and they are only recorded when the final expenditure is made. Given that the RRF funds are considerably greater than the investment grants typically received by the central government, State revenue from investment grants can be considered a good indicator of general government capital expenditure charged to RRF funds.

7 Alejandro Fernández Cerezo and Mario Izquierdo. (2023). "Encuesta a las empresas españolas sobre la evolución de su actividad: segundo trimestre de 2023". *Boletín Económico - Banco de España*, 2023/T2, 10.

8 https://www.bde.es/f/webbe/GAP/Secciones/SalaPrensa/NotasInformativas/24/presbe2024-05.pdf (only available in Spanish).

9 Exports of non-travel services also recorded considerable growth, although it was more in line with the March 2023 projections. For more details, see César Martín-Machuca and Coral García. (2023). "Recent developments in Spanish exports of non-travel services". *Economic Bulletin - Banco de España*, 2023/Q3, 05.

10 For more details, see Blanca Jiménez-García and Coral García. (2024). "La reactivación del turismo internacional en España: algunos factores explicativos". *Boletín Económico - Banco de España*. Forthcoming.

Box 1.1
QUANTIFYING THE DETERMINANTS OF THE SURPRISES IN THE GDP GROWTH FORECAST FOR 2023 (cont'd)

Spring).[11] Lastly, long-distance tourism completing its return to pre-pandemic levels also drove exports of travel services in 2023. All told, the strong momentum of exports of services explains around 1 pp of the positive surprise in the GDP growth rate (see Chart 2.b).

Exports of goods fell markedly in 2023 as a whole (-1.6%, versus the strong growth of 4.3% initially projected) (see Chart 3.a). The main factor behind the weak exports of goods was the deceleration in the euro area economies (Spain's main trading partners), which was sharper than expected in early 2023 and, in addition, affected above all the most energy and trade-intensive industries. As a result, the fall in goods exports deducted around 1.4 pp from GDP growth in 2023 compared with the March 2023 projections (see Chart 2.b).

Meanwhile, imports grew less than expected (0.3%, 1.5 pp less than initially projected) (see Chart 3.a) mainly because of the negative surprises in the demand components with the highest import content, i.e. investment and exports of goods. Thus, the sluggishness of imports raised GDP growth by 0.4 pp, largely offsetting the negative contribution from goods exports[12] (see Chart 2.b).

In sum, aside from the positive carry-over effect resulting from the statistical revisions that affected 2022, in 2023 the Spanish economy recorded higher than expected GDP growth mainly because of the upward surprises in exports of travel services and government consumption. Conversely, investment and net exports of goods were weaker than initially projected.

To conclude, it should be noted that these surprises in the demand components arose amid greater disinflation than expected, as discussed in Section 4 of this chapter. Specifically, the lower energy prices on international markets than projected in late 2022 more than offset the slight upward surprises in food and, above all, services inflation, which were at least partly a consequence of the positive surprises in the strength of domestic demand.

11 Banco de España. (2017). "Box 7. Dynamism of non-resident tourism in 2016 and its determinants". *Economic Bulletin - Banco de España*, 1/2017, pp. 23-25.

12 Goods imports account for approximately 85% of total imports.

Box 1.2

THE VULNERABILITY OF HOUSEHOLDS AND FIRMS TO A TIGHTENING OF FINANCING CONDITIONS

The tightening of monetary policy by the European Central Bank (ECB) since the end of 2021 has driven up the cost of financing for households and firms. However, owing to the increase in wages and profits, deleveraging and the rise in the value of their assets, the financial position of households and firms in Spain has actually improved.[1]

Against this background, this box analyses the impact that the gradual increase in the average cost of debt has already had and may have in the future on the financial vulnerability of firms and households. It also assesses to what extent the rise in the incomes of households and firms has mitigated the adverse effect of higher interest rates on their vulnerability. Finally, the potential impact of higher inflation and interest rates is quantified according to the level of household income, given that it is uneven across household types and tends to vary with their level of income.

In the case of households, data from the Spanish Survey of Household Finances 2020 (the latest wave available) are used to calculate the change in the percentage of vulnerable households (those whose income is not sufficient to cover their level of essential expenditure)[2] between 2020 and 2023, under a series of assumptions about how the cost of credit, spending and income changed over that period. First, it is assumed that the cost of variable rate credit increased in line with the change in the annual average level of the 12-month EURIBOR. Second, it is assumed that the price of each component of essential expenditure increased in accordance with the cumulative inflation of its consumption category over the same period. Third, household income is assumed to have increased, uniformly for all households, in line with gross disposable income per capita.[3]

According to the results obtained, the percentage of households that could not cover their essential spending increased by 0.2 pp between end-2020 and end-2023, to 7.2%. However, this increase appears to be somewhat higher for households in the bottom quintile of the income distribution (0.9 pp), with little change for households in the top three quintiles (see Chart 1).[4] Despite the greater increase in the vulnerability of low-income households, among other measures, the support provided to them in the form of transfers, the one-off increase in non-contributory pensions, the increase in the minimum wage, the introduction of the minimum income scheme and the reform of the Code of Good Practice[5] all appear to have contributed to cushioning the adverse effects that higher interest rates and inflation may have had on them. In fact, when the rise in income is ignored, the percentage of vulnerable households increased by 4 pp, with a particularly significant increase in the lowest income quintile (9.4 pp).

As regards the analysis of corporate vulnerability, the firms of interest are those under high financial pressure, defined as those whose interest expenses exceed the sum of their gross operating profit (GOP) and financial revenue. Chart 2 shows the share of total employment accounted for by firms under high financial pressure, according to simulations based on a series of assumptions about the evolution of firms' debt, GOP and cost of debt. Specifically, it is assumed that their GOP will grow uniformly and that all firms' bank and non-bank debt is rolled over as it falls due, while the outstanding balance remains constant.[6] Under these assumptions, and given the observed increase in the average cost of outstanding business debt in 2023 (162 basis points (bp)), the share of

1 Banco de España (2024). *Report on the financial situation of households and firms. Second half of 2023*.

2 Essential spending is defined as the sum of expenditure on food, utilities, rent of main residence and debt payments.

3 The methodology used for this calculation is the same as that used in Box 2 in Banco de España (2023). *Report on the financial situation of households and firms. First half of 2023*.

4 In 2020, expenditure on staple goods (such as food and utilities), rent and debt service already accounted for almost 80% of the income of the lowest income quintile, compared to 44% for the middle quintile. Around 38% of households in the lowest income quintile had some kind of debt in 2020, as compared with more than 59% of households in the middle quintile of the distribution. However, low-income households would have faced higher inflation than other households. Thus, between August 2021 and September 2022, the inflation experienced by the households in the bottom 30% of the income scale appears to have been around 11.3%, as against 9.7% for those in the top 30%. García-Miralles, Esteban. (2023). "Support measures in the face of the energy crisis and the rise in inflation: an analysis of the cost and distributional effects of some of the measures rolled out based on their degree of targeting". *Economic Bulletin - Banco de España*, 2023/Q1, 15.

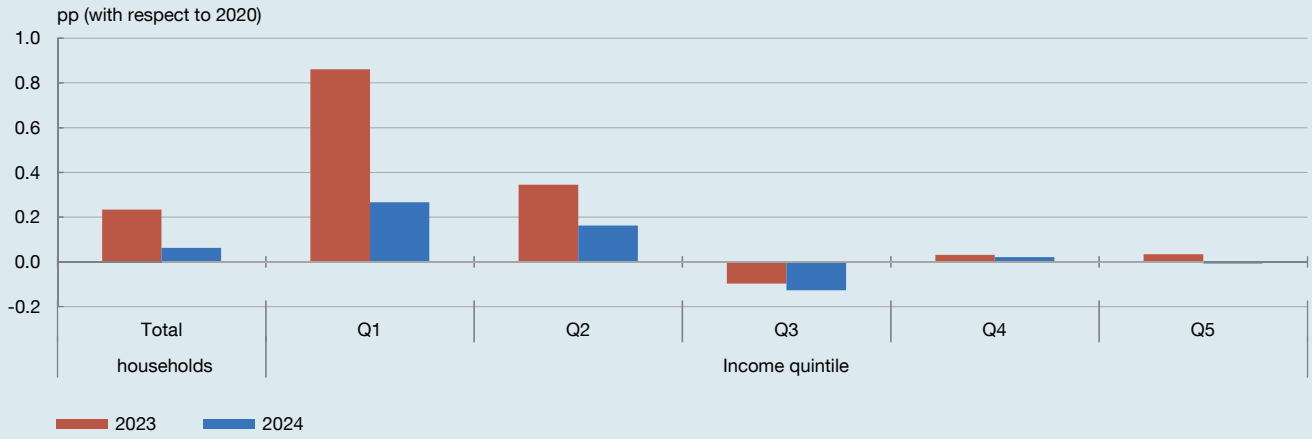
5 Banco de España. (2023). "Codes of Good Practice for Principal Residence Mortgages and Supplementary Measures". *Financial Stability Report, Spring 2023*.

6 For further details of the calculation of the share of employment of firms under high financial pressure in 2023 and 2024, as well as of the simulations carried out for that year, see "Box 2. The impact of interest rate hikes on firms' financial pressure". In Banco de España. (2024). *Report on the financial situation of households and firms. Second half of 2023*. This box also details the assumptions made regarding the outstanding amount of firms' debt, their GOP and the cost of their debt

Box 1.2

THE VULNERABILITY OF HOUSEHOLDS AND FIRMS TO A TIGHTENING OF FINANCING CONDITIONS (cont'd)

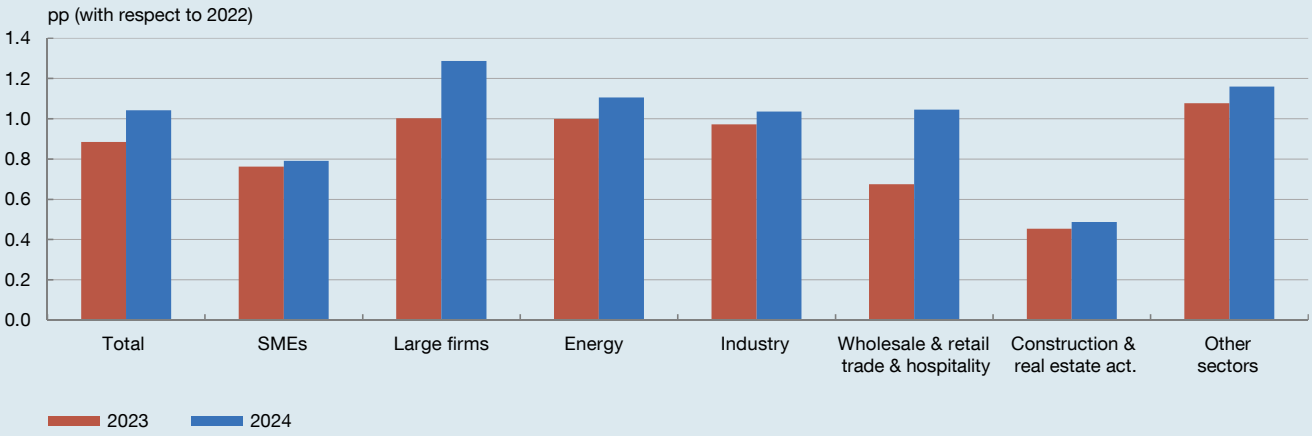
Chart 1
Change in the percentage of households whose income does not cover their essential expenditure. Breakdown by income quintile (a)



SOURCE: Banco de España (Spanish Survey of Household Finances 2020).

a Essential expenditure is defined as the sum of spending on food, utilities, rent of main residence and debt payments. To approximate the results, the change in interest rates and household income and the cumulative inflation by spending category since 2020 are taken into account. For 2023, an increase in the interest rates on variable rate loans of 417 bp, a 16.3% increase in household income and an increase in essential expenditure in line with the cumulative inflation for its components (food, 26.9%, utilities, 17.8% and rent of main residence, 6.3%) are applied. For 2024, a cumulative increase in interest rates of 344 bp since 2020, an increase in household income of 20.7% and cumulative inflation by spending component in line with the latest Banco de España macroeconomic projections are assumed.

Chart 2
Change in the share of employment of firms under high financial pressure (a)



SOURCE: Banco de España.

a A firm is considered to be under high financial pressure if its interest coverage ratio is less than one. The interest coverage ratio is defined as: (GOP + financial revenue) / financial costs. Calculated on the basis of a sub-sample of firms for which data are available in the Central Credit Register (CCR) or, in the absence thereof, on the basis of firms operating in the same province and sector (at NACE Rev. 2 class level) and of a similar size (based on the European Commission's classification), to which the average cost of financing of the group of comparable firms for which such information is available in the CCR is assigned. The financial costs of each firm for 2023 and 2024 are approximated using the balances of interest-bearing debt at the start of each year and the expected path of interest rates. The following assumptions are made: full debt rollover and an increase in GOP for all firms of 6.4% in 2023, in accordance with the growth observed in the AEAT (with the exception of firms for which CBQ data are available, in which case those data are taken), and of 3.7% in 2024, in line with the growth in the GOP underlying the latest Banco de España macroeconomic projections. Holding companies, head offices and inactive firms are excluded, as are firms with errors in their data on employment, financial cost and interest-bearing debt.

Box 1.2
THE VULNERABILITY OF HOUSEHOLDS AND FIRMS TO A TIGHTENING OF FINANCING CONDITIONS (cont'd)

employment accounted for by vulnerable firms would have increased by 0.9 pp with respect to 2022 (the latest date for which data are available). This increase would bring the share to slightly above its average level in the period 2016-2019. If we consider a scenario in which GOP remains constant, the increase in the share of employment of vulnerable firms would have been 0.2 pp greater.[7] By type of firm, the increase in business vulnerability would have been slightly greater for larger firms and those in the other sectors category, followed by energy and industry, although this deterioration would have been limited in all cases.[8]

Looking ahead, assuming that interest rates move in line with market expectations and that incomes and goods and services prices behave in accordance with the latest macroeconomic projections of the Banco de España,[9] the increase in the percentage of vulnerable agents in 2024 will be limited. Specifically, the increase in the percentage of households that cannot cover their essential spending will be around 0.1 pp (see Chart 1). The increase will be limited even for households in the bottom quintile of the income distribution (0.3 pp). Finally, the share of employment of firms under high financial pressure will not change significantly, although the increases in this share will be non-negligible in some sectors, such as wholesale and retail trade and hospitality (see Chart 2). This is because a small number of relatively large firms belonging to this sector will become vulnerable in 2024.

It should be noted, in any case, that if certain adverse economic growth scenarios materialise the financial position of households and firms could deteriorate more sharply than anticipated. Likewise, in the event that key policy rate cuts are smaller than assumed in this exercise[10] the financial pressure on indebted agents will ease by less than indicated in this box.

7 The reason why a rise in GOP reduces business vulnerability by less than growth in household income alleviates household vulnerability is because more than 90% of firms classified as vulnerable posted a gross operating loss in 2022, and therefore continue to be considered vulnerable in subsequent years.

8 The increase in the share of employment of firms under high financial pressure in these specific sectors is explained by the fact that the rise in interest rates would have caused a small number of relatively large firms to have difficulty covering their interest payments with their ordinary earnings.

9 "Macroeconomic projections for the Spanish economy (2024-2026)". *Economic Bulletin - Banco de España*, 1/2024.

10 In particular, the market expectations of January 2024 regarding interest rate developments are taken into account for the whole of 2024.

Chapter 2

Structural challenges facing the Spanish economy

Contents

Takeaways 93

1 Introduction 94

2 Productivity 96

3 Business size and demographics 99

4 Human capital 104

5 Capital investment and innovation 110

6 Institutional framework 114

7 Population ageing 116

8 Inequality and pockets of vulnerability among households 122

9 Public finances 127

9.1 Recent trends 127

9.2 Challenges facing the public pension system 130

9.3 New European fiscal rules 133

9.4 Fiscal consolidation plan 136

10 Green transition 141

References 145

Boxes

2.1 The heterogeneous impact of inflation on personal income tax revenue 151

2.2 The impact of the new incentives to delay retirement on social security pension expenditure 155

Chapter 2
Takeaways

— The Spanish economy's growth capacity over the years ahead will be influenced by a number of far-reaching structural challenges.

— These challenges include:

- driving productivity growth;
- reducing the high structural unemployment rate in the labour market;
- increasing firm size and facilitating cross-sector and cross-firm reallocation of productive resources;
- encouraging people to build up their human capital;
- promoting investment in physical and technological capital and innovation;
- improving the quality of, and trust in, Spanish institutions;
- making public finances more sustainable;
- reducing the supply and demand mismatches in the housing market, which are creating affordability problems;
- tackling the many challenges posed by population ageing, the existence of certain pockets of vulnerability in Spanish households and the green transition.

— If these challenges are to be successfully addressed, a comprehensive strategy of ambitious and lasting reforms needs to be designed and implemented.

— Against this backdrop, the Next Generation EU (NGEU) programme and the Spanish Recovery, Transformation and Resilience Plan (RTRP) present a unique opportunity to boost Spain's potential growth capacity.

— However, a rigorous selection of the investment projects to be funded from the NGEU programme is critical, as is the ambitious implementation of the other reforms and milestones pending under the RTRP.

1 Introduction

Having returned to pre-pandemic levels of activity over the course of 2022, the Spanish economy continued to post strong momentum in 2023 (see Chapter 1 of this report), amid a slowdown in economic activity worldwide, particularly in the euro area.

Spain's growth outlook for 2024-2026 remains relatively favourable (Banco de España, 2024a), but there are some sources of uncertainty at both global and domestic level that should not be underestimated.

In any event, the Spanish economy's growth capacity over the years ahead will be highly influenced by a number of far-reaching structural challenges. These include: (i) driving productivity growth; (ii) reducing the high structural unemployment rate in the labour market (see Chapter 3 of this report); (iii) increasing firm size and facilitating cross-sector and cross-firm reallocation of productive resources; (iv) encouraging people to build up their human capital; (v) promoting investment in physical and technological capital and innovation; (vi) improving the quality of, and trust in, Spanish institutions; (vii) making public finances more sustainable; (viii) reducing the supply and demand mismatches in the housing market, which are creating affordability problems (see Chapter 4 of this report); and (ix) tackling the many challenges posed by population ageing, the existence of certain pockets of vulnerability in Spanish households and the green transition. All this, against a highly complex geopolitical backdrop in which activity in the domestic and global financial system is subject to considerable sources of uncertainty (Banco de España, 2024b).

If these challenges are to be successfully addressed, a comprehensive strategy of ambitious and lasting reforms needs to be designed and implemented. For presentation purposes, the challenges outlined above are set out individually in this and other chapters of this report. They are, however, all closely interconnected, and must therefore be interpreted on a holistic basis. For instance, economic growth is key to any fiscal consolidation process, and its main drivers are buoyant productivity and enhanced human, physical and technological capital. Along the same lines, reducing the high structural unemployment in the Spanish labour market will undoubtedly entail reinforcing the role of education, which in turn will also help raise wages, boost productivity and bolster equality of opportunity. Meanwhile, the green transition will call for a very significant drive for investment in capital and innovation by the private sector and the public sector, which would be smoothed by improving the institutional framework in which economic activity is pursued in Spain.

Against this backdrop, the Next Generation EU (NGEU) programme and the Spanish Recovery, Transformation and Resilience Plan (RTRP) present a unique opportunity to boost Spain's potential growth capacity.[1] Spain has so far received grants of around €37 billion, out of the

1 See, for example, the following analytical studies using different methodological approaches recently published by the Banco de España: Cuadrado, Izquierdo, Montero, Moral-Benito and Quintana (2022), Fernández-Cerezo, Moral-Benito and Quintana (2023) and Domínguez-Díaz, Hurtado and Menéndez (2024).

approximately €163 billion allocated to it (in the form of grants and loans) under the Recovery and Resilience Facility, the centrepiece of the NGEU stimulus package that is instrumented through the RTRP. Disbursement by the European Commission of the remaining funds is contingent on fulfilling various milestones and targets, associated with investment projects and structural reforms, by 31 August 2026.

A rigorous selection of the investment projects to be funded from the NGEU programme is critical, as is the ambitious implementation of the other reforms and milestones pending under the RTRP, not least a comprehensive reform of the tax system and a review of unemployment assistance benefits. Given the little information available and the short period of time that has elapsed, it is too early for an accurate assessment of the macroeconomic effects of the funds already deployed and the impact of the reforms approved. However, it would be desirable to work towards a real-time assessment, so that any possible shortcomings that may arise, either in the procedures or in the execution of the projects funded, can be identified and corrected. The enormous complexity underlying the management of these funds advises a great deal of transparency so that the process ultimately strengthens people's trust in their institutions.

2 Productivity

Context:

Productivity gains are the main driver of long-term economic growth. One of the most commonly used metrics to measure productivity is total factor productivity (TFP), which can be defined as the part of output growth not attributable to productive resources. In other words, TFP growth proxies gains in the efficiency with which resources (capital and labour) are combined and utilised, which generate GDP growth even when the use of these resources does not increase.[2] Consequently, TFP growth can be considered the fundamental determinant of long-term growth, as efficiency gains in the use of productive resources are not subject to diminishing returns, nor is their use exclusive.[3]

Evidence:

In recent decades, the Spanish economy has seen a slowdown in productivity growth that has been significantly more pronounced than in other developed countries. Specifically, Spanish TFP growth in 2000-2022 was around 13 and 17 percentage points (pp) lower than that observed in Germany and the United States, respectively (see Chart 2.1.a). As highlighted in Chapter 2 of the Banco de España *Annual Report 2022,* sluggish productivity has been one of the main reasons, along with the persistence of very high unemployment rates, why the Spanish economy has lagged behind euro area per capita income in recent decades.

Further evidence:

One way of understanding how aggregate productivity in Spain has evolved in recent years (since 2013) is to analyse, using firm-level data, which part of the changes in aggregate productivity stem from sector composition effects (i.e. the extent to which shifts in the weights of sectors with differing productivity levels contribute to such developments) or from different intra-sector dynamics. Intra-sector dynamics, in turn, can be broken down into three

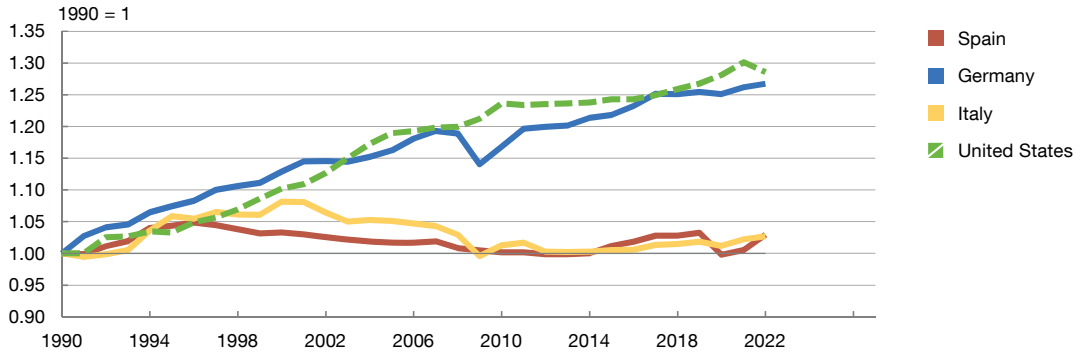
2 TFP is an efficiency metric that is related to other widely used metrics, such as labour productivity and GDP per capita. It is calculated by dividing total output by the combined contribution of the factors of production, applying assumptions about the functional form in which these factors are combined. Labour productivity is calculated by dividing total output by the number of hours worked and is therefore a more specific measure focusing on labour efficiency. Meanwhile, GDP per capita is obtained by dividing GDP by a country's population and indicates average income per inhabitant. Consequently, it is not designed to measure the efficiency of the use of factors of production.

3 A higher level of output attributable to the use of factors of production is generally subject to diminishing returns. In other words, as the use of a factor of production increases, the additional output generated by each additional unit of input decreases. However, this does not occur in the case of increases in output attributable to productivity gains. Moreover, the use of productivity gains is generally not exclusive. In other words, a new productivity-enhancing production process can usually be utilised by different production units, whereas a machine or worker are production factors that can only be used by one firm, and are therefore exclusive.

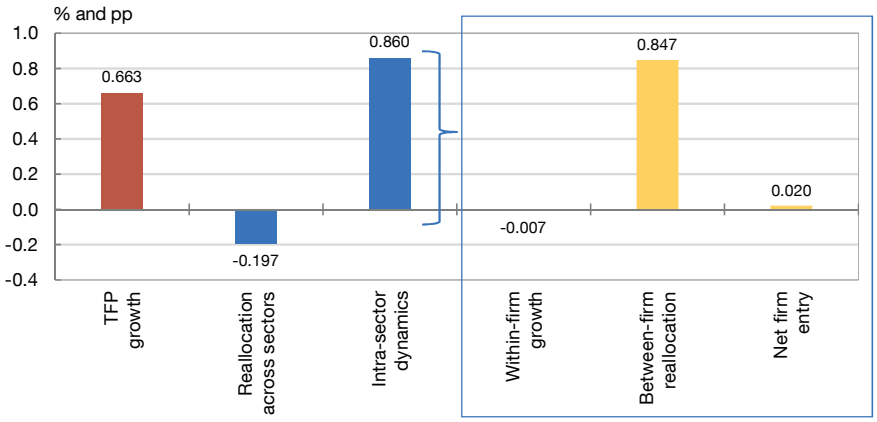
Chart 2.1

The Spanish economy has seen a more pronounced slowdown in productivity growth than other developed countries. Notable explanatory factors include low growth among active firms and the small contribution of net firm entry

2.1.a TFP



2.1.b Breakdown of TFP growth by across-sector and intra-sector contributions (a)



SOURCES: OECD and Banco de España (CBSO).

a Data in percentage (%) in the case of TFP growth and in percentage points (pp) in all other cases. Breakdown of TFP of the firms in the Central Balance Sheet Data Office integrated database, following the methodology of Foster, Haltiwanger and Krizan (2001) and weighted by sales for aggregation, and the method of Wooldridge (2009) to calculate TFP at firm level.

DOWNLOAD

contributions: the contribution from productivity growth in each firm (within-firm growth); that resulting from changes in the relative weights of firms operating in the same sector over time (between-firm reallocation); and that owing to firm entries and exits (firm demography). The results of such analysis suggest that *the main factors behind the Spanish economy's sluggish aggregate productivity are low aggregate productivity growth among active firms and the small contribution of net firm entry to productivity growth* (see Chart 2.1.b):[4]

- Cross-sector reallocation of activity made a small negative contribution to TFP growth in Spain between 2013 and 2021. During this period, however, sector-level productivity

4 This analysis is only conducted up to 2021, as information on firm exits in 2022 is not yet available. For more details on the methodology, see Foster, Haltiwanger and Krizan (2001).

contributed positively to aggregate TFP growth, as it did in other European countries (European Central Bank, 2021).

- As regards intra-sector productivity growth, resource reallocation across firms operating in the same sector made a positive contribution to productivity growth in Spain. In other words, the more productive firms posted higher activity growth than the other firms in the same sector. Meanwhile, the within-firm component made a negative contribution, that is to say, firms' average productivity growth was negative. Lastly, the extensive margin (i.e. net entry) made a very modest contribution to productivity growth.

Areas of action:

Sluggish productivity in the Spanish economy is the product of many interacting factors, calling for action to be taken simultaneously. These factors notably include: (i) the aspects shaping firm size and demographics, and the reallocation of productive resources across sectors and firms;[5] (ii) the level of human capital in the population; (iii) the technological capital stock and the drivers of investment in innovation; and (iv) the regulatory and institutional framework. The following sections describe the role played by these factors in Spain and propose various lines of action to increase their contribution to productivity growth.

Recent measures rolled out in this area:

The draft Royal Decree creating the Spanish National Productivity Board, in compliance with a European Council recommendation of September 2016, is a noteworthy example.[6] The Board's tasks will include drawing up economic and statistical analyses and issuing public opinions aimed at assessing and analysing the Spanish economy's productivity and competitiveness. If the Board is to be effective, it will need to ensure the independence and expertise of its members, and sufficient resources will have to be available to undertake rigorous analyses.

5 The sectoral make-up of the Spanish economy explains only part of its lacklustre productivity. While it is true that Spain's productive structure is skewed towards sectors of activity that usually post lower productivity growth, practically all sectors record lower productivity than in other European countries.

6 According to the latest information from the European Commission, Spain, Italy and Estonia are the only euro area countries not yet to have a national productivity board.

3 Business size and demographics

Context:

Any artificial constraint on business growth or on the ability to reallocate resources across firms and sectors ultimately holds back productivity in the economy. According to the empirical evidence available, larger firms typically exhibit higher productivity levels and, as discussed in the previous section, resource reallocation across firms is a major driver of aggregate productivity growth.[7] Furthermore, small firms are generally less diversified than their larger competitors, not only in terms of their products and customers, but also as regards their sources of financing. All of this means small firms are relatively more vulnerable to adverse macro-financial shocks.

Evidence:

The proportion of small firms in Spain is relatively high by international standards. In 2021, 76.8% of Spanish firms had between one and four employees, the highest percentage in the European Union (EU) and far higher than the figures seen, for example, in Germany (63.2%), France (70.4%) and Italy (72.5%). This gap has been relatively persistent over recent decades, and it cannot be attributed to the specific sectoral composition of the Spanish economy.[8]

Further evidence:

In addition to the small size of its firms, Spain has also recently had a lower business churn rate than other European countries, which holds back productivity as well.

— **The number of firms has returned to its pre-pandemic mark.** The number of active firms in Spain rose by 1.5%, from 3,154,837 in 2019 to 3,202,912 in 2022. This was smaller than the 9.8% rise observed in the EU as a whole during the same period.[9]

— **However, the business churn rate has fallen and remains at low levels.** Spain's churn rate, which is defined as the ratio of newly registered firms plus deregistered firms to total active

7 See, for example, Moral-Benito (2018) and García-Santana, Moral-Benito, Pijoan-Mas and Ramos (2020).

8 In particular, the percentage of Spanish firms with between one and four employees in 2021 was 58.9% in the manufacturing sectors (compared with 43.6%, 53.2% and 52.9% in Germany, France and Italy, respectively) and 79% in the services sectors (compared with 66.6%, 71.9% and 76.7% in Germany, France and Italy, respectively).

9 The data on the number of firms are taken from the Central Business Register (DIRCE, by its Spanish acronym) for Spain, and from Eurostat's structural business statistics for the EU. The DIRCE data do not include firms in agriculture (NACE Rev. 2 section A), financial service activities, except insurance and pension funding (division K64), public administration (section O), other service activities (section S), activities of households (section T) and activities of extraterritorial organisations and bodies (section U). The EU data do also not include education (section P), human health and social work activities (section Q), arts, entertainment and recreation (section R) or financial and insurance activities (section K). Excluding these sectors also, the number of firms in Spain rose from 2,781,367 in 2019 to 2,804,037 in 2022.

firms,[10] declined from an average of 18.2% in 2016-2019 to 16.2% in 2020-2021. In the EU, it rose from 17.3% to 18.1% in the same period.

— **Spain has a lower business churn rate than the EU because its entry and exit rates are lower.** Specifically, Spain's entry rate – which was in line with those observed in the EU up to 2019 – fell to around 1.7 pp below those of its European peers in 2020 and 2021 (see Chart 2.2.a). Meanwhile, the exit rate declined from around 8.5% in the pre-pandemic years to 7.3% in 2021,[11, 12] in contrast to the increase (from 7.5% to 8.5%) observed in the EU.

— **The entry and exit of firms contribute positively to productivity, meaning that a lower business churn rate limits aggregate productivity growth.** The productivity impact of business births and deaths depends not only on entry and exit rates, but also on the relative productivity of the new and exiting firms. It is possible to analyse relative productivity by considering a regression in which, for firm exits, the dependent variable takes the value of 1 if the firm exits the market in the year and 0 otherwise, with the explanatory variable of interest being its productivity – relative to the sector average and year – in the previous period. For firm entries, a similar regression is considered, but the dependent variable takes the value of 1 if the firm enters the market in the year and 0 otherwise, and the explanatory variable is its productivity in the current period. Based on the coefficients estimated in the two regressions, the following main conclusions may be drawn (see Chart 2.2.b):

  - In the case of firm exits, the negative coefficient implies that, as might be expected, less productive firms are more likely to exit the market. However, although the negative link between productivity and exit from the market became stronger during the financial crisis, it did not do so during the health crisis. This could be due, at least in part, to the various support measures deployed by the authorities following the outbreak of the pandemic, such as the furlough schemes (ERTEs, by their Spanish acronym), the deferral of social security contributions and tax payments and the provision of financing to firms on favourable terms.

  - In the case of firm entries, the negative coefficient also suggests that new firms are less productive than established ones. However, new firms typically have more room for improvement. For example, in Spain, the productivity growth of firms that entered the market between 2014 and 2016 was, after five years, around 22 pp higher than that

10 Active firms are those that have positive sales or employment in the period analysed. Entry refers to the registration of a new active firm that does not involve any other firm that either currently exists or has existed within the last two years. Exit refers to a firm that becomes inactive, again excluding cases involving other firms or when a firm is reactivated within the next two years.

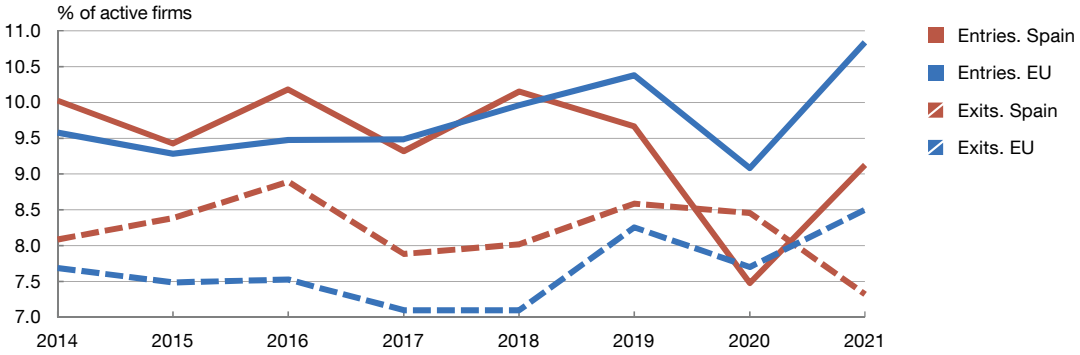
11 As exits are measured in economic, rather than legal, terms, these figures are not affected by the moratorium on insolvency proceedings. Indeed, in 2019 (the year before the moratorium was approved), 0.14% of firms filed for insolvency proceedings, while the exit rate was 9.4%. Consequently, although the number of firms being wound up has held at previous levels, the exit rate has continued to fall.

12 According to the DIRCE, the entry and exit rates for Spanish firms in 2022 were still below 2019 levels and in line with the average observed in 2020-2021.

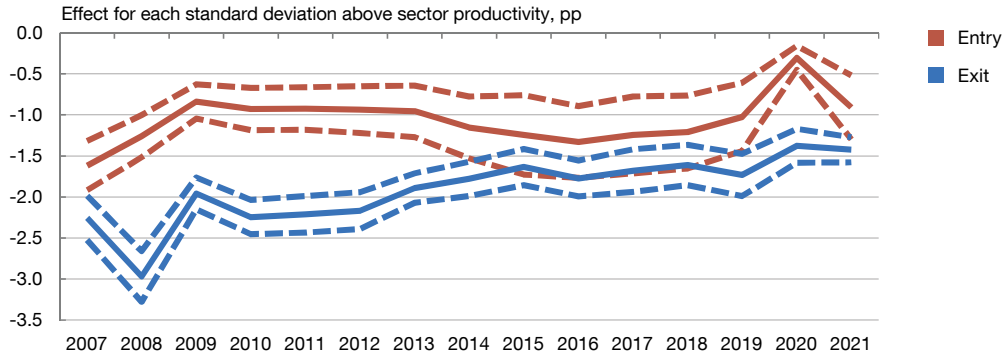
Chart 2.2

Spain has a lower business churn rate than the EU because its entry and exit rates are lower

2.2.a Firm entry and exit rates in Spain and the EU (a)



2.2.b Relative productivity levels of new and exiting firms compared with active firms (b)



SOURCES: Eurostat and Banco de España (CBSO).

a Given the lack of information for some of the years between 2014 and 2021, the EU aggregate does not include Belgium, Greece, Ireland, Malta, Poland or Sweden. Moreover, the Eurostat data do not include firms in the following sectors: agriculture (NACE Rev. 2 section A), financial service activities, except insurance and pension funding (division K64), public administration (section O), other service activities (section S), activities of households (section T) and activities of extraterritorial organisations and bodies (section U).

b The chart shows the coefficients associated with firm-level TFP (in deviations from the sector average) and estimated for each year in two regressions: one in which the dependent variable is a dummy variable that takes the value of 1 if the firm exits the market and 0 otherwise (blue line), and another in which the dependent variable is a dummy variable that takes the value of 1 if the firm has entered the market within the last year and 0 otherwise (red line). Consequently, the estimated coefficients measure the effect of one-standard-deviation changes in firms' TFP with respect to the sector average on entry and exit rates. Firm-level TFP is estimated previously, drawing on the method of Wooldridge (2009). The broken lines show 95% confidence intervals.

DOWNLOAD

of established firms, meaning that they were already more productive than their competitors from their fifth year onwards. In any event, the estimated coefficient in this regression is less negative than that estimated for exits, suggesting that new firms are more productive than exiting firms.

Areas of action:

Many obstacles shaping firm size and demographics in Spain have been identified in recent decades, notably including:

— **The quantity and quality of regulation.** The volume and complexity of the regulations governing economic activity in Spain have grown substantially in recent years.[13] As a result, firms have to dedicate an increasing proportion of their resources to understanding and complying with the regulations, which sometimes creates obstacles to market unity. To ease the regulatory burden on firms and foster market unity (which would be conducive to business growth and competition), the different tiers of general government should pool their regulatory approaches for each sector, so as to achieve best-practice standards.

— **Spanish firms' access to non-bank financing.** Despite the advances made in recent years, Spanish firms' ability to access non-bank market-based funding sources is still very low. This is particularly detrimental to growth when it limits investment opportunities for younger and more innovative firms, which have relatively less collateral but higher growth potential. In this respect, further progress needs to be made in developing venture capital markets, both in Spain and at European level. This will require firm steps to be taken towards a capital markets union in the EU (European Central Bank, 2024).

— **Insolvency proceedings.** Historically, relatively limited use has been made of insolvency proceedings and pre-insolvency arrangements in Spain. Moreover, when insolvency proceedings have been used, they have typically taken a long time and a high proportion of insolvent firms has eventually been wound up (García-Posada Gómez and Vegas Sánchez, 2018). This has delayed non-viable firms' exit from the market and even reduced the economic value of the firms affected, with the consequent adverse impact on aggregate productivity growth. The 2022 Insolvency Law reform, which is described at the end of this section, seeks to correct some of these shortcomings.

— **Public tender procedures.** Public tenders are mostly awarded to large firms. Some studies suggest that redirecting tender procedures, at least partially, towards small and highly productive but financially constrained firms could spur business and aggregate productivity growth (Giovanni, García-Santana, Jeenas, Moral-Benito and Pijoan-Mas, 2022). In this context, according to a recent Banco de España study (Aguilar, Alloza, de la Mata, Moral-Benito, Portillo-Pampin and Sarasa-Flores, 2023), the tenders linked to the NGEU programme have to date been allocated to larger firms than those that have won previous public tenders.[14] By contrast, the firms that have so far been allocated NGEU grants are comparatively smaller than has been the case in other grants, which can be partly explained by the size of programmes such as the Digital Kit.[15]

13 For more details, see Mora-Sanguinetti, Quintana, Soler and Spruk (2024) and Mora-Sanguinetti and Pérez-Valls (2021), who use a novel database that compiles and classifies the more than 200,000 rules adopted in Spain between 1995 and 2020. Moreover, according to the European Commission's Single Market Scoreboard, Spain ranked 22nd in the EU based on the burden of government regulation in 2022.

14 In addition to being larger, the successful bidders for NGEU tenders are significantly more productive, have better access to bank financing and saw a smaller drop in their sales during the pandemic.

15 A Spanish programme to foster the digitalisation of small and medium-sized enterprises, which has resulted in a first round of tenders worth €1.5 billion and currently has an implementation rate of more than 80% of the total.

— **Regulatory thresholds.** The academic literature has highlighted the existence of certain employment and tax thresholds in regulations, that are linked to arbitrary levels of firm size and which, to some extent, discourage business growth around these thresholds (Almunia and López-Rodríguez, 2018). A review should be carried out of such thresholds and their impact on business demographics.

Recent measures rolled out in this area:

Various initiatives have been approved in recent years in an attempt to bolster business growth and smooth the efficient reallocation of factors of production. However, it is still too early to accurately assess whether these initiatives will be able to significantly reverse any of the persistent weaknesses in terms of business size and demographics in the Spanish economy. The measures recently approved notably include:

— The Law on business start-ups and growth. This law seeks to boost business start-ups and foster their growth through actions such as: (i) facilitating and streamlining business start-up (for example, by reducing minimum share capital or introducing standardised templates and standard articles of association for setting up limited liability companies); (ii) providing increased flexibility in alternative financing arrangements (by introducing a new legal regime for crowdfunding platforms, for example); and (iii) incorporating incentives for compliance with payment periods, both in the private sector (by including a requirement to disclose average supplier payment periods in the annual accounts and late payment monitoring) and in general government (establishing late payment interest and other measures to combat late payment).

— Insolvency Law reform. The new law establishes a pre-insolvency mechanism known as a "restructuring plan" that allows business debt forbearance at an early stage. Furthermore, a new bespoke procedure has been added for microfirms, which is cheaper and more streamlined than the standard insolvency proceedings. Lastly, improvements have been made to the fresh-start mechanism for the self-employed and individuals, adding the possibility of debt waiver – without prior liquidation of a debtor's assets – based on a three-year payment plan and extending the waiver of unpaid claims to include public law claims, up to a certain threshold.[16]

16 On data published by the Association of Registrars, the number of insolvency proceedings involving the self-employed and individuals in Spain increased by 89% in the year following the reform, from 8,503 to 16,096. Furthermore, according to information compiled by the Spanish official export credit company (Cesce), the number of special procedures for microfirms has gradually increased from four in February 2023 to 147 in February 2024.

4 Human capital

Context:

The academic literature emphasises the importance of human capital for economic growth.

— **From a macroeconomic standpoint, there is broad consensus that a lower stock of human capital reduces growth.**[17] This impact would not only stem from the direct effect of educational attainment levels on individual productivity; it would also materialise through other channels, such as the complementarity between human capital and investment in physical or technological capital. In this respect, European countries with a higher level of human capital (based on the numeracy scores under the Programme for the International Assessment of Adult Competencies, for example) on average invest 1 pp more in R&D&I than Spain.

— **From a business perspective, firms' productivity is highly correlated to their staff's educational attainment level** (Syverson, 2011). Specifically, firms at the productivity "frontier" (those in the top 10% of the productivity distribution) have more high-skilled workers (7% more staff with tertiary education) than firms at the median of the productivity distribution (Criscuolo, Gal, Leidecker and Nicoletti, 2021).

— **At individual level, there is a clear positive return to education, which in addition seems to be increasing over time.** Drawing on data from different waves of the Banco de España's Spanish Survey of Household Finances (EFF, by its Spanish abbreviation), it is possible to estimate the internal rate of return to education as with any other investment. The cost of the investment is quantified on the basis of the sum of the income forgone by not working during the period of study, while the benefit can be calculated considering the positive labour income differential obtained after education.[18] According to this analysis, in 2019 an upper secondary education or intermediate vocational training provided a return of 18% for men and 26% for women compared with compulsory secondary education alone; in both cases, this return was greater than that estimated in 2007 (see Chart 2.3.a).[19] Moreover, university studies provided an additional return of 20% for men and 23% for women; again, these figures were higher than those estimated in 2007. Meanwhile, the additional return to higher vocational training compared with intermediate vocational training (non-compulsory level) was also positive for men and women in 2019, although for women it was lower than in 2007.

17 See, for example, Romer (1986), Lucas (1988, 1990, 2015).

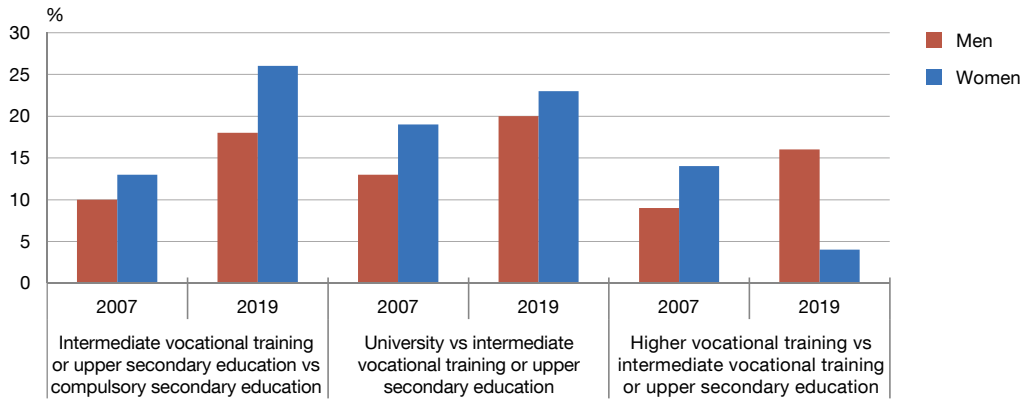
18 For more details on the methodology used, see Jansen and Lacuesta (2024).

19 Heckman, Lochner and Todd (2006) estimate, for the United States in 1990, a return of 39% to 12 years of schooling (equivalent to completing upper secondary education) compared with 10 years of schooling alone (compulsory secondary education), and an additional return of 24% to completing 16 years of education (university) compared with 14 years of education. A number of estimates are available for other countries. Drawing on various articles, Card (2008) suggests that the return to an additional year of schooling in many European countries would be between the 5% observed in Sweden and the 10% observed in the United Kingdom.

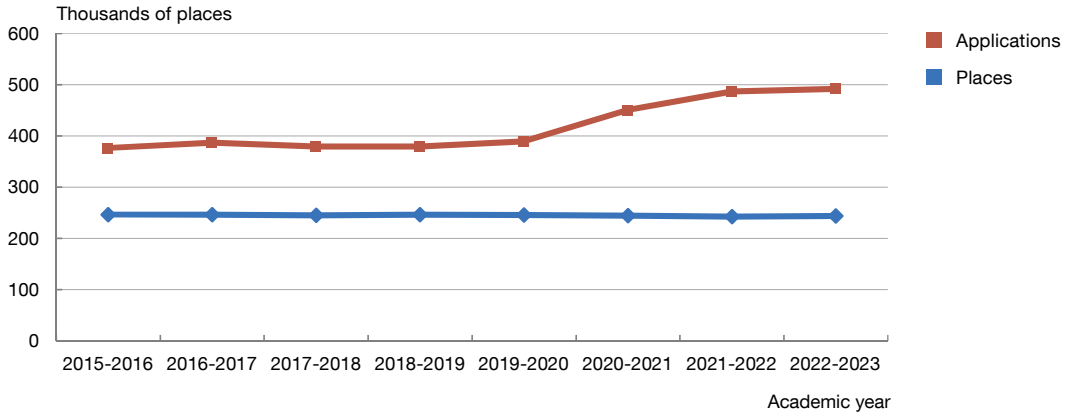
Chart 2.3

There is a significant and positive economic return to education, and it seems to be increasing over time. There appears to be some mismatch between the supply of and demand for places at conventional public universities

2.3.a Internal rate of return (IRR) (a)



2.3.b Conventional public universities: first-choice applications and places



SOURCES: Banco de España (EFF) and Ministerio de Ciencia, Innovación y Universidades (UNIVbase).

a Drawing on data from the 2008 and 2020 editions of the Spanish Survey of Household Finances (EFF). The chart depicts the IRR to one level of educational attainment compared with another. The IRR to a level of educational attainment is defined as the discount rate that equates the sum of the present value of earnings over 50 years of work experience with the opportunity cost (the present value of income earned by not remaining in education). Gross labour income per year of work experience is obtained using a logarithmic regression of gross annual labour income restricted to a sample with the two educational attainment levels analysed, adding a constant, a dummy variable for the higher educational attainment level, a variable for potential experience and its square defined as age-16 for compulsory secondary education, age-18 for intermediate studies, age-20 for higher vocational training and age-22 for university studies. The estimate takes into account weights and the five imputations of the EFF. Drawing on the results of these regressions, labour income is estimated from 0 to 50 years of work experience and the internal rate of return is calculated assuming that someone who begins to work after completing compulsory secondary education does so two years before someone who studies intermediate vocational training or upper secondary education and that there are no monetary costs of studying. Similarly, it is assumed that, compared with someone who studies either intermediate vocational training or upper secondary education, an individual who studies higher vocational training will begin two years later and a university student graduate four years later. For more details, see Jansen and Lacuesta (2024).

DOWNLOAD

Evidence:

Despite the improvement observed in recent decades, the educational attainment level of the Spanish population remains below the European average.

— **Early school leaving.** The early school leaving rate has fallen considerably in Spain over the last few decades. For instance, the percentage of the population born in 1998 whose highest

level of educational attainment was compulsory secondary education by the age of 25 was 13 pp and 7 pp lower for men and women, respectively, than for those born in 1990.[20] However, Spain continues to have one of the highest early school leaving rates among European countries. Specifically, in 2023, 13.6% of 16-24 year-olds in Spain had left school having completed, at most, compulsory secondary education, compared with 9.6% in the EU as a whole.

— **PISA results.** The Programme for International Student Assessment (PISA) of the Organisation for Economic Co-operation and Development (OECD) is a useful international assessment of students' level of achievement at the end of their compulsory education. The latest results refer to 2022, in which Spain ranks 23rd in mathematics and 24th in reading and in scientific knowledge, out of the 38 OECD member countries. When only those students at the highest levels of excellence are considered, Spain has an even lower position in the rankings.

— **Educational attainment level among adults.** On Eurostat data for 2023, the percentage of people with a low level of educational attainment in Spain was 29% among employees, 34% among employers and 35% among the self-employed. These figures are higher than those observed in Italy (27%, 33% and 25%) and well above those found in France (12%, 8% and 11%) and Germany (16%, 11% and 10%).[21]

Further evidence:

In addition to the quantity and quality of education, it is also essential to analyse the extent to which the education available can adapt to changes in demand, and thereby prevent possible mismatches that could hold back the economy's productive capacity and constrain equality of opportunity. In this respect, *there appears to be some mismatch between the supply of and demand for places at conventional (i.e. classroom-based) public universities.*

— **On the demand side, the number of applications to conventional public universities rose by 30% in Spain between 2015 and 2022** (see Chart 2.3.b).[22] Furthermore, such applications appeared to be aligned, to some extent, to labour market demand. Specifically, on average, these applications were positively correlated to graduates' contribution base four years

20 The increase in men's educational attainment level was split between intermediate vocational training, higher vocational training and university studies, whereas for women it was chiefly concentrated in university education.

21 Beyond the level of educational attainment, other practices related to firm structure, organisation and management are key to productivity. In recent years, progress has been made in the analysis of the importance of these factors in the economic literature thanks to advances in measuring them through surveys (Bloom and Van Reenen, 2007) and randomised trials (Adhvaryu, Molina and Nyshadham, 2022).

22 In addition to a rise in demand for education stemming from the higher returns to training (see Chart 2.3.a), in recent years there has been an increase in the number of people aged 19. In the period 1995-2008, the fertility rate rose somewhat in Spain, in line with the economic upswing during those years. As a result, the population aged 19 grew continuously, from 428,000 to 484,000, between 2015 and 2022. According to the population projections of the National Statistics Institute (INE), the population aged 19 will reach 586,000 in 2028. However, as fertility rates have decreased since the financial crisis, it will tend to fall back, to around 440,000 after 2040.

after graduation, with courses leading to a job paying 10% more than other courses receiving 6% more applications.

— **On the supply side, however, the number of places available at these universities for new students fell slightly (by 1%) in the period analysed.**[23] Moreover, in contrast to the number of applications, the number of places available in areas of study at conventional public universities is not correlated to wage variation. These universities are offering more courses in areas of study with greater job opportunities, but without making more places available.

Areas of action:

It is essential that structural measures be developed to promote human capital accumulation, which may require an in-depth review of the institutional design of Spain's education system. This is especially important at the present juncture, in which a major sectoral and occupational reallocation of employment appears likely, prompted, inter alia, by the far-reaching demographic and technological changes under way and the green transition (for more details on how these could affect the labour market, see Chapter 3 of this report). Among the various initiatives that could be rolled out in this area, the following are noteworthy:

— **Push to encourage students to remain in education.** Public policies should continue to encourage students to remain and progress in the formal education system, especially taking into account the associated individual return (see Chart 2.3.a) and aggregate return. In this respect, work experience is an imperfect substitute for formal education in the development of cognitive skills for workers with lower levels of educational attainment (Martínez-Matute and Villanueva, 2023). Various programmes, such as tutoring in small groups or with teachers from the same ethnic background, have proven useful in encouraging pupils to remain in school and improve their performance.[24] Furthermore, it would be advisable for the public sector to provide students (and their families) with sufficient information on the employment returns to education, to inform their decisions (McGuigan, McNally and Wyness, 2016).

— **Vocational training.** High-quality vocational training could be a very effective alternative for reducing both the early school leaving rate and some of the existing supply and demand mismatches in the labour market, which could increase in the future.[25]

  - The Organic Law on vocational training, approved in 2022, seeks to overhaul the vocational training system in Spain. To this end, it focuses on the dual vocational training system introduced in 2012 and on promoting continuous training.

23 In the same period, the number of new undergraduate students at private universities rose by 20,000 (+53%).

24 Gershenson, Hart, Hyman, Lindsay and Papageorge (2022) and Battaglia and Lebedinski (2022).

25 For instance, the percentage of Spanish firms reporting that labour shortages were having an adverse or very adverse impact on their activity has risen considerably in recent quarters. Specifically, according to the Banco de España Business Activity Survey (EBAE, by its Spanish abbreviation), 43.8% of firms perceived having such problems in 2024 Q1, up 34 pp from early 2021 (Fernández-Cerezo and Izquierdo, 2024).

- The key characteristic of the dual system is the prominent role given to firms in the training process. In the case of Spain, the economic literature finds that under the dual system the number of days worked, income and job retention rates are all higher in the two years after graduation than under traditional training programmes (Bentolila, Cabrales and Jansen, 2024). However, at international level, the evidence is mixed as to whether the better short-term returns from the dual model continue over the working life, particularly in a context of rapid technological change.[26] It may therefore be advisable, as envisaged under the new law, to reinforce the continuous training system for workers with general skills at the same time as the dual vocational training system is rolled out. This is also particularly appropriate in circumstances like the present in which the working population is ageing significantly, which results in some loss of cognitive skills (Anghel and Lacuesta, 2020).

- In any event, the number of places offered in the dual system in the 2021-2022 academic year accounted for less than 5% of the total. Consequently, if the ambitious targets set in the RTRP for the number of dual vocational training places are to be met in the coming years, the right incentives to generate these places will need to be available to Spanish firms.

— **University education.** The Organic Law on the university system (LOSU, by its Spanish abbreviation), which was approved in March 2023, fosters a series of measures to improve the quality of education and adapt the Spanish university system to the structural challenges facing the Spanish economy. Among other aspects, it introduces changes to university autonomy, staff selection processes and contract types for teaching and research staff. Although it is too early for a comprehensive assessment of the law's ability to correct any of the shortcomings of the Spanish university system,[27] further action may be needed in two particular areas in the future:

- First, the current university funding system should be assessed, focusing on aspects such as its sufficiency, equity and ability to foster excellence.[28]

- Second, the above-mentioned supply and demand mismatches in public university education should be reduced, as they could have a negative bearing on equality of opportunity[29] and the Spanish economy's ability to undertake the green and digital transition. On Eurostat data for 2020, just 24% of students in tertiary education in Spain were enrolled in a field related to the natural sciences, mathematics, statistics, information and communication technologies, engineering, manufacturing and construction, below the 28% observed in the euro area.

26 See Jansen and Lacuesta (2024) for a summary of the literature on this issue.

27 For example, according to some international rankings (Academic Ranking of World Universities), very few Spanish universities rank among the best global institutions in terms of the quality and quantity of their scientific output, taking into account the size of the country's population and economy.

28 See, for example, Montalbán Castilla (2019) and Cabrales, Güell, Madera and Viola (2020).

29 While private universities may have covered some demand, the lack of response from the public university system may affect equality of opportunity.

— **Financial education.** Financial education is key if the general public are to take well informed decisions about their finances and be able to make a critical assessment of public policies. However, as in other European countries, the Spanish population has a low level of financial literacy (Organisation for Economic Co-operation and Development, 2023). Specifically, according to the Banco de España's Survey of Financial Competences 2021, the percentage of the Spanish population aged 18-79 who understand basic concepts related to inflation, compound interest and risk diversification is relatively low, at 65%, 41% and 52%, respectively (Hospido, Machelett, Pidkuyko and Villanueva, 2023). In this respect, the Financial Education Plan, in which the Banco de España, the National Securities Market Commission and the Ministry of Economic Affairs, Trade and Enterprise participate, specifically proposes a set of measures aimed at increasing the general public's financial literacy and improving their financial conduct and habits. For the period 2022-2025, the Plan envisages action across all levels of education, as well as specific initiatives aimed at vulnerable groups and at new users of online financial services. In tandem, it is essential that the impact of such initiatives is carefully and continuously assessed.[30]

30 Bover, Hospido and Villanueva (2024) conduct a randomised experiment to assess the effect that financial education courses delivered at secondary level have on financial literacy and preferences and attitudes towards saving a few months later. Students' scores in a financial literacy test improved and their degree of patience in choices regarding current and future consumption increased, with these positive effects being observed specifically among students from less advantaged backgrounds. The improvement in their financial literacy may be quantified at around 17% of one standard deviation of the scores in a specifically designed test. By way of reference, in the context of the Survey of Financial Competences, this would be equivalent to a 40% increase in the financial literacy of the 18-25 age bracket.

5 Capital investment and innovation

Context:

Investment in physical and technological capital and the pursuit of innovative activities have the potential to significantly drive up productivity and the economy's growth capacity in the medium and long term. Any comprehensive policy for sustainable growth must therefore stimulate such investment and activities. This is especially true for innovation, as some aspects specific to this type of activity[31] could lead to private sector investment falling short from a social perspective.

Evidence:

In recent decades, an aspect that partly explains Spain's relatively lacklustre productivity has been its low share of innovation, which has also led to a smaller stock of intangible assets.

— Spain has a lower percentage of innovative firms than other European countries, even when firms' smaller size and sectoral distribution are taken into account. Specifically, Eurostat's *Community Innovation Survey* shows that, in the period 2018-2020, only 31% of Spanish firms engaged in innovative activities, compared with 49% in the EU.

— Moreover, according to OECD data, Spain's average innovation intensity is also low. In 2022, R&D&I expenditure in Spain represented around 1.4% of GDP, below the share observed in the OECD as a whole (2.7%), or in countries like Germany (3.1%) and France (2.2%). This innovation gap is the result of the scant momentum of this expenditure item in Spain over the period analysed, from the standpoint of investment both in the public sector and in the private business sector.

— As a result of these developments, although the Spanish economy's intangible assets have increased in recent decade – to 5.9% of all capital stock, according to the Spanish National Accounts –,[32] this has not been sufficient to significantly close the gap with average euro area levels (excluding Ireland[33]), where intangible assets represent 9.4% of capital stock.

31 For example, innovation generates knowledge spillovers that are not always exploitable by those making the investment. Moreover, when successful, such activities usually produce an intangible asset with an economic value that is much higher for the developer than for the funding provider. Consequently, financing for this type of activities is more complex and costly than that relating to, for example, the acquisition of a conventional physical asset.

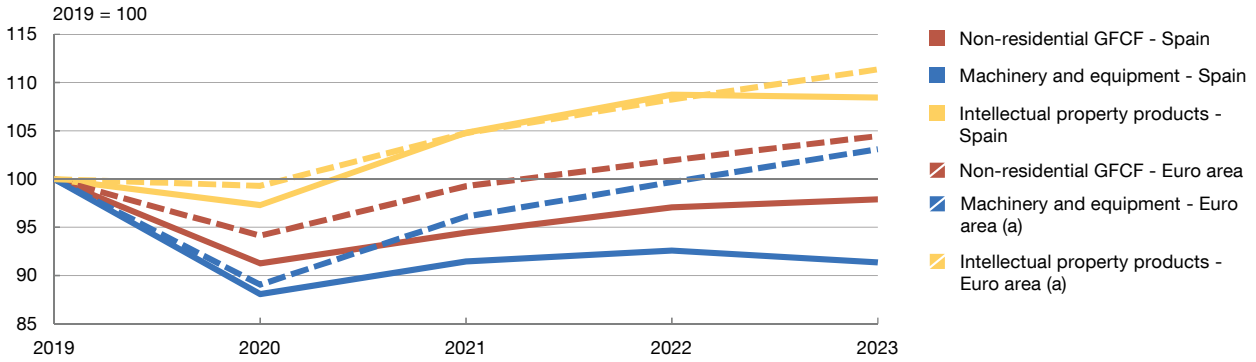
32 Intangible asset investment, according to the Spanish National Accounts, refers to investment in intellectual property products. It does not include other intangible assets, such as new product development, brands, human capital formation by the firm and organisational structure.

33 Ireland has been excluded from the data presented as it distorts the euro area investment series. For further details, see Andersson, Byrne, Emter, González Pardo, Jarvis and Zorell (2023).

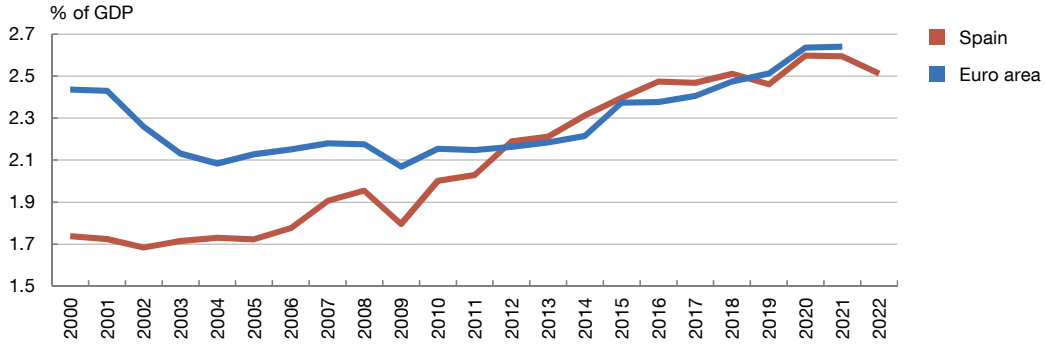
Chart 2.4

In the most recent period, investment in intangible assets and ICT has grown strongly, whereas investment in machinery and equipment has been weak

2.4.a Post-pandemic recovery in investment, by component



2.4.b ICT investment



SOURCE: Eurostat (National Accounts).

a Ireland is excluded from the euro area.

DOWNLOAD

Additional evidence:

In the most recent period, the performance of investment has been highly uneven by component, with investment in intangible assets and information and communication technologies (ICT) being clearly buoyant, and weak in capital goods.

— **Since the outbreak of the health crisis, the recovery in investment in intangible assets in Spain has been stronger than in the other investment components.** Specifically, investment in this type of asset had already returned to its pre-pandemic levels by early 2021, while all other investment components had still to reach them at end-2023 (see Chart 2.4.a). This could be due, at least in part, to the boost in the development and implementation of new technologies as a result of the mobility restrictions associated with the pandemic. That said, in 2023, investment in intellectual property products in Spain was 8.5 pp higher than the 2019 level, while in the euro area it stood 11.4 pp above its pre-pandemic mark.

— **As for tangible capital, the different adverse shocks that have shaped economic activity in Spain and globally in recent years appear to be having a sharper impact on investment in machinery and equipment.** In 2023, this demand item in Spain was still 8.6 pp below its pre-crisis level. Conversely, in the euro area as a whole this investment component stood 3.1% above its 2019 level in 2023. The Spanish economy's recent lacklustre performance in investment in machinery and equipment is largely due to the weakness of investment in transport equipment, which stands 25.1 pp below the pre-pandemic level (compared with 4.6 pp below that level in the case of the euro area).

— **Public investment has increased significantly in recent years.** Indeed, in 2022, public sector investment was 27.1% higher than in 2019. The strength of this component may be explained, at least in part, by the effects of the health crisis on some sectors closely linked to general government. Specifically, investment in machinery and equipment in these sectors (which include "Public administration and defence", "Compulsory social security", "Education" and "Human health and social work activities"[34]) grew by 36.7%.[35] Nevertheless, public investment in the euro area, which could also have benefited from such dynamics, rose by only 7.1% between 2019 and 2022.

— **Given the challenges posed by the digitalisation of activity, it is also important to analyse the recent behaviour of ICT investments.** These investments can relate both to intangible capital, such as software, databases and cloud storage servers, and to tangible capital, such as telecommunications and computing equipment. Between 2000 and 2022, this investment component showed notable buoyancy in Spain, its share of GDP increasing from 1.7% to 2.5%, very close to the 2.6% observed in the euro area as a whole (see Chart 2.4.b). In addition, according to the European Commission's Digital Economy and Society Index, in 2022 Spain ranked third in the EU in terms of digital connectivity, but came 11th as regards the integration of digital technology by SMEs.

Areas of action:

Many of the measures that could be adopted in Spain to promote business investment and innovation overlap or are compatible with the range of actions described in previous sections that should ideally be implemented to boost the level of human capital of both employers and workers, and to increase the size of Spanish firms and contribute to the cross-sector and cross-firm reallocation of productive resources. Some initiatives more specifically aimed at boosting investment and innovation are described below:

— **Providing a regulatory framework and a stable institutional environment, to give investors regulatory and legal certainty.**

34 Although the public sector accounts for most of these activities, there are also private firms operating in them. It should therefore not be assumed that only the public sector invests in these sectors.

35 Growth rate between 2019 and 2021, the latest year for which this breakdown is available.

— **Smoothing access to external financing for investment projects, especially those that tend to face greater obstacles in raising finance,** such as innovative activities and intangible asset investment. To this end, as already mentioned in Section 3, it would be advisable to foster the development of venture capital markets in Spain and Europe, taking firm steps towards a capital markets union in the EU.

— **Reviewing the efficiency and design of the system of tax incentives for innovation.** The White Paper for the Reform of the Tax System (2022) (only available in Spanish) provides a thorough overview of the problems in the design of R&D&I incentives in Spain, along with wide-ranging proposals for their reform in line with global best practices. Specifically, the evidence from around the globe shows that designing tax incentives with higher subsidies for newly created companies (which face greater constraints on R&D&I investment) leads to particularly effective policies for enhancing the drive for innovation and its deliverables. It may also be worth giving thought to measures that would allow innovative firms to claim direct reimbursement for investments if they do not make enough taxable profits.

— **Rigorously selecting investment projects to be carried out using European NGEU funds,** maximising the complementarity and synergies between public and private investment (Alloza, Leiva-León and Urtasun, 2022), and ambitiously implementing the reforms included in the RTRP to reduce the barriers that hinder the sound functioning of markets and resource allocation in the Spanish economy (Albrizio and Geli, 2021).

Recent measures rolled out in this area:

— Law on Developing the Ecosystem of Emerging Businesses, better known as the Start-Ups Law. This law is intended to stimulate investment in innovative activities, to attract, recover and retain talent, as well as create and relocate emerging firms that are committed to innovation. It simultaneously aims to stimulate collaboration of emerging firms with SMEs and large businesses, and also to foster cooperation of emerging firms and entrepreneurs with universities and research institutions. Of the range of measures introduced, the tax and employment incentives for R&D&I activities stand out, as does the measure to streamline the bureaucracy involved in setting up innovative firms.

— Law on Science, Technology and Innovation. This law sets a target for government funding of R&D&I at 1.25% of GDP by 2030. Among other measures, this law also aims to encourage scientific research by creating a new type of permanent contract for researchers and streamlining administrative barriers, such as those surrounding grant access.

6 Institutional framework

Context:

There is broad consensus in the academic literature that the institutional framework and, more specifically, the quality of institutions and the degree of trust they instil among economic agents are key in determining long-run growth (Acemoglu, Johnson and Robinson, 2005). Furthermore, some empirical evidence suggests that lost trust in institutions often takes a relatively long time to be won back, meaning that the economic consequences can also be highly persistent.[36]

Evidence:

According to different internationally comparable indicators, institutional quality and trust have deteriorated in Spain since the financial crisis.

Quantifying the quality of institutions and the degree of economic agents' trust in them is a complex task, particularly for the purpose of establishing comparisons over time and between countries. In any event, despite the uncertainty surrounding these analytical exercises (which are typically based on a combination of information sources and the stated perceptions of different types of agents), some of the metrics most frequently used in this area, such as the World Bank's *Worldwide Governance Indicators* or the European Commission's Eurobarometer, suggest that, in recent decades, trust in Spanish institutions and their perceived quality have deteriorated, and they have done so more markedly than in other European countries.[37]

Areas of action:

In light of such evidence and its economic significance, the quality of and trust in Spanish institutions should be strengthened.

— For example, turning to the dimensions assessed by the World Bank, there is scope for improving the "quality of regulation" in Spain, as it negatively affects not only firm size and the Spanish economy's productivity (see Section 3), but also judicial efficacy (Lucio and Mora-Sanguinetti, 2022).

36 See, for example, Becker, Boeckh, Hainz and Woessmann (2016), Daniele, Aassve and Le Moglie (2023) and Solé-Ollé and Sorribas-Navarro (2018).

37 Thus, for example, according to the World Bank's *Worldwide Governance Indicators,* while Spain's institutional quality in 1998 was well above the euro area average, the situation had reversed by 2022. The European Commission's Eurobarometer points in the same direction when comparing citizens' degree of trust in political parties, the Government, Parliament and the justice system between 2007 and 2023. Spain has gone from having higher levels of trust than the other large euro area economies to trailing them in all these dimensions except trust in the justice system, where it still ranks second to Germany.

— In addition, action is needed to boost the efficacy and efficiency of Spanish general government, which would help lift productivity and have positive spillovers on private sector decision-making on spending, investment and innovation. In this respect, it is worth mentioning some recent initiatives whose effectiveness will need to be carefully assessed in the coming years:

- One of the priorities of the Spanish RTRP is modernisation of the general government sector, described in project 11 of this plan and to which more than €4.2 billion has been allocated. This initiative aims to improve the efficiency of general government management by driving this sector's level of digitalisation, enhancing energy use (via building renovations and renewable energy use), strengthening the evaluation framework for public policies and cutting down on the use of temporary contracts in public sector employment.

- In this respect, the Law Institutionalising the Evaluation of Public Policies aims to incorporate ex ante and ex post assessments into the legislative processes of central government.[38] The statute of the Public Policy Assessment Agency (AEVAL) created under this law has not yet been approved.

- In addition, with respect to the civil service, changes were recently approved to public sector recruitment, to performance assessments and to internal promotion procedures that must be judged by, among other things, their impact on the quality of the provision of public services.[39] In any event, on 21 March 2024, the Government set out before the Senate Civil Service Commission the broad outlines of the new general government reform, which, inter alia, aims to improve the planning, efficiency and capacity to attract talent of public procurement systems.

38 Any ex post assessments deemed necessary to review public spending will be performed by the Independent Authority for Fiscal Responsibility (AIReF).

39 Royal Decree-Law 6/2023, of 19 December 2023, ratified by Parliament on 10 January 2024.

7 Population ageing

Context:

Population ageing is one of the biggest challenges that the world's main economies will have to face in the coming years. The extraordinary scale of this challenge stems not only from the magnitude of the demographic changes under way, but also from their numerous implications, for example, in terms of the economy's growth capacity, labour market dynamics and public revenue and expenditure.[40]

Evidence:

In recent decades, demographic trends in Spain have been marked by a significant drop in both fertility and mortality rates (see Chart 2.5.a). As a result, the population ageing process has gathered considerable pace, and will continue to do so over the coming decades, more so in Spain than in other European countries.

— **Fertility rate.** The fertility rate fell from 2.8 children per woman in 1975 to 1.1 per woman in 1998. Since then, it has remained fairly stable in Spain, below the levels observed in other European countries.

— **Mortality rate.** Spain's mortality rate at 65 years of age has clearly trended downwards in recent decades (except during the recent COVID-19 episode), and is very low by international standards.

— **Life expectancy at birth.** Life expectancy at birth has increased markedly in recent decades, to 83.2 years in 2022, and is higher than in other developed countries. However, while Spain stands out internationally for its high life expectancy at birth, its relative position in terms of healthy life expectancy[41] lags behind, for example, Germany, France and Italy (see Chart 2.5.b).[42]

— **Population structure by age group.** Since the early 1970s, the proportion of the total population aged over 64 has more than doubled in Spain, accounting for over 20% in 2023. This trend is set to continue and will be more pronounced than in other European countries. Specifically, drawing on the latest Eurostat demographic projections, between 2023 and 2053 the dependency ratio[43] in Spain will increase by 27.2 pp to 53.8%, compared with just 16.6 pp (to 45.8%) on average in the EU.[44]

40 For an in-depth analysis of these implications, see Banco de España (2019).

41 Healthy life expectancy at birth is calculated as the life expectancy at birth minus the expected number of years lived with disability or poor health, taking into account the multiple causes that might contribute to poor health, weighted according to their severity (Mathers, Sadana, Salomon, Murray and Lopez, 2001).

42 For further details about the health status of the elderly in Spain, see Crespo, Denis and Jimeno (2023).

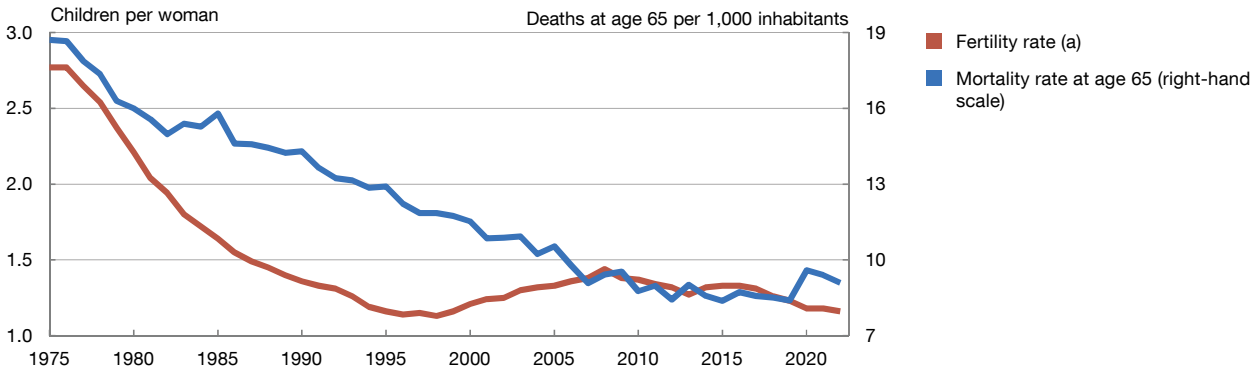
43 Defined as the ratio of the population aged over 66 to those aged 16-66.

44 These percentages remain largely unchanged, in qualitative terms, when viewed over a longer period. Again, drawing on the latest Eurostat demographic projections, between 2023 and 2100 the dependency ratio in Spain will increase by 31.6 pp to 58.2%, while the EU average will rise by just 24.7 pp to 53.9%.

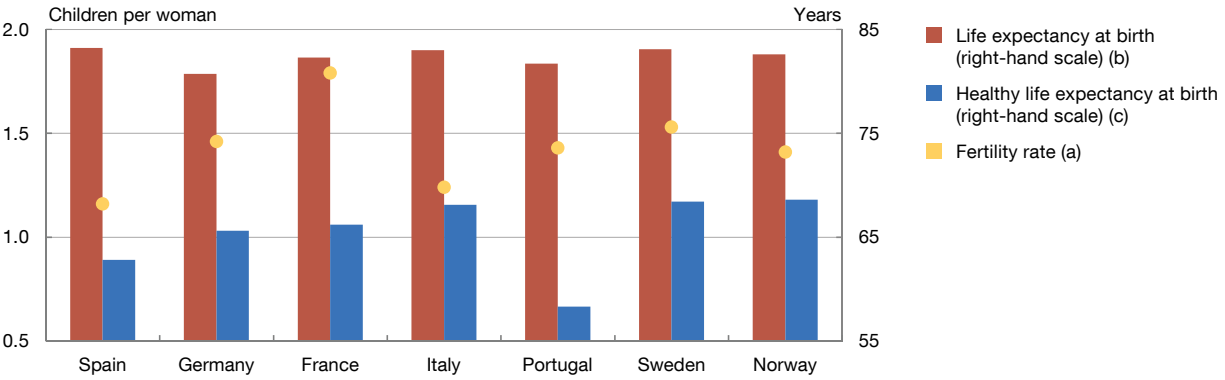
Chart 2.5

Demographic trends in Spain have been marked by a significant drop in both fertility and mortality rates. In addition, in terms of healthy life expectancy, Spain lags behind Germany, France and Italy

2.5.a Fertility and mortality rates in Spain



2.5.b Fertility rate, life expectancy and healthy life expectancy at birth in 2022, by country



SOURCES: INE and Eurostat.

a The fertility rate measures the average number of children a woman would give birth to during her child-bearing years, assuming she gave birth according to the average fertility rate for each year of age.
b Life expectancy at birth measures the average number of years that a newborn is expected to live if the mortality patterns in the period observed remain unchanged.
c Healthy life expectancy at birth is calculated on the basis of life expectancy at birth minus the expected number of years lived with disability or in poor health, considering the multiple causes that may contribute to poor health, weighted according to their severity (Mathers, Sadana, Salomon, Murray and López, 2001). Data refer to 2021, except for Norway, where they refer to 2020.

DOWNLOAD

Additional evidence:

Migration flows have surged in recent years, but it seems unlikely that this will offset the current population ageing process in Spain, or effectively smooth any mismatches that might arise in the Spanish labour market.

— **Inflows of foreign nationals.** Since 2002, more than 10 million foreign nationals have migrated to Spain, representing on average half a million intakes per year. More recently, following the decline observed during the pandemic, immigrant arrivals recovered strongly to stand at around 1.1 million in 2022, even above 2007 levels. Spain thus has one of the

highest immigration rates in Europe (approximated as the rate of foreigner arrivals per thousand inhabitants), even ahead of Germany.[45]

— **Outflows of foreign nationals.** In the last two decades (except during the years following the outbreak of the global financial crisis[46]), outflows of foreign nationals have averaged at around half of foreigner inflows, in annual terms.

— **Migration flows of Spanish nationals.** In recent decades, inflows and outflows of Spanish nationals have been far lower than those of foreign nationals. Moreover, in contrast to foreign migration flows, net migration of Spanish nationals has generally been negative, except in the pre-financial crisis years. Specifically, aggregate inflows of Spanish nationals in the period 2002-2022 stood at around 1.15 million and outflows at close to 1.3 million.

— **Impact of migration flows on the size and composition of the Spanish population.** As a result of the developments described above, since the beginning of this century, there has been a considerable net inflow of foreigners into Spain, contributing to the growth of the resident population. Indeed, net foreigner arrivals (close to 5 million between 2002 and 2022) have become practically the only source of population growth in Spain (see Chart 2.6.a). Thus, since 2002, the percentage of residents born abroad has increased by almost 12 pp, to more than 17%.

— **Age profile of foreign and Spanish nationals.** The average age of immigrants arriving in Spain is below that of Spanish nationals. Thus, in early 2023, those aged over 60 represented less than 12% of foreigners residing in Spain, compared with almost 30% in the case of the Spanish national population (see Chart 2.6.b). In addition, the difference in the average age of Spanish and foreign-born residents is around eight years, a gap that has remained virtually unchanged in recent decades.[47]

— **The potential for migration flows to offset the population ageing process.** Migration has limited potential to appreciably slow the population ageing process. In particular, for the dependency ratio in Spain to remain constant over the next 30 years, the foreign-born population of working age would have to be three times larger than anticipated in the latest INE projections.[48] In this respect, it is important to note that these projections already estimate that migration flows will lead to very significant net population growth (of almost 10 million in aggregate terms) up to 2053.

45 In terms of the number of permanent immigrants, Spain is the world's fourth destination country, only behind the United States, Germany and the United Kingdom (OECD, 2023a).

46 During the financial crisis, net migration turned negative, not only among foreigners but also among Spanish nationals. In this regard, Izquierdo, Jimeno and Lacuesta (2016) find that Spanish and foreign nationals' decision to emigrate was similarly sensitive to the unemployment rate.

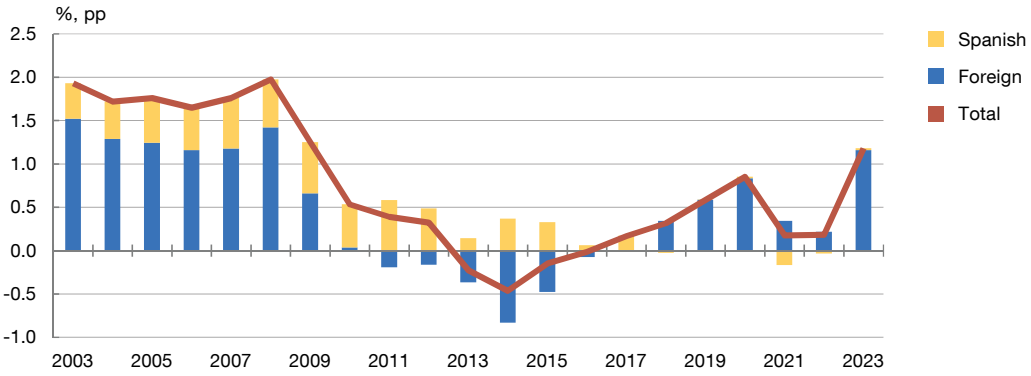
47 However, according to the INE's most recent demographic projections, this gap will narrow somewhat in the coming years.

48 In this exercise, the size of the other population groups remains at the levels projected by the INE (INE, 2022). In any event, given the high volatility of migration flows and the uncertainty surrounding them, any projection of such flows must be treated with caution.

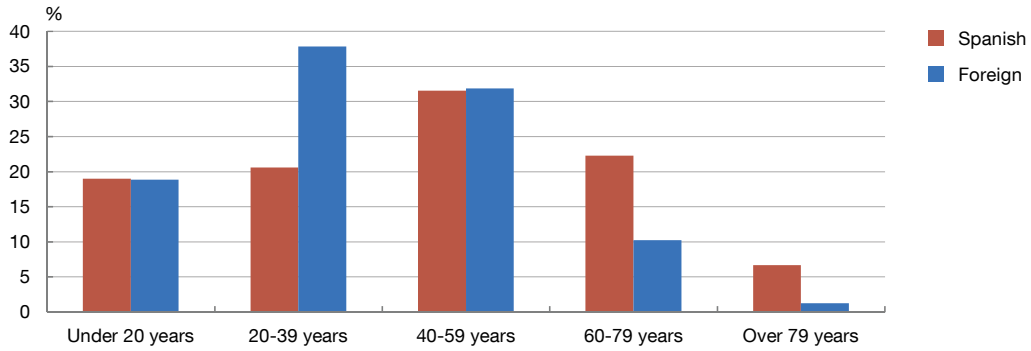
Chart 2.6

In recent years, net foreigner arrivals have become practically the only source of population growth in Spain

2.6.a Resident population growth in Spain and contribution by nationality



2.6.b Age distribution, by nationality of resident population in Spain (1 January 2023)



DOWNLOAD

SOURCE: INE.

— **Implications of migration flows for the labour market.** In recent years, foreign workers are estimated to have contributed to reducing, at least in part, the mismatches between labour supply and demand, particularly in low-skilled jobs. However, unless the nature of migration flows changes significantly, it seems unlikely that they will be able to effectively continue to do so in the coming years. All this, against a background in which the technological changes currently under way and the green transition could appreciably drive up demand for high-skilled labour (for more details about the challenges posed by these changes for Spain's labour market policies, see Chapter 3 of this report). In this respect, it is important to highlight some of the key labour-related differences between foreign and Spanish nationals:

- *Participation rate.* The participation rate among immigrants is high, generally above that of Spanish nationals (70% and 56.5%, respectively, in 2022). The migration flows projected by the INE for the next ten years could raise the participation rate in Spain by 1.6 pp (Cuadrado, Fernández-Cerezo, Montero and Rodríguez, 2023). Moreover, although the unemployment rate is higher for foreigners than for Spanish nationals, this gap has halved since the financial crisis.

- *Educational attainment and occupation.* According to the Spanish Labour Force Survey, at end-2023, in the cohort of foreign nationals who had lived in Spain for less than one year, around 80% of those of working age did not have a university education, and more than 70% were in low-skilled employment, such as domestic service,[49] construction, retail trade and hospitality. These percentages are similar to those observed in 2008 (87.4% and 60.4%, respectively), but stand in contrast to those recorded for Spanish nationals, less than 29% of whom had low-skilled jobs in 2023. In addition, the proportion of Spanish-born emigrants with a university education is particularly high, accounting for 60% of the total in 2022.

Areas of action:

Addressing the many challenges posed by demographic change calls for resolute action on multiple fronts.

— **The labour market:** Chapter 3 of this report describes some of the possible measures, which include (i) lengthening the working life of older workers, (ii) strengthening lifelong learning and active and passive labour market policies, and (iii) continuously monitoring the potential for new migration policies to effectively mitigate any labour market mismatches that may arise. Two recent initiatives are worth noting in this respect. First, the approval in 2022 of the reform of the Law on Foreign Nationals, which makes the catalogue of difficult-to-cover occupations more flexible, facilitates the entry of foreign entrepreneurs, incorporates training in the concept of "rootedness" and allows foreign students to access the labour market. Second, in recent years, the Government has entered into a number of migration agreements with different countries. These notably include the agreement signed in 2023 between the United States, Canada, Mexico and Spain to promote regular migration from Central and South America.

— **Fiscal policy:** As discussed in Section 9.2, population ageing is already driving a significant increase in public spending, both on pensions and on health and long-term care, which will continue to gather pace in the future.[50] This puts added pressure on public finances, calling for an ambitious medium-term fiscal consolidation plan to be undertaken without delay. This process will require ongoing and thorough assessment of the public pension system's financial sustainability, given that an overall analysis of the main legislative changes made to the system since 2021 suggests that the greater expenditure obligations in the long term will not be fully offset by the revenue raised.

— **Fertility trends:** The available evidence suggests that some of the reasons for Spain's low fertility rate could be related to difficulties in achieving a work-life balance.[51] In this respect,

49 On the available evidence, the inflow of immigrants employed in domestic service in Spain in the first decade of this century contributed to the rise in the wages of Spanish working mothers, by helping to improve their work-life balance and reduce the wage penalty associated with having children (Castellanos, 2023).

50 For a detailed analysis of the challenges of the demographic transition for the health system, see Regueiro-Ons and González López-Valcárcel (2023).

51 See, for example, Guner, Kaya and Sánchez Marcos (2024).

it would be useful to examine the capacity of some of the public measures adopted in recent years in prompting an appreciable shift in fertility trends in Spain over the coming years. Such measures include, for example, gradually extending paternity leave to 16 weeks by 2021 (bringing it into line with maternity leave), introducing 8-week parental leave per child for childcare and allowing more flexibility for requesting working hours to be adapted for work-life balance reasons.[52] Also worth noting are the new incentives in force since September 2023 to promote work-life balance.[53]

52 Royal Decree-Law 5/2023 of 28 June 2023.

53 Specifically, rebates on fixed-term contracts entered into with young unemployed persons to replace workers in specific work-life balance cases, social security contribution rebates for replaced workers during maternity or paternity and childcare leave, and subsidies for the contracts of workers moved to different jobs owing to risk during pregnancy or breast-feeding. For more details, see Royal Decree-Law 1/2023 of 10 January 2023.

8 Inequality and pockets of vulnerability among households

Context:

The academic literature suggests that excessively high inequality levels may weigh not only on the degree of social cohesion, but also on economic growth capacity, through their adverse effects on aggregate consumption, investment, the accumulation of human capital and opportunities for future generations.[54] Therefore, in any economy, in addition to its main macroeconomic aggregates, it is also essential to analyse the behaviour of the different measures of inequality[55] to determine whether there are significant pockets of social, economic and financial vulnerability among households.

Evidence:

In recent years, income inequality has declined significantly in Spain, against a backdrop of strong employment growth. However, some pockets of vulnerability, largely linked to housing affordability difficulties, have been observed in some households.

— **Income inequality before the pandemic.** The *IFS Deaton Review* is a key initiative, within the economic literature, that aims to quantify, as uniformly as possible, the level of inequality in a large number of countries. According to the review's latest data for a set of European and North American countries, referring to 2019, Spain had one of the highest levels of disposable income inequality that year, only outranked by the United States (see Chart 2.7.a).

— **Income inequality since the pandemic.** Broadly speaking, the majority of the most commonly used measures of inequality – such as wage inequality, income inequality or relative poverty – have followed a very similar pattern in recent years. Although they rose significantly in 2020 following the outbreak of the health crisis, they have fallen sharply since then, mainly as a result of the notable buoyancy of activity and employment in Spain since 2021. In this respect, the most recent data of the INE's Living Conditions Survey (ECV, by its Spanish abbreviation) suggest that the levels of income inequality in Spain in 2022 were very similar to, and even lower than, those observed before the start of the global financial crisis (see Chart 2.7.b).

— **Social vulnerability, associated principally with housing.** Chapter 4 of this report analyses in depth the most recent housing market developments in Spain and describes the housing

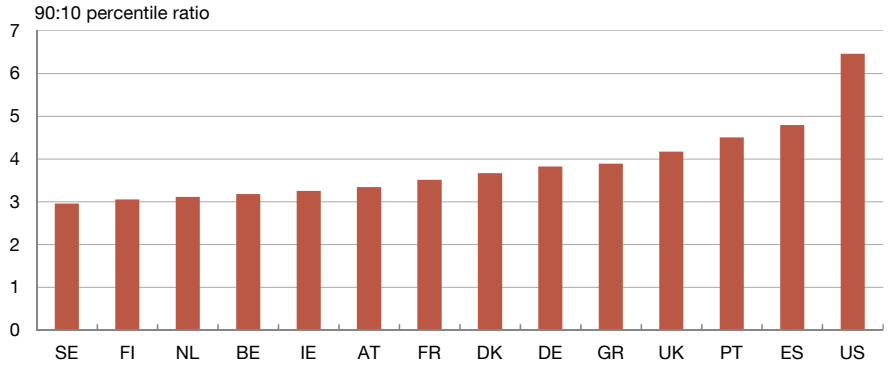
54 See, for example, Grossman (1991), Dijkstra, Poelman and Rodríguez-Pose (2020), Persson and Tabellini (1994) and Alesina and Rodrik (1994).

55 Inequality in an economy can be estimated using a variety of methods, which need not necessarily yield similar results. For example, in certain cases, an estimate of the dispersion of workers' hourly wages may be the most relevant measure of inequality. Elsewhere, however, it may prove more worthwhile to consider measures of inequality relating to total (individual or household) income, wealth or consumption. For further details on these measures of inequality in the Spanish economy, see Anghel et al. (2018) and Anghel, Bover, Hospido, Ortega and Regil (2023).

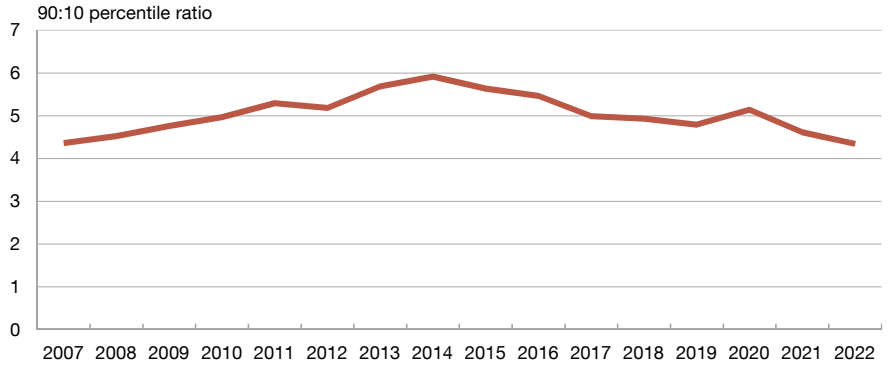
Chart 2.7

In 2019, Spain had one of the highest levels of disposable income inequality among the European and North American countries reviewed, outranked only by the United States. However, since the health crisis, income inequality has declined significantly in Spain

2.7.a 90:10 percentile disposable income ratio for different countries in 2019 (a)



2.7.b Changes in the 90:10 percentile ratio (a)



SOURCES: IFS Deaton Review Country Studies Project, INE (ECV) and Banco de España.

a Ratio of two percentiles in the income distribution. For a sample of individuals aged between 25 and 60, income is measured as gross household income plus transfers, less taxes and mandatory social security contributions of workers, the self-employed, the unemployed (if applicable) and employers, divided by the number of household members calculated using the OECD's equivalence scale, where the first household member aged 14 or over counts as one person, other household members aged 14 or over are assigned a value of 0.5, and each household member aged under 13 a value of 0.3.

DOWNLOAD

affordability problems some households face. In particular, it highlights how the high housing cost burden, especially in the rental segment, places lower-income households (notably young people and the immigrant population) in an economically vulnerable position. Thus, Spain stands out as the European economy with the highest percentage of people living in rented housing at risk of poverty or social exclusion. Specifically, 45% in 2022, compared with an average of 31% in the EU-27.

— **This vulnerability is also reflected in the different measures of wealth inequality.** Wealth inequality has increased significantly in Spain chiefly as a result of developments in the housing market since the late 2000s.

- According to EFF data, the share of wealth held by the wealthiest households has increased in the last two decades. Specifically, in 2002, 43% of the economy's total net

wealth held by Spanish households was concentrated in the wealthiest 10% of the population, compared with 54.3% in 2020. In any event, this is a substantially lower percentage than that observed in other countries. On a global scale, in 2021, for example, the wealthiest 10% of the population held 76% of total wealth (*World Inequality Report,* 2022).

- When analysing the composition of wealth by household group, it is found that behind this increase in net wealth concentration and inequality in Spain, lies a lower accumulation of housing wealth in the segments at the bottom of the wealth distribution. In this regard, since 2011, the proportion of households owning their main residence has dropped by 10 pp, and has done so far more sharply in the case of younger households (-33 pp) and those in the lower quartile of the wealth distribution (-20 pp) (Cobreros, García-Uribe and Gómez, 2023).

Additional evidence:

One of the most widely used approaches in the economic literature for assessing the extent to which equality of opportunity is guaranteed is to quantify intergenerational mobility in education, in particular, by measuring the correlation between the educational attainment levels of parents and their adult offspring. Over time, a smaller correlation implies greater intergenerational mobility. In other words, parents' educational attainment has less influence on that of their offspring, thus promoting equality of opportunity.

— This exercise is conducted for Spain in a recent study published by the Banco de España (Grébol, Machelett, Stuhler and Villanueva, 2024) which finds that the correlation between parents' level of educational attainment and that of their adult offspring decreased in the second half of the 20th century, suggesting greater intergenerational mobility and, hence, more equality of opportunity.

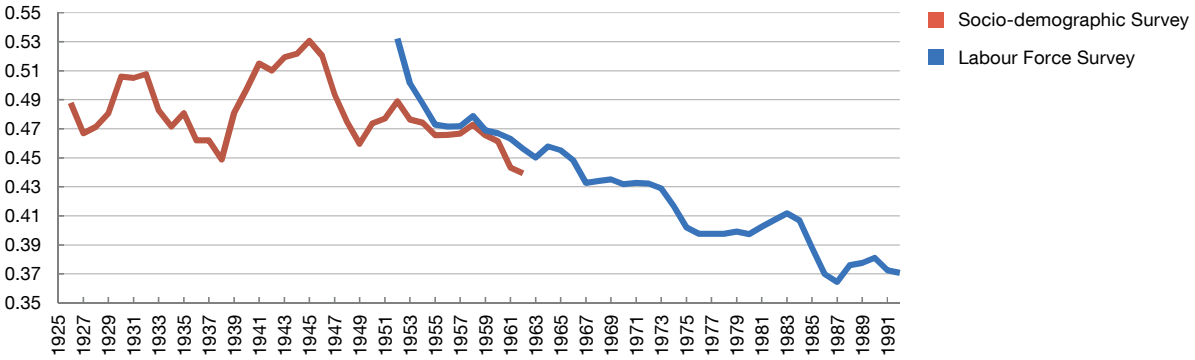
— In Spain, the correlation between the educational attainment level of parents and their offspring stood at around 0.5 for generations born between 1930 and 1960, but gradually decreased for subsequent generations, to 0.38 for those born in 1990 (see Chart 2.8.a). The international evidence available does not allow for fully consistent comparison of the degree of intergenerational mobility in education in Spain and in other European countries. In any event, with this caveat in mind, Hertz, Jayasundera, Piraino, Selcuk, Smith and Verashchagina (2008) seem to suggest that social mobility in Spain in recent decades has been relatively similar to that observed in western European countries and the United States.[56]

56 In addition, Soria (2022) concludes that, in terms of income, the degree of intergenerational mobility in Spain appears to stand at an intermediate level between that of the Scandinavian countries (very high) and that of Italy or the United States (lower).

Chart 2.8

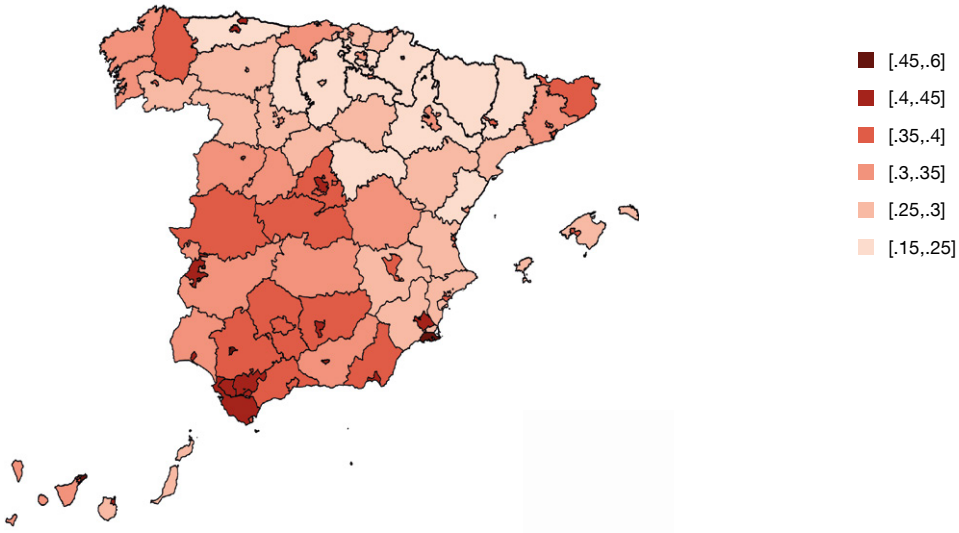
The correlation between the years spent in education by parents and their adult offspring declined in the second half of the 20th century, suggesting greater intergenerational mobility and, hence, more equality of opportunity. However, the size of this correlation varies significantly across municipalities and provinces

2.8.a By year of birth (a)



2.8.b By municipality cluster (b)

Correlation between parents and their offspring (years spent in education)



SOURCES: INE (Socio-demographic Survey (1991), Labour Force Survey (1977-2020) and Census (2011)) and Banco de España.

a In the Socio-demographic Survey, the correlation between years spent in education is calculated by pairs of parents and their offspring and in the Labour Force Survey, by pairs of parents and their offspring living at home. For more details, see Grébol, Machelett, Stuhler and Villanueva (2024).
b The regional correlation between parents and their offspring shows municipalities with more than 100,000 inhabitants and assigns the correlation observed in other municipalities to the rest of the province. The correlation between educational attainment levels is calculated using data for municipalities with more than 100,000 inhabitants and clustered data at provincial level for all other municipalities. For more details, see Grébol, Machelett, Stuhler and Villanueva (2024).

DOWNLOAD

— The decline in this correlation points to an increase in social mobility in Spain, which coincided with the education reforms that took place around 1970 and affected those born after 1960. However, it should be emphasised that the size of this correlation varies significantly across municipalities and provinces, and these differences have generally persisted over time (see Chart 2.8.b).

Areas of action:

Addressing the challenges stemming from the pockets of vulnerability among Spanish households requires public policy measures across a very broad range of areas. For example, to bring down the high structural unemployment rate in Spain (see Chapter 3 of this report) and to correct the supply and demand mismatches observed in the Spanish housing market (see Chapter 4 of this report). Also, to strengthen the quality of the country's education system and foster the accumulation of human capital by the population, which as Section 4 of this chapter shows, bring notable individual and aggregate returns. This section also shows the exceptional role played by education, along with health care,[57] in ensuring equality of opportunity for all. Income and transfer policies[58] can also play a key role in mitigating the adverse effects associated with very high levels of inequality or vulnerability. In any event, all public policy measures rolled out in this area, as in any other, must be subject to ongoing and thorough assessment, to analyse their potential to attain the proposed goals and their implications in terms of efficiency and equity. In this respect, some studies already suggest that there is scope for improving the integration of the minimum income scheme (IMV, by its Spanish abbreviation), the different local and regional subsistence income schemes and unemployment benefits, so as to increase their effectiveness and efficiency (AIReF, 2022 and 2023).

57 López Laborda, Marín González and Onrubia (2024).

58 These include, for example, the minimum income scheme, the subsistence income schemes implemented by various regional and local governments, and other direct subsidies such as those established under Royal Decree-Law 20/2022 of 27 December 2022 in the context of the recent energy crisis.

9 Public finances

9.1 Recent trends

The public finances imbalance remains very high, both by historical and international standards.

— **Public debt.** In 2020, the fiscal response to the pandemic drove up the public debt-to-GDP ratio in Spain by 22 pp to 120.3% of GDP. Since then, this ratio has gradually declined, mainly as a result of the strong recovery in economic activity, to stand at below 108% of GDP at end-2023. This figure is very high from a historical standpoint (9 pp above the pre-pandemic level) and 30 pp (17 pp) higher than the (weighted) arithmetic mean of the euro area (see Chart 2.9.a).

— **Budget deficit.** The general government deficit fell from 4.7% of GDP in 2022 to 3.6% in 2023,[59] below the Government's target of 3.9%. However, the Spanish economy's budget deficit remains above its pre-pandemic level (3.1%) and the euro area average in 2023 (3.2%), according to the European Commission's latest projections. In a setting in which public spending remained high, the reduction in Spain's budget deficit in 2023 was attributable to the continuing strong growth in revenue.

- *Public revenue.* Public revenue saw 9% year-on-year growth, driven by the impact on tax revenue of the growth in wage income and capital, corporate earnings and welfare benefits (for an analysis of the impact of the so-called "fiscal drag" on revenue from personal income tax, see Box 2.1). Public revenue was also boosted by the new tax measures implemented and the rise in social security contributions,[60] but was to some extent reduced by the cuts in personal income tax and VAT.[61]

- *Public expenditure.* Spending rose by 6% in 2023, mainly as a result of pension revaluation. Government consumption also remained high, which could be consistent with the fact that some of the expenditure increases during the pandemic had become permanent.[62] However, some of the support measures deployed in response to rising inflation (such as the blanket discount on fuel prices and the extraordinary subsidies for the energy sector) were withdrawn over the course of 2023, which reduced the overall budgetary cost of these expenditure and revenue-side measures to 1.2% of GDP (0.3 pp down on 2022).

59 The deficit is estimated to have increased by 0.02 pp to 3.7% of GDP after deducting the net impact of the support measures for financial institutions, which was positive for the general government balance in 2023.

60 These measures notably include the creation of two levies on the extraordinary profits of large financial corporations and energy utilities, a wealth tax and a cap on corporate income tax relief for consolidated groups' losses. In addition, revenues from social security contributions increased due to the implementation of the "intergenerational equity mechanism".

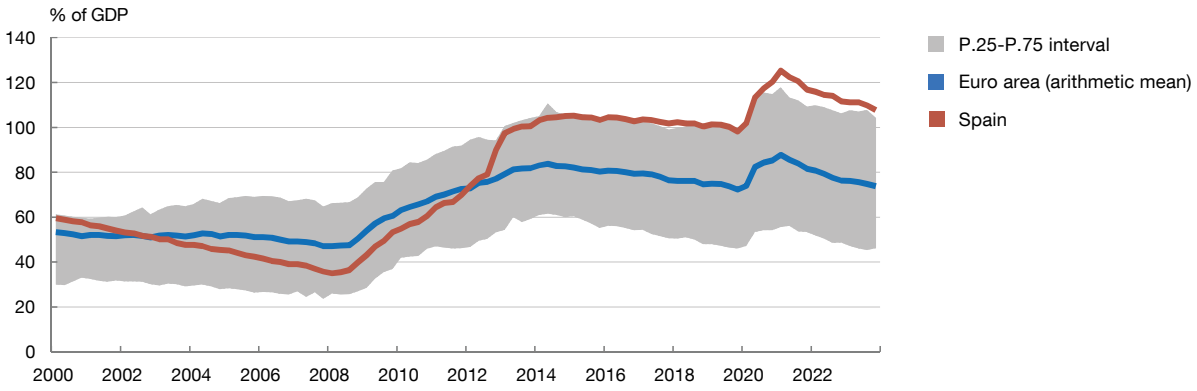
61 Specifically, as regards personal income tax, labour-income related reductions were increased at state level and certain fiscal parameters were adjusted for inflation by some regional governments. As for VAT, cuts were applied to certain food products.

62 Thus, for example, public sector employment was 10.3% above pre-pandemic levels in 2023, according to the Spanish Labour Force Survey (EPA, by its Spanish abbreviation).

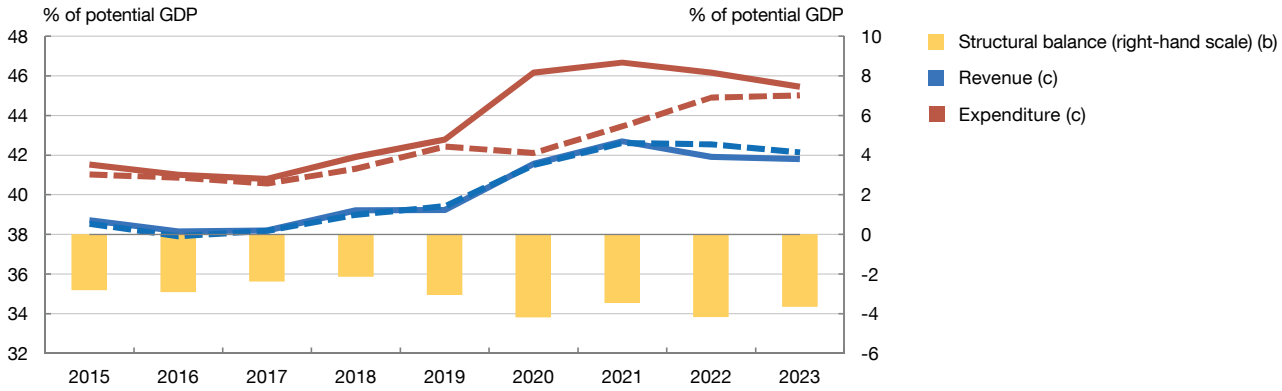
Chart 2.9

In recent years, public debt has increased more markedly in Spain than in the rest of the euro area. The Spanish general goverment fiscal imbalance has a high structural component

2.9.a General government debt (a)



2.9.b Public revenue and expenditure (cyclically adjusted), excluding NGEU



SOURCES: Eurostat, European Commission, IGAE and Banco de España.

a November 2023 European Commission estimates for 2023 Q4 (except Spain).
b The structural balance is calculated by deducting from the total balance the cyclical component and the clearly temporary and non-recurring items. According to the Eurosystem's common methodology, items that are temporary but nonetheless increase the deficit and are the result of a discretional (not forced) decision by the Government are not considered to be non-recurring.
c The dotted lines exclude any measures announced as non-permanent.

DOWNLOAD

— **Fiscal policy stance.** As a result of these developments, the fiscal policy stance in 2023, measured by the change in the structural primary balance, was contractionary, although the stimulus from European funds appears to have largely cushioned this impact. In any event, a structural deficit of close to 3.7% of GDP is estimated for 2023 (around 0.6 pp higher than calculated for 2019).

Since 2019, the public revenue-to-GDP ratio has risen sharply in Spain, by 3.6 pp to 42.8%, with tax revenue and social security contribution growth of 2.5 pp of GDP.[63] This increase in revenue has placed this ratio slightly above the arithmetic mean of the EU, although it is still almost 3 pp below the weighted EU average.

63 The additional increase in the public revenue-to-GDP ratio is essentially due to the new funds from the NGEU programme.

— General government funds have increased relative to GDP mainly as a result of strong growth in revenue from personal income tax, corporate income tax and social security contributions. Thus, current taxes on income and wealth rose relative to GDP from 10.4% in 2019 to 12.5% in 2023, and social security contributions from 12.9% to 13.5%.

— By contrast, both VAT and all other indirect taxes, including excise duties, have shown more contained growth in recent years, with their weight in GDP remaining at around the pre-pandemic level of 11.5%.[64] Indirect tax revenue as a proportion of total revenue in Spain has thus declined from 32.6% in 2019 to 30.1% in 2023.[65]

— In any event, part of the increase in tax revenue cannot be explained by the improvement in macroeconomic bases or the adoption of explicit measures to raise taxes and social security contributions on a permanent basis. This unexplained component is the so-called tax residual.[66] In 2021, these residuals were positive and very high. However, in 2023 they reversed sharply in all taxes, confirming their eminently transitory nature. Nonetheless, there are arguments that suggest that part of the remaining residuals could be reflecting some structural increase in public revenue in the wake of the pandemic stemming, for instance, from less tax fraud as a result of greater recourse to digital means of payment. In any case, there is much uncertainty as to the transitory or permanent nature of the positive residuals that remain.

This higher revenue, however, has been more than offset by the 4.2 pp increase in expenditure since the outbreak of the pandemic.[67]

— There has been a notable increase in expenditure on economic affairs, closely linked to the subsidies and transfers stemming from the energy crisis, and to NGEU-financed measures. Part of this increase could be expected to have a large transitory component.

— Spending on social protection and health care has also risen significantly in recent years. These items tend to have much stronger inertia.

— The increase in the public debt-to-GDP ratio and, since 2021, the tightening of monetary policy and the resulting higher cost of new issuance have so far led to a relatively moderate rise in debt interest expenditure.[68] Nonetheless, based on the interest rate path currently anticipated by the markets, the ratio of debt interest expenditure to GDP could stand at 2.8% in 2026, some 0.6 pp above its 2019 level.

64 This is partly due to the temporary tax cuts approved in response to the energy crisis and rising inflation. Thus, in 2023, the temporary tax measures adopted reduced VAT revenue by around 0.3 pp of GDP and revenue from other indirect taxes by just over 0.2 pp of GDP.

65 In recent years, the weight in total revenue of indirect taxation has also decreased for the (arithmetic and weighted) mean of the EU and the euro area. Nonetheless, in both regions, this decrease has been smaller than that observed in the Spanish economy.

66 García-Miralles and Martínez Pagés (2023).

67 Around 1 pp of which is attributable to NGEU-financed expenditure.

68 The moderate scale of this impact appears attributable, in part, to the long average lifespan of general government debt (for example, more than 7.5 years in the case of Spanish central government securities).

— Spending on education as a percentage of GDP has also increased since 2019, partially closing the negative gap that has traditionally existed in Spain vis-à-vis other European countries.

— As for defence spending, despite the recent increases, its weight in GDP (just over 1%) is still far from the 2% commitment to NATO.

All told, the Spanish general government fiscal imbalance has a high structural component that has not improved in recent years (see Chart 2.9.b). Indeed, as mentioned earlier, according to Banco de España estimates, the Spanish general government structural deficit as a percentage of GDP increased from 3.1% in 2019 to 3.7% in 2023.

9.2 Challenges facing the public pension system

The pension system is one of government's most important structural expenditure items. The growth seen in pension expenditure in recent years is expected to continue in the coming decades.

— In 2023, pension expenditure, including contributory and non-contributory pensions and the government employee social security scheme, amounted to 13.1% of GDP. This is 28.3% of the non-financial expenditure of the different tiers of government in 2023 in National Accounts terms.

— Over the last decade, pension payments have increased by 1.1 pp of GDP, while the number of pensions has grown by just over a million. In recent years, actual expenditure levels overall have exceeded the expenditure projections for this item (see Chart 2.10).[69]

— Looking ahead, Spain's demographic path is marked by a significant increase in the proportion of older population (see Section 7). This points to substantial growth in pension expenditure in the coming decades. According to the projections contained in the latest *Ageing Report* (European Commission, 2024), pension expenditure will escalate under the baseline scenario, to 17.3% of GDP in 2050. According to AIReF, pension expenditure will climb to 16.2% of GDP in 2050, while the number of pensions will rise from 11.1 million today to 16.7 million (see Chart 2.10).[70, 71]

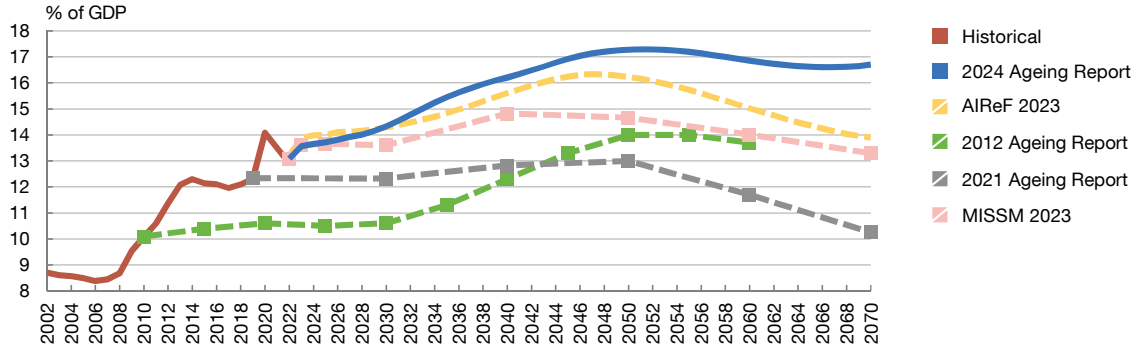
69 For example, the European Commission (2012) projected that pension expenditure would amount to 10.6% of GDP in 2020, compared with the observed values of 12.3% in 2019, 14.5% in 2020 and 13.5% in 2021. This higher than projected expenditure could be due to a less favourable macroeconomic environment and to higher average pension growth compared with the average wage. The report projected growth of 2.4% in potential GDP and of 1.7% in employment for 2020, compared with 1.7% and 1.2%, respectively, in 2019 (European Commission, 2021). As for the average pension to average wage ratio, the projection for 2020 stood at 55.9%, compared with 60% in 2019. The disparities in demographic developments are less marked: the projected dependency ratio for 2020 was 32%, while the observed ratio in 2019 was 32.1%.

70 The projections of neither AIReF nor the *Ageing Report* include the 2023 revision of National Accounts. Taking the GDP levels following that revision, under the baseline scenario in the *Ageing Report* pension expenditure would stand at 16.8% of GDP in 2050.

71 Moreover, as people age, especially those in poor health, they require long-term care in their activities of daily living. In this respect, the projections in European Commission (2024a) expect public long-term care expenditure to increase from 0.8% of GDP in 2022 to 1.7% of GDP in 2070.

Chart 2.10
Pension expenditure is expected to continue to climb in the coming decades

2.10.a Pension expenditure, developments and projections (a)



SOURCES: Ministerio de Inclusión, Seguridad y Migraciones (MISSM), IGAE, INE, AIReF and European Commission.

a The 2012 and 2021 Ageing Report and Ministry of Inclusion, Social Security and Migration (MISSM) projections are interpolated on the published figures (shown by the squares for the respective years).

DESCARGAR

A new pension system reform was implemented between 2021 and 2023. An overall analysis of the major regulatory changes introduced, while subject to considerable uncertainty, points to higher long-term expenditure obligations that are not fully offset on the revenue side.[72]

— The available estimates suggest that the changes approved have significantly increased pension system expenditure obligations over the coming decades, compared with the situation prior to 2021, by between 3.2 pp and 4.7 pp of GDP in 2050.[73]

— These greater expenditure obligations could be reduced if the new incentives introduced to postpone retirement manage to significantly raise the participation rate of older workers. Estimates of the possible effectiveness of these incentives vary between a saving of 1.4 pp (according to the Ministry of Inclusion, Social Security and Migration and the *Ageing Report*) and a saving of 0.8 pp of GDP in 2050 (according to AIReF), and a net increase in expenditure of 0.1 pp in that year (according to Fedea).

— Lastly, on the revenue side, the measures approved are expected to increase social security revenue by between 1.3 pp and 1.7 pp of GDP in 2050.[74]

72 For a detailed description of the measures adopted and their possible impact, see Banco de España (2023a).

73 De la Fuente et al. (2023), Ministry of Inclusion, Social Security and Migration (2023), AIReF (2023b) and European Commission (2024a).

74 European Commission (2024a), De la Fuente et al. (2023), Ministry of Inclusion, Social Security and Migration (2023), AIReF (2023b) and Banco de España (2023a). The revenue growth figures do not include the effects of the labour market measures adopted (as these are not changes adopted in the context of the pension reform), which the Ministry of Inclusion, Social Security and Migration quantifies at 0.8 pp of GDP in 2050. These measures are the 2021 labour reform (which is estimated to have reduced structural unemployment), the increase in the minimum wage approved in recent years, and the job retention and short-time work schemes deployed during the COVID-19 pandemic (which are understood to have brought to light new contributors from the shadow economy) (Ministry of Inclusion, Social Security and Migration, 2023).

How effective the new incentives to postpone the retirement age will be is subject to great uncertainty and a broad time horizon will be needed to gauge their impact.

— This will ultimately depend on workers' decisions as to when to leave the labour market and the extent to which a higher effective retirement age translates into lower pension expenditure. In this respect, the analysis conducted by the Banco de España suggests that in order to significantly contain pension expenditure, a very considerable percentage of workers would have to decide to postpone their retirement age. Specifically, if all projected ordinary retirements between 2022 and 2050 were postponed by one year, the pension expenditure-to-GDP ratio would fall, on average, by between 0.3 pp and 0.5 pp in that period (see Box 2.2).

— In any event, in 2022 and, especially, in 2023, the number of late retirements increased significantly compared with the years before the new measures seeking to extend working lives were introduced. Specifically, late retirements have risen from 4.8% of total retirements in 2021, to 5.4% in 2022 and to 8.1% in 2023, when they totalled more than 26,000, up 50% on the previous year.

The backstop introduced by the new reform is set to be evaluated in 2025. Under this mechanism, if the average pension expenditure projection for the period 2022-2050 published in the *Ageing Report,* corrected for the revenue measures adopted since 2020, deviates from 13.3% of GDP, the Government must identify a set of measures to remedy that deviation. These may be actions that seek to boost pension system revenue and/or reduce pension system expenditure and, where necessary, should enter into force in 2026. If no such measures were agreed, social security contributions would increase automatically in that year.[75]

The *Ageing Report* projections, net of the revenue measures quantified by AIReF, show that additional measures will most likely be needed to counter the future increase in pension expenditure.[76] Should it be necessary to activate the backstop, letting funding rely exclusively on higher social security contributions could be detrimental to employment and to the competitiveness of the Spanish economy. The simulation exercises performed using the Banco de España's Quarterly Model suggest that there is a correlation between the effective rates of social security contributions and employment. In particular, the results indicate that an increase of 1 pp in the average effective rate would produce, after four years, a drop of around 0.25% in the number of persons employed.[77]

75 Second additional provision of Royal Decree-Law 2/2023 of 16 March 2023 on urgent measures to extend pensioners' rights, narrow the gender gap and establish a new sustainability framework for the public pension system.

76 Specifically, according to the *Ageing Report,* average pension expenditure in the period 2022-2050 stands at 15.4% of GDP under the baseline scenario. AIReF (2023b) quantified the impact of the revenue measures at 1% of GDP on average in that period. Accordingly, pension expenditure net of the revenue measures approved would amount to 14.4% of GDP, above the 13.3% threshold established in the regulations. In any event, the decision to activate the backstop will depend on the formal assessment of the revenue measures to be made by AIReF in March 2025. This assessment must draw on the macroeconomic and demographic assumptions used in the *Ageing Report.*

77 Banco de España (2023a).

In consequence, looking ahead, it would be desirable to delve deeper into a number of aspects.

— Carry out an ex post analysis to ascertain the impact of the incentives to postpone the retirement age.

— Study the effects on the labour market and on firms' competitiveness of the increase in social security contributions, and the impact on intergenerational equity. In parallel, alternative measures should be analysed, including measures affecting replacement rates which are high by international standards.[78]

— Analyse developments in private retirement saving, considering the role it needs to play to complement public pensions. First, by monitoring the pace of growth of the occupational pension schemes *(planes de pensiones de empleo)* – especially the public-run and the simplified schemes *(planes de empleo simplificados)* – introduced in the 2022 pension reform. The data for 2023 show that both the number of participants and the contributions to these schemes have grown, by 13.4% and 8.6%, respectively, compared with the previous year.[79] Second, by analysing developments in contributions to individual pension schemes, which decreased by 64.1% between 2020 and 2023, coinciding with the lower tax incentives.[80]

9.3 New European fiscal rules

A new European fiscal governance framework has been adopted, which places greater emphasis on public debt sustainability and on the preparation by Member States of medium-term budgetary plans setting a multi-year expenditure path.

— On 20 December 2023 the European Union's ECOFIN Council approved a new fiscal governance framework which is in the process of being ratified by the European Council[81] before it enters into force in 2025.

— This new framework requires that Member States draw up medium-term budgetary plans that ensure – in the case of the most indebted EU countries – that the public debt-to-GDP ratio follows a permanent downward path towards the 60% threshold and that the budget deficit remains below 3% of GDP over the medium term.

— These objectives are to be achieved over four years, although this fiscal adjustment period may be extended to seven years if countries make certain structural reforms that improve their growth prospects or public investments aligned with common EU objectives.

78 OECD (2023b).

79 In this context, the Seventh General Collective Agreement for the Construction Sector, signed in July 2023, resolved to establish the construction sector simplified occupational pension scheme, which entered into force in February 2024.

80 As regards individual and associated pension schemes, from 2025 it will generally be possible to realise in advance vested rights relating to contributions made at least ten years earlier. This could have a considerable impact on the assets of these pension schemes, which in 2023 amounted to 5.9% of GDP.

81 Following the provisional agreement of the Parliament and the Council of 10 February, the European Parliament voted on the agreement on 23 April and it must now be ratified by the Council.

— The commitments made under these adjustment plans take the form of a single instrument, a multi-year net primary expenditure path to be followed by each Member State.[82] This path is established on the basis of a reference trajectory set by the European Commission based on a country-specific debt sustainability analysis.

— The new framework also incorporates some additional rules (safeguards), which impose minimum deficit and/or debt adjustments for countries whose deficit or debt figures stray from the reference values. For example, countries with a debt-to-GDP ratio over 90% will have to reduce that ratio by at least 1 pp per year. By contrast, those with a debt ratio between 60% and 90% of GDP will have to reduce it by 0.5 pp each year. Moreover, countries will have to continue their fiscal adjustment until they reach a structural deficit of 1.5% of GDP. This resilience safeguard with respect to the 3% benchmark is introduced to provide countries with a safety margin in the event of unforeseen shocks. The annual pace of adjustment to reach this margin is set at 0.4 pp (4-year programmes) or 0.25 pp (7-year programmes).

— In short, the new European fiscal governance framework seeks to calibrate the adjustment effort in each country according to their specific macroeconomic and fiscal outlook, and in a manner that will strengthen public debt sustainability in the medium term. For this purpose, it is based on a variable – primary public expenditure – that is under the direct control of the authorities. Here the aim is to mitigate, to a certain extent, the pro-cyclical bias of the previous European fiscal rules and to seek to ensure that the high volume of public revenue generated during expansionary periods is not lost.[83] The new framework also recognises the importance of designing integrated and mutually reinforcing public investment, structural reform and fiscal adjustment plans, and of increasing national governments' involvement in their design.

Once it is approved, effective and rigorous implementation of the new framework is essential, both for the sustainability of Member States' public finances and for the credibility of the European project itself. In this respect, the new rules could entail significant fiscal adjustments in some countries in the coming years.

— The new governance framework does not significantly reduce the complexity of the European fiscal rules, so determining the precise fiscal adjustment that will be needed in each Member State in the coming years is subject to considerable uncertainty. For instance, the calculation of the national expenditure trajectory and the corresponding fiscal effort is based on several technical assumptions as to potential GDP, the economic impact of structural reforms and the long-term costs of ageing, all of which are subject to great uncertainty. There are also doubts as to which specific budget items will be taken into account to determine each country's net primary expenditure path.

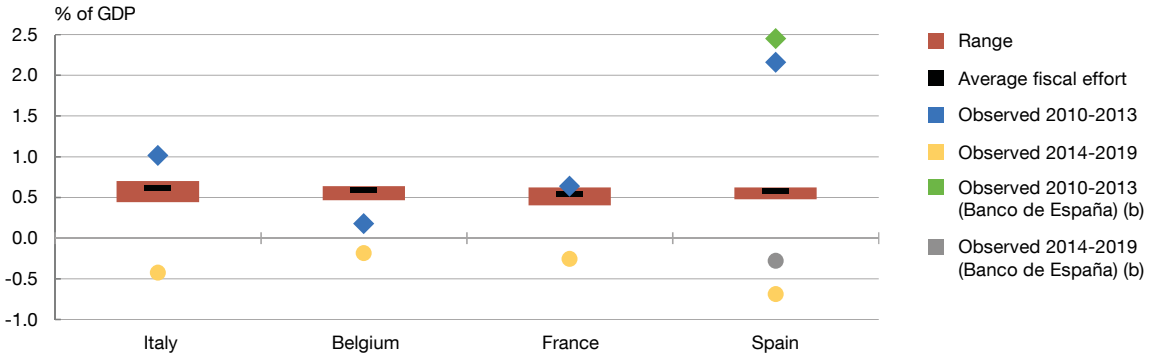
82 Net primary expenditure excludes discretionary revenue and cyclical unemployment expenditure.

83 See Alloza, Andrés, Burriel, Kataryniuk, Pérez and Vega (2021) for an analysis of the shortcomings of the previous fiscal governance framework.

Chart 2.11

The new fiscal rules could entail significant fiscal adjustments in the coming years for some countries (7-year adjustment programme)

2.11.a Annual average change in primary structural balance (a)



SOURCES: Banco de España and European Commission.

a The average annual change in the primary structural balance required to meet the debt and deficit targets under the new European fiscal rules, over a 7-year adjustment period. The range is the difference between the minimum fiscal effort required under the deterministic baseline scenario (Debt Sustainability Analysis (DSA)) and the maximum effort required under alternative scenarios of lower potential GDP growth and higher interest rates. The observed effort is that estimated by the European Commission during each period.
b For Spain, the estimated average fiscal effort differs from the European Commission estimate, primarily owing to the different potential GDP growth estimates used in the calculation.

DOWNLOAD

— Using a Banco de España debt sustainability analysis tool, which aims to replicate the European Commission's methodology for implementing fiscal adjustments under the new framework, it is estimated that, assuming 7-year fiscal consolidation plans, the most indebted EU countries would have to achieve an average annual improvement in their primary structural balance of between 0.4 pp and 0.7 pp of GDP (see Chart 2.11).

— Compared with the adjustment that these same countries undertook in the period 2014-2019 – after the European debt crisis but before the pandemic – this one will require considerable effort. However, for both Spain and Italy, the future adjustment needed would be lower than that undertaken, on average, between 2010 and 2013 during the sovereign debt crisis.

Aside from the design of the new fiscal rules, the reform approved has missed the opportunity to move forward on some key aspects of euro area governance, such as more efficient coordination of national fiscal policies and the introduction of a permanent common fiscal capacity.

— A central fiscal capacity could implement an appropriate fiscal stance at the aggregate euro area level and thus assure optimal monetary and fiscal policy coordination. It should be adequately sized and enjoy sufficient and stable funding; this would be crucial for the creation of an efficient macroeconomic stabilisation instrument.[84] In this respect, an

84 See European Commission (2018) for a review of some of the proposals put forward, both in the European institutions and in the academic literature, for the creation of a common stabilisation mechanism in the euro area.

example to follow could be the temporary SURE common funding programme adopted during the pandemic.[85]

— In addition, it would be important to introduce a permanent common funding instrument – for instance, to follow on from the temporary NGEU programme – that would make it possible to finance large-scale projects to provide public goods at a European level, while at the same time avoiding an excessive or uneven impact on national public finances and a deterioration of the single market.

— In any event, the public sector will be able to meet only a small part of the substantial investments that will be needed to address the green and digital transition in the coming years. In consequence, a favourable environment for private investment is essential, as is progress towards completion of both the banking union and the capital markets union (ECB, 2024) so as to reduce the financial fragmentation that still characterises the euro area and increase risk-sharing in the region.

9.4 Fiscal consolidation plan

The macroeconomic and fiscal dynamics of the Spanish economy highlight the need to implement, without delay, a medium-term fiscal consolidation plan that strengthens the sustainability of public finances.

— According to the analytical tools developed by the Banco de España,[86] in an inertia scenario – which takes into account the expenditure projections related to population ageing but does not consider changes in current economic and fiscal policies, nor an automatic increase in social security contributions in the event of possible activation of the backstop included in the recent pension system reform (see Section 9.2) – Spanish public debt would remain at levels very similar to current ones in the coming years, before embarking on a continued upward trajectory from 2030 (see Chart 2.12.a).

— However, in a scenario of fiscal adjustment consistent with the new European fiscal governance framework – which would involve an average annual reduction in Spain's structural imbalance of around 0.5 pp of potential GDP over a period of seven years from 2025 (see Section 9.3) – the public debt-to-GDP ratio could embark, in the coming years, on a downward path that would take it to around 80% of GDP by 2040 (see Chart 2.12.b).

It would be desirable for the multi-year consolidation plan to be set against the backdrop of a prudent macroeconomic framework and include details of the revenue and expenditure measures that would enable gradual fiscal consolidation. This would strengthen the sustainability of public finances and would also boost confidence and certainty about economic policies. In the design of this plan, some key general considerations should be taken into account:

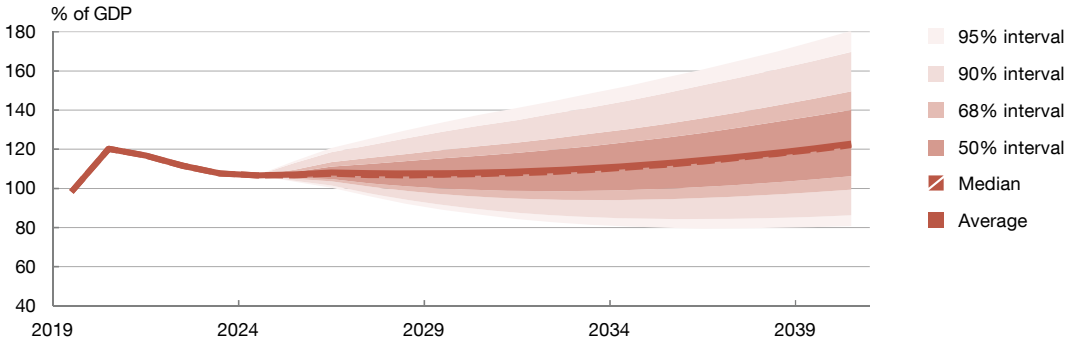
85 See Burriel, Kataryniuk and Pérez (2022) for an analysis of the significant fiscal savings gained by Member States from the SURE programme.

86 See, for example, Alloza, Martinez, Rojas and Varotto (2024).

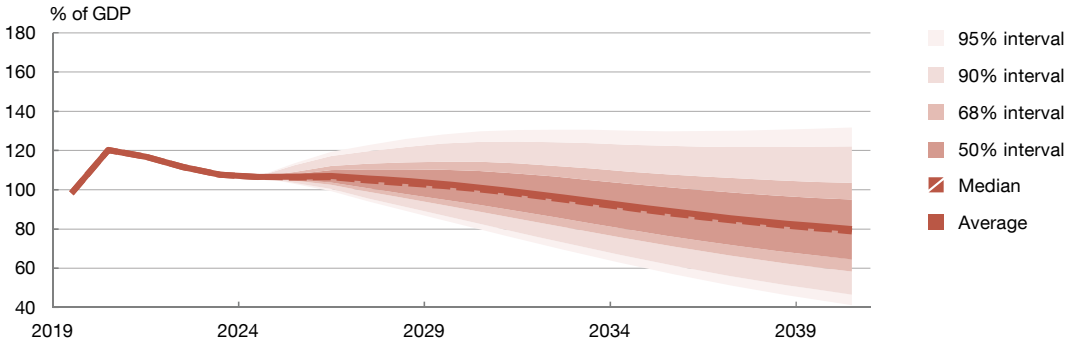
Chart 2.12

The macroeconomic and fiscal dynamics of the Spanish economy highlight the need to implement, without delay, a medium-term fiscal consolidation plan that strengthens the sustainability of public finances (a)

2.12.a No fiscal consolidation scenario



2.12.b Fiscal consolidation scenario



SOURCES: INE, AIReF and Banco de España.

a Both scenarios include a worsening of the primary structural balance up to 2040 owing to the costs of ageing (pensions, health care and long-term care). The first scenario (Chart 2.12.a) illustrates a fiscal effort consistent with the new measures envisaged in the 2023 pension system reform, but with no activation of the automatic mechanism to increase social security contributions to correct deviations in pension expenditure and no additional fiscal consolidation measures. The second scenario (Chart 2.12.b) introduces a fiscal consolidation plan in accordance with the requirements described in Section 9.3.

DOWNLOAD

— **It is essential that the Spanish economy take advantage of economic upturns to build up fiscal space that will allow it to counter the recessionary effect on activity of any future adverse macro-financial shocks.** Spain's current high level of public debt is mainly due to the significant portion of increases in the general government deficit that, in previous downturns, became structural and were not corrected in subsequent upturns. This is largely a consequence of how public expenditure has evolved. From a historical perspective, in periods when the Spanish economy has recorded below-potential economic growth, public expenditure has tended to rise. However, in periods of higher growth this expenditure has not been reduced, but in fact has even increased slightly.[87]

87 Specifically, since 2000, it is estimated that structural expenditure has grown by 1.6 pp during periods of contraction of the output gap, while in periods of expansion of this gap it has increased by 0.1 pp.

— **Given that the fiscal consolidation plan the Spanish economy needs must have a medium-term approach, it would be desirable for it to be based on broad economic, political and social consensus, and for it to actively involve all tiers of general government (central, regional and local) with budgetary responsibility.** As regards this last point, it is important to note that a reform of the regional financing system, to correct some of its limitations observed over the past decades,[88] is still pending. This reform should comply with the principles of sufficiency of resources available to regional governments (based on an objective method of calculating their real expenditure needs), fiscal co-responsibility (understood as the regions' ability to generate revenue to fund their expenditure), and transparency in the various parameters that determine the functioning and development of the system. Strict application of the fiscal rules to the lower levels of government is also essential. In this respect, potential condonation of part of the debt that regional governments have built up over recent decades could discourage disciplined fiscal behaviour in the future. The reform should also address the lack of stability of the system, which has incentivised regional governments to instigate negotiations as a means of increasing their volume of financing.

— **The fiscal consolidation plan must be accompanied by rigorous selection of the investment projects to be financed under the European NGEU programme, along with design and implementation of ambitious structural reforms to help alleviate some of the shortcomings that have historically characterised the functioning of the Spanish economy, and improvement in the quality of public finances.** Not only would this boost Spain's potential growth capacity in the medium term (Cuadrado, Izquierdo, Montero, Moral-Benito and Quintana, 2022) but in the short term it would also mitigate some of the adverse effects on activity that would result from a contractionary national fiscal policy stance.

On the expenditure side, it is essential to identify the budget headings where expenditure efficiency may be enhanced and to optimise expenditure distribution between items to promote more robust and equitable economic growth.

— In particular, further progress should be made to enhance public expenditure efficiency, in line with the recommendations of the AIReF Spending Review. Some expenditure items where significant room for improvement has been identified are active labour market policies, tax relief, subsidies, hospital expenditure and hiring incentives.

— Similarly, recent Banco de España publications have pointed to the desirability of deploying public measures with an increasingly targeted approach, so that the same objectives can be achieved – for example, protecting certain vulnerable groups from adverse shocks – at a lower budgetary cost.[89]

88 For an assessment of these constraints see, for example, Hernández de Cos and Pérez (2015).

89 See, for example, García-Miralles (2023) or Blanco and Mayordomo (2023).

— Moreover, the fiscal adjustment required in Spain should not act as a drag on future expenditure growth in areas – such as public investment, education and healthcare – that are essential, not only to boost the potential growth of the economy but also to promote equality of opportunity in society.[90] This is especially relevant at the present juncture where, like all other main world economies, the Spanish economy is immersed in an intense transformational process in areas as diverse as demographics, climate change and digitalisation.

On the revenue side, it is crucial that the fiscal consolidation plan be underpinned by a comprehensive review of the Spanish tax system that assesses whether, overall, the different taxes achieve their objectives in an efficient and effective manner. Ahead of this review and possible reform of the tax system, which is one of the milestones linked to receipt of the fifth instalment of NGEU funds, it would be desirable to take into account the following:[91]

— To make the Spanish tax system more efficient, the relative weight of consumption tax – which is low in comparison with other European economies – could be increased. In general, compared with other taxes, consumption tax creates fewer factor and product market distortions. The potential negative distributional effects that are sometimes associated with consumption taxes could be avoided if part of the revenue obtained were earmarked to compensatory transfers for the vulnerable groups affected.[92]

— In this respect, Spain's consumption tax relief measures entail a significant cost – some €53 billion in 2022 – and should be reviewed and evaluated based on their effectiveness and efficiency. Again, the distributional effects of a possible reduction in this tax relief could be offset by various fiscal strategies targeting the most disadvantaged population groups.

— Moreover, many agencies have highlighted the desirability of broadening the personal income tax base, by reforming or eliminating various tax reductions that are considered inefficient. See, for example, the recommendations of AIReF (2022) or the *White Paper on Tax Reform* (2022).

— In addition, Spain is committed to achieving some highly ambitious climate targets over the coming decades (see Section 10). To do so efficiently will require, among other measures, improving and increasing green taxation, an area in which Spain has raised less revenue than other European economies in the past decades.[93] As in the previous cases, higher green taxes could be accompanied by compensatory measures – some of which temporary – to ease the impact on certain groups of households and firms that may be particularly

90 See, for example, Ramey (2020), Deleidi (2022), Barro (2001), Krueger and Lindahl (2001) and Blanchet, Chancel and Gethin (2022).

91 For a comprehensive diagnosis of the Spanish tax system and various possible reform proposals, see the White Paper on Tax Reform (2022).

92 Correia (2010), Nguyen, Onnis and Rossi (2021), Fuster (2022), Guner, Lopez-Daneri and Ventura (2023) and Macnamara, Pidkuyko and Rossi (2023).

93 Specifically, in 2021 (latest data available), green taxes accounted for 4.5% of total taxes and social security contributions in Spain, compared with 5.4% in the euro area.

exposed to the effects of the green transition (for more details, see Chapter 4 of the Banco de España's *Annual Report 2021).*

— Lastly, the growing digitalisation and globalisation of economic activity require continued efforts to coordinate and harmonise the tax system at the international level. As is the case, for instance, of the international tax agreements achieved under the OECD/G20 framework and the various EU initiatives for greater coordination and integration of corporate and digital taxation. This is the surest means of preventing any erosion of tax bases and of Spain's economic competitiveness.

10 Green transition

Context:

The fight against climate change and the transition to a more sustainable economy is one of the key challenges facing society today. Assessing the economic impact of the different physical risks associated with global warming and environmental degradation and the transition risks arising from the shift to a low-emission economy is subject to extraordinary uncertainty. However, there is a broad consensus (i) that the economic losses resulting from the materialisation of these physical risks would far outweigh the cost of implementing an ambitious strategy to mitigate and adapt to climate change, and (ii) that a gradual and orderly transition carried out without delay and with a high degree of international coordination *(Network for Greening the Financial System* climate scenarios) would cut the transition costs. It is also clear that this transition will entail a profound structural change in Spain's economic growth model – especially in our energy model – that will have extremely significant implications for almost all areas of activity, with a very heterogeneous impact across countries, regions, sectors, firms and households.

In this setting, in recent years Spain has taken on highly ambitious environmental commitments, in line with those established in the EU overall and in other advanced economies. Specifically, the Draft Update of the 2023-2030 National Energy and Climate Plan[94] sets the following targets for 2030: a reduction of 32% in Spain's greenhouse gas emissions compared with 1990 levels; renewables to account for 48% of final energy consumption and 81% of electricity generation; and increased energy efficiency that reduces final energy consumption by 44%. Also noteworthy is that 42% of the funds received by Spain under the European NGEU programme are to be earmarked for various initiatives linked to the green transition, including the housing rehabilitation and urban regeneration plan, the emergency action plan for sustainable, safe and connected mobility in urban and metropolitan areas, and the deployment and integration of renewables.

Evidence:

There is broad consensus among the scientific community that the Iberian Peninsula could be significantly affected by the physical risks associated with climate change, and that this impact would be very uneven across regions. The considerable intensity and asymmetry of the potential impact of global warming in Spain is highlighted, for example, in the European Commission's **Ninth report on economic, social and territorial cohesion**.

— Complementary to these studies, in recent years the Banco de España has developed an intense research agenda that seeks to delve into the very diverse implications for the Spanish economy of climate change, environmental degradation and the green transition.

94 The final document must be submitted no later than 30 June 2024, taking into account the Commission Recommendation published on 18 December 2023.

— The work performed under this analytical agenda notably includes assessments of the possible macro-financial impact in Spain of various physical risks, such as those potentially arising from severe droughts and heatwaves, wildfires, floods, increased aridity[95] and the degradation of ecosystems. It also covers, in the case of transition risks, analysis of the impact on the Spanish economy – at sectoral and aggregate level – of an increase in emission costs[96] and the establishment of a border carbon adjustment mechanism.[97]

— Overall, these studies broadly suggest that the impact of the physical and transition risks on activity, employment, price and credit dynamics in the Spanish economy would be by no means insignificant. Moreover, these effects would be very heterogeneous across regions, sectors, firms and households, and would have a considerable impact on certain regions and sectors and certain types of firms and households.

Areas of action:

To address the huge challenges posed by global warming and the energy and green transition, and to meet the ambitious environmental goals to which Spain is committed, all public policies and economic agents should make a very active contribution. In this respect, the Banco de España's last two Annual Reports (**Chapter 4** of *Annual Report 2021* and **Chapter 4** of *Annual Report 2022)* analyse in detail the role that economic policies should play in this area. Some of the main messages set out in these reports are summarised below:

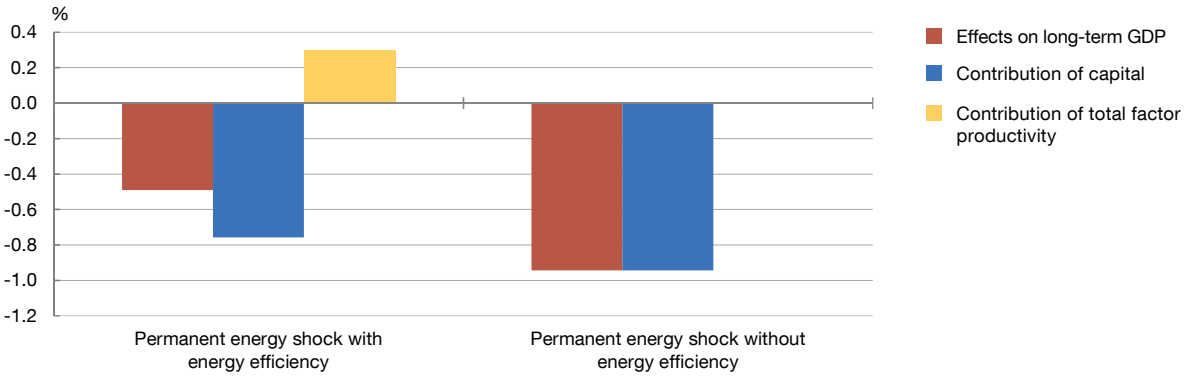
— **Governments must play a leading role throughout this process, not only because they have the necessary democratic legitimacy to define the roadmap, but also because they have the most comprehensive and appropriate set of instruments to achieve the proposed goals.** Specifically, through green taxation, public investment and regulation of economic activity, public policies must act as the essential lever to boost the green transition. Nevertheless, they must also provide economic agents with certainty and mitigate the larger negative impact that this transition will have on the most vulnerable groups.

— **The energy transition will require, among other measures, large-scale deployment of renewable energy sources over the coming decades.** Boosting renewables poses a considerable technological challenge, among others, considering that some green technologies are still at an early stage of development or are not yet cost competitive. It will also significantly drive up demand for certain raw materials – such as rare earths – that are scarce in the EU. This could trigger new dependencies on imports from third countries. In any event, Spain has a very favourable climate for the development of renewable energy

95 Broto and Hubert (2024).
96 Veiga-Duarte, Hurtado, Aguilar, Quintana and Menéndez-Álvarez (2024).
97 Delgado, Quintana and Santabárbara (2024).

Chart 2.13
Energy efficiency eases the impact on activity of higher energy prices

2.13.a Impact on GDP of higher energy prices with and without energy efficiency (a)



SOURCE: Banco de España.

a Results of applying the endogenous growth general equilibrium model (EGGEM) to the impact on Spanish potential GDP of a permanent increase of 30% in imported energy costs, according to whether or not investment is made in energy efficiency gains. Although under the EGGEM the long-term impact is very gradual (over more than 100 years), more than 80% of the transition would be completed by 2050. For more details see Domínguez, Hurtado and Urtasun (2024).

DOWNLOAD

sources for electricity generation. Specifically, according to the European Commission's ENSPRESO dataset, it has the second-highest onshore wind power capacity and the highest solar power capacity in the EU. Against this backdrop, over the last five years, Spain's installed wind capacity has increased by 8 gigawatts (GW) to 31 GW, and its solar capacity by 19 GW to 24 GW. By 2030 it aims to reach installed capacity of 62 GW (wind) and 76 GW (solar).

— **Moreover – aside from the deployment of renewables – improving energy interconnections within the EU and a determined commitment to energy efficiency gains will also be essential.** Improving energy efficiency will not only help achieve climate goals, but it will also help ease the green transition's negative impact on activity. In this respect, a recent study by the Banco de España (Domínguez, Hurtado and Urtasun, 2024) has quantified the impact on the potential GDP of the Spanish economy of a permanent increase of 30% in imported energy costs. The findings show that if, in response, firms were to invest more in energy efficiency improvements, the shock to potential GDP could be halved (see Chart 2.13). The main explanation for this lower impact on GDP in the long run would be that greater investment in energy efficiency would translate into productivity gains, which in turn would mitigate the fall in private capital investment.

— **The green transition also poses a considerable challenge for central banks and the financial system, insofar as this profound structural change could significantly affect monetary policy conduct and pose considerable risks to financial stability.** This requires central banks to act resolutely, both in their analysis of the economic and financial implications of climate change and in the realm of regulation of financial institutions and prudential supervision. In this respect, although much remains to be done, notable progress has been made in recent years.

- Monetary policy. In July 2022 the European Central Bank (ECB) resolved to tilt its corporate bond purchase programmes towards issuers with better climate performance.[98] Also, a limit was announced on the share of assets issued by banks with a high carbon footprint that can be pledged as collateral by individual counterparties when borrowing from the Eurosystem. In addition, climate change considerations were included in the disclosure requirements. All these decisions are in line with the ECB's climate action plan published with the announcement of the monetary policy strategy review in 2021.[99]

- Financial stability. Stress tests have been developed to assess the impact of transition to a greener economy on banks' solvency and profitability.[100]

- Supervision. The ECB has conducted a targeted follow-up of the weaknesses identified in the 2022 Thematic Review on Climate and Environmental Risks. This resulted in qualitative requirements being imposed on significant institutions that continue to present severe shortcomings in their materiality and business environment analysis. The ECB has also conducted on-site inspections on climate and environmental risks and has analysed the information on such risks disclosed by significant institutions for the first time under Pillar 3 standards in 2023 H1. For its part, the Banco de España has continued to assess the progress made by less significant institutions in implementing its supervisory expectations for climate and environmental risk management, incorporating the results of this assessment into the supervisory dialogue and the recommendations issued as part of the Supervisory Review and Evaluation Process.

98 ECB. (2022). *ECB takes further steps to incorporate climate change into its monetary policy operations,* 4 July (press release). Details of the decarbonisation of corporate bond holdings were published in a press release dated 19 September (ECB. (2022). *ECB provides details on how it aims to decarbonise its corporate bond holdings*). Subsequently, following the *Governing Council's decision to start reducing the asset purchase programme (APP) portfolio,* it was announced that during the period of partial reinvestment corporate bond purchases would be more strongly tilted towards issuers with better climate performance (ECB. (2023). ECB decides on detailed modalities for reducing asset purchase programme holdings, 2 February (press release)).

99 ECB. (2021). *ECB presents action plan to include climate change considerations in its monetary policy strategy,* 8 July (press release).

100 For Spain, see the latest results published in AMCESFI's first Biennial report on climate change risks to the financial system. At European level, see *The Road to Paris: stress testing the transition towards a net-zero economy.*

References

Acemoglu, Daron, Simon Johnson and James A. Robinson. (2005). "Chapter 6. Institutions as a fundamental cause of long-run growth". In Philippe Aghion and Steven N. Durlauf (eds.), *Handbook of Economic Growth,* 1 (part A), pp. 385-472, North-Holland. https://doi.org/10.1016/S1574-0684(05)01006-3

Adhvaryu, Achyuta, Teresa Molina and Anant Nyshadham. (2022). "Expectations, Wage Hikes and Worker Voice". *The Economic Journal*, 132(645), pp. 1978–1993. https://doi.org/10.1093/ej/ueac001

Aguilar, Eduardo, Mario Alloza, Tamara de la Mata, Enrique Moral-Benito, Íñigo Portillo-Pampin and David Sarasa-Flores. (2023). "Una primera caracterización de las empresas receptoras de fondos NGEU en España". Documentos Ocasionales, 2321, Banco de España. https://repositorio.bde.es/handle/123456789/35653

AIReF. (2020). "Tax Benefits Study". https://www.airef.es/en/document-center/studies-document-center/tax-benefits/

AIReF. (2022). "1st Opinion. Minimum Living Income. Opinion 1/22. https://www.airef.es/wp-content/uploads/2022/09/NOTICIAS-EN/Primera-Opinion-IMV_EN_REV.pdf

AIReF. (2023a). "2nd Opinion. Minimum Income Scheme". Opinion 2/23. https://www.airef.es/wp-content/uploads/2023/09/AIReF.-Second-Opinion-on-the-Minimum-Income-Scheme.pdf

AIReF. (2023b). "Opinion on the long-term sustainability of the general government: the impact of demographics". Opinion 1/23. https://www.airef.es/wp-content/uploads/2023/03/OPINI%C3%93N-SOSTENIBILIDAD/AIReF-2023_Opinion-sostenibilidad-de-las-AAPP-largo-plazo_EN.pdf

Albrizio, Silvia and José Federico Geli. (2021). "An empirical analysis of the determinants that can boost Next Generation EU's effectiveness". *Economic Bulletin – Banco de España*, 4/2021, Analytical Articles. https://repositorio.bde.es/handle/123456789/19071

Alesina, Alberto and Dani Rodrik. (1994). "Distributive Politics and Economic Growth". *The Quarterly Journal of Economics*, 109(2), pp. 465–490. https://doi.org/10.2307/2118470

Alloza, Mario, Javier Andrés, Pablo Burriel, Iván Kataryniuk, Javier J. Pérez and Juan Luis Vega. (2021). "The reform of the European Union's fiscal governance framework in a new macroeconomic environment". Documentos Ocasionales, 2121, Banco de España. https://repositorio.bde.es/handle/123456789/17542

Alloza, Mario, Danilo Leiva-León and Alberto Urtasun. (2022). "The response of private investment to an increase in public investment". *Economic Bulletin - Banco de España*, 2/2022, Analytical Articles. https://repositorio.bde.es/handle/123456789/21161

Alloza, Mario, Jorge Martínez, Juan A. Rojas and Iacopo Varotto. (2024). "La dinámica de la deuda pública: una perspectiva estocástica aplicada al caso español". Documentos Ocasionales, Banco de España. Forthcoming.

Almunia, Miguel and David López-Rodríguez. (2018). "Under the Radar: The Effects of Monitoring Firms on Tax Compliance". *American Economic Journal: Economic Policy*, 10(1), pp. 1-38. https://www.aeaweb.org/articles?id=10.1257/pol.20160229

Álvarez-Román, Laura, Sergio Mayordomo, Carles Vergara-Alert and Xavier Vives. (2023). "Climate Risk, Soft Information, and Credit Supply". CEPR Discussion Paper, 18661, Centre for Economic Policy Research. https://cepr.org/publications/dp18661

AMCESFI. (2023). *Biennial Report on Climate Change Risks to the Financial System,* 1. https://www.amcesfi.es/f/webwam/RCL/Publicaciones/archivos/AMCESFI_Informe_Cambio_Climatico_2023_en.pdf

Andersson, Malin, Stephen Byrne, Lorenz Emter, Belén González Pardo, Valerie Jarvis and Nico Zorell. (2023). "Intangible assets of multinational enterprises in Ireland and their impact on euro area GDP". *ECB Economic Bulletin*, 3/2023. https://www.ecb.europa.eu/pub/economic-bulletin/focus/2023/html/ecb.ebbox202303_02~3404c284d0.en.html

Anghel, Brindusa, Henrique Basso, Olympia Bover, José María Casado, Laura Hospido, Mario Izquierdo, Iván A. Kataryniuk, Aitor Lacuesta, José Manuel Montero and Elena Vozmediano. (2018). "Income, consumption and wealth inequality in Spain". Documentos Ocasionales, 1806, Banco de España. https://repositorio.bde.es/handle/123456789/33569

Anghel, Brindusa, Olympia Bover, Laura Hospido, Julio Ortega and Ana Regil. (2023). "Inequality in Spain: 2005-2021". Country Studies: Inequalities in Europe and North America. A parallel study to the IFS Deaton Review, Institute for Fiscal Studies. https://ifs.org.uk/inequality/wp-content/uploads/2023/11/Inequality-in-Spain.pdf

Anghel, Brindusa and Aitor Lacuesta. (2020). “Ageing, productivity and employment status”. *Economic Bulletin - Banco de España*, 1/2020, Analytical Articles. https://repositorio.bde.es/handle/123456789/11808

Banco de España. (2019). “Chapter 4. Economic consequences of demographic change”. In Banco de España, *Annual Report 2018*, pp. 211-252. https://repositorio.bde.es/handle/123456789/12521

Banco de España. (2022). “Chapter 4. The Spanish economy and the climate challenge”. In Banco de España, *Annual Report 2021*, pp. 221-272. https://repositorio.bde.es/handle/123456789/21115

Banco de España. (2023a). “Chapter 2. Robust and sustainable growth and convergence with the euro area: challenges and opportunities”. In Banco de España, *Annual Report 2022*, pp. 73-136. https://repositorio.bde.es/handle/123456789/29663

Banco de España. (2023b). “Chapter 4. Spain and the European Union in the face of the energy crisis: near-term adjustments and challenges pending”. In Banco de España, *Annual Report 2022*, pp. 184-220. https://repositorio.bde.es/handle/123456789/29665

Banco de España. (2024a). *Financial Stability Report. Spring 2024.* https://repositorio.bde.es/handle/123456789/36418

Banco de España. (2024b). “Quarterly report and macroeconomic projections for the Spanish economy. March 2024”. *Economic Bulletin – Banco de España,* 2024/Q1. https://repositorio.bde.es/handle/123456789/36150

Barro, Robert J. (2001). “Human Capital and Growth”. *American Economic Review*, 91(2), pp. 12-17. https://doi.org/10.1257/aer.91.2.12

Basso, Henrique, Ourania Dimakou and Myroslav Pidkuyko. (2023). “How inflation varies across Spanish households”. Documentos Ocasionales, 2307, Banco de España. https://repositorio.bde.es/handle/123456789/29792

Battaglia, Marianna and Lara Lebedinski. (2022). “With a little help from my friends: Medium-Term effects of a remedial education program targeting Roma minority”. *Economics of Education Review*, 86, 102196. https://doi.org/10.1016/j.econedurev.2021.102196.

Becker, Sascha O., Katrin Boeckh, Christa Hainz and Ludger Woessmann. (2016). “The empire is dead, long live the empire! Long-run persistence of trust and corruption in the bureaucracy”. *The Economic Journal*, 126 (590), pp. 40-74. https://doi.org/10.1111/ecoj.12220

Bentolila, Samuel, Antonio Cabrales and Marcel Jansen. (2024). “Does Dual Vocational Education and Training Pay Off?”. Forthcoming.

Blanchet, Thomas, Lucas Chancel and Amory Gethin. (2022). "Why Is Europe More Equal than the United States?". *American Economic Journal: Applied Economics*, 14 (4), pp. 480-518. https://doi.org/10.1257/app.20200703

Blanco, Roberto and Sergio Mayordomo. (2023). “Evidence on the impact of the public guarantee and direct aid schemes on Spanish firms during the COVID-19 crisis”. Documentos Ocasionales, 2317, Banco de España. https://repositorio.bde.es/handle/123456789/34592

Bloom, Nicholas and John Van Reenen. (2007). “Measuring and Explaining Management Practices Across Firms and Countries”. *The Quarterly Journal of Economics*, 122(4), pp. 1351–1408. https://doi.org/10.1162/qjec.2007.122.4.1351

Bover, Olympia, Laura Hospido and Ernesto Villanueva. (2024). “The Impact of High School Financial Education on Financial Knowledge and Saving Choices”. *Journal of Human Resources,* 59(2). https://doi.org/10.3368/jhr.0720-11049R2

Broto, Carmen and Olivier Hubert. (2024). "Desertification in Spain: Is there any impact on credit to firms?". Forthcoming.

Burriel, Pablo, Iván Kataryniuk and Javier J. Pérez. (2022). “Computing the EU'S SURE interest savings using an extended debt sustainability assessment tool”. Documentos Ocasionales, 2210, Banco de España. https://repositorio.bde.es/handle/123456789/21159

Cabrales, Antonio, Maia Güell, Rocío Madera and Analía Viola. (2020). “Income contingent university loans: Policy design and an application to Spain”. *Economic Policy*, 34(99), pp. 479–521. https://doi.org/10.1093/epolic/eiz010

Card, David. (2008). “Returns to Schooling”. *The New Palgrave Dictionary of Economics*, pp. 1-11. https://doi.org/10.1057/978-1-349-95121-5_2574-1

Castellanos, María Alexandra. (2023). “Inmigration, parenthood and child penalties”. Job Market Paper. https://www.dropbox.com/s/u7xul0la2v9u19y/MCastellanos_Imm_ChildPenalty.pdf?dl=0

Cobreros, Lucía, Sandra García-Uribe and Marina Gómez. (2023). “Distributional accounts: a tool for monitoring the distribution of household wealth and debt components”. *Economic Bulletin – Banco de España*, 2023/Q4, 02. https://repositorio.bde.es/handle/123456789/33800

Comité de Personas Expertas. (2022). *Libro Blanco sobre la Reforma Tributaria*. Instituto de Estudios Fiscales, Ministerio de Hacienda y Función Pública. https://www.ief.es/docs/investigacion/comiteexpertos/LibroBlancoReformaTributaria_2022.pdf

Correia, Isabel. (2010). "Consumption Taxes and Redistribution". *American Economic Review,* 100(4), pp. 1673-1694. https://www.aeaweb.org/articles?id=10.1257/aer.100.4.1673

Crespo, Laura, 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://repositorio.bde.es/handle/123456789/34892

Criscuolo, Chiara, Peter Gal, Timo Leidecker and Giuseppe Nicoletti. (2021). "The human side of productivity. Uncovering the role of skills and diversity for firm productivity". OECD Productivity Working Papers, 29, Organisation for Economic Co-operation and Development. https://doi.org/10.1787/5f391ba9-en

Cuadrado, Pilar, Alejandro Fernández-Cerezo, José Manuel Montero and Francisco José Rodríguez. (2023). "The impact of population ageing on the labour force participation rate in Spain". *Economic Bulletin - Banco de España*, 2023/Q3, 12. https://repositorio.bde.es/handle/123456789/33513

Cuadrado, Pilar, Mario Izquierdo, José Manuel Montero, Enrique Moral-Benito and Javier Quintana. (2022). "The potential growth of the Spanish economy after the pandemic". Documentos Ocasionales, 2208, Banco de España. https://repositorio.bde.es/handle/123456789/23359

Daniele, Gianmarco, Arnstein Aassve and Marco Le Moglie. (2023). "Never forget the first time: The persistent effects of corruption and the rise of populism in Italy". *The Journal of Politics*, 85 (2). https://doi.org/10.1086/723019

De la Fuente, Ángel (coord.), Mercedes Ayuso, José Ignacio Conde-Ruiz, Enrique Devesa, Javier Díaz-Giménez, Julián Díaz-Saavedra, Rafael Doménech, Inmaculada Domínguez-Fabián, Luisa Fuster, Miguel Ángel García-Díaz, José Antonio Herce, Sergi Jiménez, José María Marín Vigueras, Concepció Patxot, Alfonso Sánchez-Martín and Felipe Serrano. (2023). "Notas sobre las proyecciones de gasto en pensiones del MISSMI". *Estudios sobre la Economía Española,* 2023/31, Fedea. https://documentos.fedea.net/pubs/eee/2023/eee2023-31.pdf?utm_source=wordpress&utm_medium=actualidad&utm_campaign=estudio&_gl=1*16qjk3x*_ga*MTEzODcyMDcxOC4xNjY5ODI2MDU2*_ga_K71EGLC8JC*MTY5OTI4NjM2Mi40LjAuMTY5OTI4NjM2Mi4wLjAuMA..&_ga=2.65175470.1671895838.1699286362-1138720718.1669826056

Deleidi, Matteo. (2022). "Quantifying multipliers in Italy: does fiscal policy composition matter?". *Oxford Economic Papers,* 74 (2), pp. 359-381. https://doi.org/10.1093/oep/gpab028

Delgado, Mar, Javier Quintana and Daniel Santabárbara. (2024). "Carbon Pricing, Border Adjustment and Renewable Energy Investment: A Network Approach". Forthcoming.

Dijkstra, Lewis, Hugo Poelman and Andrés Rodríguez-Pose. (2020). "The geography of EU discontent". *Regional Studies,* 54(6), pp. 737–753. https://doi.org/10.1080/00343404.2019.1654603

Domínguez-Díaz, Rubén, Samuel Hurtado and Carolina Menéndez. (2024). "The medium-term effects of investment stimulus". Documentos de Trabajo, 2402, Banco de España. https://repositorio.bde.es/handle/123456789/35913.

Domínguez-Díaz, Rubén, Samuel Hurtado and Alberto Urtasun. (2024). "Energy transition and vulnerability to external shocks: simulations with an endogenous growth model". Documentos de Trabajo, Banco de España. Forthcoming.

Emambakhsh, Tina, Maximilian Fuchs, Simon Kordel, Charalampos Kouratzoglou, Chiara Lelli, Riccardo Pizzeghello, Carmelo Salleo and Martina Spaggiari. (2023). "The Road to Paris: Stress Testing the Transition Towards a Net-Zero Economy". ECB Occasional Paper, 2023/328, European Central Bank. http://dx.doi.org/10.2139/ssrn.4564374

European Central Bank. (2021). "Key factors behind productivity trends in EU countries". Occasional Paper Series, 268, European Central Bank. https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op268~73e6860c62.en.pdf

European Central Bank. (2024). *Statement by the ECB Governing Council on advancing the Capital Markets Union*. https://www.ecb.europa.eu/press/pr/date/2024/html/ecb.pr240307~76c2ab2747.en.html

European Commission. (2012). "The 2012 Ageing Report. Economic and budgetary projections for the 27 EU Member States (2010-2060)". European Economy, 2|2012. https://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee-2012-2_en.pdf

European Commission. (2018). *Annual Report 2018 of the European Fiscal Board*. https://commission.europa.eu/publications/2018-annual-report-european-fiscal-board_en

European Commission. (2021). "The 2021 Ageing Report. Economic and budgetary projections for the EU Member States (2019-2070)". Institutional Paper, 148. https://data.europa.eu/doi/10.2765/84455

European Commission. (2023). "Commission Recommendation, Assessment (SWD) and Factsheet of the draft updated National Energy and Climate Plan of Spain". https://commission.europa.eu/publications/commission-recommendation-assessment-swd-and-factsheet-draft-updated-national-energy-and-climate-5_en#details

European Commission. (2024a). "2024 Ageing Report. Economic and budgetary projections for the EU Member States (2022-2070)". Institutional Paper, 279. https://economy-finance.ec.europa.eu/document/download/971dd209-41c2-425d-94f8-e3c3c3459af9_en?filename=ip279_en.pdf

European Commission. (2024b). *Ninth report on economic, social and territorial cohesion*. Jorge Durán Laguna. (ed.), Publications Office of the European Union. https://ec.europa.eu/regional_policy/sources/reports/cohesion9/9CR_Report_FINAL.pdf

Fernández-Cerezo, Alejandro and Mario Izquierdo. (2024). "The Banco de España Business Activity Survey: 2024 Q1". *Economic Bulletin - Banco de España,* 2024/Q1, 08. https://repositorio.bde.es/handle/123456789/36213

Fernández-Cerezo, Alejandro, Enrique Moral-Benito and Javier Quintana. (2023). "A production network model for the Spanish economy with an application to the impact of NGEU funds". Documentos de Trabajo, 2305, Banco de España. https://repositorio.bde.es/handle/123456789/27333

Foster, Lucia, John C. Haltiwanger and C. J. Krizan. (2001). "Aggregate Productivity Growth. Lessons from Microeconomic Evidence". *New Developments in Productivity Analysis*, University of Chicago Press, pp. 303 – 372. https://www.nber.org/system/files/chapters/c10129/c10129.pdf

Fuster, Luisa. (2022). "Macroeconomic and distributive effects of increasing taxes in Spain". *SERIEs*, 13, pp. 613–648. https://doi.org/10.1007/s13209-022-00269-5

García-Miralles, Esteban. (2023). "Support measures in the face of the energy crisis and the rise in inflation: an analysis of the cost and distributional effects of some of the measures rolled out based on their degree of targeting". *Economic Bulletin - Banco de España*, 2023/Q1, 15. https://repositorio.bde.es/handle/123456789/29769

García-Miralles, Esteban and Jorge Martínez Pagés. (2023). "Government revenue in the wake of the pandemic: tax residuals and inflation". *Economic Bulletin - Banco de España*, 2023/Q1, 16. https://repositorio.bde.es/handle/123456789/29791

García-Posada Gómez, Miguel and Raquel Vegas Sánchez. (2018). "Bankruptcy reforms in the midst of the Great Recession: The Spanish experience". *International Review of Law and Economics*, 55, pp. 71-95. https://doi.org/10.1016/j.irle.2018.04.001

García-Santana, Manuel, 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

Gershenson, Seth, Cassandra M. D. Hart, Joshua Hyman, Constance A. Lindsay and Nicholas W. Papageorge. (2022). "The Long-Run Impacts of Same-Race Teachers". *American Economic Journal: Economic Policy*, 14 (4), pp. 300-342. https://www.aeaweb.org/articles?id=10.1257/pol.20190573

Giovanni, Julian Di, Manuel García-Santana, Priit Jeenas, Enrique Moral-Benito and Josep Pijoan Mas. (2022). "Buy Big or Buy Small? Procurement Policies, Firms' Financing and the Macroeconomy". Documentos de Trabajo, 2233, Banco de España. https://repositorio.bde.es/handle/123456789/23361

Grébol, Ricard, Margarita Machelett, Jan Stuhler and Ernesto Villanueva. (2024). "Educational inequality in Spain". Banco de España. Forthcoming.

Grossman, Herschell I. (1991). "A General Equilibrium Model of Insurrections". *The American Economic Review*, 81(4), pp. 912–921. http://www.jstor.org/stable/2006650

Guner, Nezih, Ezgi Kaya and Virginia Sánchez Marcos. (2024). "Labor Market Institutions and Fertility". *International Economic Review.* https://www.cemfi.es/~guner/Labor-Market-Institutions-and-Fertility-July-2023.pdf

Guner, Nezih, Martin Lopez-Daneri and Gustavo Ventura. (2023). "The looming fiscal reckoning: Tax distortions, top earners, and revenues". *Review of Economic Dynamics,* 50, pp. 146-170. https://doi.org/10.1016/j.red.2023.07.003

Heckman, James J., Lance J. Lochner and Petra E. Todd. (2006). "Chapter 7. Earnings Functions, Rates of Return and Treatment Effects: The Mincer Equation and Beyond". *Handbook of the Economics of Education*, 1, pp. 307-458. https://doi.org/10.1016/S1574-0692(06)01007-5

Hernández de Cos, Pablo and Javier J. Pérez. (2015). "Reglas fiscales, disciplina presupuestaria y corresponsabilidad fiscal". *Papeles de Economía Española,* 143. https://www.funcas.es/articulos/reglas-fiscales-disciplina-presupuestaria-y-corresponsabilidad-fiscal/

Hertz, Tom, Tamara Jayasundera, Patrizio Piraino, Sibel Selcuk, Nicole Smith and Alina Verashchagina. (2008). "The Inheritance of Educational Inequality: International Comparisons and Fifty-Year Trends". *The B.E. Journal of Economic Analysis & Policy*, 7(2). https://doi.org/10.2202/1935-1682.1775

Hospido, Laura, Margarita Machelett, Myroslav Pidkuyko and Ernesto Villanueva. (2023). *Survey of Financial Competences (ECF) 2021: main results and changes since 2016*". Banco de España. https://repositorio.bde.es/handle/123456789/34792

Instituto Nacional de Estadística. (2022). "Population projections. 2022-2072". https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736176953&menu=ultiDatos&idp=1254735572981

International Monetary Fund. (2021). "Boosting productivity in the aftermath of COVID-19". https://www.imf.org/external/np/g20/pdf/2021/061021.pdf

Izquierdo, Mario, Juan F. Jimeno and Aitor Lacuesta. (2016). "Spain: from massive immigration to vast emigration?". *IZA Journal of Migration*, 5 (10). https://doi.org/10.1186/s40176-016-0058-y

Jansen, Marcel and Aitor Lacuesta. (2024). "La educación post-obligatoria". In Antonio Cabrales and Ismael Sanz (coords.), *Economía de la Educación*. Fundación Areces. https://www.fundacionareces.es/recursos/doc/portal/2024/04/23/economia-de-la-educacion.pdf#page=337

Krueger, Alan B., and Mikael Lindahl. (2001). "Education for Growth: Why and for Whom?". *Journal of Economic Literature*, 39 (4), pp. 1101-1136. https://doi.org/10.1257/jel.39.4.1101

Lamas Rodríguez, Matías, Mari Luz Garcia Lorenzo, Manuel Medina Magro and Gabriel Perez-Quiros. (2023). "Impact of climate risk materialization and ecological deterioration on house prices in Mar Menor, Spain". *Scientific Reports*, 13, 11772. https://doi.org/10.1038/s41598-023-39022-8

López Laborda, Julio, Carmen Marín González and Jorge Onrubia. (2024). "Observatorio sobre el reparto de los impuestos y las prestaciones entre los hogares españoles", *Octavo informe-2021,* Fedea. https://documentos.fedea.net/pubs/eee/2024/eee2024-04.pdf

Lucas, Robert E. (1988). "On the mechanics of economic development". *Journal of Monetary Economics*, 22(1), pp. 3-42. https://doi.org/10.1016/0304-3932(88)90168-7

Lucas, Robert E. (1990). "Why Doesn't Capital Flow from Rich to Poor Countries?". *The American Economic Review*, 80(2), pp. 92–96. http://www.jstor.org/stable/2006549

Lucas, Robert E. (2015). "Human Capital and Growth". *American Economic Review,* 105 (5), pp. 85-88. http://dx.doi.org/10.1257/aer.p20151065

Lucio, Juan de and Juan S. Mora-Sanguinetti. (2022). "Drafting 'better regulation': the economic cost of regulatory complexity". *Journal of Policy Modeling*, 44(1), pp. 163-183. https://doi.org/10.1016/j.jpolmod.2021.10.003

Macnamara, Patrick, Myroslav Pidkuyko and Raffaele Rossi. (2023). "Taxing consumption in unequal economies". Documentos de Trabajo, 2331, Banco de España. https://repositorio.bde.es/handle/123456789/34646

Martínez-Matute, Marta and Ernesto Villanueva. (2023). "Task specialization and cognitive skills: evidence from PIAAC and IALS". *Review of Economics of the Household*, 21, pp. 59-93. https://doi.org/10.1007/s11150-021-09587-2

Mathers, Colin D., Ritu Sadana, Joshua A. Salomon, Christopher J. L. Murray and Alan D. Lopez. (2001). "Healthy life expectancy in 191 countries, 1999". *The Lancet*, 357(9269), pp. 1685-1691. https://doi.org/10.1016/S0140-6736(00)04824-8

McGuigan, Martin, Sandra McNally and Gill Wyness. (2016). "Student awareness of costs and benefits of educational decisions: effects of an information campaign". *Journal of Human Capital,* 10(4), pp. 482-519. https://www.journals.uchicago.edu/doi/10.1086/689551

Ministerio de Inclusión, Seguridad Social y Migraciones. (2023). "Proyecciones del gasto público en pensiones en España." https://www.inclusion.gob.es/documents/20121/3479582/Informe+Proyec_SS+2023_final.pdf

Montalbán Castilla, José. (2019). "Financiación Universitaria: Desafíos y Soluciones Potenciales". *Estudios sobre la Economía Española,* 2019/16. Fedea. https://documentos.fedea.net/pubs/eee/eee2019-16.pdf?_gl=1*op4vfb*_ga*MTMxNDY1MTE2My4xNzEzMTgyNTE1*_ga_K71EGLC8JC*MTcxMzE4MjUxNC4xLjAuMTcxMzE4MjUxNC4wLjAuMA

Mora-Sanguinetti, Juan S. and Ricardo Pérez-Valls. (2021). "How does regulatory complexity affect business demography? Evidence from Spain". *European Journal of Law and Economics*, 51, pp. 203–242. https://doi.org/10.1007/s10657-020-09650-w

Mora-Sanguinetti, Juan S., Javier Quintana, Isabel Soler and Rok Spruk. (2024). “The heterogenous effects of a higher volume of regulation: evidence from more than 200k Spanish norms”. *Journal of Regulatory Economics,* 65, pp. 137-153. https://doi.org/10.1007/s11149-023-09466-x

Moral-Benito, Enrique. (2018). “Growing by learning: firm-level evidence on the size-productivity nexus”. *SERIEs,* 9, pp. 65-90. https://doi.org/10.1007/s13209-018-0176-2

Nguyen, Anh D. M., Luisanna Onnis and Raffaele Rossi. (2021). “The Macroeconomic Effects of Income and Consumption Tax Changes”. *American Economic Journal: Economic Policy*, 13(2), pp. 439-466. https://www.aeaweb.org/articles?id=10.1257/pol.20170241

Organisation for Economic Co-operation and Development. (2021). "Improving knowledge transfer and collaboration between science and business in Spain", OECD Science, Technology and Industry Policy Papers, 122. https://doi.org/10.1787/4d787b35-en

Organisation for Economic Co-operation and Development. (2023a). *International Migration Outlook 2023.* https://doi.org/10.1787/b0f40584-en

Organisation for Economic Co-operation and Development. (2023b). "OECD/INFE 2023 International Survey of Adult Financial Literacy", OECD Business and Finance Policy Papers, 39. https://doi.org/10.1787/56003a32-en

Organisation for Economic Co-operation and Development. (2023c). *Pensions at a Glance 2023: OECD and G20 Indicators*. OECD Publishing. https://doi.org/10.1787/678055dd-en

Persson, Torsten and Guido Tabellini. (1994). “Is Inequality Harmful for Growth?”. *The American Economic Review*, 84(3), pp. 600–621. http://www.jstor.org/stable/2118070

Ramey, Valerie A. (2020). “The macroeconomic consequences of infrastructure investment”. Working Paper 27625, National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w27625/w27625.pdf

Regueiro-Ons, Camila and Beatriz González López-Valcárcel. (2023). “Los retos del sistema sanitario a la luz de la transición demográfica”. In Funcas, *La economía española ante el reto demográfico,* pp. 112-131. Papeles de Economía Española, 176. https://www.funcas.es/revista/la-economia-espanola-ante-el-reto-demografico/

Romer, Paul M. (1986). “Increasing returns and long-run growth”. *Journal of Political Economy*, 94(5), pp. 1002-1037. https://www.jstor.org/stable/1833190

Solé-Ollé, Albert and Pilar Sorribas-Navarro. (2018). “Trust no more? On the lasting effects of corruption scandals”. *European Journal of Political Economy*, 55, pp. 185-203. https://doi.org/10.1016/j.ejpoleco.2017.12.003

Soria, Javier. (2022). “Intergenerational Mobility, Gender Differences and the Role of Out-Migration: New Evidence from Spain”. http://dx.doi.org/10.2139/ssrn.4110960

Syverson, Chad. (2011). “What Determines Productivity?”. *Journal of Economic Literature*, 49(2), pp. 326-365. https://www.aeaweb.org/articles?id=10.1257/jel.49.2.326

Veiga-Duarte, Rubén, Samuel Hurtado, Pablo A. Aguilar, Javier Quintana and Carolina Menéndez-Álvarez. (2024). “CATALIST: a new, bigger, better model for evaluating climate change transition risks at Banco de España”. Forthcoming.

Wooldridge, Jeffrey M. (2009). “On estimating firm-level production functions using proxy variables to control for unobservables”. *Economics Letters,* 104(3), pp. 112-114. https://doi.org/10.1016/j.econlet.2009.04.026

Box 2.1

THE HETEROGENEOUS IMPACT OF INFLATION ON PERSONAL INCOME TAX REVENUE

The robust performance of public revenue in Spain in the last four years is mainly attributable to strong growth in revenue generated by personal income tax. This increase owes, first, to real growth in the tax base (the number of workers and pensioners) and, second, to growth in its nominal component (wages, welfare benefits and other household income), driven by the inflationary episode.[1]

In addition, nominal growth in the personal income tax base may trigger an increase in the effective average tax rates if the parameters determining the tax liability are not fully updated in line with growth in the taxable base. This effect, known as "fiscal drag", means that an increase in taxable income prompts an even higher increase in the tax rate, leading to the elasticity of revenues to changes in the taxable income (ERTI) being greater than 1.[2]

This box summarises the main findings of a forthcoming paper[3] that analyses the impact of fiscal drag on aggregate tax revenue and its uneven effect across households depending on their level of income. To this end, it uses the personal income tax microsimulation tool developed by the Banco de España,[4] which is based on anonymised administrative tax data of personal income taxpayers and on detailed modelling of the tax rules. This tool performs hypothetical simulations of changes in taxpayers' income or in the applicable rules, yielding individual results for each taxpayer in the sample and aggregate results for the economy as a whole.

In the first simulation exercise, the ERTI of each taxpayer is estimated in a static context by calculating the impact on their tax liability of increasing all their income sources by 1%, given certain microdata and tax rules. This exercise estimates the degree of marginal fiscal drag (i.e. that triggered by slight increases in income) in the tax system, irrespective of possible changes in the tax rules or of the observed growth in income. Given these results, aggregate revenue-base elasticity of 1.85 is estimated. In other words, a 1% increase in household income would lead to a rise of 1.85% in total tax revenue if the tax parameters are not updated.[5] For example, for a taxpayer with income of €33,700 (belonging to the 77th percentile) and a tax liability amounting to €5,472, a 1% increase in income (€337) would trigger a rise of around €101 (1.85%) in their tax liability. This elasticity is in line with the estimates available for the average of countries belonging to the Organisation for Economic Co-operation and Development (OECD).[6]

The fiscal drag effect is determined by two mechanisms. The first is the loss in relative value of tax benefits (reductions, tax deductions and tax credits), which do not increase in proportion to income because they are either fixed nominal amounts or subject to ceilings that are not updated. It is estimated that 58% of fiscal drag stems from this mechanism, which is strongly influenced by the loss in relative value of the reduction for labour income earners and of the personal and family allowance. The second mechanism occurs when increases in income are taxed at a marginal rate that is higher than the average rate applied to individual taxpayers, as the progressive tax brackets are defined in nominal terms and do not change, i.e. they are not adjusted for inflation. This latter mechanism accounts for an estimated 42% of fiscal drag. The significance of these two mechanisms varies depending on taxpayers' income, as illustrated below.

Chart 1 shows that there are marked differences in taxpayers' ERTI depending on their total income, with near-zero elasticities for those at the lower end of the income

1 The factors that have led to the recent increase in public revenue in Spain are described in Chapter 1 of this report, and in Esteban García-Miralles and Jorge Martínez Pagés. (2023). "Government revenue in the wake of the pandemic. Tax residuals and inflation". *Economic Bulletin - Banco de España,* 2023/Q1, 16. Personal income tax revenue is defined as the revenue collected in cash terms in one year, mostly in the form of tax withholdings and prepayments on the income earned that year. Thus, the revenue, the income that makes up the tax base and the GDP to which this income contributes all refer to the same year.

2 In technical terms, the ERTI of each individual is equal to their effective marginal rate (the tax rate applied to the last euro of income earned) divided by their effective average rate (the tax payable divided by total income).

3 Sofía Balladares and Esteban García-Miralles. (2024). "Progresividad en frío. El impacto heterogéneo de la inflación sobre la recaudación por IRPF", Documentos Ocasionales, Banco de España (forthcoming).

4 Olympia Bover, José María Casado, Esteban García-Miralles, José María Labeaga and Roberto Ramos. (2017). "Microsimulation tools for the evaluation of fiscal policy reforms at the Banco de España". Documentos Ocasionales, 1707, Banco de España.

5 This estimate is based on the latest available pre-pandemic microdata referring to 2019 and on the legislation applicable at the time. The results therefore capture the effect of the tax rules regardless of observed income growth or subsequent regulatory changes. In any event, a simulation based on 2023 legislation yields a similar estimate (1.84), and the historical relationship between growth in the tax base and tax revenue net of the fiscal measures for the period 2017-2022 is of the same magnitude (1.84).

6 Robert Price, Thai-Thanh Dang and Jarmila Botev. (2015). "Adjusting fiscal balances for the business cycle: New tax and expenditure elasticity estimates for OECD countries". OECD Economics Department Working Papers, 1275, OECD Publishing.

Box 2.1
THE HETEROGENEOUS IMPACT OF INFLATION ON PERSONAL INCOME TAX REVENUE (cont'd)

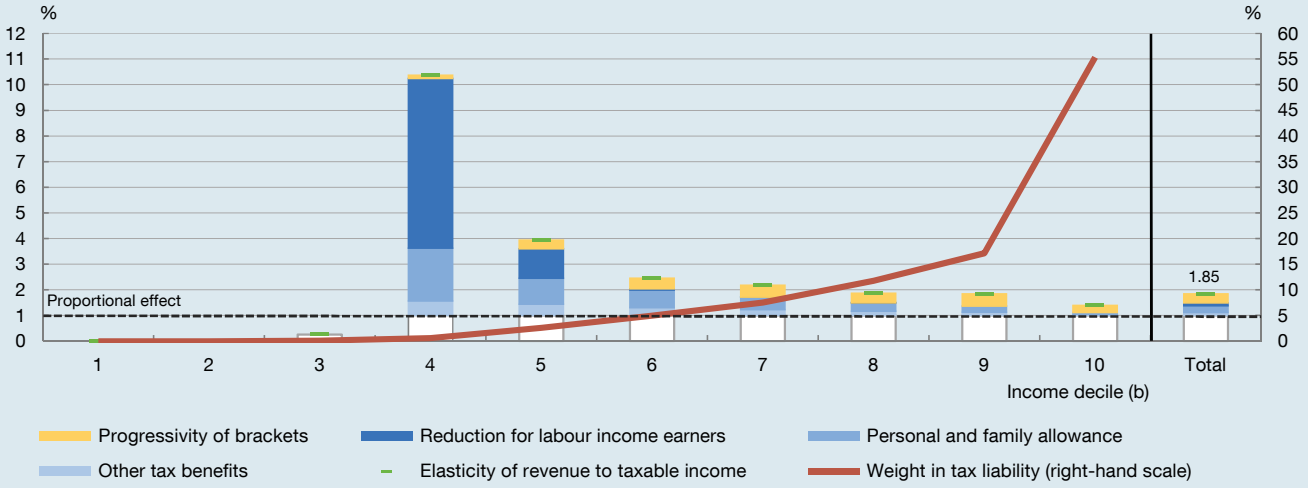
distribution, and high elasticities for medium and medium-high incomes, which decrease as income increases.

The middle of the distribution has notably high elasticities, with an ERTI greater than 10 in the fourth decile. Although taxpayers in this decile have low income and low tax liabilities, a rise in income triggers very high relative increases in these liabilities, almost entirely due to the loss of relative value in tax benefits, which have a sizeable impact on the calculation of their income tax. Taxpayers in the top deciles have lower elasticities than those on medium incomes, with elasticities of 1.8 and 1.4 in the ninth and tenth deciles, respectively. In these deciles, fiscal drag largely stems from the progressivity of personal income tax.[7] These two deciles represent 17.2% and 55.4%, respectively, of aggregate revenue from personal income tax, and their weight in aggregate ERTI is therefore very significant.

Generally, the effect of fiscal drag reduces income inequality insofar as it leads to a broad-based rise in the effective average rates across the entire income distribution. Given that personal income tax rates are progressive, higher average rates across the distribution mean greater redistribution of income. Specifically, both the Gini index and the 90:10 ratio of after-tax income point to a less unequal distribution when incomes increase homogeneously and tax rules remain unchanged.[8] However, although the redistributive capacity of the tax is enhanced, its progressivity, i.e. the difference between the effective average tax rates for high and low incomes, is slightly reduced.[9]

In the second simulation exercise, the impact of fiscal drag is quantified in the current situation, in which nominal household income is growing strongly and the parameters that determine the personal income tax payable have not

Chart 1
Distribution of elasticity of revenue to taxable income (ERTI) (a)



SOURCES: Ministerio de Hacienda (Instituto de Estudios Fiscales) and Banco de España.

a ERTI is defined as the percentage change in the tax liability triggered by a 1% increase in taxable income.
b Average ERTI in each decile is calculated as the average weighted by each individual's share in total tax liability, such that the average of all deciles weighted by their contribution to total tax liability coincides with aggregate ERTI.

7 As tax benefits represent a very minor part of these taxpayers' tax base, their ERTI is mainly determined by the effect of tax brackets. This is despite the fact that tax rates become flatter in the higher income brackets, and that taxes on savings income (predominant for higher incomes) are less progressive.

8 The Gini index is defined as the area between the Lorenz curve (which shows the cumulative percentage of total income) and a line with a slope at 45 degrees (representing perfectly equal distribution of income). The 90:10 ratio represents the wealthiest 10% of the income distribution relative to the poorest 10%.

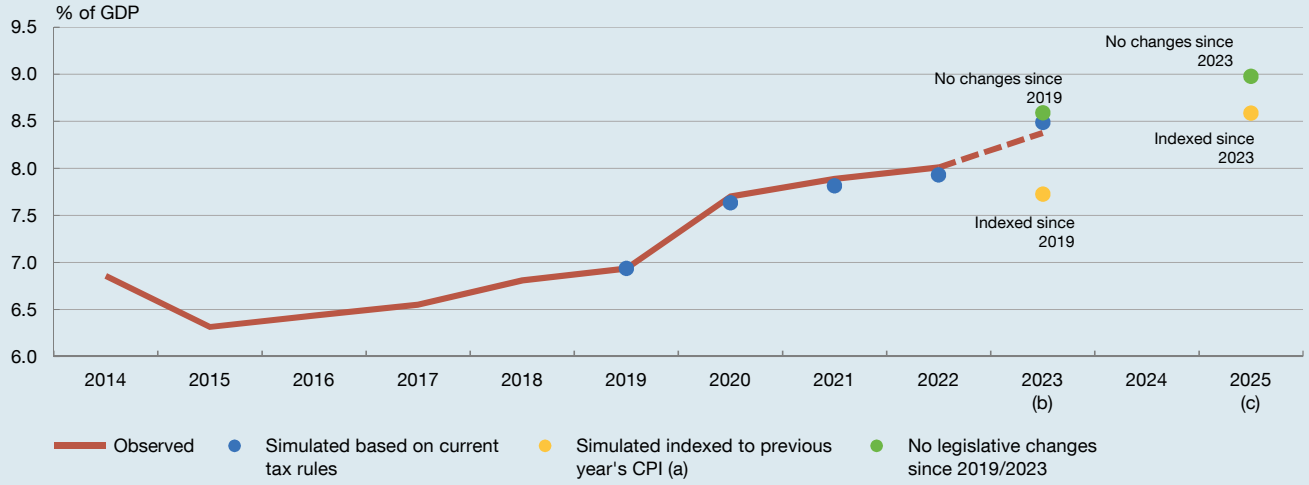
9 This result is consistent with earlier literature, which also finds that fiscal drag reduces inequality despite weakening the progressivity of the tax. See Herwig Immervoll. (2005). "Falling up the stairs: the effects of 'bracket creep' on household incomes". *Review of Income and Wealth,* 51(1), pp. 37-62.

Box 2.1
THE HETEROGENEOUS IMPACT OF INFLATION ON PERSONAL INCOME TAX REVENUE (cont'd)

been fully updated, despite some reforms introduced in recent years.[10] This exercise entails uniformly updating the microdata on the basis of observed or projected growth in the different sources of individuals' gross income (wages, capital income, self-employment income),[11] and incorporating the legislaton in force each year or hypothetical legislation in which the tax parameters are updated, to calculate the resulting tax revenue.

Chart 2 shows the quantitatively significant impact of fiscal drag in the recent period. Specifically, it is estimated that fiscal drag would explain around half of the increase observed in the personal income tax revenue-to-GDP ratio between 2019 and 2023[12] (from 6.9% to 8.5%). The remaining increase owes mainly to higher growth in the personal income tax base relative to GDP growth. In addition, the effective average rates are estimated to have risen from 12.8% in 2019 to 14.7% in 2023, with 70% of this increase attributable to fiscal drag. This estimation is obtained by comparing the estimated revenue for 2023 given the current legislation, with that obtained, for the same year, in a simulation in which the personal income

Chart 2
Observed and simulated changes in the personal income tax-to-GDP ratio



SOURCES: Ministerio de Hacienda (Instituto de Estudios Fiscales and Agencia Estatal de Administración Tributaria) and Banco de España.

a Personal income tax parameters are indexed every year t, using the CPI observed between December of year t-2 and November of the previous year t-1.
b For 2023, growth observed up to 2023 Q3 is extrapolated to the year as a whole.
c For 2025, the Banco de España's macroeconomic projections are used for the different macroeconomic aggregates underlying the tax base.

10 Slightly over half of OECD countries, including Spain, Italy and Portugal, update their personal income tax parameters discretionally and more or less regularly, using more or less clearly defined criteria, while other countries do so automatically by law, for instance, the Nordic countries, the United States and Belgium. In Spain, in 2022 and 2023, regulatory changes to update some of the tax parameters were approved by a number of regional governments. There have also been regulatory changes at the central government level in 2023 and 2024, which modify the reduction for labour income earners to accommodate the increase in lower incomes, particularly those affected by the rise in the national minimum wage. All of this legislation has been incorporated into the analysis.

11 The fact that this exercise does not account for any heterogeneity in the growth of each source of income among taxpayers does not have a significant effect on the aggregate results obtained. This is because most of the tax revenue is concentrated in the top deciles (as illustrated by Chart 1), which in turn determine the gross income growth used in the simulations. In any event, as a robustness check, a simplified simulation has also been carried out to account for heterogeneity across deciles in the total income growth of individual taxpayers, drawing on information from the National Statistics Institute's (INE) Living Conditions Survey (in which income is observed up to 2022 and the same distribution is assumed for growth in 2023). The exercise uses this heterogeneous growth, combined with the estimated ERTI for each decile (see Chart 1), to obtain the aggregate tax revenue. The result of this robustness exercise (tax revenue growth of 43.7% between 2019 and 2023) is very similar to that obtained using homogeneous growth in all the deciles (43.3%) and that yielded by the microsimulator (43%).

12 The 2023 estimate is based on an extrapolation using data observed up to the third quarter.

Box 2.1
THE HETEROGENEOUS IMPACT OF INFLATION ON PERSONAL INCOME TAX REVENUE (cont'd)

tax parameters have been updated each year from 2019 to 2023, using the consumer price index (CPI) observed the previous year.[13]

In the coming years, if there are no further regulatory changes to update the personal income tax parameters, fiscal drag will continue to have a significant impact on tax revenue. In particular, it is estimated that if the personal income tax rules in force in 2023 remain unchanged (incorporating the recent reform affecting the reduction for labour income earners applicable from 2024) and the different household income components grow uniformly in line with the Banco de España's 2023 Q4 macroeconomic projections, personal income tax revenue could reach 9% of GDP in 2025, up 29% on 2019. Conversely, if the personal income tax parameters were to be indexed in 2024 and 2025 to the previous year's CPI, the personal income tax-to-GDP ratio would stand at 8.6%, close to its 2023 level and 24% higher than in 2019. Moreover, in the absence of further changes to the personal income tax rules, the effective average rate could stand at 15.3% by 2025, 20% higher than in 2019.

These results show that the decision on how and when to update the tax parameters has consequences both for total revenue and for its distribution across taxpayers' income level. These consequences must be weighed up in the current context of vulnerable public finances and bearing in mind the recommendations for an efficient design of taxation (see Section 9.4 of this chapter).

13 Specifically, the update of the fiscal parameters for year t is based on the growth of the CPI observed between December of year t-2 and November of year t-1, which is the usual practice in most countries that index their taxes to the CPI of the previous year. However, indexation alternatives are used in other countries, such as the current year's CPI or other indices that reflect wage growth. The simulation results for the period analysed are similar if the personal income tax parameters are updated using these alternative indices.

Box 2.2

THE IMPACT OF THE NEW INCENTIVES TO DELAY RETIREMENT ON SOCIAL SECURITY PENSION EXPENDITURE

The latest pension system reform, carried out between 2021 and 2023, has safeguarded pensions' purchasing power and bolstered their sufficiency through measures such as indexing them to the consumer price index (CPI), repealing the sustainability factor and increasing minimum pension top-ups. As described in Section 9.2, these spending-side measures, which are partially offset by higher social security contributions, entail a notable increase in the system's obligations in the medium and long term.

This box seeks to quantify the possible impact of one of the measures approved to mitigate this increase in the system's expenditure, namely the incentive to delay retirement, by drawing on simulations using microdata from the social security administrative labour records (MCVL, by its Spanish initials). In this respect, two key changes have been approved through the reform. First, a 4% increase in pension benefits has been established for each year that retirement is postponed, irrespective of the contribution period. Second, workers who delay retirement have been given the choice of receiving either the foregoing percentage increase in their pension, a lump-sum payment upon retirement or a combination of the two.[1]

Analysing how effective these new incentives are in containing the projected growth of pension expenditure relative to GDP is crucial for determining whether further measures will be needed to ensure the system's financial sustainability in the future (see Chart 2.10 of the main text). In this case, containment operates through two channels. First, workers remaining for longer in the labour market reduces the number of years they will receive a pension (even though the pension they ultimately receive is for a higher amount than if they had retired at the ordinary retirement age). Second, a higher participation rate among the older population, insofar as it translates into higher aggregate employment, could contribute to economic growth and, therefore, to GDP. In this respect, a European comparison shows that the participation rate in Spain for those aged 55-64 (65.4%) is lower than in some European Union (EU) countries, such as Sweden (81.7%), Germany (75.3%) and Portugal (68.6%), but higher than in others, among them France (60.3%), Italy (57.8%) and Greece (57.1%).[2]

Given the short period of time that has elapsed since the new incentives came into force in 2022, it is too early to quantify the extent to which they could prompt a substantial shift in workers' decisions about when to leave the workforce. These decisions depend on many factors, such as health, personal and family circumstances and job satisfaction, meaning that the monetary incentives are just one more aspect within a range of factors influencing workers' decisions.

In general, the latest evidence shows that the benefits and labour market dynamics before 2022 provided limited incentive for workers to remain in the labour market, demonstrating the difficulty in achieving a substantial increase in the effective retirement age through this incentives mechanism. MCVL data reveal that the decision to continue working beyond the ordinary retirement age has traditionally been restricted to a small number of workers. Indeed, the labour market exit trends among some of the cohorts that have most recently retired (those born between 1950 and 1954) have been highly influenced by the statutory retirement ages for both early and ordinary retirement. Thus, Chart 1.a shows a significant decline in the labour market exit rate in the 65-66 age bracket, attributable to the gradual raising of the statutory retirement age established in the 2011 reform. But the changes in the number of people working beyond the statutory retirement age have been much less notable. For example, of the workers born in 1954 who were paying social security contributions at the age of 60, only 9.2% continued to pay such contributions at the age of 67, a modest increase of 1.2 pp with respect to the proportion calculated considering workers born in 1950.

In addition, again according to the MCVL, for close to 30% of people who took retirement in 2022, the effectiveness of the incentives to continue working would have been limited, as their pre-retirement employment status would have meant there was little scope for extending their working life (i.e. they were unemployed,

1 The new option to receive a lump sum may be more attractive to workers with a high intertemporal discount; that is to say, those who show a greater preference for receiving income in the present rather than potentially greater income in the future.

2 On the revenue side, past the ordinary retirement age, firms and workers that provide their services outside general government and public authorities are exempt from paying social security contributions for common contingencies, except temporary incapacity stemming from such contingencies. This exemption also encompasses contributions for unemployment insurance, the Wage Guarantee Fund and vocational training.

Box 2.2
THE IMPACT OF THE NEW INCENTIVES TO DELAY RETIREMENT ON SOCIAL SECURITY PENSION EXPENDITURE (cont'd)

did not pay social security contributions or were recipients of a disability pension) (see Chart 1.b).[3]

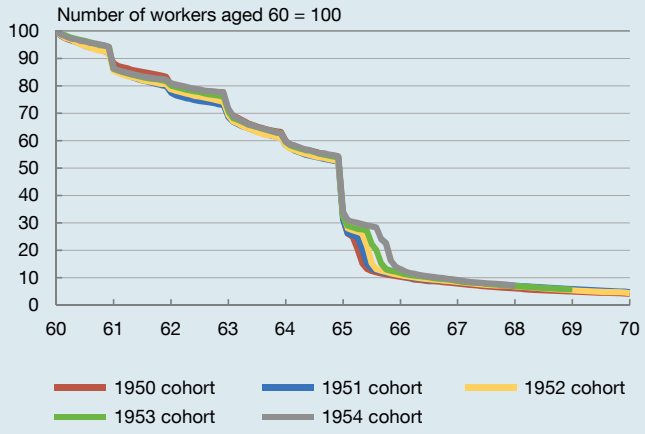
There is also some uncertainty about the extent to which a potential increase in the effective retirement age reduces pension spending relative to GDP. To address this issue, the Banco de España has recently developed a tool to simulate long-term social security spending on contributory pensions, based on the MCVL.[4] Drawing on an estimated labour income process and a retirement decision model,[5] the tool can simulate – up to 2050 – the contribution records of a sample of workers in 2021 and the moment that they will retire, taking into account the legislation currently in force and the legislation that will be applicable over the coming decades.[6]

The preliminary results obtained from this tool show that social security spending on contributory pensions, which was equivalent to 12% of GDP in 2021, will grow significantly in the coming years. In 2050, the level of relative spending on pensions will be contingent, among other factors, on projected economic growth. Thus, it is expected to range between 14.3% (under a favourable scenario of long-term annual GDP growth of 1.8%) and 16.9% (if such GDP growth were only 1%).

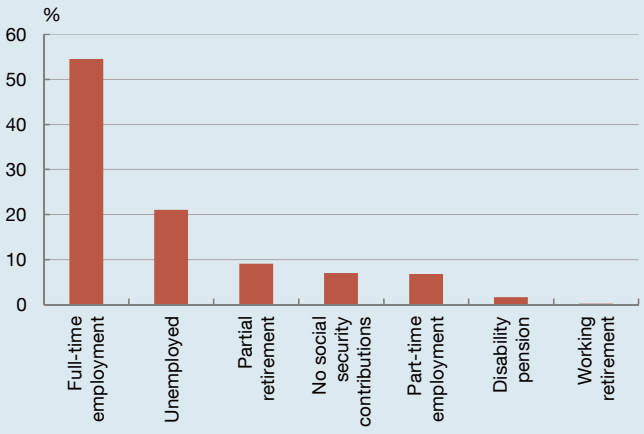
The retirement decision model does not contemplate workers taking into account the increase in their future income as a result of delaying their exit from the labour market, nor was there a lump-sum payment for postponing retirement during the sample period used to estimate such increase. These results should therefore be interpreted under the assumption that the new incentives do not alter the "no-policy-change" course of the projected effective retirement age, which is largely

Chart 1
In recent years, less than 10% of workers have remained in the labour market after the age of 67

1.a Number of workers who remained in the labour market at different ages



1.b Pre-retirement employment status of people who took retirement in 2022



SOURCES: Ministerio de Inclusión, Seguridad Social y Migraciones (MCVL) and Banco de España.

3 The analysis estimates the employment status of workers who retired in 2022 two months previously. A total of eight statuses are defined: full-time employment, part-time employment, unemployment, full retirement, partial retirement, working retirement *(jubilación activa),* disability pension and no social security contributions.

4 Henrique Basso, Angela Denis, Esteban García-Miralles, José María Labeaga and Roberto Ramos. "Simulaciones del gasto en pensiones en el largo plazo". Documentos Ocasionales – Banco de España (forthcoming).

5 Specifically, a multinomial logit model with five classes (full or part-time employment, unemployment, full retirement, partial retirement and no social security contributions) is estimated using monthly data from 2010 to 2017 and for workers aged 58-70. The model's explanatory variables include labour income, the amount of unemployment benefits, the amount of retirement pensions, different pension entitlement indicators and various demographic variables.

6 The tool also relies on various macroeconomic and demographic assumptions and a set of simple rules for other non-retirement pensions (for widow(er)s, disability, orphans and surviving family members), in order to complete the path of social security spending on contributory pensions.

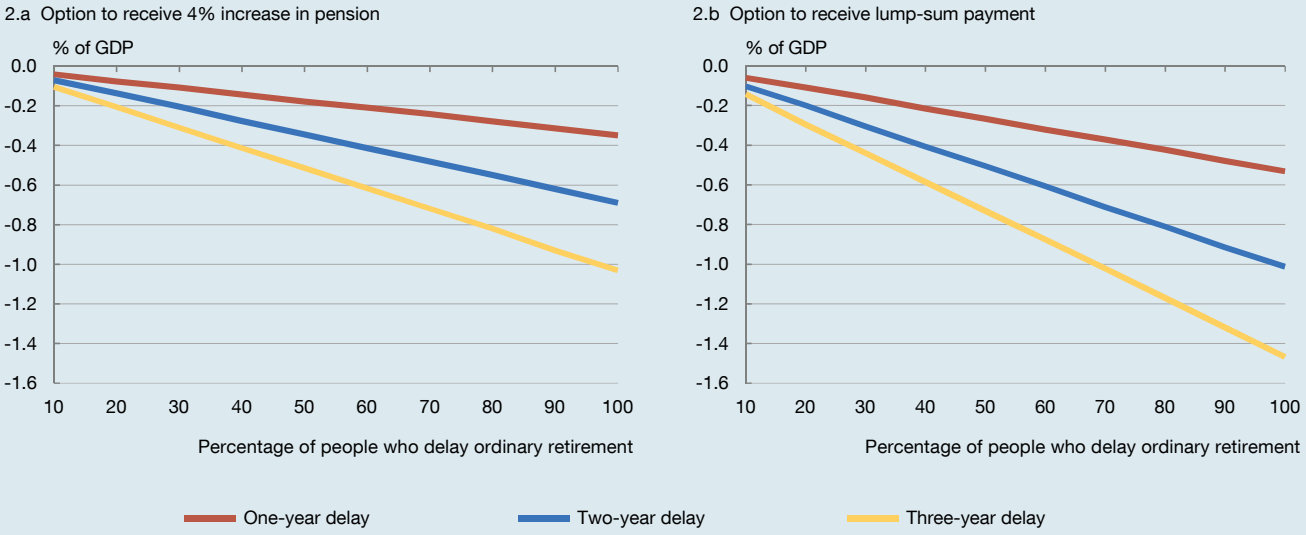
Box 2.2
THE IMPACT OF THE NEW INCENTIVES TO DELAY RETIREMENT ON SOCIAL SECURITY PENSION EXPENDITURE (cont'd)

determined by the increase in the statutory retirement age established in the 2011 reform.[7]

To gauge the potential effect of the incentives approved in 2021 on delaying retirement, a number of additional simulation exercises have been conducted. Specifically, drawing on the retirement age distribution for the projection horizon, it has been assumed that the retirement age rises by between one and three years for a growing proportion of workers. For instance, the scenario envisaging the smallest impact of the new incentives assumes that only 10% of workers at ordinary retirement age would delay retirement, and would only do so by one year. By contrast, the scenario envisaging the greatest impact of these incentives assumes that 100% of such workers would delay their exit from the labour market by three years.[8] Two alternative options are also considered: one in which, after delaying retirement, workers choose the 4% increase in their benefits, and another in which they opt for the lump-sum payment.[9] It is worth noting that, given the typical inflation rate and life expectancy projections, the present value of the 4% increase is higher than that of the lump-sum payment. Consequently, this latter option entails a greater saving from the standpoint of social security spending.[10]

Chart 2 show the results of these simulations. On average in the period 2022-2050, if 20% of the workers of ordinary retirement age under the baseline projection participate in the labour market for another year, pension spending

Chart 2
Change in average pension expenditure in 2022-2050 compared with the baseline projection, based on the percentage of people who delay retirement and the type of incentive chosen



SOURCE: Banco de España.

7 Specifically, from 2027 onwards, the ordinary retirement age will be 65 for workers with at least 38 and a half years of contributions, and 67 in other cases.

8 This exercise assumes long-term GDP growth of 1.3%, leading to pension expenditure of 16% of GDP in 2050. This GDP growth is consistent with the estimate of potential GDP of the Spanish economy in Pilar Cuadrado, Mario Izquierdo, José Manuel Montero, Enrique Moral-Benito and Javier Quintana. (2022). "The potential growth of the Spanish economy after the pandemic". Documentos Ocasionales, 2208, Banco de España. Moreover, it should be mentioned that the number of workers taking ordinary retirement over the projection horizon accounts for around 75% of total new retirement pensions.

9 For simplicity, it is assumed that the formula established for contribution periods shorter than 44 years and six months is applied to all workers who choose the lump sum, yielding an amount that is 10% lower than that for workers whose cumulative contributions exceed that period.

10 For example, taking as reference an annual pension of €14,000, projected price growth of 2% and a life expectancy of 20 years at the time of retirement, the present value of the pension increase flow for delaying retirement (stripping out inflation) would be €13,607, whereas the lump sum would amount to €6,028 if the contribution period were shorter than 44 years and six months, and €6,631 otherwise.

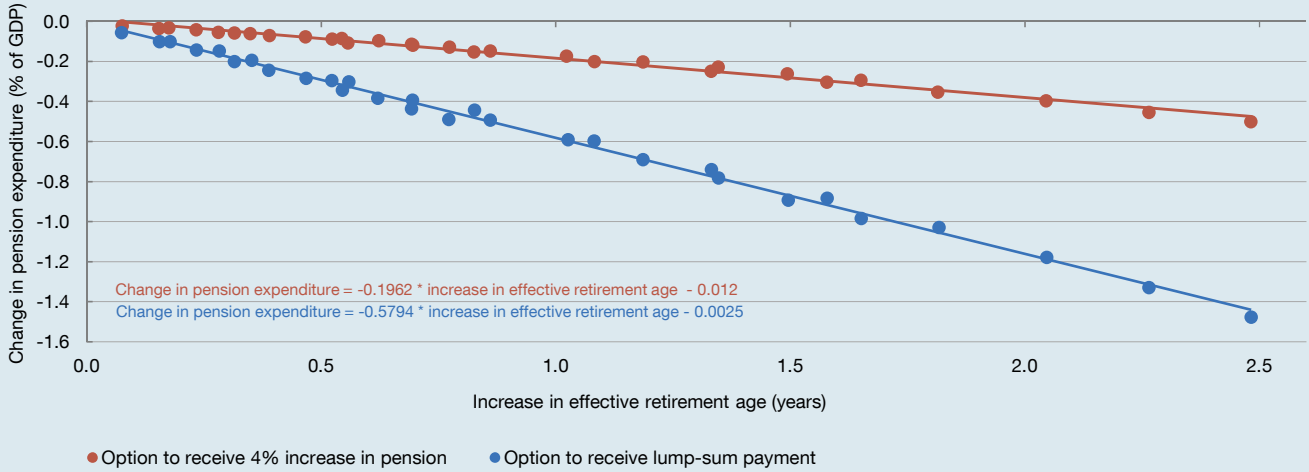
Box 2.2

THE IMPACT OF THE NEW INCENTIVES TO DELAY RETIREMENT ON SOCIAL SECURITY PENSION EXPENDITURE (cont'd)

relative to GDP would fall by barely 0.1 percentage points (pp), compared with a decline of between 0.3 pp and 0.5 pp if 100% of them decided to do so.[11] Naturally, lengthier extensions of working life would result in lower pension expenditure. For instance, if half of these workers delayed retirement for three years, the saving in pension expenditure would be 0.5 pp of GDP, assuming these workers opt for a higher pension, or 0.7 pp of GDP if they chose the lump-sum payment. While these exercises should be treated with caution owing to the large number of assumptions involved, they suggest that, even under scenarios where the new incentives have a notable effect on increasing the effective retirement age, the reduction in pension expenditure, at least in an initial approximation, would be relatively limited.

Moreover, the simulations make it possible to establish a relationship between a higher effective retirement age and a change in relative pension expenditure. Taking 2050 as a reference and estimating a linear relationship, it may be concluded that each year of increase in the effective retirement age would be associated with a decrease in pension spending of between 0.2 pp and 0.6 pp of GDP (see Chart 3).[12] The value of this relationship can be compared with the estimates of other institutions. For example, according to the Independent Authority for Fiscal Responsibility (AIReF), a one-year increase in the effective retirement age would reduce pension spending by 0.8 pp of GDP by 2050, whereas the Ministry of Inclusion, Social Security and Migration estimates a saving of 0.9 pp in that year. For its part, the Foundation for the Study of Applied Economics (Fedea) calculates that the impact of an average one-year delay of retirement on relative spending on pensions would range between a reduction of 0.3 pp and an increase of 0.1 pp.[13] It should

Chart 3
Each year of increase in the effective retirement age would be associated with a decline in pension spending of between 0.2 pp and 0.6 pp of GDP in 2050.
Estimated relationship between an increase in the effective retirement age and the change in pension expenditure in 2050



SOURCE: Banco de España.

11 In the tool described, GDP growth is obtained as the sum of the increase in the number of workers and apparent labour productivity growth. Consequently, in the simulations, the new retirement age distributions resulting from the assumed effect of the incentives are reflected in GDP growth through the change in the number of workers as a result of a percentage of them deciding to continue working for another year, without this altering the productivity growth assumption.

12 Taking the period 2022-2050 as reference, an average one-year increase in the effective retirement age in that period would be associated with a decrease in average expenditure of between 0.6 pp and 0.8 pp of GDP.

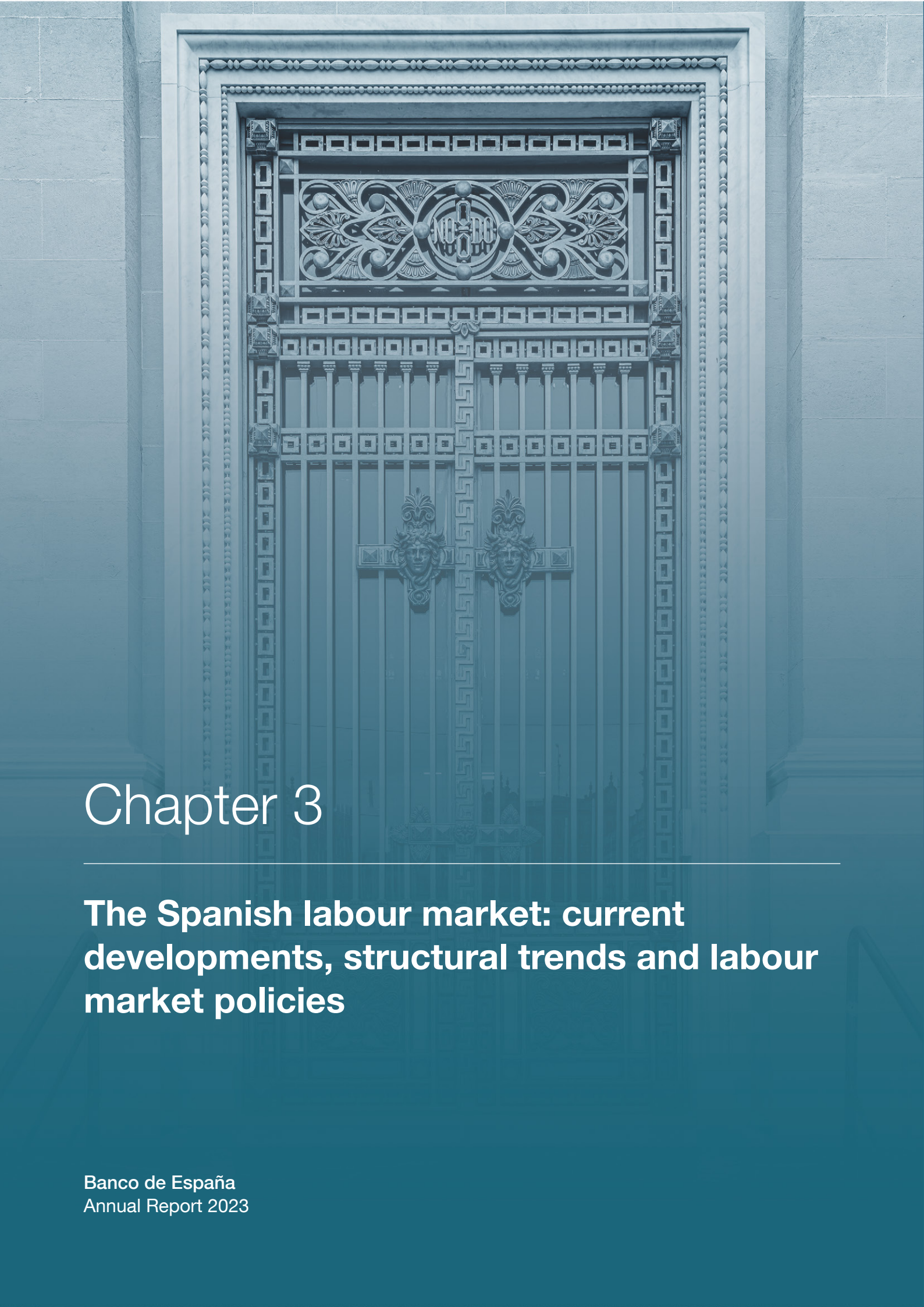
13 The value of the relationship estimated by the Ministry of Inclusion, Social Security and Migration has been calculated drawing on a simulation conducted by this Ministry, which links an increase of 1.6 years in the retirement age in 2050 to a reduction in pension expenditure of 1.4 pp of GDP in that year. See Ministerio de Inclusión, Seguridad Social y Migraciones. (2023). "Proyecciones del gasto público en pensiones en España". See also AIReF. (2023). "Opinion on the Long-term Sustainability of the General Government: the Impact of Demographics". Opinion 1/23, and Ángel de la Fuente et al. (2023). "Notas sobre las proyecciones de gasto en pensiones del MISSMI". *Estudios sobre la Economía Española* 2023/31, Fedea.

Box 2.2

THE IMPACT OF THE NEW INCENTIVES TO DELAY RETIREMENT ON SOCIAL SECURITY PENSION EXPENDITURE (cont'd)

be stressed that each of these estimates is based on its own specific methodology, models and assumptions, and the comparisons set out must therefore be interpreted with due prudence.

Further analyses will be needed in the future to gauge the new incentive scheme's potential for delaying retirement. In this respect, labour market developments for the segment of workers approaching retirement age in the years ahead will provide further evidence on the scheme's ability to increase labour-market participation among older workers and thus improve the social security system's financial sustainability.



Chapter 3

The Spanish labour market: current developments, structural trends and labour market policies

Banco de España
Annual Report 2023

Contents

Takeaways 162

1 Introduction 163

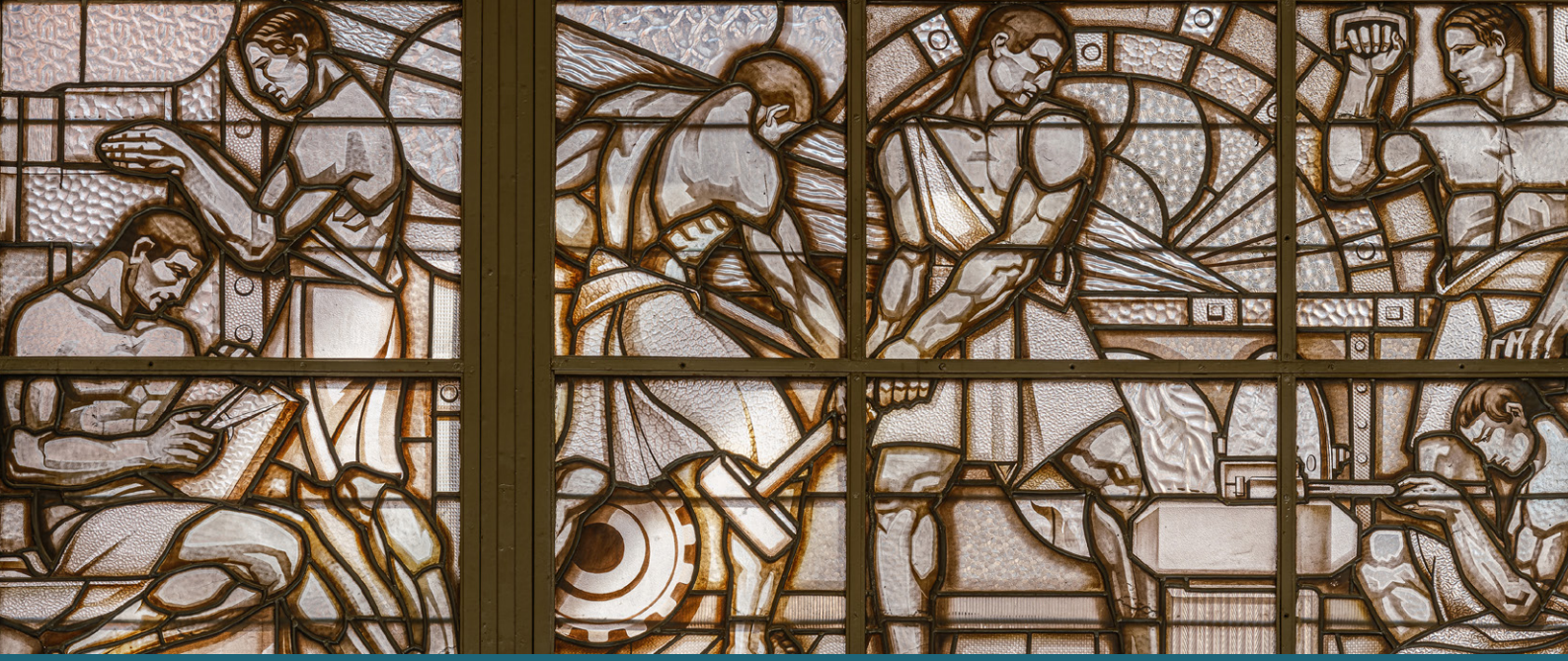
2 Spanish labour market: current developments 165
- 2.1 Employment (number of persons employed) 165
- 2.2 Some key traits of the composition of employment 166
- 2.3 Employment (hours worked) 170
- 2.4 Productivity, compensation per employee and unit labour costs 172
- 2.5 The unemployment rate and indicators of labour market tightness 178

3 Impact of technological and demographic change on the labour market 182
- 3.1 New technologies, the organisation of labour, employment and wages 182
- 3.2 Ageing of the labour force 186

4 Labour market policies 192
- 4.1 Active and passive labour market policies 192
- 4.2 Other institutional aspects of the labour market 198

References 202

Boxes
- **3.1** The recent behaviour of the temporary employment ratio and other indicators proxying job stability 205



Chapter 3
Takeaways

— Recent Spanish labour market developments have mainly been marked by employment's considerable momentum. By contrast, labour productivity has barely increased since the onset of the pandemic.

— Despite strong job creation, the unemployment rate in the Spanish economy remains excessively high. The Spanish labour market is nevertheless showing signs of tightness similar to those of other countries with lower unemployment rates. For example, firms are reporting labour shortages as one of the main constraints on their business activity.

— Looking ahead, the technological and demographic changes under way could revolutionise the labour market, with very significant implications for labour demand and supply and for the employability and productivity of certain groups.

— A labour market policy overhaul is a priority in light of the challenges facing the Spanish labour market posed by a persistently higher unemployment rate than other European countries, technological changes and population ageing.

— Specifically, active labour market policies (training and job mediation) are especially necessary to absorb the disruptive effects of technological change on employment and to make older workers more employable.

— Meanwhile, unemployment benefits should afford the unemployed appropriate protection, but without disincentivising job-seeking and labour mobility.

— Turning to other aspects related to the labour market's institutional framework, to foster the necessary occupational reallocation of employment, more headway should be made in defining the objective grounds for dismissal and in making such processes less uncertain.

— In addition, amid growing heterogeneity across businesses on many fronts, collective bargaining should afford some flexibility so that working conditions – e.g. in terms of working hours – can be adapted to firms' individual circumstances.

1 Introduction

Recent Spanish labour market developments have mainly been marked by employment's considerable momentum.

Such developments have unfolded against a very complex backdrop shaped, among other factors, by the COVID-19 pandemic, the energy crisis, Russia's invasion of Ukraine, the conflict in Gaza and monetary tightening around the world. According to the Spanish Labour Force Survey (EPA), between 2019 Q4 and 2023 Q4 a total of 1.28 million jobs were created in Spain, 783,000 of them in 2023. In the same period, the employment rate (proportion of the population aged 16-64 in employment) rose by 2.2 percentage points (pp), from 63.7% to 65.9%. Section 2 reviews these and other recent key developments in the Spanish labour market. In addition, Box 3.1 documents how the temporary employment ratio and other indicators that serve as a proxy for job stability have fared in recent quarters.

Despite employment's buoyancy, in the Spanish economy the unemployment rate remains excessively high.

The unemployment rate has trended downwards since mid-2020. However, at end-2023 it stood at 11.8%, twice that of the EU-27. This difference is particularly stark in terms of youth unemployment, the incidence of long-term unemployment and the employment status of workers approaching the retirement age. This negative differential in the unemployment rate and that observed in labour productivity are the main reasons why Spanish per capita income has failed to converge with that of other European countries in recent decades (Banco de España, 2023).

Looking ahead, the technological change and demographic shifts under way could revolutionise the labour market.

Technological change stems mainly from advances in robotics and artificial intelligence; the demographic shifts are above all related to the ageing workforce, resulting from lower numbers of new entrants in the labour market and a longer working life. Both factors have important implications for labour supply and demand and for the effectiveness of labour market policies. Section 3 analyses the labour market implications of technological and demographic change and the different factors that could amplify or mitigate them.

Given this situation, reviewing labour market policies is a priority.

With a persistently higher unemployment rate than other European countries, and faced with technological change and population ageing that could pose an extraordinary challenge to the employability and productivity of certain groups of workers, labour market policies need to be rethought. Specifically, active labour market policies (training and job mediation) are especially necessary to absorb the disruptive effects of technological change on employment and to

make older workers more employable. Meanwhile, unemployment benefits should afford the unemployed appropriate protection, but without disincentivising job-seeking and labour mobility. Turning to other aspects related to the labour market's institutional framework, to foster the necessary occupational reallocation of employment, more headway should be made in defining the objective grounds for dismissal and in making such processes less uncertain. In addition, amid growing heterogeneity across businesses on many fronts, collective bargaining should afford some flexibility so that working conditions – e.g. in terms of working hours – can be adapted to firms' individual circumstances. The final section of this chapter discusses labour market policies as they currently stand and possible avenues to improve them.

2 Spanish labour market: current developments

2.1 Employment (number of persons employed)

One of the most striking features of the Spanish economy's recent performance is the buoyancy of employment measured by the number of persons employed.

During the pandemic, employment fell (and unemployment rose) much less than might have been expected after economic activity collapsed (see Chart 3.1). The furlough schemes (ERTEs) – which constituted the main economic policy response to the labour market fallout from the COVID-19 crisis – were an important contributing factor. During the subsequent economic recovery in 2021 and 2022, employment also grew at a pace that, by historical standards, did not square with the observed path of GDP. More recently, economic activity has been weighed down by adverse geopolitical events, persistent high inflationary pressures and the interest rate hikes required to tame them. This has also slowed the pace of employment growth. Even so, it has continued to grow at relatively high rates. According to the EPA, 780,000 jobs were created in Spain in 2023 (590,000 in H1 and 190,000 in H2), raising the number of persons employed in Spain to 21.25 million, an all-time high which stands 6.4 pp above the end-2019 level.

A broad set of countries have also seen employment perform strongly since the COVID-19 crisis.

The patterns of the recovery in employment rates are qualitatively similar in Spain and the EU-27 (see Chart 3.2). However, in Spain the number of persons in effective employment fell more in 2020-2021 and employment has recovered slightly more quickly since then. Labour markets across Europe have decelerated recently. Yet when set against economic activity employment in Spain and other European countries is proving more resilient than in similar episodes in the past.

There are several potential reasons for employment's relative strength.

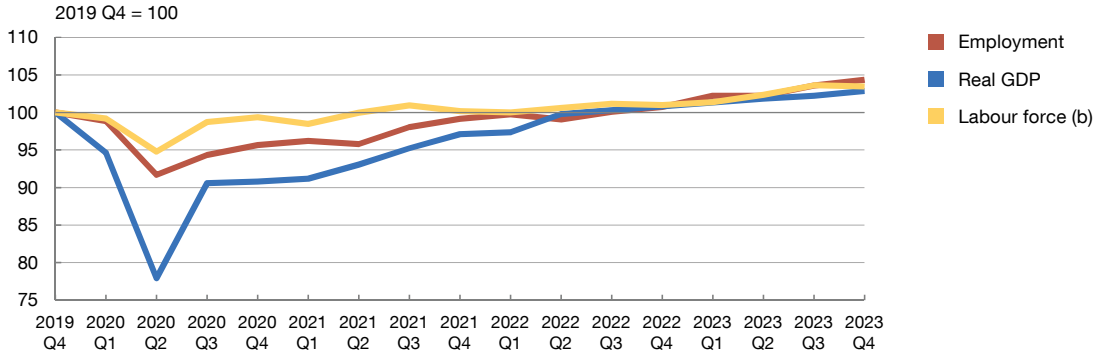
- As detailed in Section 2.2, some of the recent strength of employment in the Spanish economy is attributable to public sector employment growth and immigrant inflows. All this in a setting in which, in the wake of the pandemic, new hiring needs have arisen in certain sectors and occupations. Specifically, some of the sectors that have seen higher growth in their activity in recent years are particularly labour intensive. This has contributed to aggregate employment outperforming GDP relative to other past episodes.

- Meanwhile, the Banco de España's regular business surveys suggest that "labour hoarding" has also played a role in the recent period. Labour hoarding refers to when firms decide not to terminate employees when activity is at a low ebb in anticipation of future labour demand. Considerable uncertainty surrounds the relative share of the main determinants of labour hoarding – which is also somewhat prevalent in other

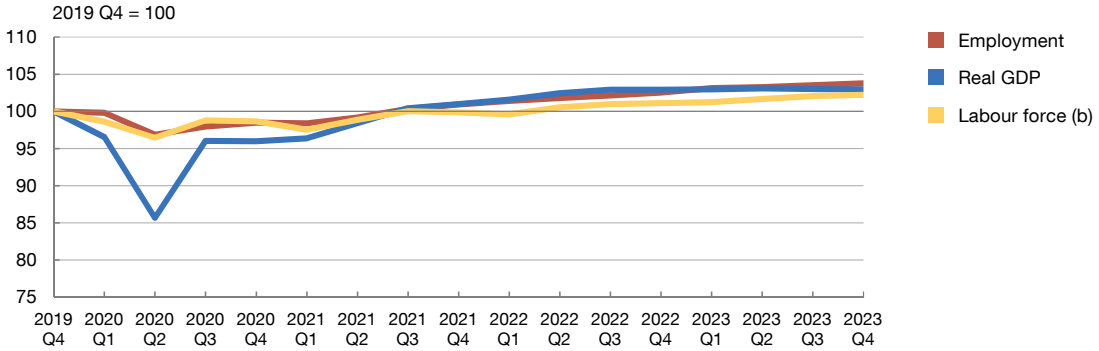
Chart 3.1

The sound performance of the labour market since the crisis is qualitatively similar in Spain and the euro area. Employment has outstripped GDP in both areas

3.1.a Quarterly change in real GDP and total employment. Spain (a)



3.1.b Quarterly change in real GDP and total employment. EA-19 (a) (c)



SOURCE: Eurostat (Quarterly National Accounts and Labour Force Survey).

a GDP and employment according to the National Accounts, seasonally adjusted data.
b Economically active population aged 15-64.
c EA-19 refers to the euro area countries in the period 2015-2022.

DOWNLOAD

European economies (European Commission, 2023) – and how persistent it could be. Its possible determinants include: (i) the experiences from the pandemic (it was the first time that ERTEs were used across the board in Spain as a means of adjusting the workforce in response to a recession without destroying employment); (ii) firms finding it more difficult of late to hire new workers (see Section 2.5 for more details); and (iii) firms potentially expecting the recent adverse shocks to be temporary.

2.2 Some key traits of the composition of employment

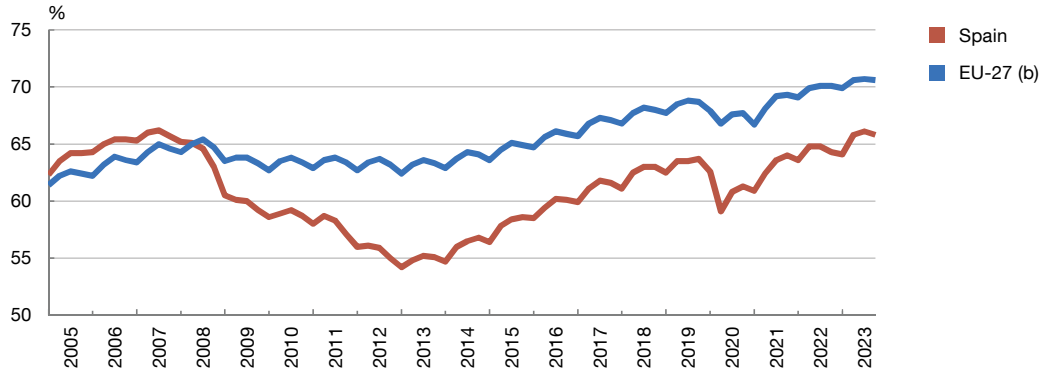
Employment has grown with considerable heterogeneity across sectors, occupations and regions.

The heterogeneous performance of employment across sectors, occupations and geographical areas has become more pronounced in the most recent period (Section 3 argues that this will

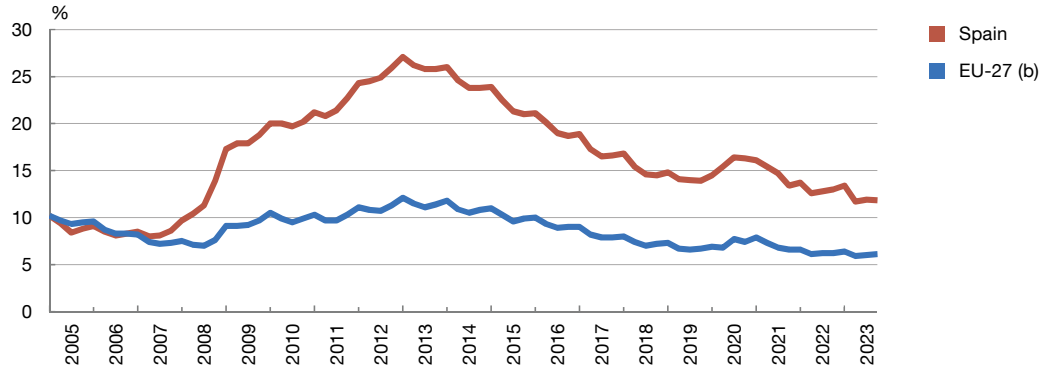
Chart 3.2

During the pandemic, employment rates fell and unemployment rates increased much less than might have been expected after economic activity collapsed

3.2.a Employment rate (a)



3.2.b Unemployment rate (c)



SOURCE: Eurostat (Labour Force Survey).

a Employment rate measured as employed people as a percentage of the working-age population (aged 15-64).
b EU-27 refers, throughout the period considered, to the aggregate of the European Union Member States from 2020 onwards.
c Unemployment rate measured as unemployed people as a percentage of the total labour force (aged 15-64).

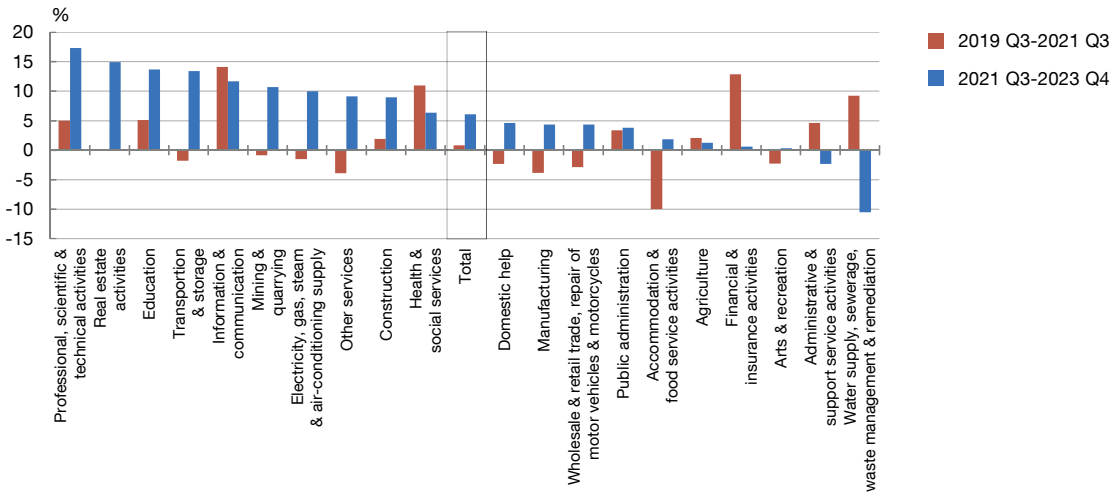
DOWNLOAD

probably intensify in the coming years). Since 2019, and despite the pandemic, employment has continued to grow more in the services sector (excluding trade and hospitality) than in construction and industry. By occupation, the largest fluctuations (decreases during the pandemic and increases thereafter) are observed in trade and food service workers and skilled labour in the agricultural, livestock and construction sectors. Also noteworthy is the sharp employment growth in technical, scientific and intellectual professions in the most recent period (see Chart 3.3), something also observed in the EU-27 as a whole. By geographical area, the regions that have historically had the lowest employment rates (such as the Canary Islands, Extremadura, Castile-La Mancha and Andalusia) have been those where such rates have grown the most since 2019 (see Chart 3.4.a). Lastly, it should be noted that the growth of the employment rates has above all been due to the greater presence of tertiary-educated persons in employment (see Chart 3.4.b).

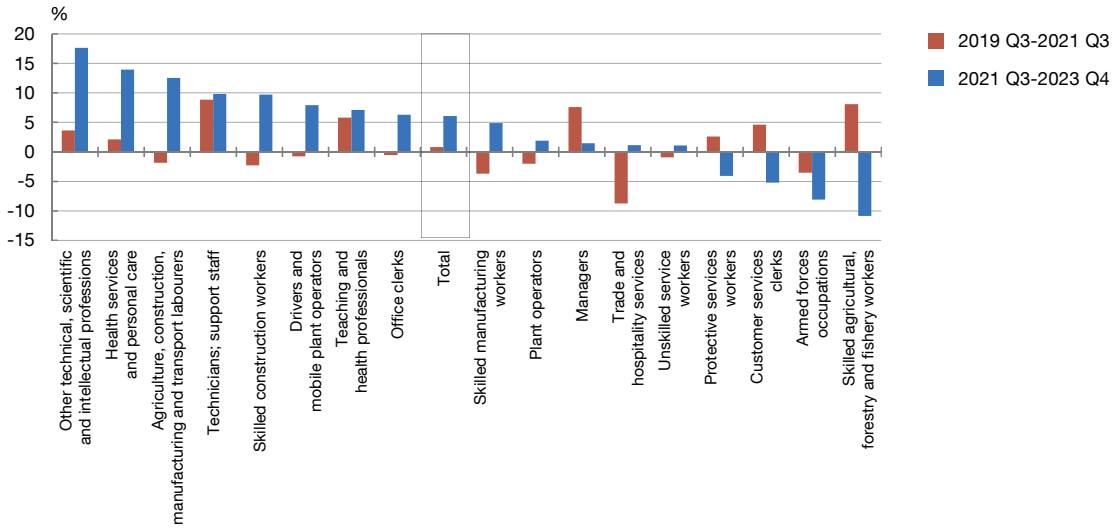
Chart 3.3

Employment has performed differently across sectors and occupations, partly because of the necessary reallocation of employment during the pandemic

3.3.a Employment growth rate, by sector



3.3.b Employment growth rate, by occupation



DOWNLOAD

SOURCE: INE (EPA).

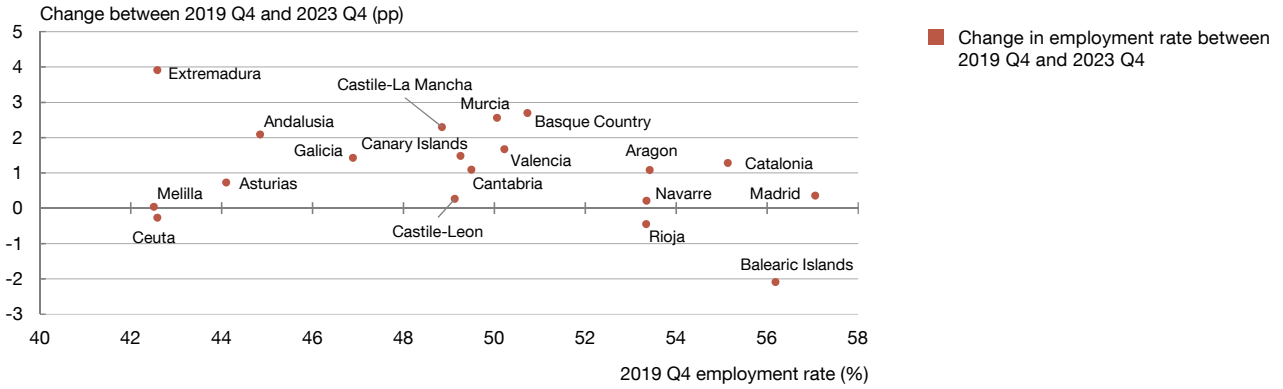
Employment has grown more in the public sector than in the private sector.

Between end-2019 and end-2023 the number of salaried workers in the public sector increased by 340,000, i.e. average annual growth of 2.4%, outstripping that in paid employment in the private sector (1.7%). However, in the same period private sector employment increased by 850,000 people (see Chart 3.5.a). As a result, the share of public sector employees in total paid employment rose from 16.3% to 16.9%. This trend was particularly noticeable between 2020 and 2022 (when the public sector accounted for 17.3% of total paid employment), while private sector paid employment grew more in 2023.

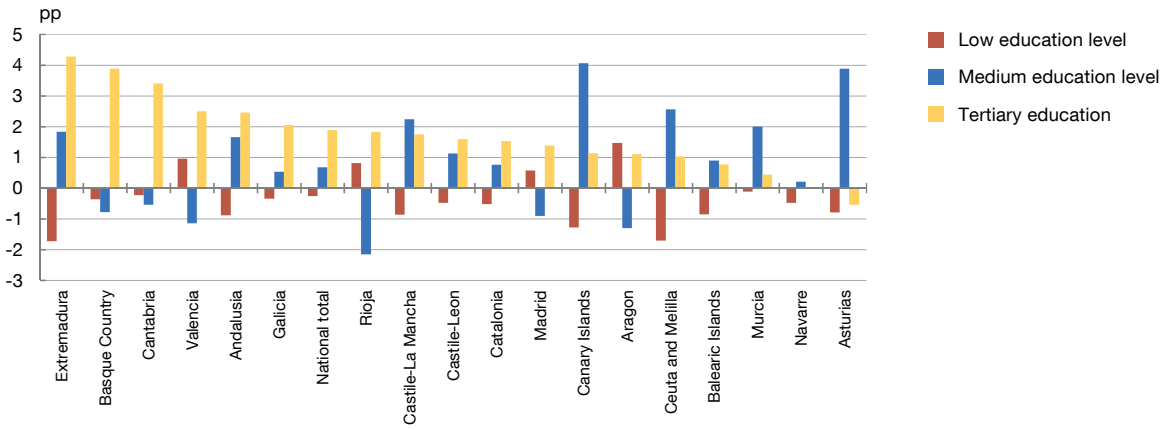
Chart 3.4

Employment rates have grown more in the regions where they were lower, above all due to the contribution of the population group with high educational attainment levels

3.4.a Change in employment rate by region since 2019 Q4, based on its value at that date (a)



3.4.b Contribution to the change in each region's employment rate, by educational attainment level (a) (b)



SOURCE: INE (EPA).

a Employment rate calculated for the working-age population.
b "Low education level" refers to lower secondary education. "Medium education level" includes upper secondary education, the Spanish Baccalaureate, vocational training and other studies. "Tertiary education" comprises diplomas, bachelor's degrees, master's degrees and doctorates. Banco de España calculations drawing on EPA microdata.

DESCARGAR

The recovery in migratory flows, which were very adversely affected by the pandemic, has contributed considerably to employment's recent strength.

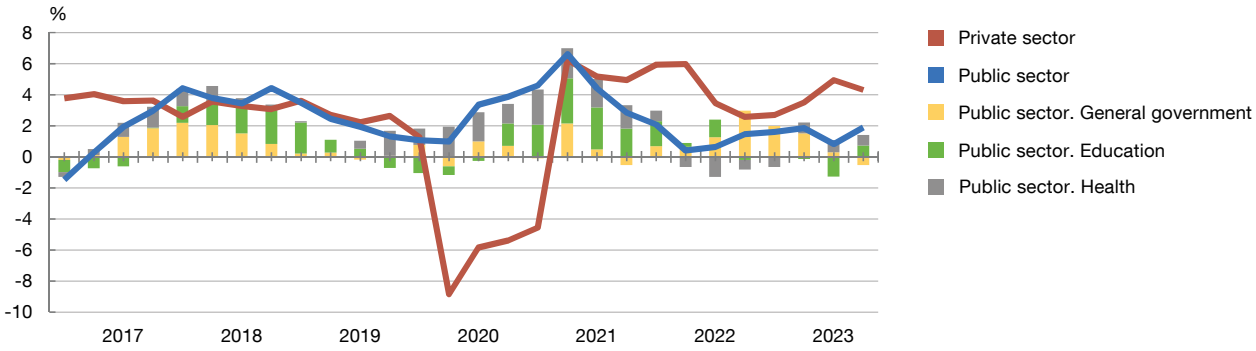
Between early 2022 and end-2023, the population in Spain grew by 1,000,000 and the labour force increased by 788,000. Virtually all of these increases (96.1% and 71.7%, respectively) were due to immigration (see Chart 3.5.b). Turning to employment, foreign nationals accounted for 54% of the 1.06 million new persons employed in the same period.[1] The demographic forecasts of the National Statistics Institute (INE), Eurostat and the Independent Authority for

1 See Section 7 of Chapter 2 of this report for more details on the composition and labour-market participation of these migratory flows.

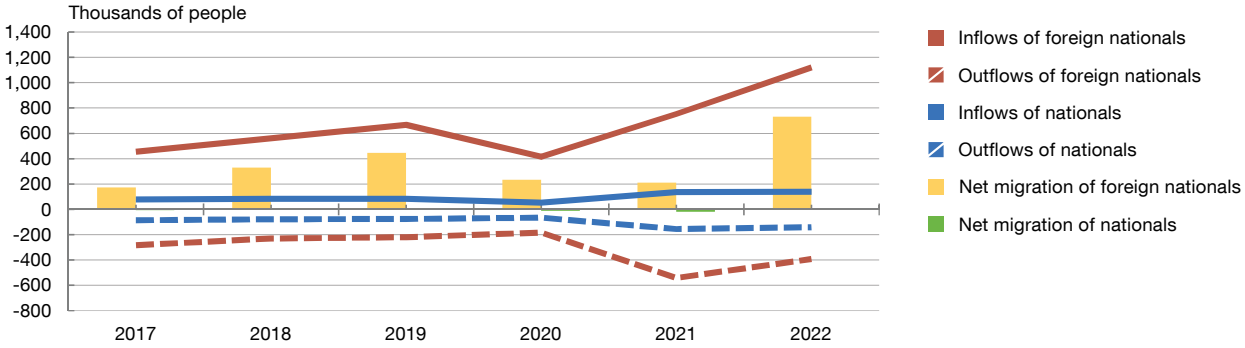
Chart 3.5

Public sector employment and immigrant inflows are other factors that have contributed to employment's buoyancy

3.5.a Public sector and private sector employment (a). Year-on-year rate of change



3.5.b Migration flows of nationals and foreign nationals (b)



SOURCES: INE (EPA, Migration Statistics, Residential Variation Statistics, Statistics on Migrations and Changes of Residence) and Banco de España.

a Public sector employment measured by public sector paid employment. General government, education and health account for more than 85% of public sector paid employment.
b Banco de España calculations drawing on data from the Migration Statistics, Residential Variation Statistics and Statistics on Migrations and Changes of Residence.

DOWNLOAD

Fiscal Responsibility (AIReF) all point to immigration maintaining this momentum over the coming years, with net inflows of 200,000-500,000 in 2024 and 2025.

2.3 Employment (hours worked)

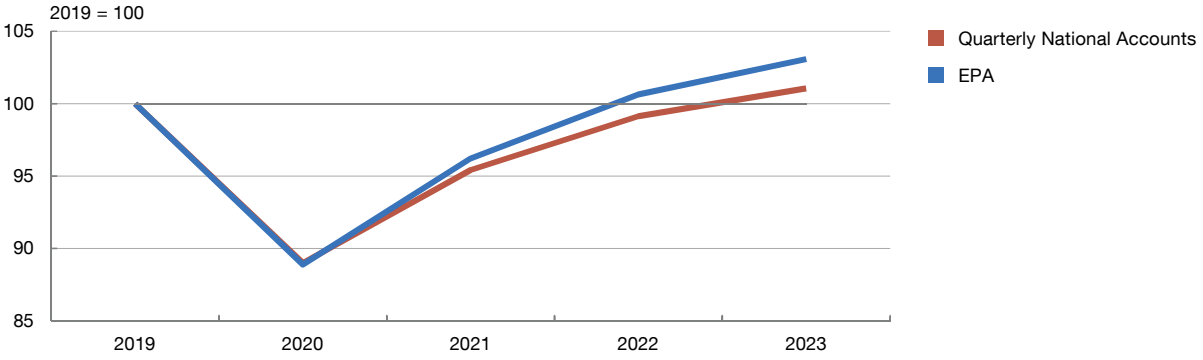
Compared with the considerable buoyancy of the number of persons employed, hours actually worked have grown considerably less and hours worked per person employed have decreased.

On National Accounts data, actual hours worked decreased by more than 10% in 2020 and gradually recovered thereafter, reaching their pre-pandemic level at end-2023. On EPA data, in 2022 hours worked were already above their 2019 level (see Chart 3.6).

Chart 3.6

Compared with the robust growth of the number of persons employed, the recovery in total hours worked has been more modest

3.6.a Hours actually worked, by different statistics



SOURCE: INE.

DOWNLOAD

Hours worked per person employed are also decreasing in other European countries and this decline should be contextualised within the gradual downward trend in working hours.

Prior to the pandemic hours worked per person employed were already clearly trending downwards in both Spain and the EU. This was the result, among other factors, of changes in the sectoral composition of activity, a higher incidence of part-time employment and, less so, productivity gains, which leave more time for leisure (Cuadrado, 2023). During the pandemic, hours worked fell much more sharply than the number of persons employed (essentially as a result of the roll-out of the ERTEs), prompting a sharp drop in this variable. However, it returned to its previous trend once the worst phases of the health crisis were over (see Chart 3.7.a).

One of the most prominent factors contributing to the sluggishness of hours worked per person employed[2] is the greater prevalence of sickness and inability to work leave.

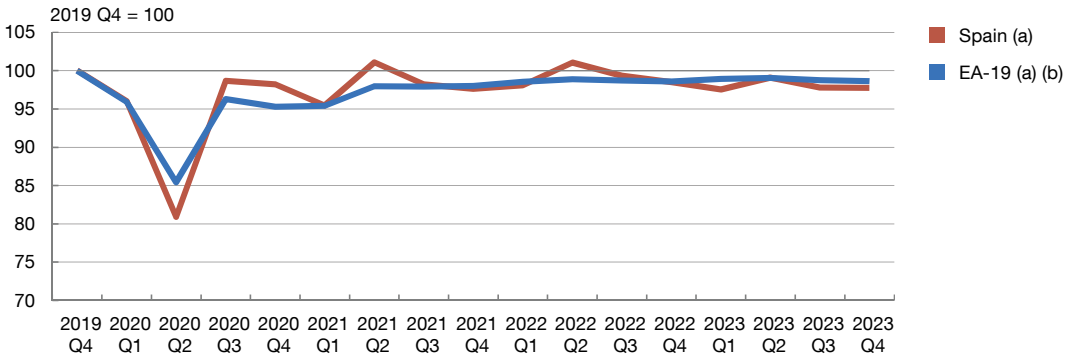
The prevalence of this leave, which rose considerably during the pandemic, has held more recently at relatively high levels (see Chart 3.7.b), a pattern also observed in many other countries. This phenomenon, which is surrounded by considerable uncertainty, could be attributable to multiple factors, including most notably: the possible persistent health sequelae of COVID-19 (Hurtado and Izquierdo, 2023); changes in healthcare protocols to contend with the pandemic (e.g. how sick leave is granted); absenteeism's typical procyclicality; employment's recent greater buoyancy in the public sector (where this type of leave is usually more prevalent);

2 The higher relative growth in employment in the public sector – where hours worked per person employed are typically lower than in the private sector – has also contributed to these developments. Conversely, between end-2019 and end-2023 the percentage of persons in part-time employment in Spain fell from 14.7% to 13.5%. All else being constant, this would have contributed to an increase in hours worked per person employed.

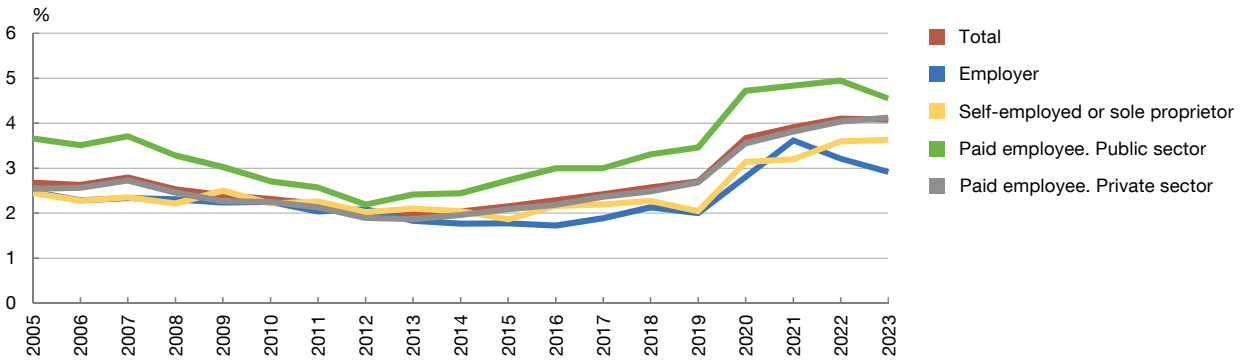
Chart 3.7

Hours worked per person employed in Spain and the EA-19 have grown moderately since the pandemic, still weighed down by a high incidence of sick leave

3.7.a Hours worked per person employed in Spain and the EA-19



3.7.b Persons employed absent from their job because of sickness or accident in Spain, by employment status (c)
As a % of the total of each category



SOURCES: Eurostat (Quarterly National Accounts) and INE (EPA).

a Hours worked per person employed. National Accounts.
b EA-19 refers to the euro area countries in the period 2015-2022.
c Banco de España calculations drawing on EPA microdata.

DOWNLOAD

and the ageing labour force (see Section 3.2). Should this higher incidence of sick leave continue, it could adversely affect productivity, employment and potential economic growth.

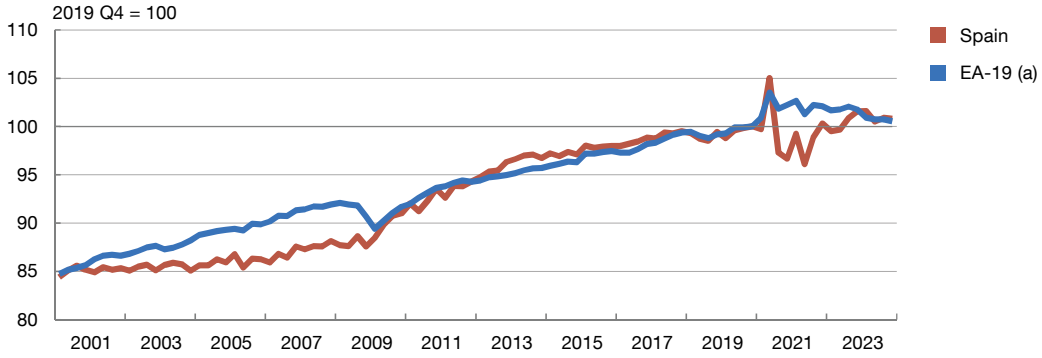
2.4 Productivity, compensation per employee and unit labour costs

In contrast to employment, labour productivity has barely increased since the onset of the pandemic.

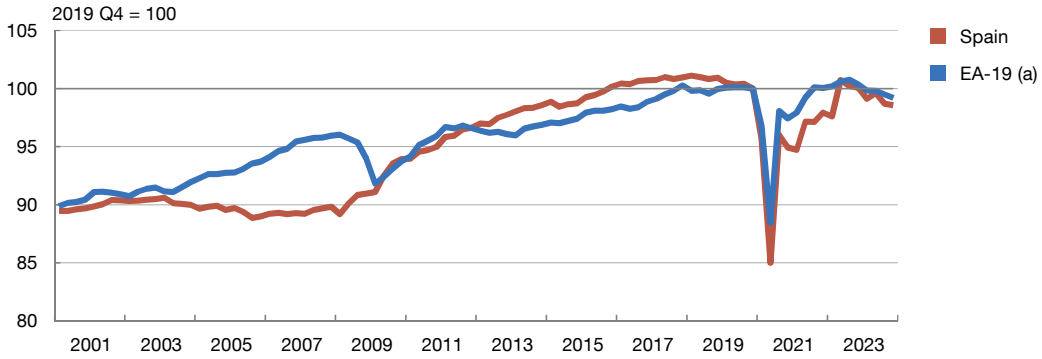
In the period 2019-2023, GDP per hour worked only grew by 0.8% in Spain, a figure which is not too dissimilar from that observed in the euro area as a whole. However, a decrease in labour productivity can been seen in Spain and the euro area (-1.4% and -0.8%, respectively) when measured in terms of persons employed (see Chart 3.8).

Chart 3.8
Productivity is stuck at 2019 levels, both in Spain and in the euro area, and fell in 2023

3.8.a Apparent labour productivity per hour worked



3.8.b Apparent labour productivity per person employed



SOURCE: Eurostat (Quarterly National Accounts).

a EA-19 refers to the euro area countries in the period 2015-2022.

DOWNLOAD

Meanwhile, since end-2019 compensation per employee has increased in Spain by 16.9% in nominal terms and by 1.2% in real terms, growing more markedly in 2023.

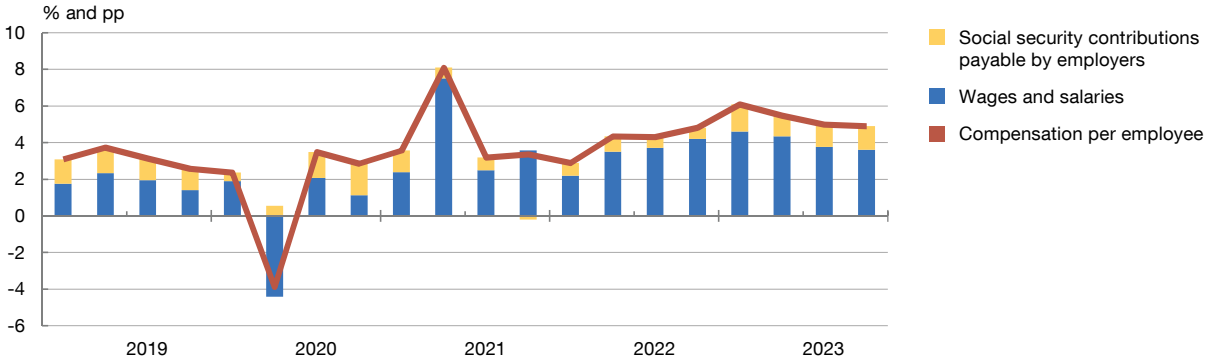
Growth in nominal compensation per employee increased from below 2% in 2020 to over 5% in 2023 (and even above 6% in the market economy sectors). This growth is essentially associated with the increase in inflation, such that real compensation per employee grew relatively moderately (see Chart 3.9).

- *Amid high inflationary pressures, wage increases negotiated under collective agreements have been relatively moderate.* In 2023 and 2024 to date, such wage settlements are very much aligned with the recommendations – for wage increases of 4% in 2023 and 3% in 2024 and 2025 – established in the fifth Employment and Collective Bargaining Agreement reached by the social partners in March 2023. Meanwhile, although the onset of the inflationary episode prompted an increase in the prevalence of indexation clauses (from 19% in 2019 to 24% in 2023), for the time being their impact on the rise in wage costs is proving very limited.

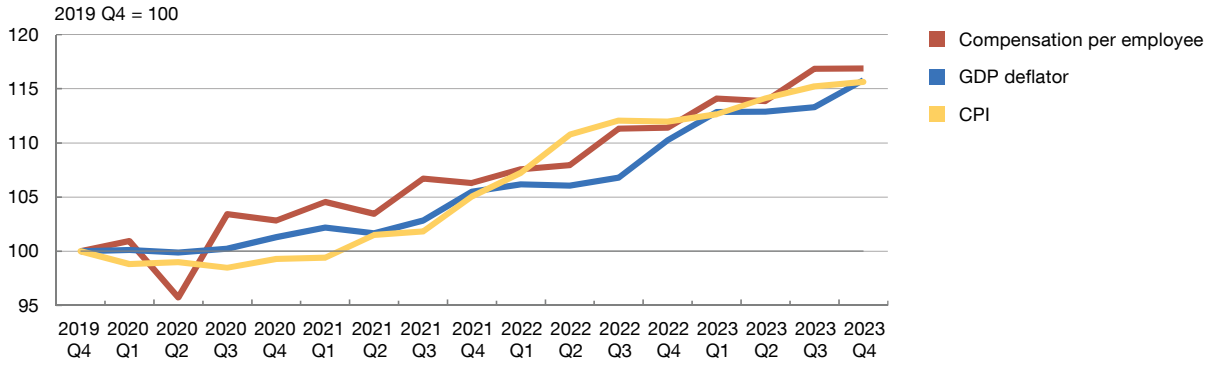
Chart 3.9

Compensation per employee grew by 5.3% in 2023, with sizeable wage growth and a notable contribution from social security contributions. Real compensation per employee grew more moderately

3.9.a Compensation per employee and its main components
Year-on-year rates of change and contribution by components



3.9.b Compensation per employee and price indices since end-2019



DOWNLOAD

SOURCE: INE (Quarterly National Accounts and CPI).

- *The increase in social security contributions contributed to the rise in labour costs in 2023.* This increase stemmed from two measures: the introduction of the intergenerational equity mechanism (IEM) and the rise in the maximum contribution base.[3] Their aim is to partially reduce the sizeable public pension shortfall in Spain. However, it should be noted that, according to simulations conducted using the Quarterly Macroeconometric Model of the Banco de España, a 1 pp increase in the average effective rate of social security contributions could, after four years, prompt a decrease in the number of persons employed of close to 0.25%.[4]

- *The national minimum wage has continued to rise.* Since 2018, and taking into account the increase recently approved for 2024, the national minimum wage has risen by 54%

3 In 2023 the IEM contribution rate was 0.5% for employers and 0.1% for employees. In 2024 these rates have been raised to 0.58% and 0.12%, respectively. Meanwhile, the maximum contribution base increased by 7.92% in 2023 and 5% in 2024.

4 In 2022, social security contributions represented 12.8% of GDP in Spain, compared with 10.7% (arithmetic mean) and 12.9% (weighted average) in the EU.

in Spain, to €1,134 a month (in 14 payments per year). Thus, the ratio between the minimum and average wage in Spain has moved closer to that observed in other European economies and even surpassed the goals of a gross minimum wage-to-gross median wage ratio of 60% and gross minimum wage-to-gross average wage ratio of 50% recommended by the Directive of the European Parliament and of the Council on adequate minimum wages in the European Union adopted in October 2022.[5] As a result of these developments, the percentage of workers earning the national minimum wage in Spain rose from 5.1% to 11.5% between 2018 and 2023, and, according to estimates, it will reach 12.7% in 2024. Having reached these levels, it would be advisable for potential future increases in the national minimum wage to take into account (through a detailed ex ante analysis) the possible adverse effects that, in the absence of productivity gains, such increases could have on the employment of certain groups of workers, firms and regions.[6]

- *Wage drift has been greater than observed in the past.* Wage drift refers to the part of wage growth that is not explained by growth in negotiated wages and salaries and the minimum wage. In Spain this gap has traditionally been negative in economic upswings and positive in recessions, mainly as a result of changes in the sectoral and occupational composition of employment and labour mobility. However, in recent years, marked by robust GDP growth in Spain, wage drift has been positive (close to 2 pp in 2023). Although much uncertainty still surrounds the reasons for, and degree of persistence of, this procyclicality of wage drift (which is a new development in Spain, but relatively common in other European economies), it could be at least partly attributable to the Spanish labour market's considerable tightness of late (see Section 2.5).

Overall, compensation per employee growth, combined with productivity's sluggishness, has driven unit labour costs (ULCs) higher than those observed in other euro area countries.

On the latest National Accounts data, ULCs increased by 6% in 2023. In Spain ULCs have grown by 2.6 pp more than in the euro area as a whole since 2019 (see Chart 3.10). This relative deterioration in ULCs could ultimately affect Spanish firms' price competitiveness and delay the return of inflation to the target of 2% over the medium term. In this respect, recent Banco de España estimates (Aguilar, Domínguez-Díaz, Gallegos and Quintana, 2024) suggest that, for each percentage point increase in this differential, Spanish exports could decrease by between 0.2% and 0.3%, while GDP could diminish by 0.6%.

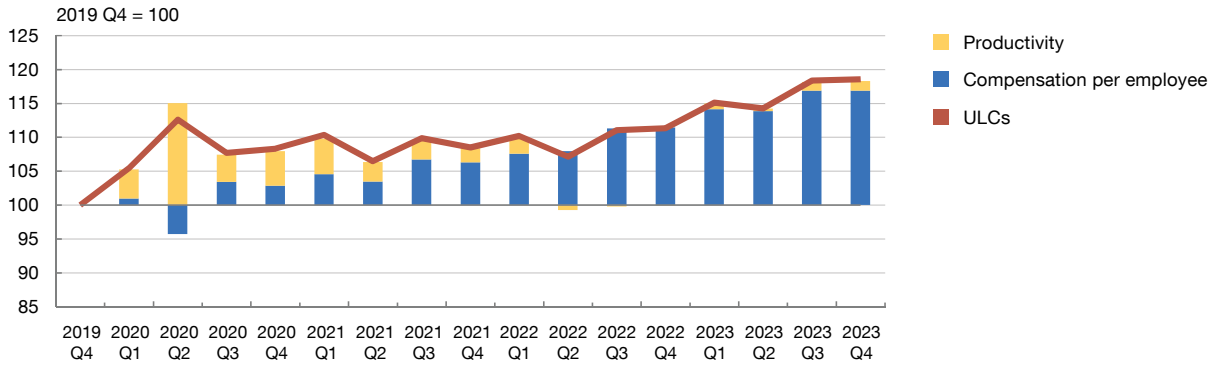
5 In this respect, it should be noted that the variability across provinces of the percentage of workers earning the national minimum wage and of the minimum wage-to-median wage ratio is very high. Specifically, the minimum wage-to-median wage ratio in Álava, Vizcaya, Guipúzcoa, Navarre, Barcelona and Madrid is somewhere between 50% and 60%, while in provinces such as Almería, Ourense, Badajoz, Lugo and Cuenca it exceeds 80%.

6 Some studies indicated that, overall, minimum wage increases did not have a sizeable adverse impact on employment in the period 2018-2021, but that they were detrimental to older workers and reduced hours worked and the flow of job creation for young adults (Barceló, Izquierdo, Lacuesta, Puente, Regil and Villanueva, 2021). Meanwhile, a recent study (Anghel and Tagliatti, 2024) shows that the employment impact of the national minimum wage is particularly high in small and medium-sized enterprises and in regions with the highest unemployment rates.

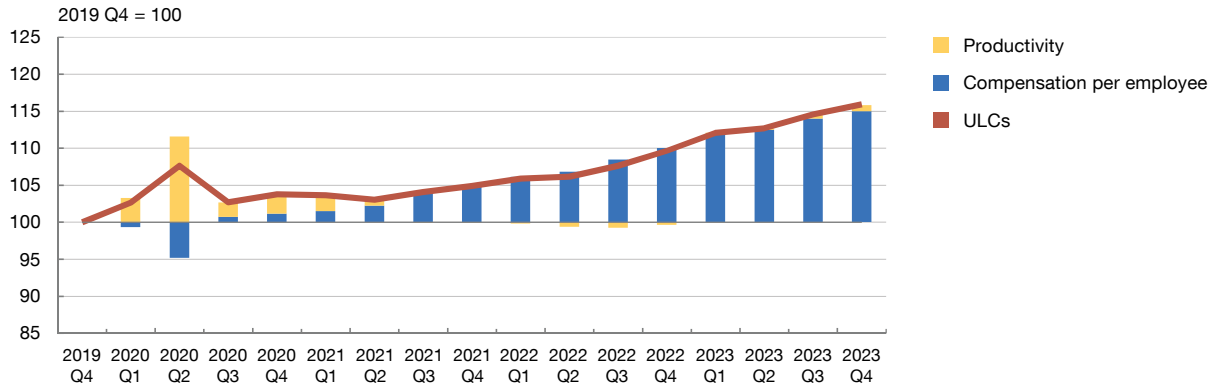
Chart 3.10

The higher growth in ULCs in 2023 was due to both an increase in compensation per employee and a decrease in productivity

3.10.a ULCs in Spain (a)



3.10.b ULCs in the EA-19 (a) (b)



SOURCE: Eurostat (Quarterly National Accounts).

a Seasonally adjusted time series. ULCs are decomposed under the assumption that the productivity of employees is equal to that of persons employed.
b EA-19 refers to the euro area countries in the period 2015-2022.

DOWNLOAD

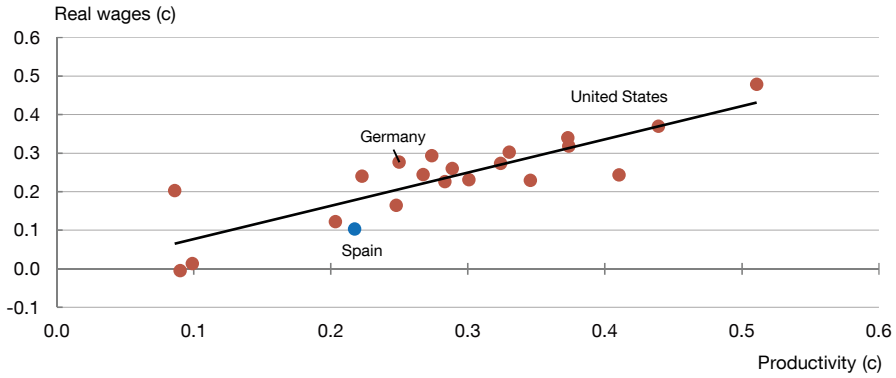
Over a broad time horizon, productivity growth is the main determinant of real wage growth, although, in certain settings, productivity gains do not necessarily entail equivalent increases in real wages.

- *The international evidence for recent decades points to real wages increasing more markedly in economies where productivity growth is stronger.* Chart 3.11 depicts apparent labour productivity and average real wages in the period 1990-2019 in the advanced economies. There is a significant positive correlation between the two variables: the greater the productivity growth, the larger the increases in average real wages. This evidence also helps explain the scant growth in real wages in Spain over recent decades: productivity growth in Spain has been weak both in absolute terms and compared with developments in other major global economies.

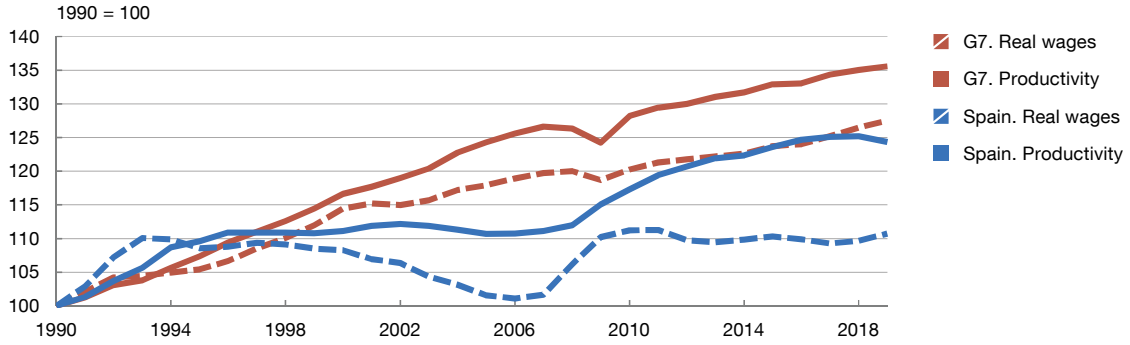
Chart 3.11

There is a positive association between wages and productivity, despite lower aggregate growth in wages than in productivity since 1990

3.11.a Relationship between real wages and labour productivity: advanced economies (a) (b)



3.11.b Real wages and labour productivity in Spain and the G7 (a)



SOURCES: OECD and Banco de España.

a Real wages are measured as compensation per employee deflated by the GDP deflator. Labour productivity is expressed as the ratio of real GDP to the total number of persons employed.
b The following advanced economies are considered: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and United States.
c Rate of change between 1990 and 2019, as a percentage.

DOWNLOAD

- *This does not mean that growth in apparent labour productivity necessarily entails equivalent increases in real wages.* In the vast majority of the countries depicted in Chart 3.11, growth in apparent labour productivity in the period 1990-2019 outstripped that observed in average real wages. Spain is among the countries where this gap is wider.

- *The reasons behind this gap have been and continue to be a focal point in the economic literature, although it is yet to offer conclusive findings on the relative importance of each of the possible determinants.* The main determinants analysed notably include technological change, with greater complementarity between it and capital than between it and labour in recent decades. Another focal point for researchers has been the globalisation of economic activity, which has prompted some offshoring of the most labour-intensive activities and also reduced the negotiating power of workers in

advanced economies. A further aspect highlighted in the literature as a possible reason for wage stagnation compared with productivity growth is related to the greater monopsony and monopoly power exerted by firms,[7] in a setting in which, as mentioned above, workers' negotiating power has weakened. Lastly, the importance of the major changes that have arisen in the composition of labour supply – e.g. in terms of ageing workers (see Section 3.2), the incorporation of women into the labour market and immigration – has also been highlighted.[8]

2.5 The unemployment rate and indicators of labour market tightness

Employment growth has brought down the unemployment rate.

At end-2023, the unemployment rate stood at 11.8%, down 5.6 pp from the onset of the pandemic and the lowest rate recorded in Spain since end-2008. Robust job creation contributed positively to this decline, while labour force growth has prevented an even steeper fall in the unemployment rate.[9]

However, a positive differential remains between the Spanish unemployment rate and that of the main European economies.

At end-2023, the Spanish unemployment rate was still twice that of the EU-27 as a whole (5.9%). Meanwhile, the rate of youth unemployment (16-24 year-olds) was 28%, almost triple the OECD rate (10.7%) and around double that of the average for the EU-27 (14.9%). In addition, despite the high labour turnover in Spain, 39% of the unemployed had been jobless for over one year, versus 25.4% in the OECD as a whole. These indicators of the considerable scale of unemployment in the Spanish economy, even during strong economic recoveries, and its uneven distribution across population groups (see Chart 3.12), suggest that a large portion of unemployment is structural.

The causes of the persistence of this positive differential in the unemployment rate between Spain and most other European countries have been the subject of much research over the course of recent decades.[10]

Although such causes continue to be discussed and assessed empirically, the economic literature has generally argued that a considerable portion of the cross-country differences in

7 For example, Deb, Eeckhout, Pattel and Warren (2022) estimate overall developments in monopoly and monopsony power using a sample of US firms and find that increasing monopoly power accounts for 75% of wage stagnation while increasing monopsony power accounts for 25%.

8 See Grossman and Oberfield (2022) for a recent overview of the potential determinants of the decoupling of wages and productivity.

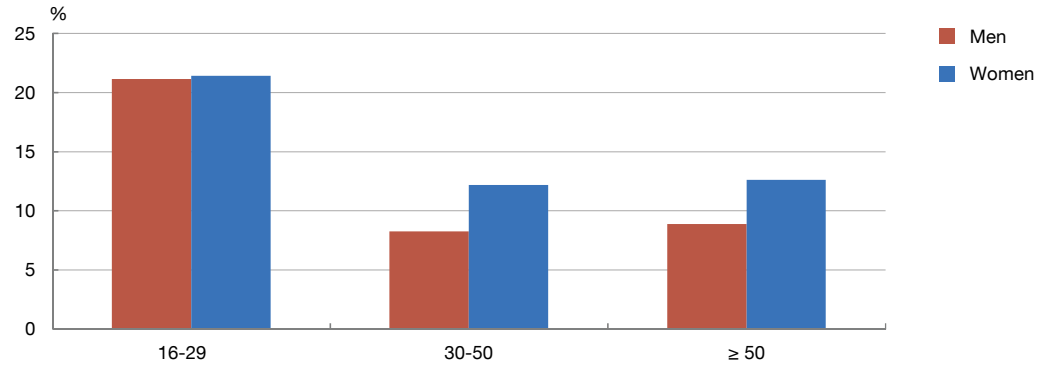
9 Taking the working-age population as that aged 16-69, had the participation rate remained constant, the unemployment rate would have been 1 pp lower (10.8%) at end-2023.

10 Literature on this matter was already abundantly available at the end of the 20th century. See Bertola (2017) for a recent review of this literature.

Chart 3.12

Youth unemployment remains almost twice that of the rest of the population. This difference is somewhat more pronounced among men

3.12.a Unemployment rate in 2023, by age group and gender



SOURCE: INE (EPA).

unemployment rates are related to the very institutions and policies that have a direct impact on the functioning of the labour market. These typically include the design of active labour market policies (which should mainly target making the unemployed more employable) and passive labour market policies (which should offer an appropriate level of protection for the unemployed while providing sufficient incentives for them to return to work), and other factors that influence both the rate of job creation and job stability (e.g. the different types of contracts available, the level of termination costs and many factors with a bearing on collective bargaining). These matters are discussed in Section 4.

Despite the high unemployment rate, the Spanish labour market is showing similar signs of tightness to those of other countries with lower unemployment rates.

Two indicators should be mentioned in this regard:

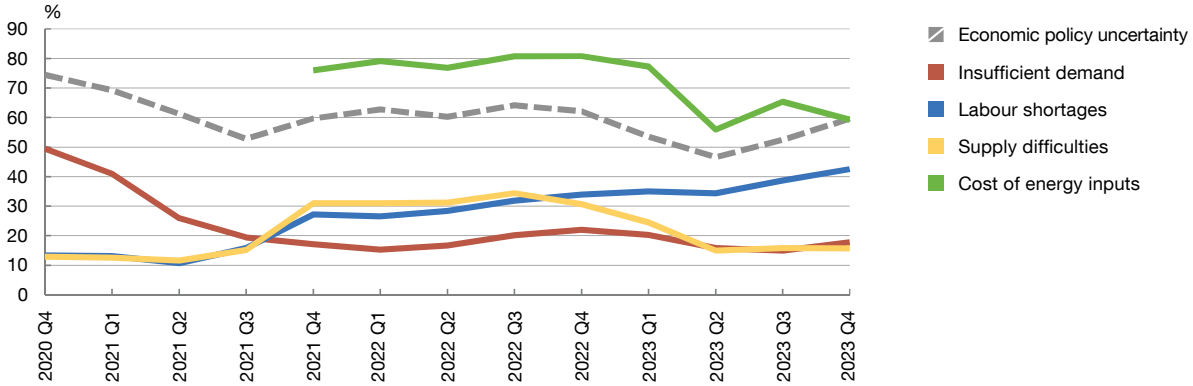
- First, the regular business surveys conducted by the European Commission and the Banco de España highlight that firms perceive labour shortages as one of the main constraints on their productive activity (see Chart 3.13.a). Specifically, the percentage of firms reporting this view rose from 25% in early 2022 to 42.5% at end-2023.

- Second, although job vacancies are difficult to measure with the standard statistical tools (and, therefore, the available information should be interpreted with caution), there are indications of labour supply shortages in several sectors and occupations. This is the case both in low-skilled sectors and occupations (e.g. hospitality and trade) and in those requiring some professional qualifications (particularly among technology and engineering firms). In any event, for the economy as a whole, both in Spain and in the euro area, the vacancy rate has increased in recent years as the unemployment rate has fallen (see Chart 3.13.b).

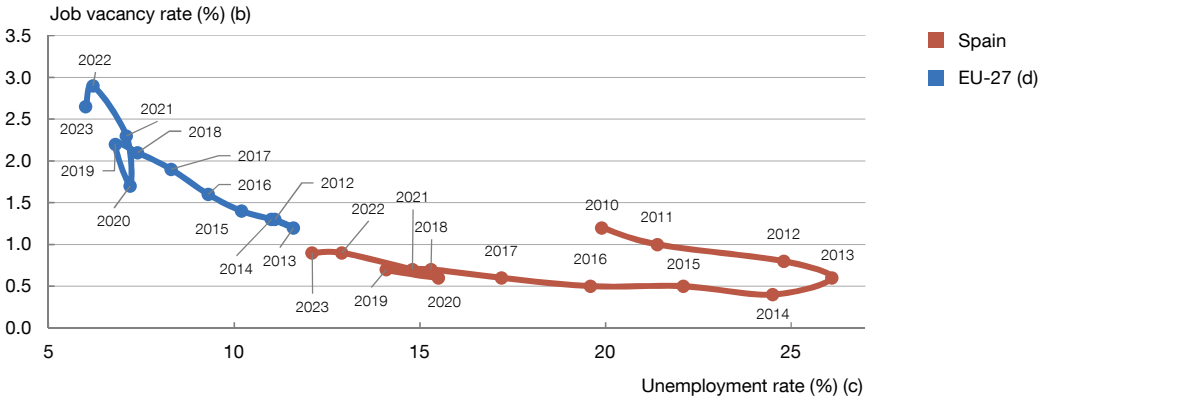
Chart 3.13

Labour shortages are a constraint on business activity. The job vacancy rate has increased in Spain and the EU-27

3.13.a Constraints on business activity (a)



3.13.b The Beveridge curve



SOURCES: Banco de España (EBAE) and Eurostat (Labour Force Survey and job vacancy rate).

a In the Banco de España Business Activity Survey (EBAE), the firms reporting an adverse or very adverse impact of each of the factors on their activity. The index is constructed by assigning the following values to firms' qualitative responses: significant increase = 2; slight increase = 1; unchanged = 0; slight decrease = -1; and significant decrease = -2.
b The job vacancy rate is measured as the ratio of the number of job vacancies to the sum of the number of occupied posts plus the number of job vacancies.
c The unemployment rate is the ratio of the unemployed to the total labour force (aged 15-74).
d EU-27 refers, throughout the period considered, to the aggregate of the European Union Member States since 2020.

DOWNLOAD

The reasons for the labour market tightness in Spain, in a setting in which unemployment rates are still so high, may vary across sectors and occupations.

Labour market tightness may arise on the demand side (due to an increase in the number of jobs created by firms), on the labour supply side (on account of a higher reservation wage), because of lower job matching efficiency, and through a combination of several of these factors.

- In some sectors and occupations, it is likely that the skill mismatch between new openings and job seekers has increased and, therefore, that matching efficiency has

decreased. This hypothesis is particularly plausible in the current setting, where the education system is not keeping pace with the rapid technological developments (see Section 4 of Chapter 2 of this report).

- In other cases, matching may have slowed, at least in part, as a result of higher reservation wages, i.e. the wages that workers demand to accept a given position. This hard-to-quantify phenomenon could be partly attributable to a wide range of factors (e.g. to the increased scope of minimum income schemes or to job seekers having higher expectations).

Furthermore, during the worst phases of the pandemic, in some countries – especially in the United States – voluntary exits from the labour market increased considerably and, as a result, the participation rate fell. However, this phenomenon – which has now reverted in the United States in recent years – seems to be of little relevance to explain Spanish labour market dynamics. Indeed, in 2020 the participation rate fell far more moderately in Spain than in the United States and, since then, the Spanish rate has followed an upward path, taking it 0.7 pp above its pre-pandemic level at end-2023.[11] Since end-2019, this increase has been around 1 pp for workers aged 20-34, around 1.5 pp for those aged 35-54 and, particularly notably, around 4 pp for those aged 55-69.

11 Participation rate referring to the population aged 16-69.

3 Impact of technological and demographic change on the labour market

3.1 New technologies, the organisation of labour, employment and wages

With each new wave of technological development, concerns about the impact of technology on employment resurface.

Broadly speaking, this impact could materialise via three main channels:

- The first relates to productivity growth as a result of innovations, which allow more goods and services to be produced with fewer factors of production.
- Another is associated with the displacement of some workers performing certain productive tasks that may be rendered redundant by the new technologies.
- Third, technological innovations create new jobs that require complementary skills and professional qualifications.

Historically, however, overall employment levels in the face of technological innovations are estimated to have remained stable or even increased.

In particular, the displacement effect has traditionally been outweighed by increased productivity and the emergence of new jobs. Thus, when technological advances are accompanied by a relatively swift adaptation of the labour supply from the education and professional standpoint and significant increases in output, consumption and wages, they have boosted economic growth and, thereby, social welfare (Autor and Salomons, 2017).

Previous technological changes were limited to the automation of very specific tasks that complemented human work or to manual or routine tasks.

These changes tended to displace some low-skilled workers, while increasing the productivity of high-skilled ones (skill-biased technological progress), or enabled routine tasks to be automated, increasing workers' productivity (routinisation).

Conversely, the development of robotics and artificial intelligence (AI) could make it possible to automate productive tasks across all occupations, including those requiring a higher level of professional qualification.

AI and robotisation are general-purpose technology innovations with the capacity to perform creative and not just routine tasks. They therefore have the potential to revolutionise the labour market. The possibility that these technological changes will be more disruptive than those

observed in the past, not only for the labour market but also in many other areas, is arousing growing public concern and academic interest.

In this regard, besides the potential positive effects of these new technologies on productivity, there are also some risks.

These include the emergence of biases towards the selection of more AI-intensive (rather than human-work intensive) technologies, the loss of economies of scope in human judgement and decisions as they are delegated to machines and intensive use of "smart machines" to monitor workers. Concern about these (and other) possible negative effects[12] has already given rise to some regulatory initiatives. For example, in early December last year, the Presidency of the Council and negotiators from the European Parliament reached a provisional agreement on harmonised AI rules (the AI Act). This project aims to ensure that the AI systems introduced in the European market and used in the EU are safe and respect the EU's fundamental rights and values, while seeking to stimulate investment and innovation in the field of AI in Europe.

Evidence on the labour impact of these new technological changes is still very limited and should be interpreted with caution.

A number of studies have sought to measure the effects of robotisation and AI on employment using various approaches. One of them is to analyse the behaviour of different segments of the labour market in terms of their exposure to the new technologies. The results generally vary depending on the country and the time period under review. In the Spanish manufacturing sector there is some evidence that the new wave of technological innovation has led to both productivity and employment growth: compared to the companies that did not install robots, those that did so increased their output by between 20% to 25% after four years, reduced the share of labour costs in their total costs by between 5 pp and 7 pp and saw net job creation at a rate of 10% (Koch, Manuylov and Smolka, 2021). One possible explanation for these findings is that firms that automate are more productive and competitive, meaning that they can reduce the price of their products and thus gain market share, which increases their labour demand (Aghion, Antonin, Bunel and Jaravel, 2022).[13]

Labour demand has so far increased relatively more in occupations that are potentially more exposed to robotics and AI developments.

Albanesi, Dias da Silva, Jimeno, Lamo and Wabitsch (2023) show that in EU countries the share of occupations that are more complementary with advances in robotics and AI in employment increased over the period 2011-2019. This effect seems to be stronger the more young people and high-skilled workers are employed in these occupations (see Chart 3.14). Meanwhile, the wage losses associated with the introduction of new technologies tend to be higher for older

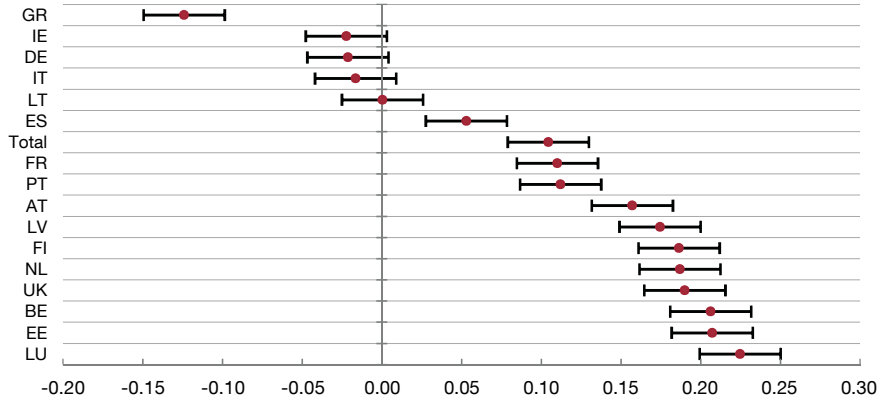
12 Acemoglu (2021) outlines the possible negative effects of AI beyond the labour market.

13 Robotisation could also affect inflation dynamics through changes in workers' bargaining power and the weight of labour in production (Basso and Rachedi, 2023).

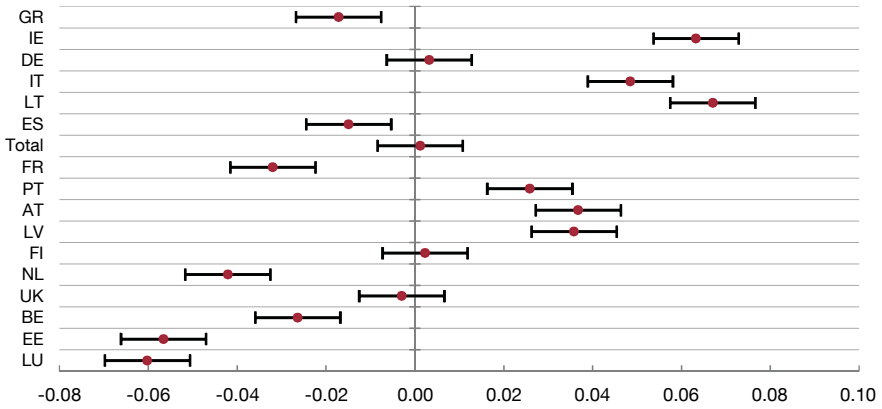
Chart 3.14

Employment has increased more in the occupations most exposed to robotics and AI developments, whose impact on wages depends on their complementarity with workers' occupational skills (a)

3.14.a Association between occupations' total share in employment and their exposure to new technologies



3.14.b Association between occupations' relative wages and their exposure to new technologies



SOURCE: Albanesi, Dias da Silva, Jimeno, Lamo and Wabitsch (2023).

a Error bars indicate standard error with 95% confidence.

DOWNLOAD

manual workers, while younger workers, more likely to take up jobs in the more technological sectors, tend to see their wages rise (Humlums, 2021).

Exposure to new technologies and their degree of complementarity with human work will determine which workers will be displaced and which will benefit from further increases in productivity.

Much uncertainty surrounds the degree of complementarity between new technological developments and human work, especially as it is not yet possible to predict with any degree of certainty the real potential of these innovations. For example, it is entirely possible that the latest AI developments, based on generative language models, will have very far-reaching and

profound implications for many productive activities that require high levels of qualification. The limited empirical evidence available so far on the impact of robotics and AI on the labour market may therefore not be truly representative of the changes that will occur in the near future.

- *In principle, complementarity with robotics and AI will foreseeably be greater for workers who understand how these new technologies work and who are able to provide added value to the tasks carried out by robots and algorithms.* Workers who are versatile enough to perform several different and horizontal tasks in the production of goods and services will also benefit comparably. Conversely, those workers who are limited to a small number of tasks – whether routine, manual or otherwise – are likely to be displaced by the new technologies.[14]

- *In any event, digitalisation and advances in AI could also increase employment opportunities for low-skilled workers and provide tools that complement their skills.* There is evidence, for example, that these developments have led to an increase in self-employment – i.e. a higher number of workers doing work for firms without having a stable employment relationship with them – and the creation of new jobs associated with the gig economy, which has been a quantitatively important source of employment. In this regard, it will be important to understand the extent of the impact on employment and productivity of the emergence of new forms of self-employment and the decline in the share of paid employees in the labour force. In particular, as pointed out by Gómez García and Hospido (2022), the working conditions of self-employment and/or gig work are generally different from those of the employees displaced by the new technologies.

- *In short, the bias towards high-skilled workers observed with previous technological developments could disappear or even change sign with these new technological developments.* If this were the case, these innovations could even contribute to reducing income inequality.

The use of the new technologies in the production of goods and services is still in its infancy and how quickly they are deployed will foreseeably depend on various institutional factors.

Some studies have pointed out that the pace of this deployment will hinge on the development of digital infrastructure, human capital and workers' digital skills, and the flexibility of the labour market and labour market policies. A combination of indicators of these institutional factors puts the Spanish economy somewhat behind other developed countries in terms of preparedness for the implementation of the new technologies (Cazzaniga et al., 2024).

Teleworking is an example of how the new technologies can change firms' internal organisation and the way labour services are provided.

14 See Green (2024) for preliminary estimates of the impact of AI on the demand for skills.

The COVID-19 pandemic gave a significant boost to teleworking (Anghel, Cozzolino and Lacuesta, 2020). Thus, in Spain the percentage of remote workers increased from 4.8% in 2019 to 7.6% in 2022. However, this percentage, which varies significantly across occupations, is still significantly lower than in other European countries. In particular, in the EU-27 it increased from 5.4% to 10.2% in the same period.

The impact of teleworking on productivity depends on how it is implemented and is likely very heterogeneous across occupations.

The most plausible hypothesis is that the relationship between teleworking and productivity is in the shape of an inverted "U" (OECD, 2020a). With very low levels of teleworking, productivity would probably suffer because workers would be less satisfied and find it more difficult to perform their tasks efficiently. Similarly, with very high levels of teleworking, productivity could decline due to the significant reduction in interaction and knowledge flows between teams, an aspect which, in some occupations, is essential to properly performing certain tasks. Conversely, intermediate levels of teleworking would benefit from productivity gains arising, for example, from lower commuting costs and higher employee satisfaction. The impact of teleworking on productivity also depends on how various logistics issues are resolved, such as the infrastructure available for remote working, the working conditions at employees' homes and the nature of the tasks to be performed. For this impact to be positive, it is essential for workers to have sufficient digital skills, an area where there is room for improvement in Spain (Banco de España, 2023).

Measurement of the impact of teleworking on productivity is still at a very early stage and more time will be needed to calculate this impact over different time horizons.

The empirical evidence available so far supports the hypothesis of a positive association between teleworking and productivity: Bergeaud, Cette and Drapala (2023) combine survey data on approximately 1,600 French companies with financial information from their balance sheets and estimate a 0.6% increase in total factor productivity for each percentage point increase in the proportion of workers who telework. As mentioned above, these findings should be interpreted with due caution. In any event, what has been clearly observed in recent years is a notable increase in the percentage of job offers that allow remote working, as well as in workers' preferences for this type of job (Adrjan, Ciminelli, Judes, Koelle, Schwellnus and Sinclair, 2021; Colonnelli, McQuade, Ramos, Rauter and Xiong, 2023).

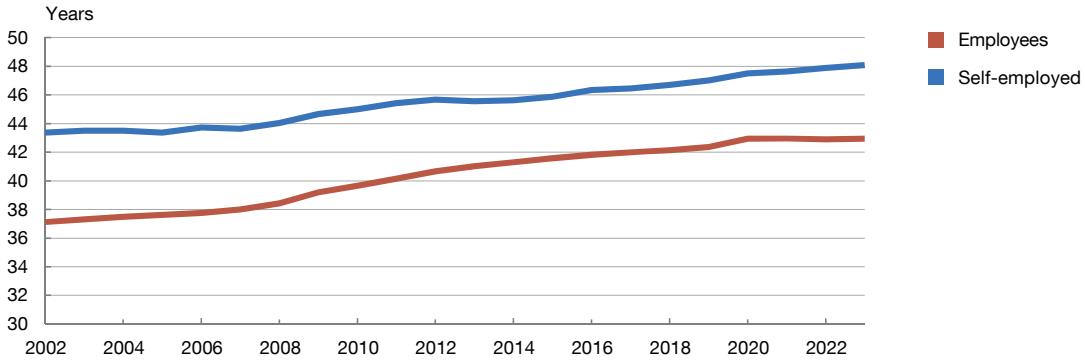
3.2 Ageing of the labour force

The demographic changes affecting the Spanish population (and that of most advanced countries) are profoundly changing the composition of the working population by age group and will continue to do so in the future.

The fall in birth rates, the sizeable baby boomer generation reaching retirement age and the continuing increase in longevity are leading to a significant ageing of Spain's working population,

Chart 3.15
The fall in the birth rate between 1977 and 1997 and longer working lives have led to a significant increase in the average age of the working population

3.15.a Average age of employees and the self-employed (a)



SOURCES: INE (EPA) and Banco de España.

a Banco de España calculations drawing on EPA microdata. Average age of persons employed aged 16 years and over.

DOWNLOAD

which will intensify in the coming years.[15] So far this century the average age of employed persons in Spain has risen by approximately 6 years – from 37.5 to 43.5 – and that of the self-employed has done so by 4 years – from 44 to 48 (see Chart 3.15).

The ageing of the Spanish working population has a negative impact on the rates of growth of aggregate employment and productivity and, therefore, on potential economic growth.

- *Participation and employment rates for workers approaching the retirement age are lower than for middle-aged workers.* Therefore, an increase in the relative share of older people automatically entails a decline in aggregate participation and employment rates (see Chart 3.16 and, for more details, Cuadrado, Fernández Cerezo, Montero and Rodríguez, 2023).

- *Similar differences by age group are also observed in the case of productivity,* reflecting greater productivity growth at the start of working life than in later stages.[16] Thus, aggregate productivity growth also falls, due to a composition effect, as a result of an ageing working population.

- *But population ageing could also change the historical distribution of employment and productivity rates by age group.* Indeed, countries with older working populations have lower productivity growth rates among younger age groups and are less inclined to

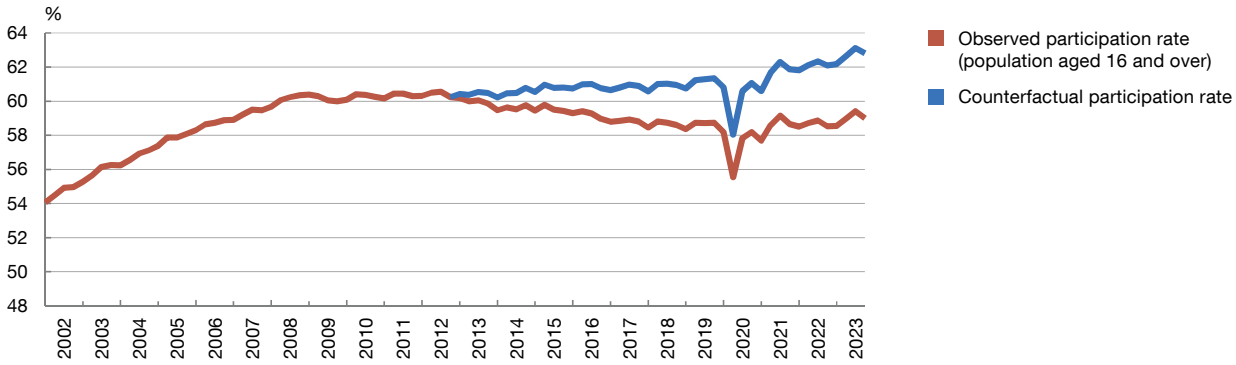
15 For more details on this demographic change and its possible implications, see Banco de España (2019).

16 These differences are often approximated by the relative wage by age over the working life. See Anghel, Jimeno and Jovell (2023).

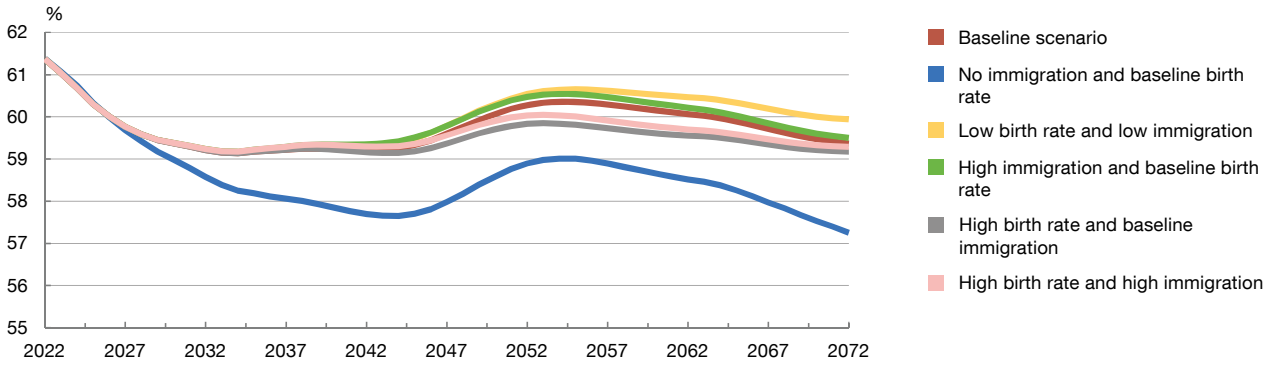
Chart 3.16

The ageing of the Spanish working population will drag down the aggregate employment growth rate over the coming decades

3.16.a Observed and counterfactual participation rate (a)



3.16.b Employment rate projections (b)



SOURCES: INE (EPA and population projections) and Banco de España.

a The counterfactual participation rate is calculated by setting the weightings applied to each five-year population bracket at their 2012 average level and applying the observed participation rate to each population group quarter by quarter.

b Calculations using EPA data and the INE population projections. See Anghel, Jimeno and Jovell (2023). The scenarios are defined as follows:
- No immigration and baseline birth rate: No immigration and projected baseline birth rate.
- Low birth rate and low immigration: The short-term fertility indicator for 2071 is set two standard deviations below the baseline scenario and immigration values in the years 2036 and 2071 are reduced by 10%.
- High immigration and baseline birth rate: Immigration values in the years 2036 and 2071 are increased by 10% and the projected baseline birth rate is used.
- High birth rate and baseline immigration: The short-term fertility indicator for 2071 is set two standard deviations above the baseline scenario and the projected baseline immigration is used.
- High birth rate and high immigration: The short-term fertility indicator for 2071 is set two standard deviations above the baseline scenario and immigration values in the years 2036 and 2071 are increased by 10%.
- High birth rate and baseline immigration: The short-term fertility indicator for 2071 is set two standard deviations above the baseline scenario and the projected baseline immigration is used.
- High birth rate and high immigration: The short-term fertility indicator for 2071 is set two standard deviations above the baseline scenario and immigration values in the years 2036 and 2071 are increased by 10%.

DOWNLOAD

implement technological innovation. One explanation for the former is that, in older countries, young people have fewer opportunities for promotion and, therefore, experience lower productivity growth at the start of their working life (Liang, Wang and Lazear, 2018). The latter is because the productivity of young people in the R&D sector is relatively high, which means there is less technological innovation in older countries (Aksoy, Basso, Smith and Grasl, 2019).

Moreover, demographic and technological changes interact with each other and population ageing also affects labour demand.

- *The economic impacts of the demographic and technological transformation will be closely interrelated.* Robotics and AI can increase the productivity of the workers that are not displaced and perform some of the tasks that smaller cohorts of young workers would no longer be able to carry out. Moreover, the creation of new labour-intensive jobs based on these technological innovations will depend on the ability of displaced workers, a large proportion of whom will likely be older workers, to re-enter the labour market.

- *Population ageing will also shape labour demand through changes in household consumption patterns and the emergence of new activities related to the "silver economy".* With a larger population benefiting from longer retirement periods, demand for certain personal services and leisure-related activities can be expected to increase. This change in the composition of consumption[17] could lead to a significant sectoral and occupational redistribution of employment and to the creation of new jobs.

Several factors could, at least in part, mitigate the potential adverse effects of the ageing of the Spanish workforce on economic activity, but this will require decisive economic policy action.

These factors include migration flows, longer working lives, and training and labour market policies.

- *Migration flows rejuvenate the working population somewhat.* In Spain foreign workers are on average 3.4 years younger than national workers. However, immigration cannot be expected to be the panacea for the problem of the generational replacement of workers in Spain (see Section 7 of Chapter 2 of this report). This would require much stronger migration flows than assumed even in the most optimistic demographic projections. In addition, immigrants tend to have different professional qualifications and occupy different jobs from nationals who retire from the labour market. In this regard, migration policies should proactively anticipate the recruitment needs that will arise in the Spanish labour market as a result of future retirements and promote the arrival of immigrants able to meet these labour needs.

- *The extension of working lives, which is already taking place, also helps to reduce some of the adverse effects of population ageing on the labour market.*[18] The

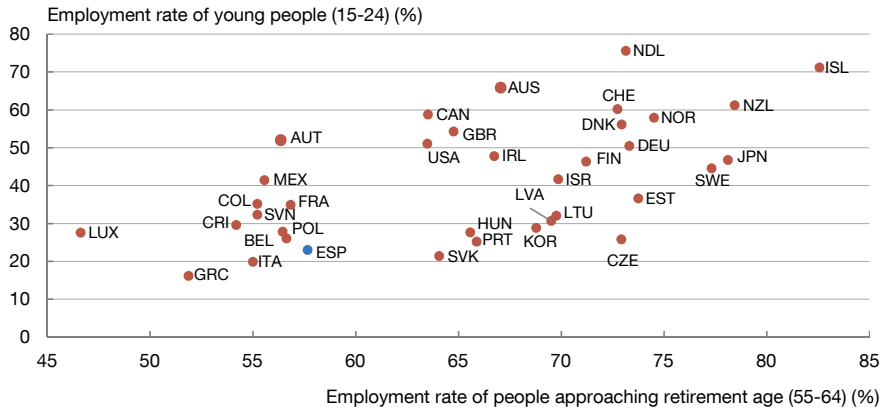
17 Aside from these possible effects of ageing on the composition of the consumption basket, it is unclear how demographic change might affect aggregate consumption. On the one hand, the accumulation of wealth by the generations approaching retirement could fund a higher level of consumption. On the other hand, however, the preference of older people to pass on their wealth to the next generation (through inheritance) and to keep precautionary savings due to uncertainty about longevity and pension benefits could lead to lower consumption. The available empirical studies so far do not point to a sizeable increase in consumption at advanced ages.

18 A longer working life also contributes positively to the financial sustainability of the pension system (see Section 9.2 of Chapter 2 of this report). Indeed, part of the extension of working life in the Spanish economy in recent years stems directly from various legislative changes to the country's pension system, for example, the gradual increase of the statutory retirement age to 67, introduced by the 2013 pension reform.

Chart 3.17

Youth employment rates are higher in countries where the employment rate of the population approaching retirement age is also higher

3.17.a Relationship between the employment rate of young people and that of the population approaching retirement age in various countries in 2022 (a)



SOURCE: OECD.

a Australia, Austria, Belgium, Canada, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Norway, Netherlands, New Zealand, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Türkiye, United Kingdom and the United States.

DOWNLOAD

participation and employment rates of workers approaching the retirement age have increased significantly.[19] However, longer working lives cannot fully offset the decline in new entrants to the labour market. First, although there is still some scope to further extend the working lives of Spanish workers, this process faces some obvious limitations, for example those related to the health of older workers (Crespo, Denis and Jimeno, 2023). Furthermore, it is important to stress that older workers are not perfect substitutes for younger workers, since their professional qualifications, skills and abilities are not the same. Therefore, even if older workers stay in the labour market for longer, they will not be able to fill the types of jobs for which younger workers are in demand. This is consistent with the fact that the employment rate of young people does not fall when the retirement age is postponed. In fact, the opposite is often true: countries with higher employment rates among the older population also tend to have higher youth employment rates (see Chart 3.17).

- *The potential adverse impact of population ageing (and new technologies) on the economy as a whole could be reduced by training and labour market policies that help workers (re)adapt their professional qualifications to the labour market's new demands.* As has been argued in this and the previous section, the demographic and technological changes under way are expected to significantly alter the sectoral and occupational composition of labour demand and call for new professional skills in the labour supply.

19 Since end-2019, the employment rates of the 60-64 and the 65-69 age groups have increased by 2.5 pp and 9.6 pp, respectively, while their participation rates have increased by 3 pp and 8 pp, respectively.

Vocational and occupational education and training, together with active and passive labour market policies and, more generally, the institutional framework of the labour market, play an extraordinarily important role in this context, as will be discussed in the following section. The adaptation of all these policies to the new needs generated by the technological and demographic changes should be high on Spain's structural reform agenda and could lead to significant progress on multiple fronts. For example, in reducing Spain's high youth unemployment, which partly reflects a mismatch between the human capital acquired in the education system and that demanded by the labour market and which will not automatically decrease as a result of a lower number of young people entering the labour market (Bentolila, Felgueroso, Jansen and Jimeno, 2022).

4 Labour market policies

Spain's unemployment rate is higher than that of other European countries and yet, at the same time, the country faces labour shortages. This, together with the fresh challenges posed by the technological and demographic changes currently under way, means that labour market policies are due for a comprehensive rethink.

Labour market policies encompass (i) all of the aspects that make up the institutional framework within which employment relationships take place (e.g. the types of contracts on offer, termination costs, the statutory working week, etc.), and (ii) active and passive labour market policies, which, in turn, are closely linked with education policy as a whole, among other aspects.

Labour market policy must be considered in its entirety.

Some of the main instruments of Spanish labour market policy are addressed individually in the rest of this section. Nonetheless, it should be noted that these instruments all complement each other and that the ability of each instrument to efficiently meet its goals rests on their combined overall design.

- For example, termination costs (which essentially aim to prevent the inefficient destruction of jobs) and unemployment benefits (which seek to mitigate the fall in wage income suffered by unemployed workers) both have an impact on employability and labour mobility. The economic literature suggests that a combination of high severance payments and generous unemployment benefits (which drive up reservation wages) is associated with a high level of structural unemployment.

- Active and passive labour market policies offer another example of complementarity. No matter how efficient active policies are, if the incentives to look for work are not tailored accordingly, transitions from unemployment to employment will be low and, by extension, so will aggregate employment. Equally, unemployment benefits that are heavily geared towards incentivising job-seeking will neither be sufficient nor able to meet their goal if the active labour market policies do not effectively help to make workers more employable.

4.1 Active and passive labour market policies

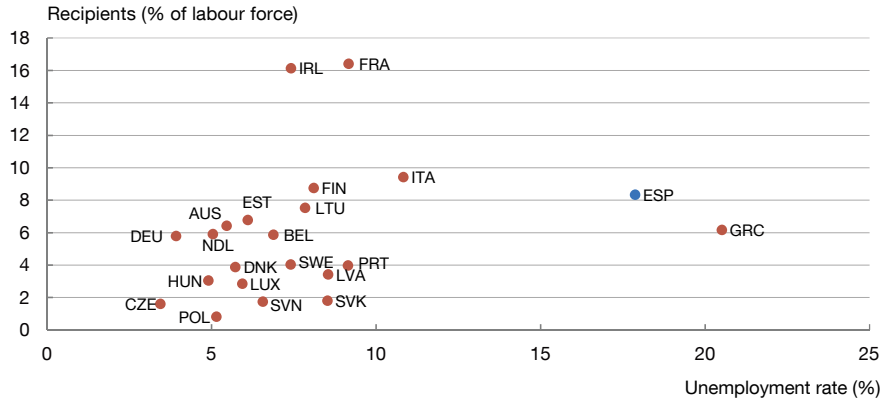
Active and passive labour market policies are a cornerstone of the welfare state.

Together, these two policies seek to sustain the income of the unemployed, while at the same time aiming to facilitate their return to the labour market through a range of initiatives to boost their human capital and employability.

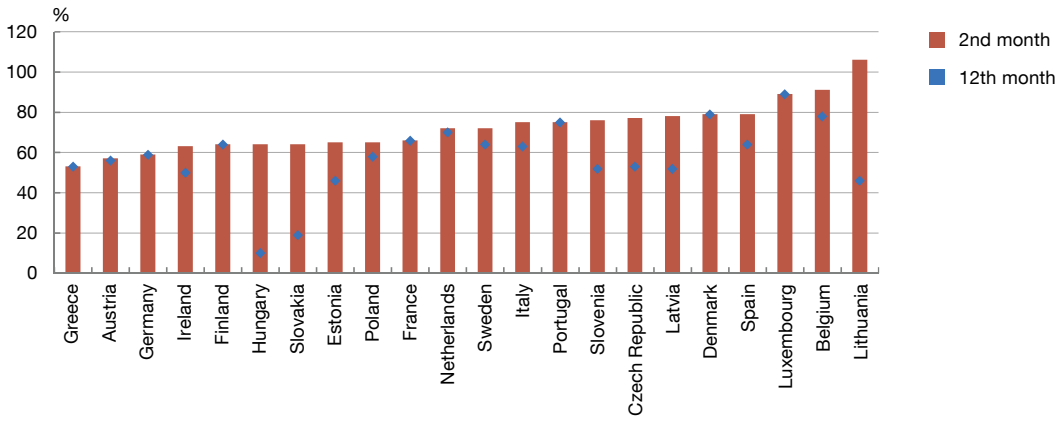
Chart 3.18

Unemployment benefit coverage relative to the unemployment rate is comparatively low in Spain, and the unemployment benefit replacement rate is relatively high compared with other EU countries

3.18.a Correlation between the unemployment rate and unemployment benefit recipients, 2014-2021



3.18.b Net replacement rate of unemployment insurance benefits, 2022 (a)



SOURCE: OCDE.

a The net unemployment benefit replacement rate is the proportion of previous income represented by the unemployment benefit, 2 and 12 months after becoming unemployed, for a single, childless person whose previous in-work income amounted to 67% of the average wage.

DOWNLOAD

As international comparisons suggest, in Spain these policies display some significant drawbacks that reduce their effectiveness in meeting their goals.

- *The level of coverage/protection that passive policies afford the unemployed has been comparatively low.* In Spain, around 8% of the labour force receives unemployment benefits, slightly above the EU average. But this is down to the fact that the Spanish unemployment rate is far higher than the figure for the EU. When this coverage is measured in terms of the unemployment rate, the share of unemployed persons receiving unemployment benefits stands at around 55%, below the EU average (see Chart 3.18.a). The prevalence of long-term unemployment and the high levels of unemployment and heavy turnover among new entrants to the labour market (who therefore take longer to become eligible for unemployment benefits) are partly

responsible for the comparatively low coverage and spending on unemployment benefits in Spain.

- *The unemployment benefit replacement rate is fairly high by international standards.* In Spain, the average replacement rate for unemployment insurance benefits (relative to the previous net wage) stands between 60% and 80% – the longer unemployment lasts, the lower the figure –, one of the highest among OECD countries (see Chart 3.18.b). Moreover, although the duration of unemployment insurance benefits is capped at 24 months, unemployment assistance benefits can in certain cases last indefinitely. This means that older, less employable workers account for the bulk of spending on unemployment benefits.

- *By international standards, both the extent to which the unemployed participate in active policies and the amounts spent on such policies are low in Spain when set against the unemployment rate* (see Chart 3.19). Spain's active policies have been characterised by, inter alia, (i) limited coverage of unemployed workers, (ii) the very minor role played by the (national and regional) public employment services in the intermediation of new placements and in back-to-work training, and (iii) insufficient evaluation of their outcomes.

In a context in which, in addition to the green transition, the technological and demographic changes currently under way will lead to major shifts in the sectoral and occupational structure of employment, improving the performance of the country's active and passive labour market policies is crucial.

As noted above, these structural processes will lead to the emergence of new jobs and tasks in certain industries, while destroying jobs in many other sectors and occupations. The better the labour supply is able to adjust to the new demands of the job market, the more positive the impact such transformational changes will have on employment and productivity. Active and passive policies have a key role to play here, in support of the role played by the education system as a whole. In this regard, as detailed in Chapter 2 of this report (Section 4), among other aspects it is essential to ensure that (i) public policies continue to enable students to remain and prosper in the formal education system, (ii) the university education on offer is able to cater swiftly to new demands, and (iii) quantitative and qualitative progress is made in dual vocational training.

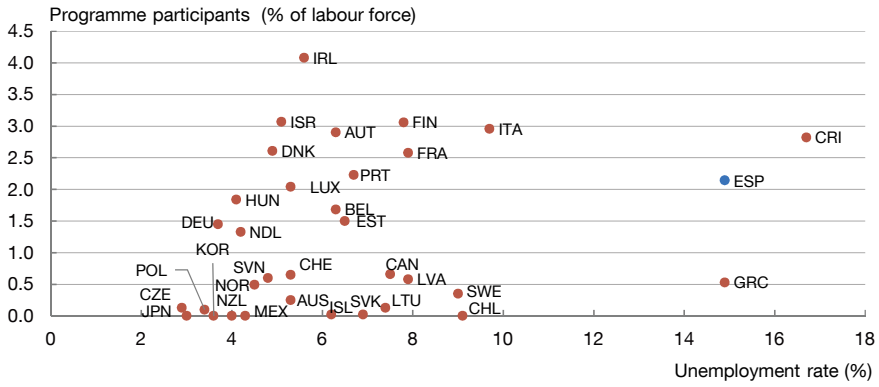
In terms of active labour market policies, progress is needed on several fronts:

- *With regard to training programmes, new technologies call for more horizontal and versatile skills, which are hard to acquire without others traditionally provided by the education system.* In a context of considerable technological change, building general human capital (which allows for an increase in productivity across a broad set of tasks) is likely to be more necessary than building specific human capital (which only boosts productivity in specific tasks at particular firms). With this in mind, the content and

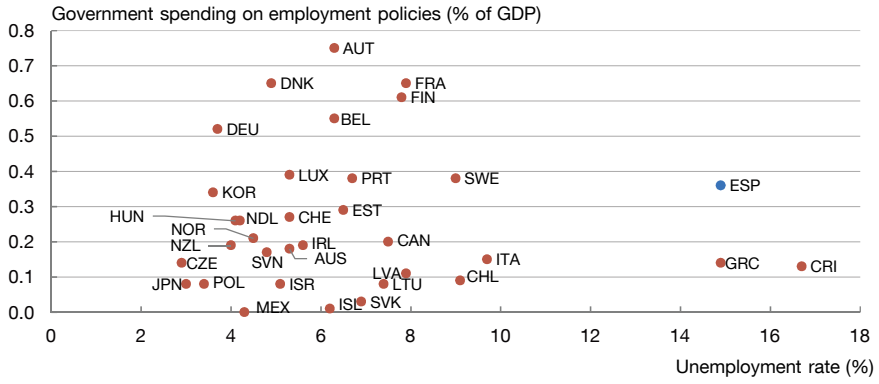
Chart 3.19

The coverage offered by active policies relative to the unemployment rate is comparatively low in terms of both programme participant numbers and spending

3.19.a Relationship between the unemployment rate and participation in active policies, 2021



3.19.b Relationship between the unemployment rate and spending on active policies, 2021



SOURCE: OECD (Labour Market Programmes).

a Training programmes, direct job creation and public employment and government services. Countries included: Australia, Austria, Belgium, Canada, Chile, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, Norway, New Zealand, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden and Switzerland.

DOWNLOAD

teaching methods of the formal education system and back-to-work training must be brought up to date, targeting the skills needed to understand, perform and add value to the tasks that can be carried out by the new technologies. Moreover, in a digitalised world in which information-gathering and data analysis are paramount, greater emphasis should be placed on the STEM disciplines (Science, Technology, Engineering and Mathematics).

- *As far as job mediation is concerned, the public employment services should introduce new techniques for job profiling and matching job-seekers to the available vacancies.* These techniques should help identify the training needs of the unemployed and tailor them to the changing demands.

- *Training and job intermediation programmes must be assessed continuously.* Such assessments should help to identify the volume of resources needed by the public employment services, to better allocate such resources and design action plans, and to evaluate potential partnerships and synergies with the private sector.

The recently approved Employment Law[20] seeks to modernise active policies, although it is still too early to assess whether it will be able to address the shortcomings consistently identified in these policies over recent decades.

The new legislation aims primarily to improve the coordination of the different employment programmes across regional governments (with the creation of the Spanish Employment Agency), to ensure an adequate supply of services and, in short, to introduce a new approach to labour market policy with a view to making the programmes rolled out more effective. To this end, the Law sets out new methods for measuring the employability of the workers participating in the programmes, and seeks to enhance the evaluation of such programmes, while broadening the guaranteed services by scaling up professional profiling, individual mentoring and continuous counselling, with the design of professional pathways and bespoke plans for unemployed workers.

The review of passive labour market policies should make returning to work a more attractive prospect for the unemployed, while ensuring that benefits are sufficient and improving coordination with active labour market policies.

The economic literature shows that the incentives to return to work are greater when benefits decline over time, and when the amount and duration of such benefits are capped. However, these parameters should be calibrated to ensure that the primary goal of unemployment protection programmes can also be met; namely, to prevent a substantial loss of income should this contingency arise (Landais, Michaillat and Saez, 2018). Thus, the international evidence suggests that unemployment benefits that are relatively broad-based, generous and long-lasting are only compatible with low unemployment rates when the incentives to return to work are also significant, and, in particular, when the public employment services are highly efficient when it comes to intermediation, counselling, profiling, training and monitoring job seekers (Asenjo and Pignatti, 2019).

In the light of the best practices implemented in other European countries and the available empirical evidence, the following options may be worth exploring with a view to a possible reform of Spain's passive labour market policies:

- *Introducing changes to the duration of the benefits/subsidies – which could be conditional on the economic cycle – and/or decreasing their amount over time, without reducing the level of protection ex ante.* Based on the international evidence and certain studies of the impact that unemployment benefits have on the prevalence and

20 Law 3/2023 of 28 February 2023 (only available in Spanish).

duration of unemployment (Rebollo and Rodríguez Planas, 2020, and Banco de España, 2023), Spain has some leeway to adjust the eligibility requirements, the benefit replacement rates, the way in which such benefits vary over the duration of unemployment and their maximum duration, so as to strike a better balance in terms of the trade-off between income replacement and job-seeking incentives that underlies the design of passive labour market policies.

- *Allowing certain benefits/subsidies to be compatible (for part of or their entire duration) with employment.* In particular, converting a portion of the benefits/subsidies into wage complements when new employment is found would help facilitate labour mobility and the return to work. Thus, the incentive to return to work would not rest solely on the eventual decline in benefits/subsidies over time (Armand, Carneiro, Tagliati and Xia, 2022).

- *Improving the integration of the myriad income policies rolled out by the different tiers of general government, to provide efficient and robust social security that protects groups with a very limited employability.* Unemployment assistance benefits are an extension of contributory benefits when an unemployed worker is in a situation of vulnerability (based on their income or wealth). Their rationale is thus no different from that of subsistence income and anti-poverty schemes, such as the minimum income scheme and similar initiatives rolled out at municipal and regional level. Combining all these programs would help to make them more effective (broader coverage) and more efficient (greater positive impact per resource deployed) (AIReF, 2022).

- *Strengthening the coordination of active and passive labour market policies with a view to also enhancing their efficacy and efficiency.* As things stand, all of these interventions are fragmented across the different tiers of government (general, regional and local) and information does not flow freely between such tiers. This can mean that many of the requirements for activating or qualifying for the different programmes are not fully coordinated. Similarly, the family circumstances and financial position of unemployed workers are not always given sufficient consideration when determining the income criteria on which access to such benefits depends.

Component 23.R10 of the Recovery, Transformation and Resilience Plan envisages a streamlined, enhanced approach to unemployment assistance, although the specific details have yet to be approved.

The main aim is to integrate various special schemes that have emerged over time within the ordinary unemployment assistance benefit paid once contributory benefits have run out; an integration that would take place in coordination with the roll-out of the minimum income scheme. This Component also aims to broaden unemployment protection, linking such protection to a firmer commitment to returning to work, and enabling this subsidy to serve as a transition to welfare protection when the beneficiary does not rejoin the job market and finds themselves in a position of vulnerability. Royal Decree-Law 7/2023 was approved in late 2023

to implement these reforms, although it was not ultimately ratified by Parliament. This reform is still therefore pending.

4.2 Other institutional aspects of the labour market

Other aspects of the institutional framework of the Spanish labour market should be reconsidered to enable labour supply and demand to adjust more smoothly to the far-reaching challenges posed by the sweeping technological and demographic changes under way.

In its current guise, this institutional framework is the result of the numerous reforms that the Spanish labour market has undergone over recent decades. The latest of these reforms affected the available hiring arrangements, made certain changes to collective bargaining, consolidated the use of furlough schemes as a temporary employment adjustment mechanism and created the RED mechanism, among other measures. This reform was approved in late 2021 and, as noted in Box 3.1, it is too early to properly assess its overall impact on employment levels and stability, wages, productivity and other macroeconomic aggregates. In any event, it is essential to ensure that the various elements that make up the institutional framework of Spain's labour market do not contribute to prolonging the high levels of unemployment and do not stand in the way of either the process of reallocating employment across sectors, firms and occupations that is likely to gather pace or the need to extend workers' working lives.

Longer working lives should be encouraged by doing away with certain aspects that, in practice, serve to drive older workers out of the labour market.

Thanks to the latest technological developments, jobs that do not call for physical or mental skills for which older workers are ill-suited now account for an increasingly large share of total employment (Acemoglu, Søndergaard Mühlbach and Scott, 2022). However, most of these positions are not being taken by older workers, whether for reasons of demand (e.g. the fact that employers prefer younger workers, differences in labour costs across ages, etc.) or of supply (e.g. the fact that older workers tend to be less mobile, early voluntary transitions to retirement, etc.). Against this backdrop, aside from raising the statutory retirement age, action should be taken on various fronts to encourage workers to prolong their working lives, such as (i) more flexible hiring arrangements for older workers, (ii) incentivised reassignments, retraining and vocational training, (iii) an end to mandatory exits from employment, or (iv) working retirement *(jubilación activa)* programmes that provide incentives to combine retirement benefits with employment income. On this last point, certain aspects of the current regulations governing working retirement in Spain (Royal Decree-Law 5/2013 of 15 March 2013) could restrict the use of these programmes. For example, the fact that they may only be activated after reaching the ordinary statutory retirement age and the fact that pensions are not updated at the end of the compatibility period (Sánchez Martín and Jiménez Martín, 2021).

Recent years have seen the adoption of various measures that seek to keep workers in the labour market for longer.

These notably include new incentives for postponing retirement, an exemption on making social security contributions for certain contingencies beyond the statutory retirement age and the limits on clauses governing mandatory retirement under the age of 68. While, in principle, these initiatives have the potential to significantly boost the labour market participation of older workers, in reality the efficacy of such measures (i.e. their ability to substantially shape workers' decisions on whether to retire, compared with a scenario in which no such measures exist) remains uncertain.[21]

Collective bargaining should allow for a degree of flexibility to enable employment conditions to cater to firms' individual circumstances.

This is particularly important in a context such as the current one, in which, thanks to technological and demographic changes, new forms of employment are emerging and there is growing heterogeneity across firms in a number of aspects (e.g. in terms of how they organise their work and their internal flexibility). In this regard, the 2021 labour market reform restored the pre-eminence of sectoral agreements in certain areas, albeit retaining some of the internal flexibility mechanisms (e.g. opt-outs and unilateral modifications of working conditions by employers) designed for distressed firms. It is important to ensure that firms, particularly SMEs and start-ups, are still able to adapt to a highly volatile, complex environment.

The regulations governing termination costs must ensure that workers are adequately protected, while at the same time facilitating mobility across sectors and occupations.

In terms of the scale of termination costs and while international comparisons are complex, the data published by the OECD suggests that the costs of fair dismissals on objective grounds are higher in Spain than those seen in other European countries, whereas the additional severance for unfair dismissal is lower (see Chart 3.20 and OECD, 2020b). Meanwhile, according to the Ministry of Labour and Social Economy's statistics on dismissals and their costs, in 2023 around 75% of the dismissals settled at court in Spain were declared unfair or null and void.[22] This finding, together with the less stringent requirements for initiating and executing disciplinary dismissals, appears to explain why many dismissals in Spain go through this channel (Jimeno, Mora-Sanguinetti and Martínez-Matute, 2020). In this regard, to facilitate the necessary reallocation of workers across sectors and occupations, further progress should be made on defining the objective grounds for dismissal and on reducing the uncertainty associated with these processes. This would be particularly important if severance payments for unfair dismissal were determined based on dissuasive and compensatory costs (Article 24 of the Revised European Social Charter), with the amount varying depending on the individual circumstances of each worker, which would likely exacerbate litigation over dismissals and push up costs, with potentially adverse effects on employment.

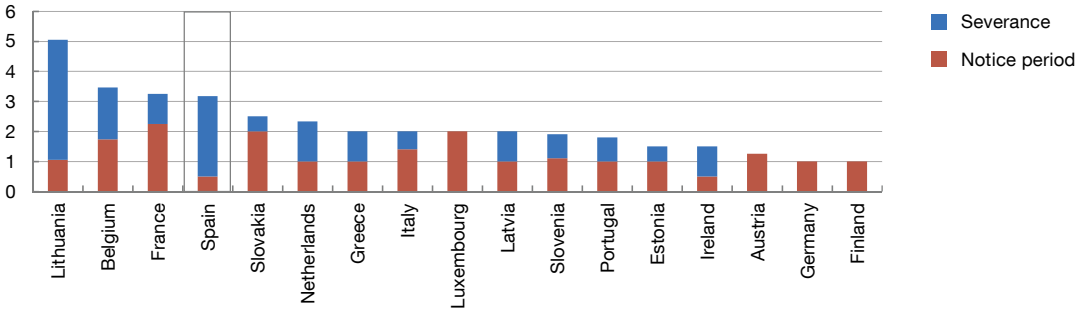
21 Box 2 in Chapter 2 of this report sets out some estimations on the potential impact of incentives for postponing retirement.

22 Moreover, the severance costs of collective dismissals under redundancy programmes (around 8.6% of the total in 2023) tend to be higher than those established by law.

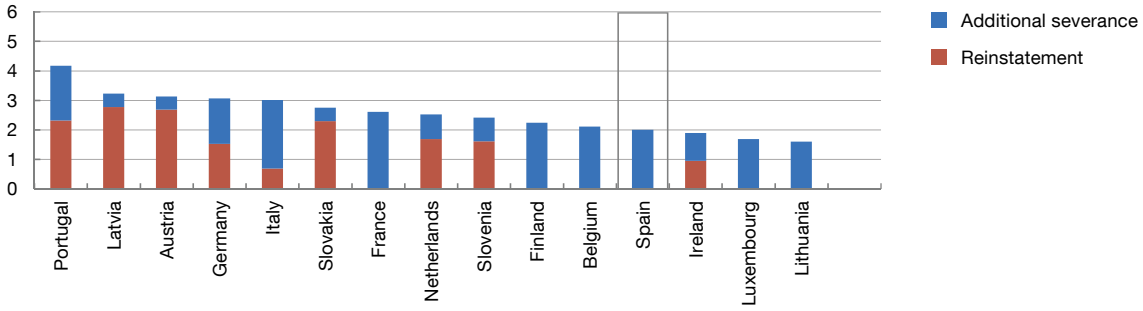
Chart 3.20

By international standards, severance payments for fair dismissals are relatively high in Spain. However, the additional costs of unfair dismissal are not among the highest

3.20.a Indicator of individual dismissal costs of fair dismissals on economic grounds, 2019 (a) (b)



3.20.b Indicator of additional dismissal costs of unfair dismissals, 2019 (a) (c)



SOURCE: OCDE (Employment Protection Legislation Database, http://oe.cd/epl).

a The values depicted do not represent the amounts of severance payments for dismissal, but rather are the result of converting such severance payments and other dismissal-related items into a scale from 0 to 6.
b For regular workers with four years of job tenure, measured in months of pay after dismissal notice. Includes only individual dismissals for economic reasons. Figure 3.2 of "OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis".
c For regular workers, with 20 years of job tenure, where the dismissal is deemed unfair. Figure 3.4 of "OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis".

DOWNLOAD

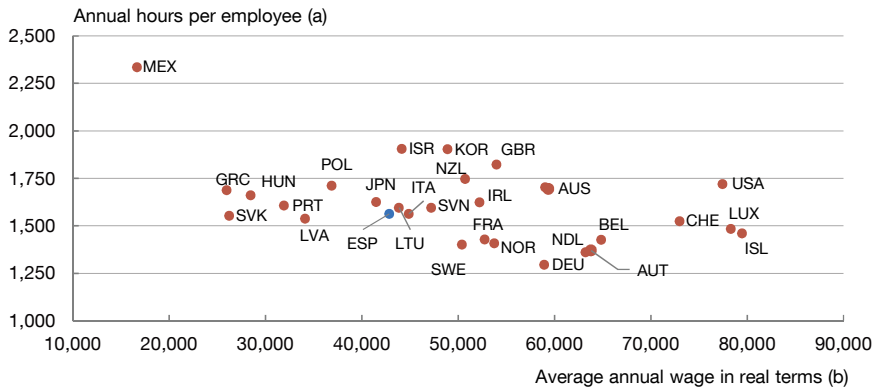
The working week follows a downward secular trend.

In Spain, the statutory working week has been capped at 40 hours since 1983. However, average working hours have fallen significantly. According to the Spanish Labour Force Survey, between 2005 and 2023 weekly contract working hours for main, full-time employment declined by 48 minutes, down to 38.91 hours a week. Meanwhile, over the same period, actual hours worked fell by 3.1 hours to 33.1 hours a week. This decline should be seen as part of a trend that can primarily be attributed, both in Spain and at a global level, to various factors of a structural nature, such as the greater weight of the services sectors, a higher female labour market participation rate and the rise in the part-time employment rate, as well as to the productivity improvements deriving essentially from the introduction of numerous technological changes (see Chart 3.21). As argued throughout this chapter, such technological changes are likely to enable further reductions to working hours in the coming decades.

Chart 3.21

Productivity gains allow for shorter working hours and higher wages. Accordingly, the correlation between the two variables is found to be negative at international level

3.21.a Relationship between real wages and hours actually worked in OECD countries, 2022



SOURCE: OCDE.

a Annual hours actually worked per employee based on National Accounts
b Equivalent full-time wage, calculated using National Accounts. All sectors of the economy. Expressed in US dollar (PPP).

DOWNLOAD

Looking ahead, it is essential to bear in mind that average working hours vary considerably across types of firm and sectors.

The decline in the duration of the average working week has been highly heterogeneous across sectors and firms, reflecting the specific characteristics of firms, its uneven impact on productivity and labour costs and workers' preferences. This heterogeneity must be maintained going forward, particularly if the statutory working week is ultimately reduced, in which case the different firms and sectors should be afforded ample flexibility to adapt to the legislative change if the possible negative effects of this measure on labour costs, productivity and the aggregate level of employment and activity are to be avoided (Kramarz, Cahuc, Crepon, Skanks, van Lownell and Zylberberg, 2008).[23]

23 According to Arellano, García and Ulloa (2023), eight million salaried workers have a working week of more than 37.5 hours. Bringing the maximum working week down to that figure would therefore entail a reduction of 29.1 million hours a week, representing 5.5% of the total hours actually worked. According to these estimates, without factoring in wage or productivity adjustments, the ensuing increase in ULCs would reduce GDP and employment growth by around 0.6 pp and 0.8 pp, respectively.

References

Acemoglu, Daron. (2021). "Harms of AI". NBER Working Paper Series, 29247, National Bureau of Economic Research. http://doi.org/10.3386/w29247

Acemoglu, Daron, Nicolaj Søndergaard Mühlbach and Andrew J. Scott. (2022). "The rise of age-friendly jobs". *The Journal of the Economics of Ageing,* 23, 100416. https://doi.org/10.1016/j.jeoa.2022.100416

Adrjan, Pawel, Gabriele Ciminelli, Alexandre Judes, Michael Koelle, Cyrille Schwellnus and Tara Sinclair. (2021). "Will it stay or will it go? Analysing developments in telework during COVID-19 using online job postings data". *OECD Productivity Working Papers,* 30, Organization for Economic Cooperation and Development. https://doi.org/10.1787/aed3816e-en

Aghion, Philippe, Celine Antonin, Simon Bunel and Xavier Jaravel. (2022). "The effects of automation on labor demand: a survey of the recent literature". In ByLili Yan Ing and Gene M. Grossman (eds.), *Robots and AI: a new economic era.* Routledge, pp. 15-39. https://doi.org/10.4324/9781003275534-2

Aguilar, Pablo, Rubén Domínguez-Díaz, José-Elías Gallegos and Javier Quintana. (2024). "A Production Network Perspective on Inflation Developments". Forthcoming.

Aksoy, Yunus, Henrique S. Basso, Ron P. Smith and Tobias Grasl. (2019). "Demographic structure and macroeconomic trends". *American Economic Journal: Macroeconomics,* 11(1), pp. 193-222. https://doi.org/10.1257/mac.20170114

Albanesi, Stefania, António Dias da Silva, Juan F. Jimeno, Ana Lamo and Alena Wabitsch. (2023). "New technologies and jobs in Europe". Documentos de Trabajo, 2322, Banco de España. https://doi.org/10.53479/33414

Anghel, Brindusa, Cristina Barceló and Ernesto Villanueva. (2023). "The growth in permanent contracts and its potential impact on spending". *Economic Bulletin - Banco de España,* 2023/Q1, 19. https://doi.org/10.53479/29793

Anghel, Brindusa, Marianela Cozzolino and Aitor Lacuesta. (2020). "Teleworking in Spain". *Economic Bulletin - Banco de España,* 2/2020, Analytical Articles. https://repositorio.bde.es/handle/123456789/12627

Anghel, Brindusa, Juan F. Jimeno and Pau Jovell. (2023). "El envejecimiento de la población trabajadora: tendencias y consecuencias". *Papeles de Economía Española,* 176, pp. 76-92. https://www.funcas.es/wp-content/uploads/2023/06/PEE-176_Anghel_Jimeno_Jovell.pdf

Anghel, Brindusa and Federico Tagliati. (2024). "La incidencia del salario mínimo en España: un análisis a nivel de empresa". *Economic Bulletin - Banco de España.* Forthcoming.

Arellano, Alfonso, Juan Ramón García and Camilo Ulloa. (2023). "Propuesta de reducción de la jornada laboral: incidencia e impacto potencial". BBVA Research. https://www.bbvaresearch.com/publicaciones/espana-propuesta-de-reduccion-de-la-jornada-laboral-incidencia-e-impacto-potencial/

Armand, Alex, Pedro Carneiro, Federico Tagliati and Yiming Xia. (2020). "Can subsidized employment tackle long-term unemployment? Experimental evidence from North Macedonia". Documentos de Trabajo, 2022, Banco de España. https://repositorio.bde.es/handle/123456789/10478

Asenjo, Antonia, and Clemente Pignatti. (2019). "Unemployment insurance schemes around the world: Evidence and policy options". Research Department Working Paper, 49, International Labour Organization. https://www.ilo.org/global/research/publications/working-papers/WCMS_723778

Autor, David, and Anna Salomons. (2017). "Robocalypse now: Does productivity growth threaten employment?". In European Central Bank (ed.), *Investment and Growth in Advanced Economies: ECB Forum on central banking, 26-28 June 2017, Sintra, Portugal: conference proceedings,* pp. 45-118. https://doi.org/10.2866/7866

Autoridad Independiente de Responsabilidad Fiscal. (2022). "1st Opinion. Minimum Living Income". Opinion, 1/22. https://www.airef.es/wp-content/uploads/2022/09/NOTICIAS-EN/Primera-Opinion-IMV_EN_REV.pdf

Banco de España. (2019). "Chapter 4. Economic consequences of demographic change". In Banco de España, *Annual Report 2018,* pp. 211-252. https://repositorio.bde.es/handle/123456789/12521

Banco de España. (2023). "Chapter 2. Robust and sustainable growth and convergence with the euro area: challenges and opportunities" In Banco de España, *Annual Report 2022,* pp. 71-136. https://doi.org/10.53479/29659

Barceló, Cristina, Mario Izquierdo, Aitor Lacuesta, Sergio Puente, Ana Regil and Ernesto Villanueva. (2021). "Los efectos del salario mínimo interprofesional en el empleo: nueva evidencia para España". Documentos Ocasionales - Banco de España, 2021. https://repositorio.bde.es/handle/123456789/16842

Basso, Henrique, and Omar Rachedi. (2023). "Robot adoption and inflation dynamics". https://economics.uc3m.es/wp-content/uploads/2023/04/RobotInflation_BassoRachedi_compressed_compressed.pdf

Bentolila, Samuel, Florentino Felgueroso, Marcel Jansen and J.F. Jimeno (2022). "Lost in recessions: youth employment and earnings in Spain". *SERIEs,* 13, pp. 11–49. https://doi.org/10.1007/s13209-021-00244-6

Bergeaud, Antonin, Gilbert Cette and Simon Drapala. (2023). "Telework and productivity: insights from an original survey". *Applied Economics Letters.* https://doi.org/10.1080/13504851.2023.2209307

Bertola, Giuseppe. (2017). "European unemployment revisited: shocks, institutions, integration". *Research in Economics,* 71(3), pp. 588-612. https://doi.org/10.1016/j.rie.2017.06.002

Cazzaniga Mauro, Florence Jaumotte, Longji Li, Giovanni Melina, Augustus J. Panton, Carlo Pizzinelli, Emma J. Rockall and Marina Mendes Tavares. (2024). "Gen-AI: Artificial intelligence and the future of work". Staff Discussion Notes, 2024/001, International Monetary Fund. https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2024/01/14/Gen-AI-Artificial-Intelligence-and-the-Future-of-Work-542379

Colonnelli, Emanuele, Timothy McQuade, Gabriel Ramos, Thomas Rauter and Olivia Xiong. (2023). "Polarizing corporations: does talent flow to 'good' firms?". Working Paper, 2023-147, Becker Friedman Institute for Economics at University of Chicago. http://dx.doi.org/10.2139/ssrn.4645695

Crespo, Laura, Angela Denis and Juan F. 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

Cuadrado, Pilar. (2023). "An analysis of hours worked per worker in Spain: trends and recent developments". *Economic Bulletin - Banco de España,* 2023/Q1, 14. https://doi.org/10.53479/29733

Cuadrado, Pilar, Alejandro Fernández Cerezo, José Manuel Montero and Francisco José Rodríguez. (2023). "The impact of population ageing on the labour force participation rate in Spain". *Economic Bulletin - Banco de España,* 2023/Q3, 12. https://doi.org/10.53479/33513

Deb, Shubhdeep, Jan Eeckhout, Aseem Patel and Lawrence Warren. (2022). "What drives wage stagnation: monopsony or monopoly?". *Journal of the European Economic Association,* 20(6). https://doi.org/10.1093/jeea/jvac060

European Commission. (2023). "European business cycle indicators. 2nd Quarter 2023. Special Topic: A new survey-based labour hoarding indicator". Technical Paper, 066. https://doi.org/10.2765/771791

Gómez García, Marina, and Laura Hospido. (2022). "The challenge of measuring digital platform work". *Economic Bulletin - Banco de España,* 1/2022, Analytical Articles. https://repositorio.bde.es/handle/123456789/20479

Green, Andrew. (2024). "Artificial intelligence and the changing demand for skills in the labour market". OECD Artificial Intelligence Papers, 14, Organisation for Economic Co-operation and Development. https://doi.org/10.1787/88684e36-en

Grossman, Gene M., and Ezra Oberfield (2022). "The Elusive Explanation for the Declining Labor Share". *Annual Review of Economics,* 14(1). https://doi.org/10.1146/annurev-economics-080921-103046

Humlums, Anders. (2021). "Robot Adoption and Labor Market Dynamics". https://static1.squarespace.com/static/5d35e72fcff15f0001b48fc2/t/61a4e7d3dfd0aa67849b9918/1638197204858/humlumJMP.pdf

Hurtado, Samuel, 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

Jimeno, Juan F., Juan Mora-Sanguinetti and Marta Martínez-Matute. (2020): "Employment protection legislation, labor courts, and effective firing costs". *IZA Journal of Labor Economics,* 9(1). https://doi.org/10.2478/izajole-2020-0002

Koch, Michael, Ilya Manuylov and Marcel Smolka. (2021). "Robots and firms". *The Economic Journal,* 131(638), pp. 2553–2584. https://doi.org/10.1093/ej/ueab009

Kramarz Francis, Pierre Cahuc, Bruno Crepón, Thorsten Skans, Gijsbert van Lomwel and André Zylberberg. (2008). "Labour Market Effects of Work-Sharing Arrangements in Europe". Fondazione Rodolfo Debenedetti, VIII European Conference. https://www.frdb.org/wp-content/uploads/2020/07/VIII-conf_Report-2_2006NEW.pdf

Landais, Camille, Pascal Michaillat and Emmanuel Saez. (2018). "A Macroeconomic Approach to Optimal Unemployment Insurance: Theory". *American Economic Journal: Economic Policy,* 10(2), pp. 152-181. https://doi.org/10.1257/pol.20150088

Liang, James, Hui Wang and Edwuard P. Lazear. (2018). "Demographics and entrepreneurship". Journal of Political Economy, 126(S1), S140-S196. https://doi.org/10.1086/698750

Organisation for Economic Co-operation and Development. (2020a). "Productivity gains from teleworking in the post COVID-19 era: How can public policies make it happen?". OECD Policy Responses to Coronavirus (COVID-19). https://doi.org/10.1787/a5d52e99-en.

Organisation for Economic Co-operation and Development. (2020b). "Chapter 3. Recent trends in employment protection legislation". In *OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis,* OECD Publishing, pp. 168-220. https://doi.org/10.1787/1686c758-en.

Rebollo-Sanz, Yolanda-F., and Núria Rodríguez-Planas. (2020). "When the Going Gets Tough… Financial Incentives, Duration of Unemployment, and Job-Match Quality". *Journal of Human Resources,* 55(1), pp. 119-163; https://doi.org/10.3368/jhr.55.1.1015.7420R2

Sánchez Martín, A. R., and Sergi Jiménez Martín. (2021). "La compatibilidad del trabajo y el cobro de pensión en España: análisis institucional en el contexto europeo". Estudios sobre la Economía Española, 2021/10, Fedea. https://documentos.fedea.net/pubs/eee/eee2021-11.pdf

Box 3.1

THE RECENT BEHAVIOUR OF THE TEMPORARY EMPLOYMENT RATIO AND OTHER INDICATORS PROXYING JOB STABILITY

The labour market reform adopted in late 2021 cut down on temporary contracts in an attempt to increase job stability. Specifically, it eliminated contracts for specific tasks and services (which accounted for around 40% of temporary contracts prior to the reform), capped the maximum duration of seasonal contracts at six months (which can be extended to 12 months via collective bargaining), tightened the limits on successive temporary contracts and cut the duration of work-experience contracts from 24 to 12 months. By contrast, some aspects of permanent contracts were relaxed – notably the use of permanent seasonal employment contracts – and, albeit only for the construction sector, the completion of the construction work was included as grounds for termination of permanent contracts.

The temporary employment ratio has fallen sharply since the reform was adopted. According to the Spanish Labour Force Survey (EPA by its Spanish acronym), in 2023 Q4 it stood at 16.5%, versus 25.4% at end-2021 (see Chart 1). This decline has been steeper in the private sector, where the temporary employment ratio has fallen by just over 10 percentage points (pp), to 13.2%. In the public sector, however, it has held at close to 30% over the last two years.[1] Overall, this decline has enabled the Spanish temporary employment ratio to make up considerable ground on the euro area average (14.5% in 2023 Q3).

This sharp fall in the temporary employment ratio has also been observed in social security registrations, where the proportion of workers registered with a temporary contract decreased from 30.4% to 14.9% between December 2021 and December 2023. This 15.6 pp decline is explained by an increase in full-time permanent contracts (8.6 pp), in part-time permanent contracts (4.1 pp) and in permanent seasonal employment contracts (3 pp) (see Chart 2). The latter were hardly used in Spain before the 2021 reform and their prevalence in total numbers registered with social security has more than doubled, rising from 2.4% in 2021 to 5.7% in 2023. The decline in the temporary employment ratio has been widespread across sectors, although sharper in some of the sectors with the highest pre-reform ratios, such as construction, hospitality, arts, administrative activities, agriculture and other service activities. In all these sectors, except construction, a sizeable portion of the fall in the temporary employment ratio since the reform was implemented is explained by the growth of permanent seasonal employment contracts.

Against this background, this box looks at recent developments in other indicators which proxy job stability in the Spanish labour market. This descriptive exercise is not a causal assessment of the 2021 labour market reform. As stated in other Banco de España reports, such an assessment would need to take into account the impact of the measures adopted on multiple dimensions (e.g. employment, unemployment, wages, productivity and other macroeconomic aggregates),[2] consider a broad time horizon and analyse the possible asymmetric effects of the reform on different groups of workers, firms and sectors (which would require the most granular data possible).

Labour turnover indicators can be calculated drawing on social security hiring and separation data to analyse the extent to which the sharp reduction in the temporary employment ratio has resulted in higher job stability. Using the ratio of the sum of the total number of employment contracts starting and the total number of employment contracts ending in a given month to the stock of employees as a measure of labour turnover, Chart 3 shows that since the reform was adopted labour turnover has fallen from an average of 1.33% in the period 2015-2019 to an average of 1.12% in the period 2022-2023. This decline is the result of the change in the percentage of workers with permanent and temporary contracts, as the turnover for employees with a permanent contract increased (from 0.25% to 0.61%) and it only decreased slightly for workers with a temporary contract (from 3.40% to 3.19%).

The higher turnover of permanent contracts since the entry into force of the labour market reform reflects the greater labour market inflows and outflows of workers with permanent contracts, in general, and of those with

1 Under Law 20/2021 of 28 December 2021, a public examination and merits-based selection process must be held for positions in the public sector held by temporary employees. The deadline for this process is 31 December 2024. As the majority of temporary contracts in the public sector are interim contracts for unfilled vacancies, compliance with this rule will pose a considerable challenge for recruiting public sector staff.

2 See, for example, Anghel, Barceló and Villanueva (2023), who analyse the possible impact of the 2021 labour market reform on private consumption and precautionary saving by workers switching from a temporary to a permanent contract.

Box 3.1

THE RECENT BEHAVIOUR OF THE TEMPORARY EMPLOYMENT RATIO AND OTHER INDICATORS PROXYING JOB STABILITY (cont'd)

Since the labour market reform was adopted in late 2021, the temporary employment ratio has fallen sharply, approaching the euro area average. In terms of labour turnover, the gains are smaller due to the higher turnover among new permanent contracts.

Chart 1
Temporary employment ratio (a)

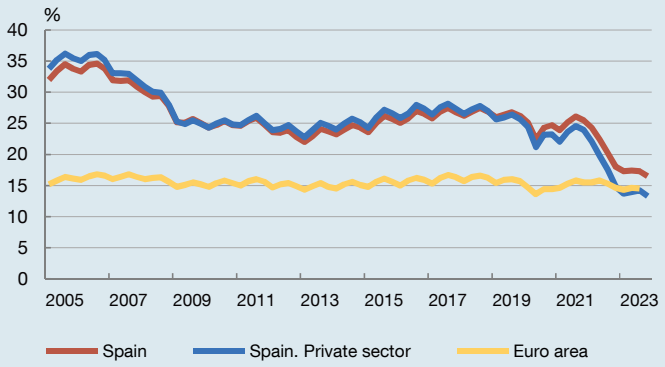


Chart 2
Cumulative change in the temporary employment ratio of numbers registered with social security and contributions by type of permanent contract (b)

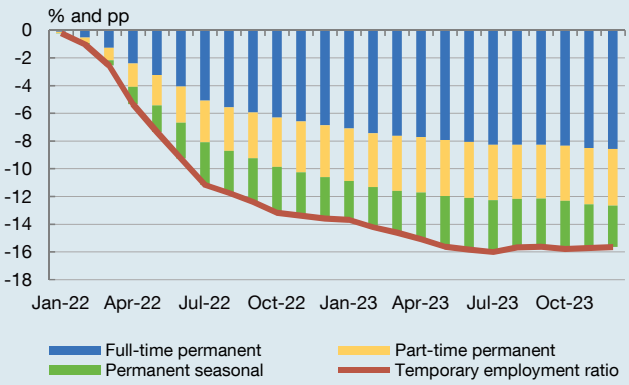


Chart 3
Turnover rate. Total and by type of contract.
Monthly average of contracts starting and ending as a percentage of the numbers registered with social security (c)

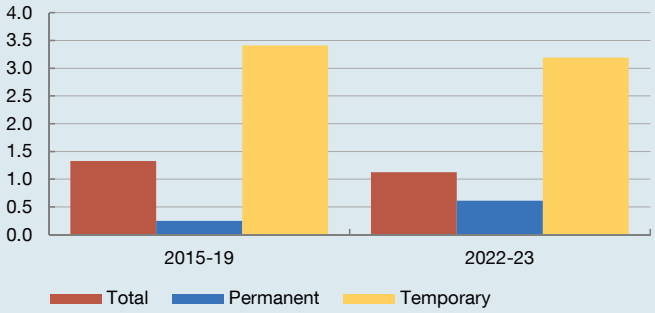


Chart 4
Termination rate, by type of contract
Average monthly terminations as a percentage of the numbers registered with social security (c)

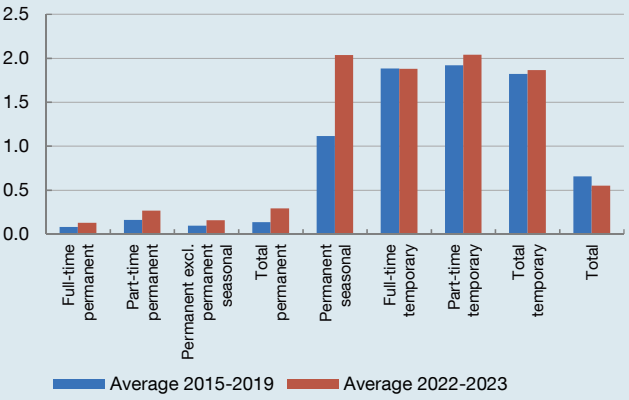


Chart 5
Survival probability of a contract starting in March of each year (d)

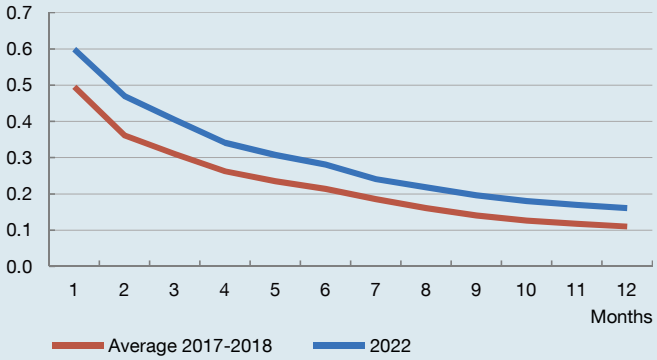
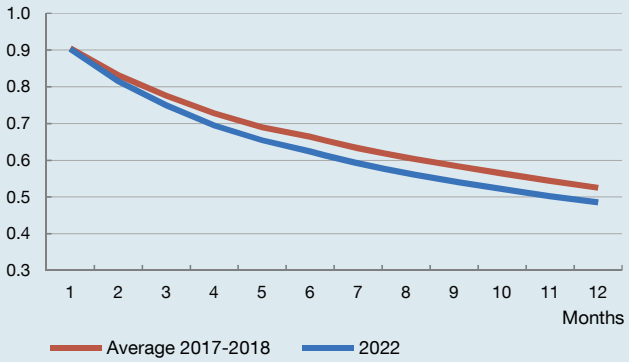


Chart 6
Survival probability of a permanent contract starting in March of each year (d)



SOURCES: INE (EPA), Eurostat (LFS), Tesorería General de la Seguridad Social and Banco de España.

a EPA data for Spain and LFS data for the euro area.
b Data for numbers registered under the General Social Security Regime, by type of contract and working hours.
c Data on hires and terminations for numbers registered under the General Social Security Regime, by type of contract.
d Banco de España calculations drawing on individual records for employment relationships beginning between 2017 and 2022 provided by the Ministry of Inclusion, Social Security and Migration.

Box 3.1
THE RECENT BEHAVIOUR OF THE TEMPORARY EMPLOYMENT RATIO AND OTHER INDICATORS PROXYING JOB STABILITY (cont'd)

permanent seasonal contracts in particular. Specifically, the termination rate for these contracts has increased significantly compared with the period 2015-2019 (see Chart 4). Indeed, the termination rate for permanent seasonal contracts before the reform stood practically midway between that for other permanent contracts and that for temporary contracts. However, since 2022 this rate has almost doubled and is now the same as for temporary contracts. In any event, despite the higher rate of outflows of workers with a permanent contract, their greater job stability compared with that of temporary workers has led to a reduction in the overall outflow rate.

These aggregate turnover figures should nevertheless be taken with caution, as, for example, they do not distinguish between contracts signed before and after the 2021 reform. However, individual information on employment relationships in Spain has recently become available, allowing this analysis to be refined.[3] In particular, the first-year survival rate of contracts starting in March 2022 can be calculated and compared with that of contracts starting in March 2017 and March 2018. The one-year time horizon means that these contracts were not affected by the outbreak of the pandemic. This is a more consistent comparison than that based on aggregate data. However, economic cycle differences between the two periods analysed and labour market shocks in general may affect the new contracts' survival rates. The differences observed cannot therefore be interpreted as being caused by the reform.

Chart 5 shows that 16.1% of all the employment relationships that began in March 2022 were still ongoing a year later. This is a higher survival rate than observed for the contracts signed in March 2017 and March 2018 (11% on average) and in March 2021 (14.9%).[4] Again, the overall survival rate improved despite the deterioration in the survival rate of permanent contracts (excluding permanent seasonal contracts) following the labour market reform. Thus, 48% of the permanent contracts signed in March 2022 were still ongoing one year later, while this percentage was 52.5% on average for permanent contracts signed in March 2017 and March 2018 (see Chart 6).

Overall, both the findings drawing on aggregate data and those drawing on more granular data show that job stability in Spain's labour market increased slightly following the reform adopted in late 2021. This is because, despite the slight increase in job instability in new permanent contracts (especially permanent seasonal contracts), the share of permanent contracts increased significantly compared with that of temporary contracts.

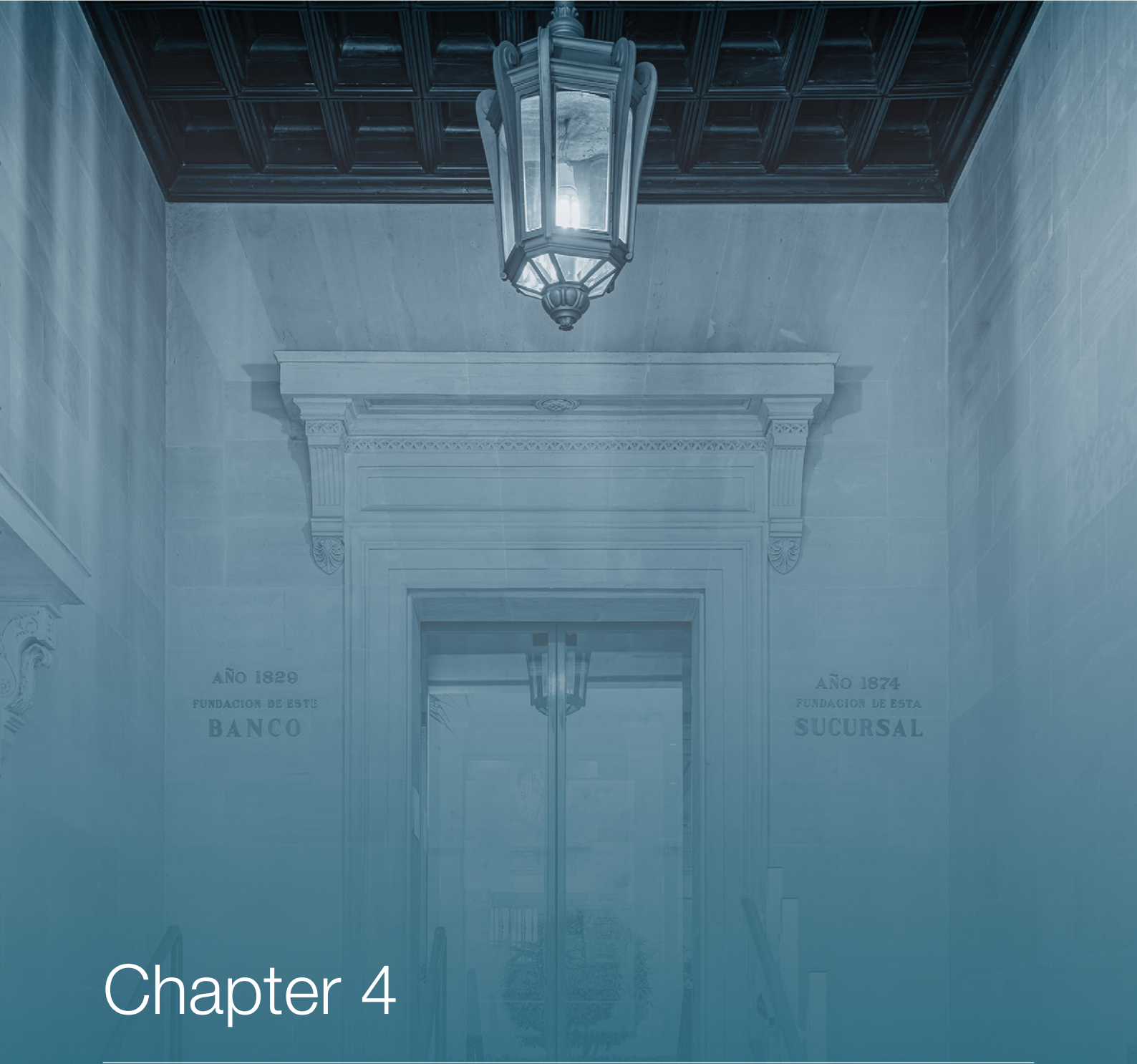
In any event, two aspects should be noted. First, while the Spanish economy's temporary employment ratio has converged significantly with the European average in recent years, other internationally available measures of job stability suggest that there is still room for improvement in this area in Spain. Thus, although outflows from employment into unemployment decreased in Spain from 3.3% of the labour force in the first three quarters of 2019 to 2.8% in the same period of 2023,[5] this percentage is still significantly higher than that observed for the euro area as a whole (1.2%).

Second, as mentioned above, the analysis presented in this box does not provide an assessment of the impact of the 2021 labour market reform because, among other reasons, in order to do so the impact on the Spanish labour market of the multiple shocks to economic activity in recent years would need to be delimited. However, the recent availability of individual information on all employment relationships in Spain will allow a more complete analysis to be carried out in the future, in which these causal impacts could be estimated, for example, based on the asymmetric behaviour observed in the employment relationships of different types of workers and firms.

3 Information is available on each employment contract's start and end dates reported to social security between January 2017 and March 2023, broken down by type of contract, some worker characteristics (age, gender and nationality) and the firm's economic sector and province.

4 Using these granular data, it can also be shown that 80% of the workers who started employment relationships in March 2022 were still employed a year later, whether by the firms with which they established these relationships or by others. This probability is slightly higher than that observed for workers who signed their job contracts in March 2017 and March 2018 (79.2% on average).

5 In Spain outflows from unemployment into employment rose from 23.7% to 25%, a somewhat smaller increase than in the euro area as a whole, while transitions from economic inactivity to employment increased slightly more in Spain than in the euro area.



Chapter 4

The Spanish housing market: recent changes, risks and affordability problems

Banco de España
Annual Report 2023

Contents

Takeaways 210

1 Introduction 211

2 Recent housing market developments 212
- 2.1 The housing purchase market 212
- 2.2 The residential rental market 216

3 The main drivers of the dynamics observed 219
- 3.1 House demand momentum 219
- 3.2 The rigidity of housing supply 226

4 The implications of these dynamics for financial stability 232

5 Housing affordability difficulties 237
- 5.1 Housing affordability for young people 237
- 5.2 Home ownership affordability 239
- 5.3 The rent cost burden 244

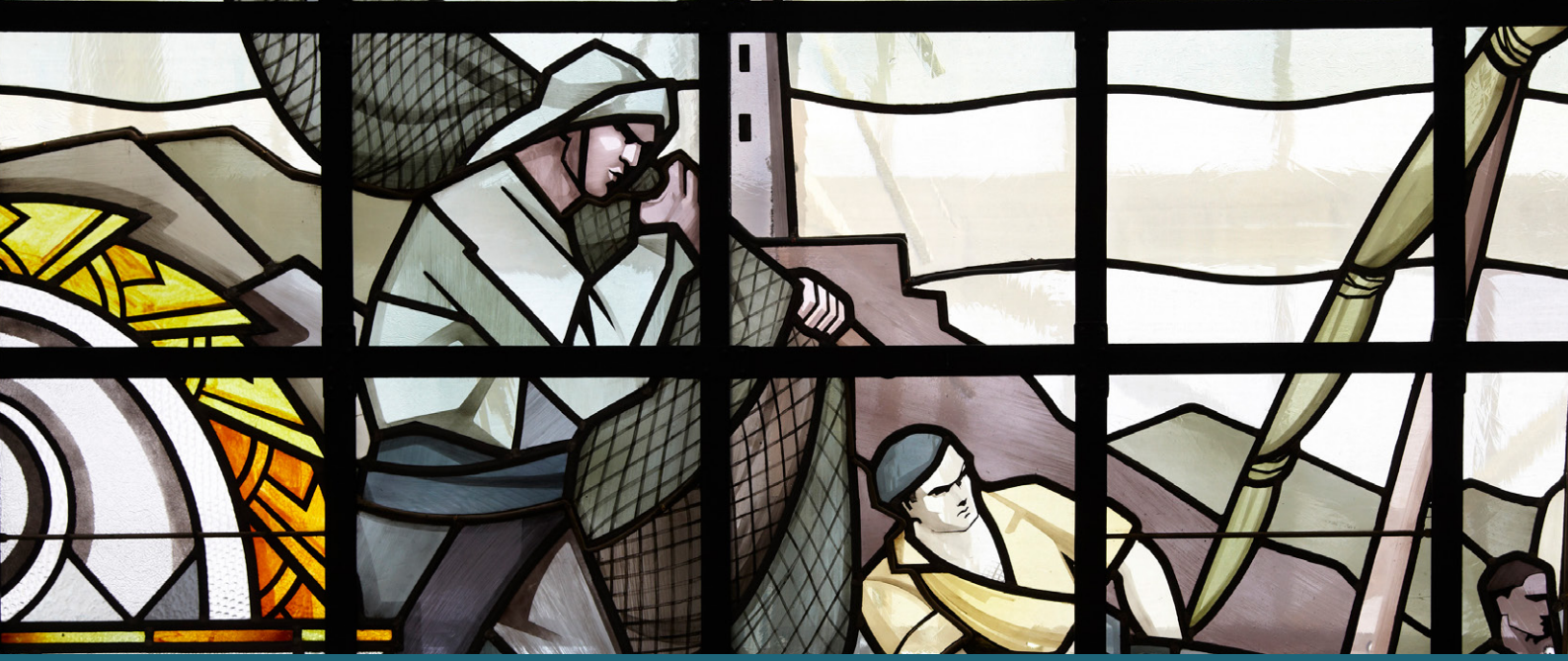
6 Housing affordability: the public policy challenge 248
- 6.1 Economic and social implications 248
- 6.2 Public policies 250
  - 6.2.1 Recent public policy measures adopted 251
  - 6.2.2 A preliminary assessment of the measures adopted on the basis of evidence from the economic literature 253
  - 6.2.3 Possible future measures 255

References 261

Boxes

4.1 The commercial real estate market and its financial stability implications 265

4.2 An analysis of alternative public policies to reduce the problems of housing affordability 269



Chapter 4
Takeaways

— Robust housing demand, along with relative supply rigidity, has resulted in sustained growth in house purchase and rent prices in the Spanish economy since 2014.

— Despite the marked dynamism of activity in the residential housing market, the associated vulnerabilities and risks to financial stability are contained.

— Nevertheless, housing affordability problems have become more pronounced over the last few years, particularly among lower-income households (young people and the immigrant population) and in certain geographical areas (urban and tourist areas).

— The adverse social and economic effects associated with housing affordability difficulties warrant the introduction of economic policy measures that seek to correct them.

— In any event, considering the scale of the problem diagnosed here, it seems unlikely that isolated short-term actions can have sufficient scope to significantly reduce the current difficulties in housing affordability.

— In addition, public policies must be designed to ensure that actions that may have relatively limited effectiveness in the short term do not ultimately have significant unwanted effects that hinder the functioning of the housing market in the medium and long term.

— As such, the measures taken would ideally extend over a long time horizon, involve the different tiers of government with responsibility for housing and focus especially on boosting supply, particularly for the rental market and social rentals.

— Furthermore, these measures should prioritise resource allocation to the most vulnerable groups and consider other aspects that have an impact on the housing market, such as those affecting the functioning of the labour market, economic productivity and tax and transport policies.

1 Introduction

The housing market has an important economic and social function.[1] First, conditions in the housing market, together with those in the labour and credit markets, determine housing affordability for households, in both the house purchase and rental segments. Potential housing affordability problems, in addition to being of considerable social importance, may also generate adverse economic effects. Second, housing market activity plays an important role in the economy, both via employment in the construction sector and residential investment. This, together with the fact that a significant portion of real estate transactions are credit financed, means that the functioning of the real estate market may also have significant implications for financial stability. Indeed, property crises have often been associated with banking crises, such as the one in Spain between 2008 and 2013.

This chapter analyses the situation of the Spanish housing market, including both the house purchase and rental segments. First, the main features characterising recent housing market developments are detailed, as are their possible determinants. This is followed by a review of the associated financial stability vulnerabilities and risks, based on a broad set of indicators. The remainder of the chapter focuses on issues related to housing affordability conditions for households. In particular, it shows how the degree of affordability has changed in recent years, how it compares to other economies, and which groups face greater difficulties in accessing owner-occupied and rented housing. Lastly, there is a discussion of possible lines of action that could be considered to address these problems.

1 This chapter focuses on the residential housing market, except in Box 4.1 which delves into recent developments in the commercial real estate market, both in Spain and internationally, and their implications for financial stability.

2 Recent housing market developments[2]

2.1 The housing purchase market

Housing purchases are markedly robust despite the slowdown observed since 2022 Q4. Among recent developments, foreign purchases and lower recourse to mortgage financing, in the context of tighter financing conditions, stand out. The significant volume of sales coincides with modest new housing production, which is reflected in the containment of real estate supply indicators. Against this backdrop, house prices have shown a sustained recovery since 2014. However, cumulative growth is uneven and is stronger in new housing, large urban areas and tourist areas. The sustained dynamism of house prices in Spain stands in contrast to the recent correction seen in some of the main euro area economies.

— **Volume of house purchases.** The number of house purchases has been falling since 2022 Q4, but remains high and above pre-pandemic levels. House purchases have grown strongly since late 2020, when the mobility restrictions linked to the COVID-19 pandemic were lifted. This growth was underpinned by the pent-up demand from that period and by accommodative financing conditions (see Chart 4.1). As a result, the volume of sales surpassed 700,000 units in 2022, the highest figure since the real estate boom of the first decade of the 21st century. Although the number of transactions has fallen since late-2022, there were around 640,000 housing purchases in 2023, 12% more than in 2019, with average volumes exceeding 50,000 transactions per month.

— **New and second-hand housing purchases**. Housing transactions mostly involve second-hand stock, which accounted for around 90% of the market in 2023. This figure – which stood at 40% in 2008 – rose during the economic and real estate crisis of 2008-2013 before steadying at its current level from 2014 (see Chart 4.1). The prevalence of second-hand housing is partly the result of the accumulation of a large housing stock over the previous decades and a shortage of new housing (see Section 3).[3]

— **Purchases by legal entities.** Housing purchases by legal entities accounted for 10% of the total in 2023, in line with the proportions observed since 2020. These figures are below the annual average of 12% recorded between 2014 and 2019 and well clear of the peaks of around 20% reached between 2012 and early 2014.

— **Foreign purchases.** Housing purchases by the foreign population, both resident and non-resident, account for a significant share of the total, albeit spread unevenly across

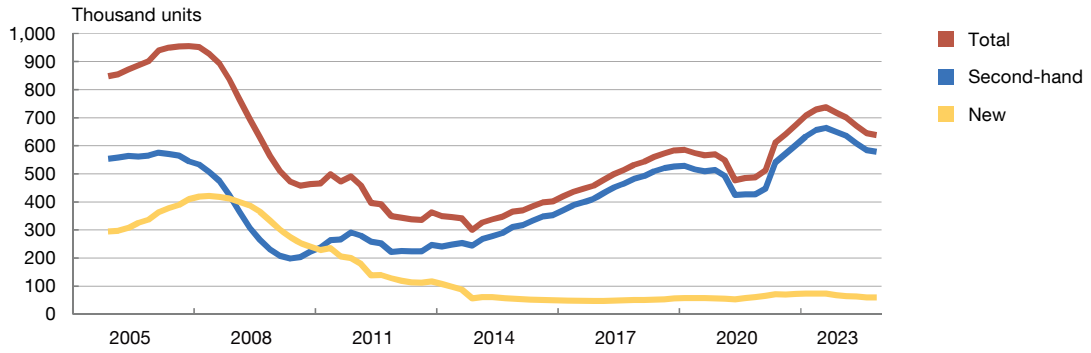
2 For a more detailed analysis of recent developments in the Spanish residential housing market and how they compare with previous cycles, see Lájer, López-Rodríguez and San Juan (2024). See also Khametshin, López-Rodríguez and Pérez (2024) for a description of developments in the housing rental market.

3 Among European economies, Spain has one of the highest ratios of houses per 1,000 inhabitants, with around 550 residences compared with the EU27 average of 500 and the average of 470 for Organisation for Economic Co-operation and Development (OECD) countries (OECD, 2024).

Chart 4.1

House purchases have fallen recently, although they remain high from a historical perspective and are especially strong in the second-hand market

4.1.a House purchases (a)



SOURCE: Ministerio de Transportes y Movilidad Sostenible.

a Cumulative 4-quarter data.

DOWNLOAD

geographical areas. These transactions reached their all-time high in 2022, at 134,000 units, a figure that dropped to around 125,000 in 2023, which was 19.3% of the total, in contrast with 7.1% in 2007. The largest shares of foreign purchases are seen in tourist areas, such as the islands and along the Mediterranean coast. This can be explained by the high demand for second homes from non-residents.

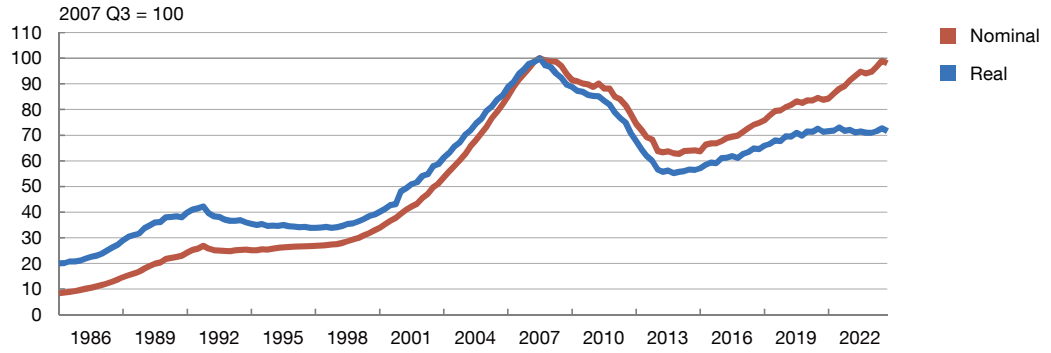
— **Real estate supply indicators.** Consistent with the low share of new housing transactions, real estate supply indicators are relatively subdued, by historical standards. In particular, new building permits, employment in construction and residential investment stand below the figures recorded in previous upturns and below those of the euro area as a whole. Specifically, in 2023 residential investment in Spain stood at 5.7% of GDP, below the euro area's 6.1% and below the annual averages around 6.5% recorded in the 1980s and 1990s. There were around 110,000 new building permits in 2023, well below the 320,000 annual average of the 1990s and the 550,000 annual average of the first decade of the 21st century. Since 2020 H2 the construction sector has accounted for around 6.5% of total employment, below the annual average of 9.1% in the 1980s and 1990s and the 12% seen during the boom of the 21st century's opening decade (for more details, see Sections 3 and 4).

— **Debt-financed housing purchases.** Recourse to mortgage financing has declined since the start of monetary tightening in late 2021. Specifically, around 45% of transactions in 2023 were financed by new mortgages, some 10 percentage points (pp) less than in 2021. This share has fluctuated in recent decades, depending, among other factors, on the ease of access to credit. It fell from 60% in 2007 to 30% in 2013, coinciding with the economic and banking crisis during which banks significantly tightened the credit supply. Following the economic recovery that began in 2014, the share of mortgage-financed purchases rose, growing to 55% in 2021 as access to bank lending improved. The subsequent decline in this

Chart 4.2

Average house prices have recovered notably since 2014, although in real terms they stand more than 28.5% off their 2007 peak

4.2.a House prices (a)



SOURCE: INE.

a Real house prices are deflated by the consumer price index. Latest data: 2023 Q4.

DOWNLOAD

percentage could be linked to two factors: i) the tightening of financing conditions, which has resulted in tighter lending standards and a significant increase in the cost of financing; and ii) growth in the share of purchases by non-residents using alternative funding sources. Nevertheless, in spite of the fall relative to 2022, in 2023 the flow of new mortgage credit and the number of new residential mortgages were 16% and 4%, respectively, above their 2019 levels. At the same time, lower leveraging and prudent credit standards are apparent in new mortgages (see Section 4).

— **House prices.** In 2023 Q4, the year-on-year growth rate of average house prices in Spain was 4.2%. This increase continues the upward trend in prices in recent years, which has led them to accumulate, on average, a nominal appreciation of 56% since early 2014 (see Chart 4.2). However, these prices are still 2% below their 2007 peak. In real terms, the revaluation since 2014 Q1 is close to 30%, although real prices in late 2023 were, on average, 28.5% below the maximum levels observed in 2007.

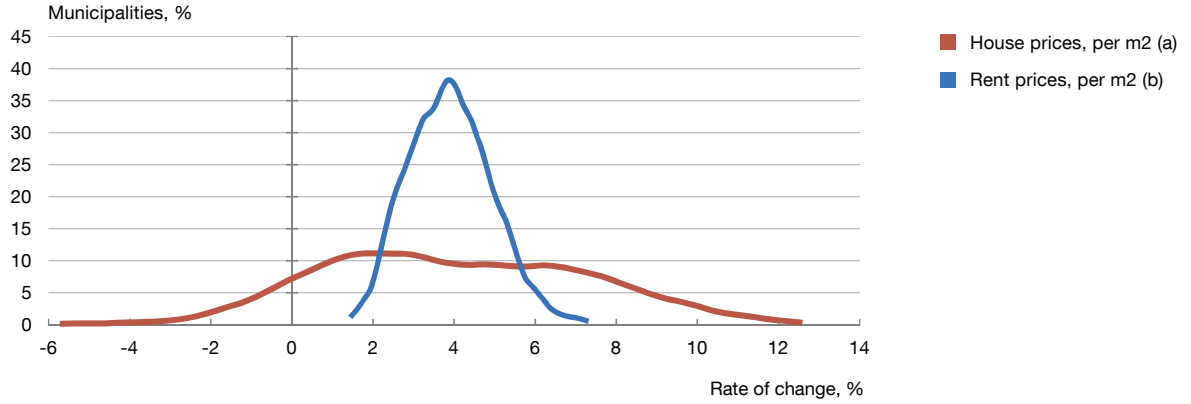
— **New and second-hand house prices.** Price growth is highly uneven between new and second-hand housing. In the new housing segment, prices are growing faster, with a year-on-year increase in 2023 Q4 of 7.5%, compared with a 3.6% rise for second-hand housing. As a result of this difference, real average prices of new housing were 6% below their 2007 peak at end-2023, while real average prices of second-hand housing were around 37% short of theirs.

— **Geographical variation in house prices.** Higher price increases are observed in urban areas with greater growth in activity and in areas with higher populations and more tourist activity (see Section 3). These differences are also reflected in a significant dispersion in

Chart 4.3

Considerable geographical heterogeneity (at municipality level) in house price growth, compared with less dispersion in rent price growth

4.3.a Distribution of average annual growth in house prices and rent prices. Municipalities with more than 50,000 inhabitants



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

a Rate of change calculated for open-market house purchases between the start of the aggregate house price recovery in 2013 and 2023.
b Rate of change calculated for the stock of rented housing owned by private individuals between the start of the aggregate rent price recovery in 2014 and 2022 (latest year available). Municipalities in Navarre and the Basque Country are not included since information on rental prices is not available for those regions.

DOWNLOAD

average annual house price growth since 2013 between the largest municipalities, with declines even observed in areas experiencing depopulation (see Chart 4.3).

— **The residential housing market in the global context.** The housing markets of the main advanced economies recovered strongly in the aftermath of the global financial crisis and were highly buoyant following the COVID-19 pandemic. This was reflected in very robust cumulative growth in house prices. For example, euro area-wide house prices in mid-2022 were 40% higher than their 2007 level (10% higher in real terms).[4] In the United States, the United Kingdom and Japan, nominal prices grew in that same period by 75%, 50% and 25%, respectively (30%, 10% and 20% in real terms). However, the tightening of monetary policy in most of these economies, which began in late 2021 in response to persistent inflationary pressures, has led to a degree of correction in real estate activity and house prices that has been particularly intense in those economies whose valuation indicators showed more marked signs of imbalances. Indeed, real house prices in the euro area have fallen since 2022,[5] and there are even significant cumulative falls in nominal prices from their peaks in 2022 to 2023 Q4 (latest available figures) in Germany (-13%), France (-4%) and the Netherlands (-2%).

4 Cumulative price growth between 2007 and mid-2022 was 100% in Germany, 60% in the Netherlands and 30% in France. However, nominal aggregate prices did not reach the highs of 2007 in Italy and Spain.

5 In the euro area as a whole, real prices decreased from the beginning of 2022 to 2023 Q4 by around 10%, with falls of around 20% in Germany, 13% in the Netherlands, 10.5% in France and 6% in Italy, compared with a slight increase of 0.5% in Spain. Real house prices have also fallen by 6% from their 2022 peaks in the United Kingdom and Canada, while gradually recovering (rising by 2%) in the United States.

2.2 The residential rental market[6]

The size of the rental market has grown significantly since the economic crisis that began in 2008. However, this growth has been uneven across population groups and geographical areas. The largest increases in tenant households have been observed among lower-income households and, in particular, among young people. By geographical area, municipalities in large urban areas and tourist areas have experienced the most growth in both market size and prices. This expansion is taking place in a rental market dominated by private individuals and small-scale landlords and with a notably small share of social rentals. In this regard, it should be noted that the significant increase in the rental housing supply has been countered by the higher pressure exerted by demand, as the result of a partial shift from the purchasing segment (see Section 3). This imbalance has driven sustained increases in rent prices since 2015. These increases stem mainly from the prices of new houses entering the market and rental contract renewals.

— **Rental market size.** The rental market showed marked growth in 2023, rising to around 3.6 million main residences,[7] accommodating 18.7% of households (INE 2024a). This is an estimated increase in the rental housing stock of 1.3 million homes over its 2007 level, with a cumulative increase in the size of this market of more than 50%. The growth in renting is explained by its rise among younger households (see Chart 4.4), and its predominance among the foreign-born population, both groups in which lower-income households are concentrated. This development has contributed to Spain's gradual convergence towards the EU27 average, although the proportion of home ownership in 2022 was still higher in Spain (75% versus 65%).

— **Distribution of ownership in the rental market.** The Spanish residential rental market is characterised by the prevalence of private landlords and small-scale landlords, with a relatively low share of legal entities and landlords with more than ten properties. Specifically, main market rent residences owned by private legal entities represent an estimated 8% of the total, while individuals account for 92%.[8] The recent surge in buy-to-let investments by individuals partly explains this market structure. In particular, households increased their holdings of rental housing at an annual average rate of over 100,000 units between 2012 and 2022. In addition, individual landlords who own or have usufruct over more than ten properties appear to account for 7% at most of all market rent properties in common fiscal territory (i.e. all Spanish regions excluding the Basque Country and Navarre).[9] At the same time, the share of social rental housing is very low, with an estimated 300,000 units (1.5% of main residences).

— **Geographical heterogeneity in rental market size.** The regions with a higher share of rental housing in 2023, whether market or below-market rents, are Madrid (23.7%), Catalonia

6 This section does not include tourist rentals, which are discussed in Section 3.

7 Some 3 million of which are market rents, while the remainder are below-market rents (including social and affordable housing rentals and homes under the old rent control system).

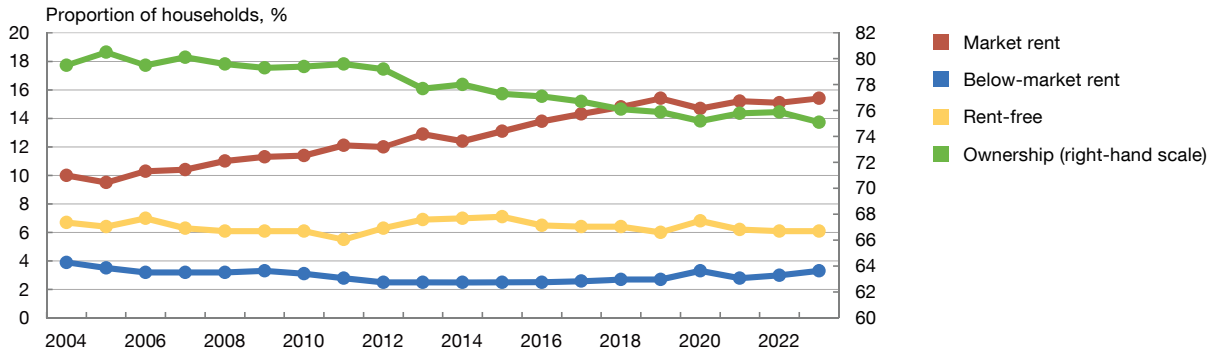
8 Own estimates based on the information provided by the Tax Studies and Statistics Service of the Tax Agency (AEAT, by its Spanish acronym) and by the Official Statistics Institute (INE, by its Spanish acronym) in the 2021 Population and Housing Census, the Living Conditions Survey and the Continuous Population Statistics.

9 Estimations made by the Tax Studies and Statistics Service of the AEAT for 2021 (latest data available).

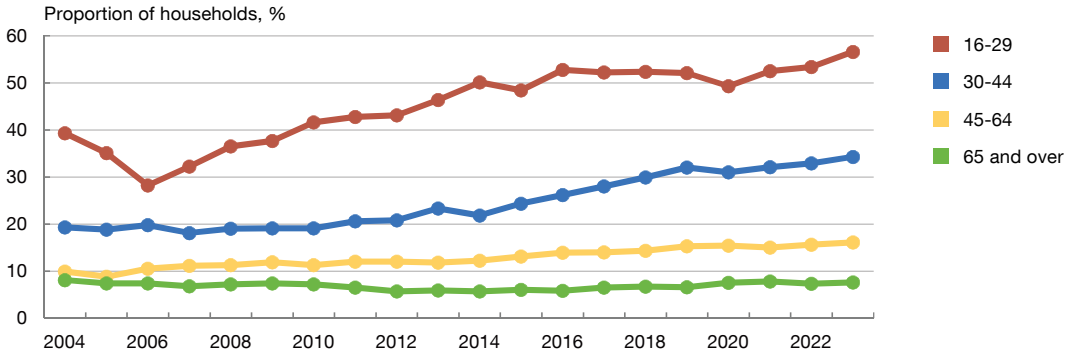
Chart 4.4

The proportion of households living in rented dwellings has grown markedly in the last decade, driven by this market's growing share among young people

4.4.a Tenure status of main residence



4.4.b Households living in rental housing, by age group (a)



SOURCE: Living Conditions Survey (INE 2024).

a Rentals include both market rents and below-market rents (e.g. social housing rentals and the old rent-control system).

DOWNLOAD

(24.9%), the Canary Islands (28.5%) and the Balearic Islands (30.9%), compared with a national average of 18.7%. At the same time, according to the 2021 Population and Housing Census, the median ratio of rented main residences in municipalities with more than 50,000 inhabitants stood at 17.2% in 2021. Among the provincial capitals, however, the rental housing stock exceeded 30% in Girona and Barcelona[10] and stood at around 25% in Madrid and Palma de Mallorca, compared with figures below 10% in Huelva and Jaén.

— **Rental prices.** Since 2015, when they reached their lowest levels, rents have accumulated sustained increases. Between 2015 and 2022, the cumulative average growth rate of rental income per square metre for the rental housing stock was more than 28.5%.[11] These increases are primarily the result of higher rents for new homes entering the market and

10 In the central districts of Barcelona, the percentage of rental housing ranged from 35% to 50% in 2021.

11 According to the State benchmark system for residential rental prices (Ministry of Housing, 2023) and own estimates based on the information provided by the AEAT Tax Studies and Statistics Service.

price increases in rented homes when new contracts are agreed. Specifically, between 2015 and 2022, the average annual price increase of new rental contracts is estimated to be between 7% and 8%.[12] By way of comparison, over the same period, house prices rose by an annual average of 6% in nominal terms. The indicators available for 2023, based on the statistics for asking rents published by the real estate portals, also appear to point to a marked dynamism in rent prices for new contracts in recent months. In particular, the year-on-year change in asking rents, which may serve as a proxy for the increase associated with new contracts, stood between 6% and 10% in late 2023, depending on the real estate portals consulted.

— **Geographical heterogeneity of rental price growth.** The average annual growth between 2015 and 2022 in rents in larger municipalities shows a more limited dispersion than does the increase in average house prices (see Chart 4.3). This can be partly explained by the fact that annual updates to rental contract prices are dependent on benchmarks, such as the consumer price index (CPI). However, rent prices have risen significantly in certain regions: i) along the Mediterranean coast in areas with significant tourism activity; ii) in the central districts of large cities; and iii) in some municipalities on the edge of large urban areas.[13] Such strong growth in rent prices in large urban areas has also been observed in the major advanced economies over the past decade and has resulted, for example, in high rent prices for houses, rooms and studio apartments in the major European cities and those popular with tourists.[14] In the United States, growth in new rental prices was a contributor to the recent inflationary episode, with rents remaining buoyant in large US cities.[15]

12 Annual updates of existing contracts grow at more moderate rates in line with the rental consumer price index.

13 For example, between 2015 and 2022, cumulative growth in rent prices per square metre stood at more than 50% in the city of Valencia and in Estepona, and at more than 40% in Málaga, Palma de Mallorca, Ibiza, Torremolinos and Alicante. The urban area of Barcelona recorded cumulative growth of between 35% and 40%. For more details, see Khametshin, López-Rodríguez and Pérez (2024).

14 See the International Rent Index compiled by HousingAnywhere and the Index of Private Housing Rental Prices, UK compiled by the UK Office for National Statistics.

15 See Adams, Loewenstein, Montag and Verbrugge (2022) and the Zillow Observed Rent Index.

3 The main drivers of the dynamics observed

3.1 House demand momentum

Since 2016 demographic growth has been a key factor in explaining the rise in demand for both owner-occupied and rental residential housing. This growth is largely explained by significant net external migration, which has intensified since 2022, contributing to a substantial increase in net household formation. These new household flows are concentrated in certain regions and in the main urban areas, where the largest price increases in owner-occupied and rental housing are observed. The increase in the demand for a main residence has also been accompanied by the strength of demand from non-residents, whether for owner-occupied or rental (but mainly seasonal) housing. The surge in demand for housing arose in a relatively favourable macroeconomic setting, especially in terms of employment and with financial conditions that remained loose until monetary tightening started in late 2021. In addition, banks seem to have maintained prudent credit standards when extending mortgage loans. This, together with the house price and labour market dynamics, appears to have contributed in recent years to a notable shift in demand for housing among the lower-income groups from the purchase segment to the rental segment, which was particularly intense in the case of young people, who have higher rates of unemployment and part-time work, along with weaker cumulative wage growth.

— **Population growth.** Resident population growth is an important driver of demand for owner-occupied and rental housing through new household formation. In recent years, substantial growth in net household formation has been observed in Spain, from 50,000 in 2015 (the lowest figure recorded since 1980) to provisional figures in excess of 275,000 new households per year on average in 2022 and 2023 (see Chart 4.5). Although these demographic projections are highly uncertain, they point to significant net household formation over the coming years that will continue to boost housing demand. In the short term the projections point to a net increase of around 220,000 households per year for the period 2024-2026, while in the medium term an increase of around 120,000 per year is estimated over a 10-year horizon.[16] The main factor underlying this growth (recently and in the near future) in the number of residents and households is the increase in net external migratory flows – particularly sharp in 2022 and 2023 – which offsets the negative natural population growth and the net outflows of Spaniards abroad.[17]

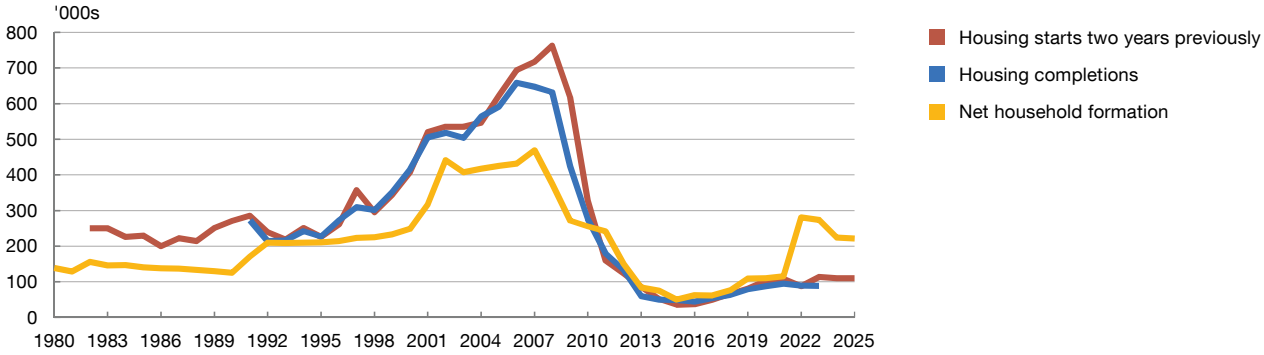
— **Average size of new households.** The demand for housing also increases owing to a progressive reduction in average household size, which in Spain was 2.5 persons in 2023, compared with 2.86 in 2001 and 3.59 in 1981 (INE, 2023a). This trend is also observed in the euro area as a whole, where the average household size in 2022 was estimated at 2.2 persons

16 These forecasts relate to the household projections statistics and the projections published by the INE in October 2022.

17 Spain's population has increased by close to 2.2 million people since 2016, with 50% of this increase concentrated in 2022 and 2023. The number of foreign-born residents has increased by around 2.9 million, while births in Spain have fallen by approximately 700,000.

Chart 4.5
Since 2022, new housing production has lagged well behind demographic dynamics

4.5.a Housing starts two years previously, housing completions and net household formation (a)



SOURCES: Banco de España, INE and Ministerio de Transportes y Movilidad Sostenible.

a Latest data observed: 2023 Q4. Net household formation to 2021 is based on the census and continuous registers published by the INE, while for 2022 and 2023 the figures are the average annual change in households (based on quarterly data from the INE's Continuous Population Statistics). Net household formation for 2024 and 2025 corresponds to the latest household projections published by the INE in October 2022.

DESCARGAR

(European Commission, Eurostat, 2023). A more in-depth analysis of these data shows an increase in the dispersion of the number of members per household over the last decade. Thus, in Spain, households with five or more members have increased, but, notably, so have one-person households, in part influenced by population ageing.[18] These changes have implications regarding the type of housing in demand, for instance, in terms of size.

— **Geographical heterogeneity in net household formation.** The autonomous regions where net household formation and the increase in demand for residential housing are concentrated are the most highly populated ones. Specifically, the Catalonia, Madrid, Andalusia and Valencia regions, which represented 58% of the stock of households in 2021, account for around 70% of the new households formed in 2022-2023 and of the projected increase for 2024 and 2025 (see Chart 4.6). This concentration is largely explained by the demographic growth dynamics in the five provinces where more than 50% of new households reside (Málaga, Alicante, Valencia, Barcelona and Madrid).

— **Population concentration in urban areas.** In recent years, population growth has tended to concentrate in urban areas[19] (see Chart 4.7). Specifically, between 2014 and 2022 (the latest available figure), the population in urban areas grew by 4.2% vis-à-vis an aggregate increase of 3.1%. This change was driven by growth in the suburbs (6.1%), which accounts for 65%

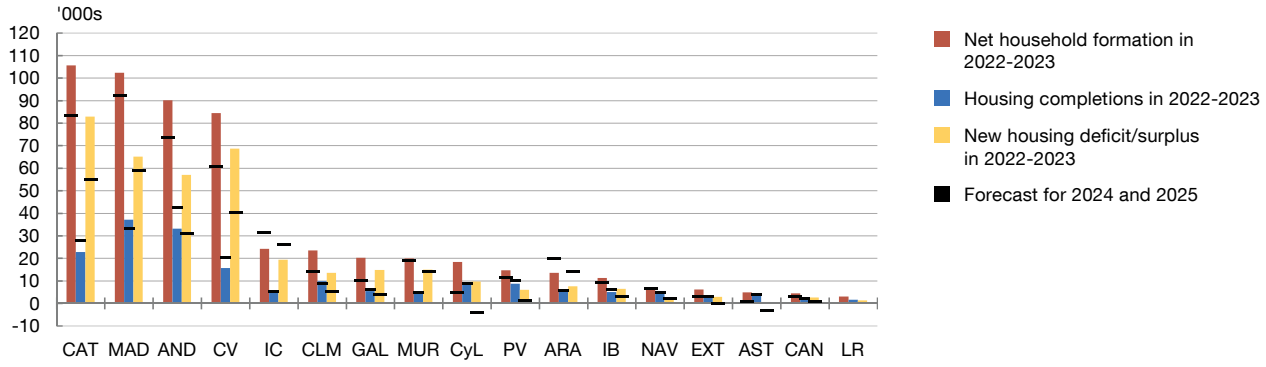
18 The increase in households with five or more members between 2011 and 2021 is estimated at around 200,000 (INE, 2023a), while the increase in one-person households since 2011 exceeded 1.2 million at 1 January 2024 (INE, 2023b).

19 Throughout this chapter, the term "urban area" refers to the functional urban area (FUA) concept. According to Eurostat, an FUA consists of a densely inhabited city and a less densely populated commuting zone whose labour market is highly integrated with the city. In Spain, 70 FUAs were defined in 2023, which account for nearly 68.5% of the population. For more methodological details, see European Commission, Eurostat (2019).

Chart 4.6

The lower buoyancy of housing completions relative to net household formation has led to a new housing deficit since 2022, concentrated in certain regions

4.6.a New households and housing completions in 2022 and 2023, by region



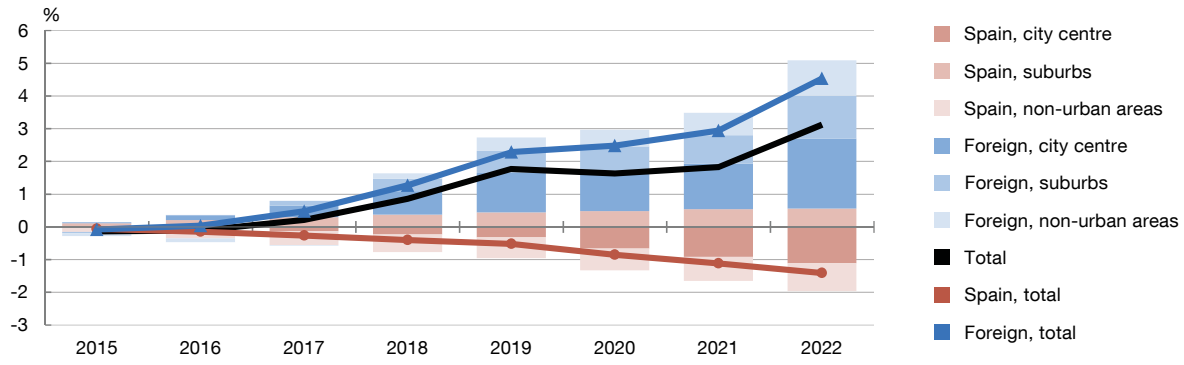
DOWNLOAD

SOURCES: INE, Ministerio de Vivienda y Agenda Urbana and Banco de España.

Chart 4.7

Net external migration is driving demographic growth, particularly in urban areas

4.7.a Contributions to cumulative population growth since 2014, by country of birth and area of residence



DOWNLOAD

SOURCES: INE (Padrón Continuo and Censo Anual de Población) and Banco de España.

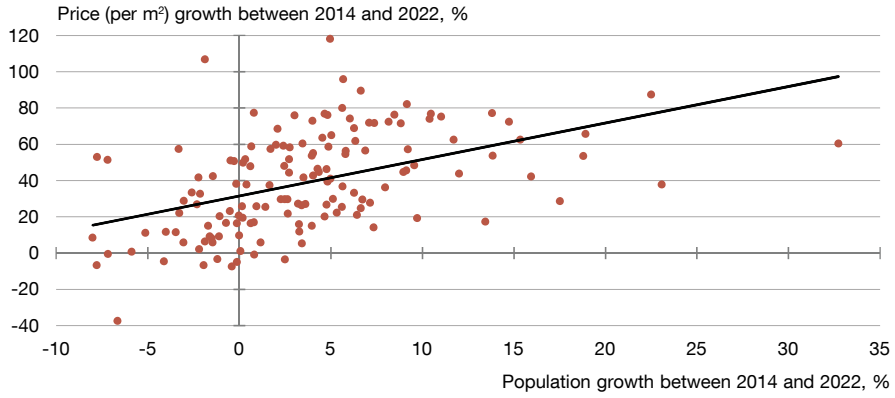
of the population increase in urban areas. However, outside these areas the population declined until 2018, after which it recovered somewhat until 2022, when the 2014 levels were exceeded by 0.8%.[20] The breakdown by nationality evidences that the foreign-born population has grown across all the geographical areas considered, although more in urban areas, with growth figures between 2014 and 2022 of around 1 million inhabitants in the city centres and over 600,000 in the suburbs. Conversely, during this period, citizens born in Spain contributed to the decline in population, with falls of more than 500,000 inhabitants

20 For a more detailed analysis of recent spatial population distribution dynamics in Spain, see Banco de España (2021).

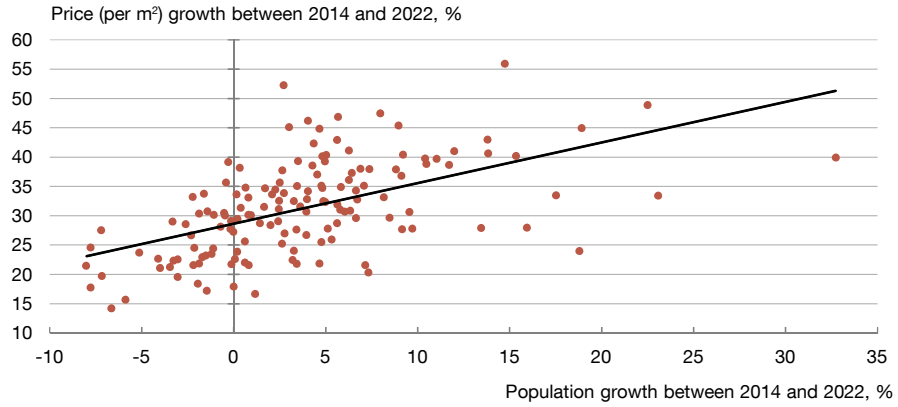
Chart 4.8

The municipalities with the strongest population growth have recorded the sharpest increases in house and rental prices

4.8.a Cumulative growth in house prices and the population. Municipalities with more than 50,000 inhabitants



4.8.b Cumulative growth in rental prices and the population. Municipalities with more than 50,000 inhabitants (a)



SOURCES: INE and Banco de España using data from the Colegio de Registradores and the AEAT Tax Studies and Statistics Service.

a Municipalities in Navarre and the Basque Country are not included since information on rental prices is not available for those regions.

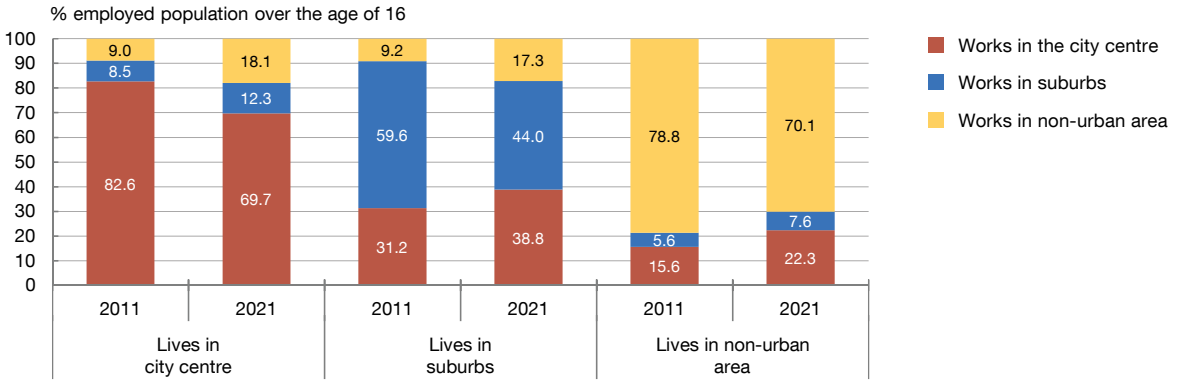
in the city centres and increases of around 250,000 in suburban areas. The latter suggests that Spaniards are moving from the city centres to the suburbs, in an environment of higher house prices in the centres of large cities. By contrast, foreign-born individuals seem to have substantially increased their relative presence in city centres. Given their lower average income levels and the high real estate prices in the main cities, they tend to live in rented housing and, in the most recent period, increasingly in shared rentals and rented rooms.

— **Demographic growth and real estate prices.** The differences in demographic dynamics across geographical areas are one of the main determinants of the uneven growth in owner-occupied and rental house prices in recent years. Indeed, as shown in Charts 4.8.a and 4.8.b, there is a strong positive correlation between population growth and the rise in purchase and rental prices from the start of the economic recovery in 2014 to 2022 (latest available data). This evidence seems to point to some relative rigidity in the supply of

Chart 4.9

Increase in the proportion of workers living and working in different areas, driving up mobility and the need for transport infrastructure

4.9.a Composition of the employed population by place of residence and of work



SOURCE: INE, Censo de Población y Viviendas, 2011 and 2021.

housing to accommodate the increase in demand that has arisen, to a large extent, as a result of demographic developments.

— **Real estate prices in congested urban areas.** Congestion in the main urban areas influences the demand for housing and exerts upward pressure on prices. First, there is a high population density in city centres and the population is gradually concentrating in urban areas.[21] The international evidence suggests that these urban developments are associated with higher purchase and rental prices. This is especially so when (both urban and metropolitan) public transport infrastructure fails to increase the scale of cities and improve mobility within metropolitan areas. Second, congested urban development increases the relative cost of living in city centres[22] and lengthens commute time. In Spain, these costs seem to have risen over the past decade owing to population growth and greater labour mobility within urban areas (see Chart 4.9). This growth in potential users does not appear to have been accompanied by a sufficient increase in investment in metropolitan transport.[23]

— **Demand from non-residents.** The demand for housing by foreign non-resident citizens contributes to rising owner-occupied and rental house prices. The largest share of house purchases by non-residents is observed in the Balearic Islands, the Canary Islands and Valencia, with figures ranging between 20% and 25% of all purchases in 2023 (see Chart 4.10). This demand is characterised by non-residents' high purchasing power in

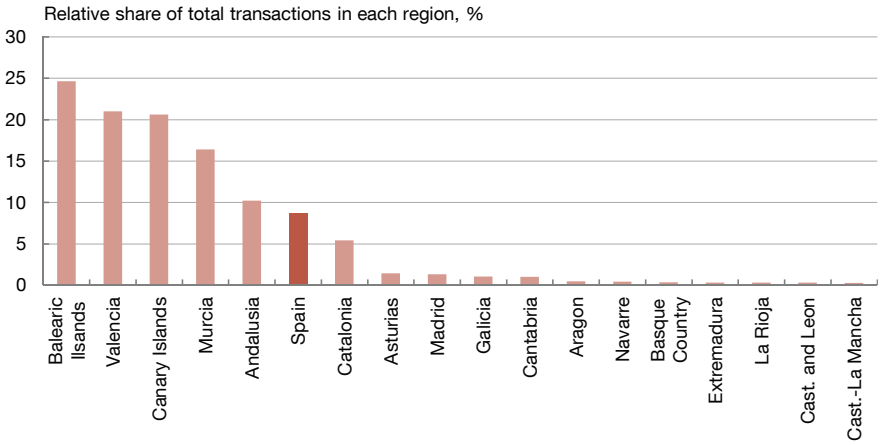
21 Banco de España (2021) and Banquet, Delbouve, Daams and Veneri (2022).

22 Forte-Campos, Moral-Benito and Quintana (2021) estimate that the cost of living indices in Madrid and Barcelona are, on average, around 20% higher than those observed in other Spanish cities, with house prices contributing significantly to these higher costs. Thus, wage premia associated with residing in large cities are significantly squeezed when wages are measured in terms of purchasing power parity.

23 In this connection, the Independent Authority for Fiscal Responsibility (AIReF, by its Spanish acronym) points to an insufficient investment effort in urban area (especially local) transport infrastructure (AIReF, 2020).

Chart 4.10
House purchases by non-resident foreigners are mainly on the Mediterranean coast and the islands

4.10.a Purchases by non-resident foreigners, by region. 2023



DOWNLOAD

SOURCE: Ministerio de Transportes y Movilidad Sostenible.

relative terms, as the higher average price of transactions of this kind tends to show. For example, in 2023 H1 (the latest available figures) the average price per square metre of dwellings purchased by non-residents and residents was €2,600 and €1,600, respectively. Meanwhile, foreign citizens play a significant role in the increase in tourist and seasonal rentals, which is reducing the residential use of housing in certain areas, thus contributing to rising rental prices in areas under housing pressure (see Section 3.2).

— **Impact of the macroeconomic situation and the labour market situation.** Favourable macroeconomic developments since 2014 have supported the cyclical recovery of the home ownership and rental market. In particular, during this period employment and real gross disposable income per capita grew steadily. This favourable trend was only temporarily interrupted during the peak of the COVID-19 pandemic and, in the case of real income, also during the surge in inflation between 2021 H2 and 2022 H1. Thus, at end-2023 employment was 19.2% above the figures recorded at end-2013, while real gross income per capita was 12.8% higher. However, these favourable developments at the aggregate level in the labour market are highly uneven across groups (see Chapter 3). In particular, workers with lower skills and less work experience are those with the highest rates of unemployment and part-time work, and weaker wage growth. These facts are related to shortfalls in business productivity and the Spanish economy's human capital endowment, resulting in the existence of vulnerable groups with lower income levels (most notably young people) where the problems of access to housing are concentrated (see Section 5).

— **The impact of monetary policy.** Financial conditions have been a significant driver of changes in the demand for home ownership in the recent period. The economic recovery initiated in 2014 was accompanied by loose financial conditions linked to an expansionary monetary policy. These financial conditions boosted demand for housing by both final

homeowners and buy-to-let investors. The monetary policy tightening which started at end-2021 seems to have helped contain the demand for home ownership since then, as access to financing became more expensive and the expected return on some alternative financial assets improved.

— **The attractiveness of investment in buy-to-let property.** In recent years, many private investors have been attracted by rental profitability and the expected appreciation of house prices since their recovery in 2014. The gross rental yield (GRY) [24] for the average stock of rental housing stood at around 5.5% per year in the period 2015-2022, while the GRY at the start of the rental contract reached around 7% per year during this period.[25] It should be emphasised that the GRY is not adjusted for the risk implicit to leasing nor does it take into account rent-associated expenses which, as reported by individuals in their personal income tax returns, seems to reduce profitability by around 2 pp. The ex post GRY obtained by a private investor with a buy-to-let dwelling (which, aside from the rent, includes capital gains associated with house price growth) appears to have stood at 10.5% per year on average in the period 2015-2022.[26] By way of comparison, the average annual nominal gross yield over the same period of 10-year government bonds, bank deposits and the IBEX 35 average, including dividend payments, stood at 1.2%, 0.3% and 6.8%, respectively.[27] In net tax terms, it should also be borne in mind that there is a favourable tax treatment of rental income from individuals' main residence vis-à-vis higher effective tax rates on, for instance, other rental income or the double taxation of dividends.[28] These yields, compared with financial asset yields, contribute to explaining the surge in buy-to-let investments by natural persons who do not professionally engage in real estate, to the point that this group already accounts for over 90% of the rental market in Spain (see Section 2).

— **The impact of credit conditions.** Changes in credit conditions applied by banks have also impacted housing demand through their effect on households' ability to access financing. The evidence indicates that, following the 2008 financial and real estate crisis, and partly as a result of the regulatory and supervisory changes introduced in response thereto, banks have applied prudent credit standards that have prevented the build-up of imbalances such as those that led to the 2008-2013 real estate and banking crisis (see Section 4). This prudence in mortgage lending is reflected in the decline in (i) the proportion of house value that is financed with mortgage loans, (ii) the average loan-to-

24 The GRY is calculated as the ratio of annual average rent to average house price, in square metre terms, for the economy as a whole. GRYs are calculated drawing on data provided by the Tax Studies and Statistics Service of the Tax Agency and the Association of Registrars.

25 Khametshin, López-Rodríguez and Pérez (2024).

26 This ex post yield is the result of the dividend obtained as rental income and the unrealised capital gain associated with the appreciation of the dwelling. This nominal yield has been reduced in real terms by annual average CPI growth during the period of 1.8%.

27 In 2023, with average annual inflation of 3.5%, the yields of these alternative investments stood at 2.9% in the case of 10-year bonds, and 2.6% for bank deposits (see Summary Real Estate Indicators). The index calculated by BME is used to calculate the cumulative dividend yield of the IBEX 35 from early 2023 to end-2023, which stood at 20.6%.

28 The rental income earned by individuals is generally subject to a 50% reduction in the case of contracts entered into before 2024. A 60% reduction applies in the case of contracts in force until termination.

house price ratio and (iii) the share of household income devoted to payment of the initial loan instalment (see Section 4). This change in credit conditions, along with other factors, appears to have contributed to a notable shift in housing demand towards the rental segment, which was underdeveloped. This is especially true in the case of young people (see Section 5), which is the group with the highest share of rented housing in recent years (see Chart 4.4).

3.2 The rigidity of housing supply

The lacklustre housing supply in the recent period, compared with the robustness of demand, has significantly underpinned house purchase and rental price growth. Against this backdrop, the mobilisation of second-hand residential housing has been instrumental for absorbing some of the strength in demand and limiting the surge in prices. By contrast, the contribution of new housing to aggregate supply has been more limited, owing to, among other factors, the scarcity of build-ready land,[29] construction workforce shortages, rising production costs, and difficulties in acquiring and developing new urban land available for construction. The rigidity of housing supply in the short term is also explained by a low house renovation capacity, empty houses not matching current household preferences, regulatory uncertainty and the rise of alternative housing uses, such as holiday or seasonal rentals.

— **The housing stock.** It is estimated that in 2023 the aggregate housing stock was around 27 million units, of which 19.3 million (72% of the total) were main residences. The remaining stock of available housing, around 7.5 million, is used for different purposes, such as second homes, and tourist and seasonal rentals. As described in this section, new housing for residential purposes has lost momentum in recent years, leading to a significant number of second-home conversions into main residences. At the same time, the emergence of new house uses, such as for holiday purposes (whether on an owner-occupied or rental basis) and the surge in alternatives, such as seasonal and room rentals, have contributed to weaker growth in the supply of traditional residential housing. The recent regulations that have restricted tourist rentals in some areas and those that have provided greater protection for low-income tenants (see Section 6) could contribute to shifting the housing supply to these alternative uses. In particular, rapid growth is observed in the weight of seasonal rentals (commonly lasting between 1 and 11 months), which appears to have a laxer regulatory framework that is more favourable for owners.[30] The housing stock as a whole is growing at a slower pace than demand for its main uses.

29 Throughout this chapter "build-ready land" will be understood to be urban land in development areas available for construction (building plots). Build-ready land belongs to the category of consolidated land that does not require any urban transformation, and also includes urban land under development. In a previous phase, urban land is classified as unconsolidated and includes plots that require urbanisation processes for future development and construction. Urban land is land included in a municipality's urban development plans and that has some basic urban services (e.g. water, sanitation, electricity and road transport).

30 Estimates based on data drawn from real estate portals show strong growth in seasonal rentals in 2023, with figures accounting for around 10% of the total supply of rental housing, with ratios exceeding 30% in San Sebastián and Barcelona. The data for Barcelona indicate that in mid-2023 the supply of dwellings for tourist and seasonal rentals already accounted, overall, for around 45% of the supply of residential rental housing (Observatori Metropolità de l'Habitatge de Barcelona, 2023).

— **The mismatch between the supply of and demand for owner-occupied and rental housing and its impact on prices.** Since 2021 there has been a substantial reduction in the differential between supply, resulting from aggregating the volume of new and second-hand housing announced in the real estate portals, and demand for housing, as approximated by the volume of transactions. There is evidence that this fall in excess supply is positively correlated with house price growth, both at the aggregate level and across geographical areas.[31] At the same time, rental price dynamics in large cities suggest that the notable increase in the stock of privately owned rental housing in recent years (see Section 2.2) seems to have been insufficient to absorb the larger relative increase in demand.

— **New housing supply.** The number of new houses completed declined abruptly after the 2008 real estate crisis, in a setting in which significant excess housing production had built up relative to household formation. The number of homes completed declined from its peak of 650,000 per year between 2006 and 2008 to a low of 45,000 units in 2016. Since then, the number of completed homes has slowly recovered, stabilising, from 2021, at around 90,000 units per year (see Chart 4.5).[32] This volume is significantly lower than the net household formation figure relating to 2022 and 2023, which is unprecedented in the history of the Spanish real estate market, in which the gross supply of new housing has traditionally grown more than household formation.[33]

— **The new housing shortfall.** The differential built up in 2022 and 2023 between net household formation and new housing production was approximately 375,000 units. Also, in 2024 and 2025, the projections of net household formation, along with the volume of current housing starts that will be completed during this period, will give rise to an additional shortage in excess of 225,000 homes (see Chart 4.5).[34]

— **Geographical heterogeneity in the new housing shortfall.** The shortage of new housing is particularly intense in the regions with the highest population growth and tourism activity (see Chart 4.6). For instance, new housing could meet close to 40% of the potential demand from new households in the period 2022-2025 in Spain as a whole. This figure falls to below 20% in the Canary Islands and to between 25% and 30% in the Catalonia, Valencia and Murcia regions.

— **The role of the stock of unsold housing.** The existence of a large stock of unsold new housing could help explain the lacklustre supply of new housing up to 2018, but not in the

31 San Juan (2023).

32 In the euro area, excluding Spain, around 1.2 million house building permits were issued in 2022. This is 25% less than in 2007 but 35% more than in 2014, when the recovery started. In the main euro area economies, the percentage of residential building permits relative to the total euro area is 33.7% in France, 23% in Germany, 9.1% in Spain and 4.7% in Italy.

33 The excess supply observed since 1980 has reflected, in part, the existence of an amortised volume of dwellings and the demand for second homes.

34 The figure for housing starts in 2022 and 2023 is used to approximate the volume of homes that will be completed in 2024 and 2025 given the estimated average construction time in Spain. In calculating the housing shortage, only the demand by resident households is considered, while purchases by non-resident foreigners are not.

most recent period. The accumulation of unsold new housing during the real estate boom of the first decade of the 21st century raised the stock of these dwellings to 650,000 units in 2009. This figure declined progressively, stabilising at around 450,000 homes in 2018, a figure representing 2.3% of the stock of main residences in 2023.[35] Despite the surge in demand, this stock has not declined since then. This could indicate a mismatch between such dwellings and current household preferences. Thus, other factors, analysed below, seem to have contributed to a larger extent to the lacklustre supply of new housing in recent years.

— **The shortage of land available for construction.** The evidence indicates that both purchase and rental real estate prices have tended to grow more in municipalities with a lower relative availability of build-ready land (see Chart 4.11). This lower availability may be due to physical factors, such as the lack of land (as a large portion of the available land has already been built on), but also to various general government decisions and the development sector's risk-taking capacity. Specifically, regional and local governments are initially responsible for determining the degree of development and urban planning of a territory. Thereafter, different administrative procedural formalities and investments are needed to effectively create buildable land that can be used for construction. The speed and degree of certainty with which these procedural formalities are carried out substantially influences this process. Also, together with other factors, it affects the development sector's expected return on the purchase and development of new urban land for construction.

— **Cost and availability of factors of production.** The increase in the supply of housing may have been limited in recent years by the rise in construction costs and the shortage of skilled labour. Indeed, 55% of the businesses in the construction industry that participated in the Banco de España Business Activity Survey (EBAE, by its Spanish acronym) reported at end-2023 that the labour shortage had a negative impact on their activity. Meanwhile, the ageing of construction workers and the lack of vocational training weigh on the sector's productivity. The labour shortage is also reflected in an increase in total labour costs per worker of 11.2% between 2019 and 2023, which is higher than that for the industrial sector (10.5%), but lower than the increase in the services sector (14.9%). Moreover, these increases are in addition to a nearly 30% rise in the costs of materials over the same period.

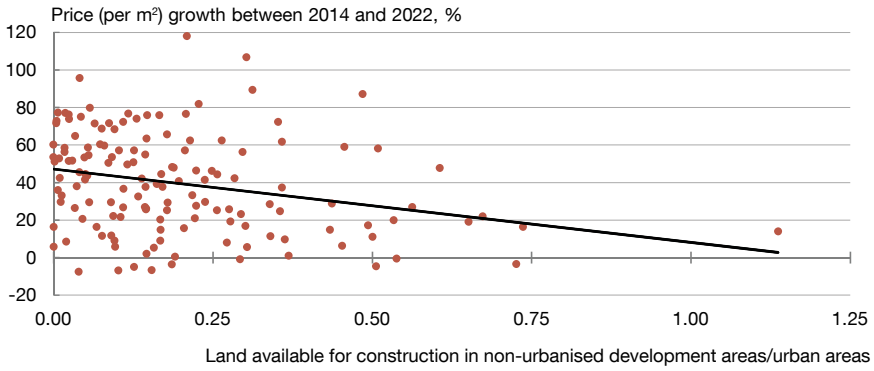
— **Residential real estate financing.** The construction of new housing also seems to be influenced by the lack of investments in the acquisition and development of new urban land. The high uncertainty associated with the profitability of these investments and the limitations to the availability of funding for these activities might also contribute to this shortage. Specifically, the financing of this activity with own funds accounts for less in Spain than in other advanced economies and it has not increased significantly following

35 The number of unsold new dwellings in a given year is calculated on the basis of the difference between the number of homes completed (approximated by the number of building completion certificates) and the number of new house purchases whose data are available from 2004. The stock of unsold new housing is, therefore, the build-up of this measure since early 2004.

Chart 4.11

House prices and rents tend to rise most sharply in municipalities with less land available for construction (a)

4.11.a Cumulative growth in house prices and available land. Municipalities with more than 50,000 inhabitants



4.11.b Cumulative growth in rental prices and available land. Municipalities with more than 50,000 inhabitants (b)

SOURCES: Ministerio de Vivienda y Agenda Urbana and Banco de España using data from the Colegio de Registradores, the Catastro and the AEAT Tax Studies and Statistics Service.

a The ratio of available land is calculated in relation to urban land in 2014. Land available for construction in development areas corresponds to the latest figure available for the period analysed.
b Municipalities in Navarre and the Basque Country are not included since information on rental prices is not available for those regions.

the global financial crisis. Nor has an increase in international investment in this field been observed. Thus, investment with own funds has not been able to offset the limitation in access to credit of projects for these purposes with low credit quality. These limitations were justified owing to the need to avoid an excessive build-up of risks in this segment[36] and are consistent with the regulatory[37] and supervisory changes in this field after the global financial crisis, and with banks' prudent practices. The insufficiency of new

36 In the years leading up to the 2008-2013 real estate crisis, the build-up of risks in Spain's real estate market was excessive. As a result, the ratio of non-performing loans for firms engaging in real estate activities and construction was close to 40% in 2013. However, the non-performing ratio for this loan portfolio is currently low (4.3% at end-2023).

37 The evidence available internationally suggests that the adoption of the Basel III regulatory standards increased banks' resilience and reduced systemic risk, with no adverse effects on the aggregate credit flows having been identified (Basel Committee on Banking Supervision, 2022).

investments by the private sector seems to be especially significant in build-to-rent activities (since the cost of capital for these activities, with a greater associated risk, is higher) and in the social rental housing segment (where failure to periodically update the module price, against a background of increasing production costs, exerts downward pressure on developers' expected returns).[38]

— **The role of housing renovation.** The contribution of home renovations to the increase in the supply of housing is relatively modest in Spain. Thus, home renovation permits stood at around 25,000 in 2023, slightly lower than the average for the past decade and below the renovation ratios observed in the large European economies.[39] In this connection, the Spanish Recovery, Transformation and Resilience Plan (RTRP) aims to boost home renovation to increase the supply of residential housing. Specifically, the renovation of more than 500,000 homes is envisaged over the RTRP application period, with the aim of reaching 300,000 renovated homes per year by 2030. The expected revitalisation of this activity could be hampered by the shortage of skilled labour and the location of some empty homes requiring renovation in areas of lower demand.

— **The role of empty housing.** A priori, the capacity to increase the supply of housing by mobilising empty homes seems to be relatively limited, since they are largely concentrated in areas with less demographic buoyancy.[40] For instance, in municipalities with fewer than 10,000 inhabitants, where 20% of the population lives, 45% of homes are empty. By contrast, in cities with more than 250,000 inhabitants, empty homes account for 7.5% of the total housing stock (and 10.5% of the national stock of empty homes), i.e. around 400,000 units. Although mobilising these homes could contribute to increasing supply, a significant proportion of them is in poor condition, with suboptimal accessibility or very low energy efficiency, thus requiring prior renovation.

— **Tourist rentals.** In recent years, the surge in holiday rentals appears to have somewhat reduced the potential supply of housing available for residential use, albeit highly unevenly across geographical areas. The share of the holiday rental activity in the overall residential market is modest, with the estimated ratio to total main residences standing at 1.8% (340,000 homes).[41] However, it already accounts for nearly 10% of the rental market. This activity is concentrated in the main tourist areas in certain urban areas (such as Málaga, Marbella, Elche and Palma de Mallorca) and in the central districts of the major cities with the most tourist activity (Barcelona, Madrid, Seville and Valencia) (see Chart 4.12).[42]

38 The module price determines the maximum value at which subsidised housing (for purchase or rent) may be offered. Many regions have frozen their module prices in recent years, but some regions have announced that they will be updated.

39 The annual ratio of renovated housing stood at 2% of the housing stock in France, 1.5% in Germany and 0.8% in Italy, compared with 0.1% in Spain.

40 A home is classified as empty when its electricity consumption is below a minimum threshold. For further details, see INE (2023b).

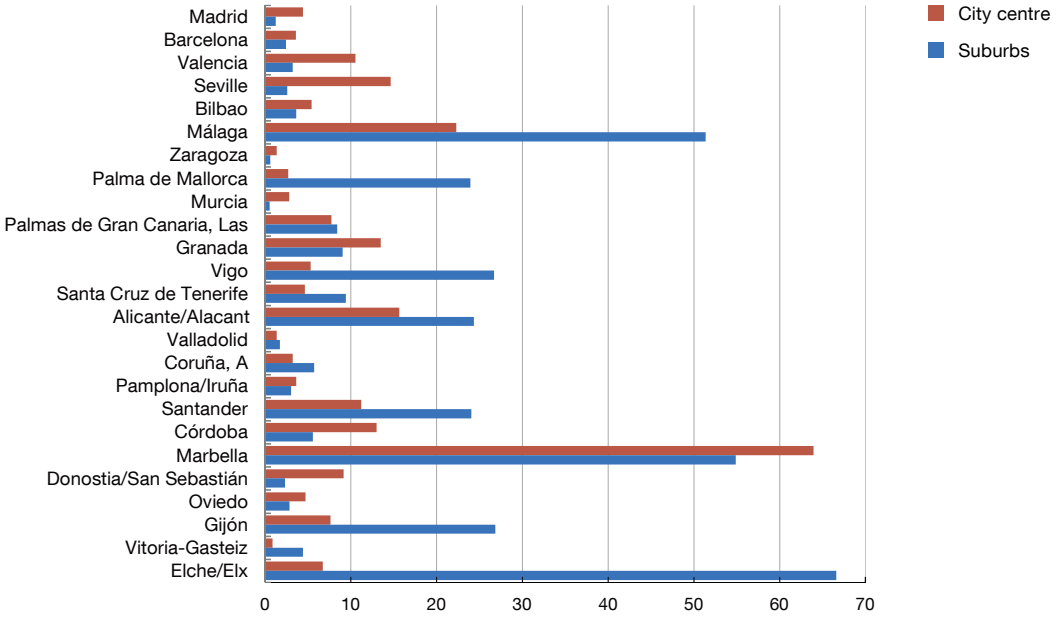
41 Experimental Statistic. Measurement of the Number of Tourist Dwellings in Spain and their Capacity.

42 For instance, in the census sections falling in the quintile with the highest share of tourist rentals in a city, this activity accounted for between 13% and 90% of the rental housing stock in the city of Valencia. Another example is that the number of tourist rental units was 1.5 times higher than the number of residential rental dwellings in some census sections of central Seville. For more details, see Khametshin, López-Rodríguez and Pérez (2024).

Chart 4.12

Tourist rentals account for a considerable share of housing in certain urban areas and in the central districts of major cities with the most tourist activity

4.12.a Tourist rentals as a share of total rental housing in the 25 largest urban areas, % (a)



SOURCES: INE and Banco de España.

a Calculated as the ratio of tourist housing in August 2023 to the latest figure available for the number of residential rental houses at municipal level (Population and Housing Census 2021).

DOWNLOAD

According to the economic literature, neighbourhoods in which there is a greater presence of tourist rentals (displacing residential housing) experience larger relative increases in house purchase and rental prices.[43]

43 In the case of Barcelona, García-López, Jofre-Monseny, Martínez-Maza and Segú (2020) estimate that rental and purchase prices increased by 7% and 17%, respectively, in the areas located in the highest decile of the distribution of Airbnb activity. In Los Angeles, Koster, Van Ommeren and Volkhausen (2020) estimate that tourist rentals through Airbnb led to a 15% increase in housing prices near areas with the most tourist activity.

4 The implications of these dynamics for financial stability

On balance, the indicators used by the Banco de España to monitor the vulnerabilities and risks to financial stability associated with the housing market suggest that the risks are contained. For instance, according to the latest data, the Banco de España's synthetic indicator of risks to financial stability[44] stands at around 0.32, signalling a moderate risk level (see Chart 4.13). By way of comparison, this indicator was above 0.6 during the real estate boom of the early 21st century, peaking at close to 0.9 in 2007, just before the real estate crisis. Conversely, it followed a downward path in the period 2008-2013, posting a low of 0.25 in late 2013. In any event, aside from this synthetic index, the Banco de España's risk analysis is also based on the individual monitoring of a broad set of indicators covering the following aspects: i) housing market activity, ii) the volume and status of credit, iii) credit standards for new loans, iv) the financial position of households, and v) house valuation. The status of each of the main indicators is discussed below. Box 4.1 examines the risks to financial stability associated with the commercial real estate market.

— **Indicators of house price imbalances.**[45] Given the difficulties in estimating long-run equilibrium house prices, the Banco de España uses several alternative methodologies and presents the results as ranges. The resulting indicators, based on the latest data (for 2023 Q4), point to moderate house price overvaluation in the economy as a whole (see Chart 4.14). In particular, in 2023 Q4 the average indicator stood close to the equilibrium level and well below the overvaluation levels reached during the mid-2000s real estate boom.[46]

— **Indicators of house price developments under adverse scenarios.** These indicators, based on quantile regressions, serve to estimate the potential fall in house prices at different horizons under adverse scenarios of varying severity.[47] On the latest information, under an adverse scenario equivalent to the 10th percentile of the price distribution (i.e. the level below which the 10% most adverse scenarios lie), average house prices would decline by 5.2% over a one-year horizon and by 9.4% over a two-year horizon. These falls are similar to those historically observed for that percentile over the same horizons (4.8% and 8.5%, respectively). All of which suggests that, at present, the downside risks to house price developments are moderate as compared with the historical average.

— **Indicators of real estate activity.** In terms of housing transactions and building permits, the activity indicators point to a slowdown in housing market dynamics in the most recent

44 For more details on the methodology used, see Alves, Broto, Gil and Lamas (2023).

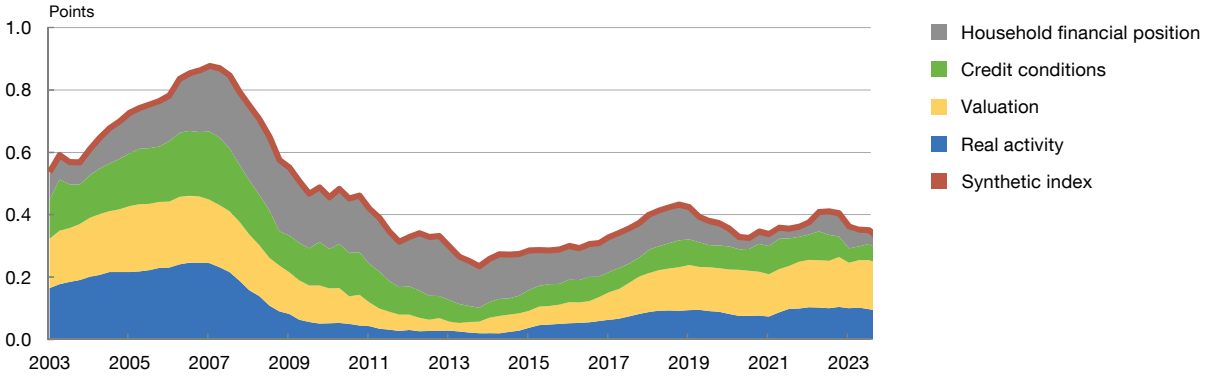
45 These indicators are regularly presented in Chapter 3 of the Banco de España's Financial Stability Report. For further methodological details, see Castro, Estrada and Martínez (2016), and Martínez and Maza (2003).

46 It is important to note that these overvaluation indicators do not take into account some relevant variables, such as demographics and certain supply-side factors. As discussed in Section 3 of this chapter, these drivers have played a significant role in Spanish house price dynamics in the most recent period.

47 For more details on the methodology used, see Ganics and Rodríguez Moreno (2022).

Chart 4.13
The synthetic risk indicator currently stands at a moderate level

4.13.a Synthetic index of housing market vulnerabilities and risks (a)



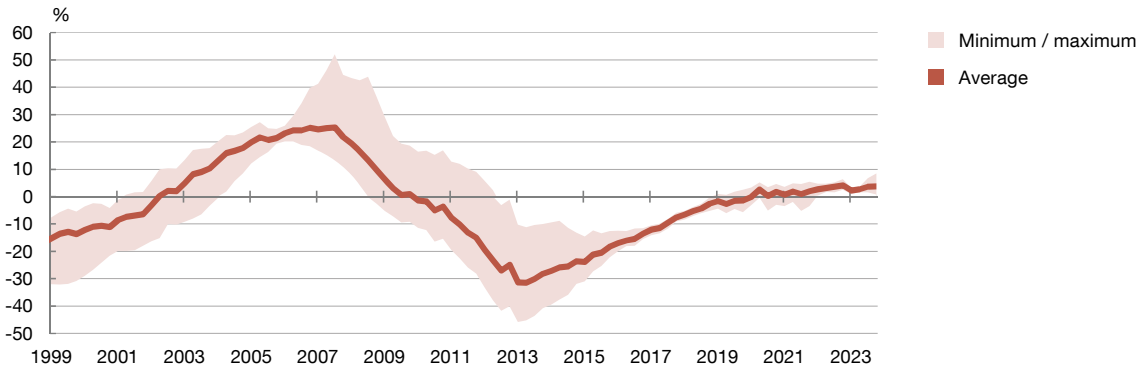
SOURCE: Banco de España.

a Synthetic indicator summarising the individual housing market indicators. These individual indicators refer to metrics proxying the financial position of households, credit conditions (such as the volume of mortgage lending and credit standards) and developments in housing prices or supply and demand indicators (for more information, see Alves, Broto, Gil and Lamas (2023)). The synthetic index takes a value between zero and one. Higher (lower) values indicate higher (lower) imbalances.

DOWNLOAD

Chart 4.14
The indicators of house price imbalances point to a moderate level of overvaluation

4.14.a Indicators of house price imbalances (a)



SOURCE: Banco de España and INE.

a The shaded area represents the minimum and maximum values of four indicators of house price imbalances. Data updated at December 2023.

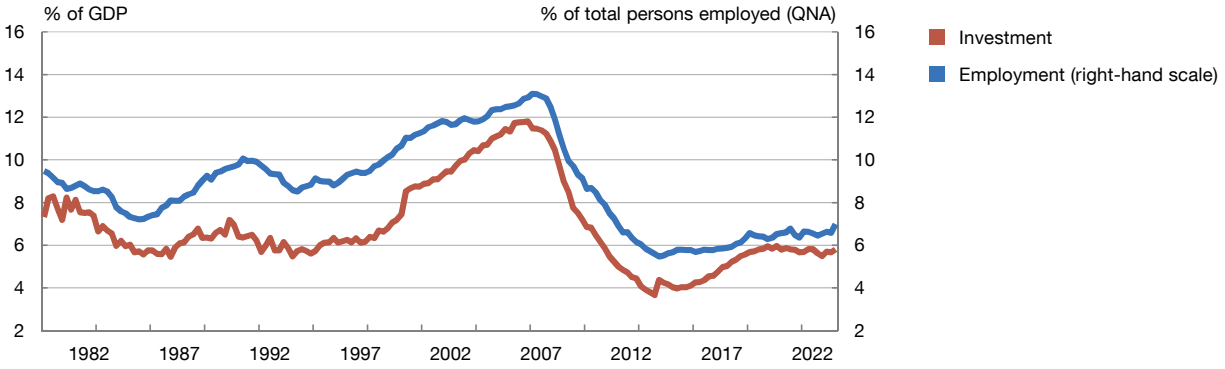
DOWNLOAD

period. Further, there are no indications of the real estate market becoming oversized. For instance, both the share of the construction sector in total employment and the ratio of residential investment to GDP currently stand at low levels, especially by historical standards (see Chart 4.15.a).

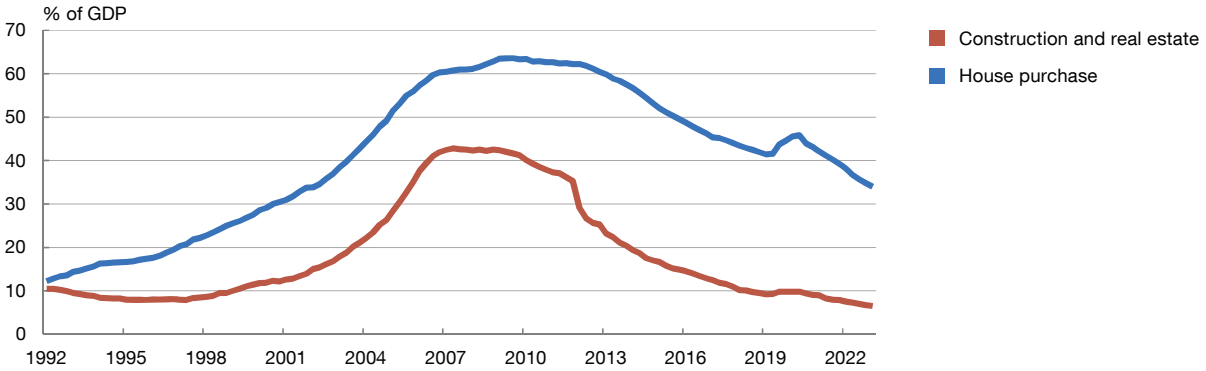
— **Real estate credit developments.** Nor have any warning signs been observed in relation to the credit market. In particular, since 2022 there has been a drop in new loans for house

Chart 4.15
No indications of the real estate and mortgage markets becoming oversized

4.15.a Residential investment and employment in the real estate market (a) (b)



4.15.b Outstanding stock of credit, by purpose



SOURCES: Banco de España and INE.

a Seasonally adjusted series. Latest data: 2023 Q4.
b The employment data refer to the construction sector, excluding real estate development.

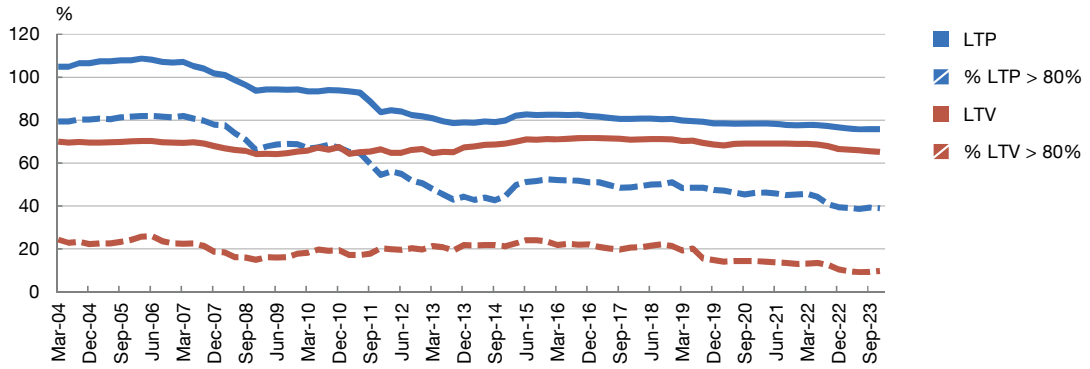
DOWNLOAD

purchase, together with a contraction in the outstanding stock of such credit to its lowest levels (in GDP terms) since 2003 (see Chart 4.15.b). Meanwhile, the outstanding stock of loans for real estate construction and development (as a percentage of GDP) is at its lowest point for the last 30 years. As for the credit quality of banks' real estate exposures, again, there are no indications of a significant deterioration. For instance, despite rising in recent months, at end-2023 the non-performing loan ratio for mortgage loans stood at moderate levels by historical standards (2.6%, compared with the average of 3.5% in the period 2007-2023).

— **The financial position of households.** Household balance sheets have improved somewhat over the last few years. In particular, there has been a decline in the ratio of household debt to disposable income, which in 2023 Q4 stood at its lowest level since mid-2002. This came in step with a recovery in household wealth. Meanwhile, the saving rate climbed to 13.1% in 2023 Q4 (the latest figure available), above the average for the period 2000-2023 (9%).

Chart 4.16
Mortgage lending standards in relation to house prices and the value of mortgage collateral remain at prudent levels

4.16.a Loan-to-price (LTP) and loan-to-value (LTV) ratios (a)



SOURCES: Banco de España, Colegio de Registradores, Central de Información de Riesgos (Banco de España) and INE.

a The LTP ratio is the ratio of the mortgage principal to the house purchase price. The LTV ratio is the ratio of the mortgage principal to the appraisal value of the house. The average values of these ratios are weighted by the capital of each mortgage and are calculated for new mortgages. The LTP>80% and LTV>80% series show the percentage of loans extended in each quarter with LTP and LTV ratios, respectively, of over 80%.

DOWNLOAD

However, as indicated in the Banco de España's latest *Report on the financial situation of households and firms,* these relatively favourable overall dynamics are consistent with lower-income households and those with lower saving capacity finding themselves in a vulnerable position.

— **Credit standards related to collateral and maturity.**[48] Broadly speaking, these credit standards are at prudent levels. For instance, the average ratio between the loan amount and the transaction price (loan-to-price (LTP) ratio) for new mortgages stood at around 75% in 2023 Q4 (see Chart 4.16). This ratio has decreased slightly since mid-2021, by around 2.5 percentage points (pp), having held relatively stable at close to 80% since 2013. Likewise, the average ratio between the loan amount and the value of the mortgage collateral at origination (loan-to-value (LTV) ratio) stood at around 65% at end-2023, while the proportion of riskier loans (those with an LTV ratio above 80%) was low (around 9.5% in 2023). As for the share of new mortgages with maturities of more than 30 years, the most recent data also indicate prudent practices. Specifically, this share stood at 30% at end-2023, after holding relatively steady at around 45% in the period 2013-2020.

— **Indicators of loan repayment capacity based on borrower income.** Again, these indicators stand at prudent levels, although some deterioration has been observed in the most recent period. The loan-to-income (LTI) ratio for new mortgages, which captures the relationship at origination between the principal amount of the loan and borrower income, has held steady in recent years. At the same time, the share of mortgages with a ratio above 5 (considered

48 The figures in this paragraph and the next one refer to new lending rather than the overall stock of outstanding mortgages.

a high value) has tended to decline. Conversely, the median debt-to-income (DTI) ratio, which measures debt service costs as a share of borrower income, has risen since 2022, mainly as a result of higher borrowing costs. Likewise, the share of new mortgages with a DTI ratio of over 30% (the level below which default risk is considered low)[49] has increased to 25%. Despite this, the share of new mortgages considered riskier stands at prudent levels and well below the figures of over 50% observed in the period 2002-2008.[50]

49 Beyond this gross income threshold, the probability of mortgage default rises. For a median income level bearing an effective income tax rate of 15%, this threshold is equivalent to around 35% of net household income.

50 Galán and Lamas (2019).

5 Housing affordability difficulties

This section analyses the extent to which there are housing affordability difficulties in Spain, both for buyers and renters. The indicators available show that such difficulties have become more pronounced over the last few years, particularly for certain types of households and in certain geographical areas. By cohorts, housing affordability poses greater challenges for lower-income households and those with scant saving capacity, groups that include a high proportion of young people and foreign residents. By geographical area, the difficulties are most acute in areas that are more economically buoyant and those with higher levels of tourism. Conversely, the proportion of mortgaged households overburdened by their housing costs is low. This appears to reflect, at least in part, sound selective lending by banks, which only extend credit to households that have sufficient savings and income relative to the price of the property. By contrast, the percentage of renter households that are overburdened by their housing costs is very high, above the EU27 average. Lower-income households, which cannot afford home ownership, face high rental costs, partly on account of the problems in the functioning of the housing market.

5.1 Housing affordability for young people

— **Leaving the family home.** The age at which young people move out of the family home has been steadily rising since 1980 (see Chart 4.17). In the period 2008-2022, of the main European countries, Spain recorded the largest increase in the proportion of young people aged 18-34 living in the family home (see Chart 4.18.a). Specifically, 65.9% of Spanish people in this age bracket still lived at home in 2022, up by around 13 pp on 2008 and 16 pp above the EU27 average.[51] This high ratio and its marked increase in recent years are an indication of growing housing affordability problems – whether to rent or to buy – for a cohort that also tends to have worse labour market conditions. In 2022, just 12.5% of young people aged 18-34 in Spain rented their homes, compared with 52.5% in Germany, 35.5% in France and the EU27 average of 20%. At the same time, in 2022 the share of young home owners in Spain (around 17.5%) was similar to that in Italy and in France, but higher than in Germany (around 13.5%).

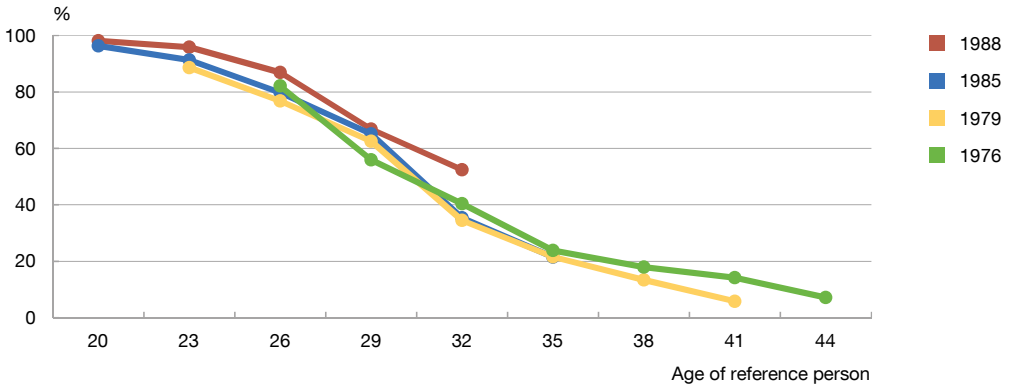
— **Rented housing among young people who have left the family home.** In 2022, 48.5% of Spanish households with a reference person aged 18-34 were not homeowners (see Chart 4.18.b). This ratio was around 3 pp above the EU27 average, having increased sharply in Spain over the last decade. However, it remained below the levels observed in the main euro area economies, such as Germany (80%) and France (67.5%), albeit somewhat higher than the figure in Italy (46.2%). Furthermore, among the main European economies as a whole, Spain has the highest share of young households using a dwelling rent-free (12.3%,

51 In addition to Spain, the highest ratios are to be found in southern EU27 countries, such as Greece (71.9%), Portugal (70.7%) and Italy (69.4%), and in Ireland (64.1%), which are also the economies where the ratio has increased most sharply since 2008 (by 13.5 pp in Greece, 10 pp in Portugal, 8.3 pp in Italy and 13.7 pp in Ireland).

Chart 4.17

Cohorts born after 1980 leave the family home at an older age, suggesting that young people face growing housing affordability problems, whether to buy or to rent

4.17.a Probability of living with parents over the life cycle, by year of birth



SOURCE: EFF (2002-2020).

compared with 6.5% for the EU27), which is probably testimony to the significant role played by family support in the case of households with greater financial resources. By contrast, the share of young households in Spain paying below-market rents (2.7%) is very low compared with other European economies (26% in France) and the EU27 average (10%), due to the low proportion of social rental housing (see Section 2).

— **Young people's labour market situation and access to credit.** In recent years, young people's capacity to purchase a home has been stymied by their labour market situation (see Section 4). For instance, in 2023 the unemployment rate for the Spanish labour force aged 15-29 stood at 21.3%, while the part-time employment rate was 25.3%. Both figures are systematically higher than those recorded in other age groups (12.1% and 13.3%, respectively, for the economy as a whole) and in other European economies (euro area averages for the same age group: 11.2% and 23.7%, respectively).[52] Meanwhile, although the gross wage of young workers aged 16-34 grew by around 25% in cumulative terms in the period 2015-2022,[53] average house prices rose by 42% and average rents by 28.5%[54] in the same period. In sum, in recent years these real estate price dynamics and the labour market situation of young people,[55] together with banks' prudent mortgage lending

52 The labour market situation of Spanish young people also compares poorly with that of their euro area counterparts once their higher participation rate (50.3% vs 44.8% for the euro area) is taken into account, with the Spanish group having a lower employment rate in 2022 (39.6%) than that of their euro area peers (49.7%).

53 This is a larger increase than observed in the period for workers overall (12.5%). However, the negative differential between the average wage of young people and that of workers overall was 5.5 pp greater than observed in 2008.

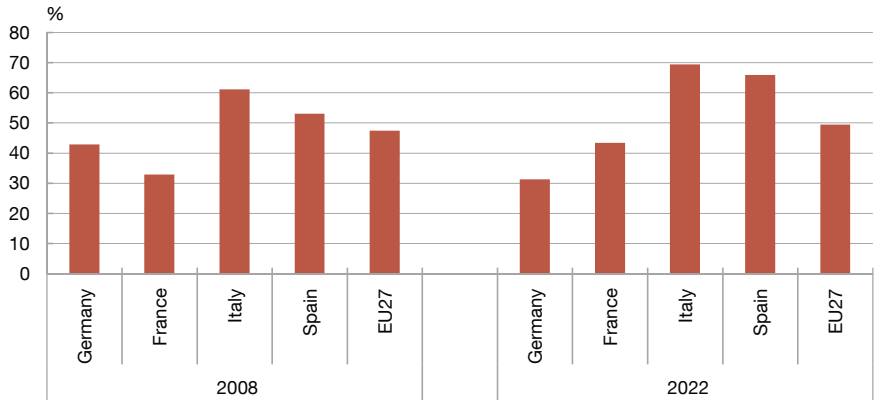
54 The average rent increase for the stock of rented housing. The average annual increase in new rental contracts was more pronounced, standing between 7% and 8% in the period 2015-2022.

55 For an analysis of the potential adverse effects of this labour situation, in terms of the higher uncertainty and risk associated with young households' income and how this affects the decision to move out of the family home, along with consumption and investment decisions, see Barceló and Villanueva (2018) and Arellano, Bonhomme, De Vera, Hospido and Wei (2022).

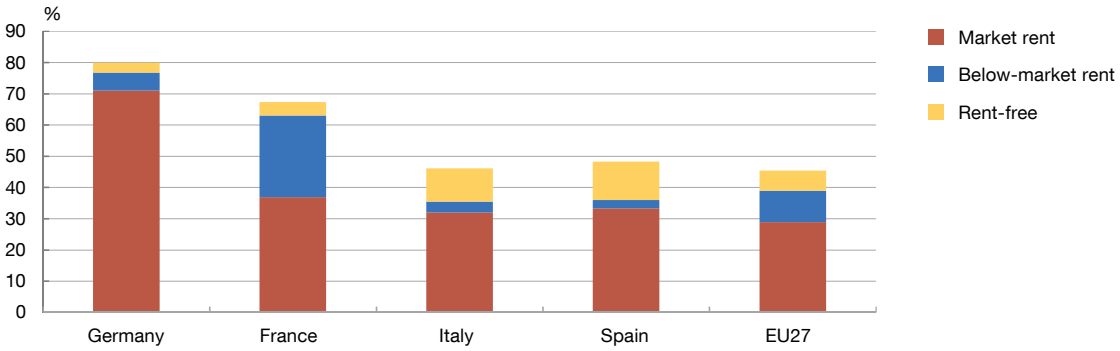
Chart 4.18

Over the last decade, Spanish young people have notably delayed the decision to move out, with the share living in rented accommodation rising markedly

4.18.a Percentage of young adults (18-34) living with their parents



4.18.b Percentage of young households living in rented homes. 2022 (a)



SOURCE: Banco de España, based on EU-SILC (2023) data.

a Young households are those whose reference person is aged between 18 and 34. Rented housing includes at market rents, at below-market rents and dwellings used rent-free.

DOWNLOAD

practices, appear to have hindered this cohort's access to financing for house purchase, significantly shifting young people's housing demand towards the rental segment (see Section 3).

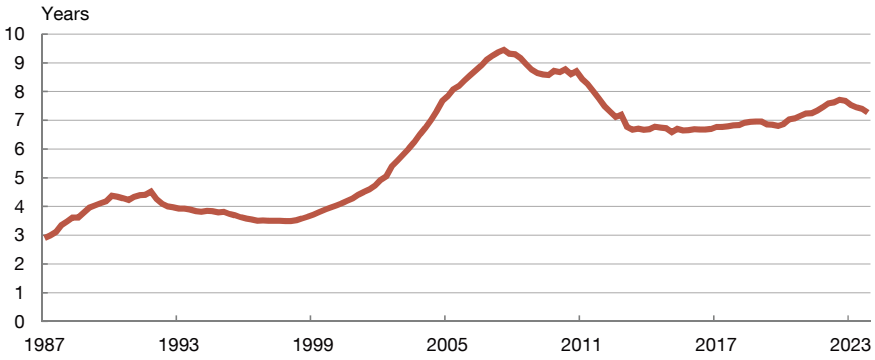
5.2 Home ownership affordability

— **House purchase affordability: the price-to-income ratio.** House purchase affordability can be proxied using the ratio between the average house price and the gross annual income of the median household. This indicator, expressed in terms of years of current income needed to pay off a house, has risen substantially since the onset of the COVID-19 pandemic. That said, at end-2023 it had declined slightly to 7.3 years (see Chart 4.19.a). From a historical perspective, the affordability indicator is short of its 2008 peak (9.5 years),

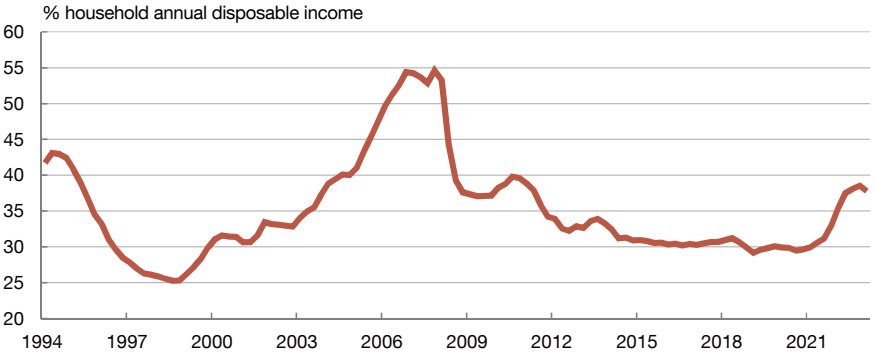
Chart 4.19

The indicators that proxy the theoretical burden associated with house purchase remain at high levels by historical standards

4.19.a Potential house purchase burden (a)



4.19.b Theoretical regular financial burden of house purchase (b)



SOURCE: Banco de España.

a Defined as the ratio of the average house price to the gross income of the median household.
b "Annual theoretical burden" calculated as the instalments paid by a median household in the first year of a mortgage on a standard home, financed with a standard loan amounting to 80% of the property's appraisal value, relative to gross household disposable income. This gross burden is not adjusted for the tax benefits in force until December 2012.

DOWNLOAD

but is still double the average figure for the period 1987-2000. At international level, the OECD price-to-income indicators available from 1995 show housing purchases becoming less affordable. For instance, at end-2023 this affordability indicator stood at double its 1995 level for the United Kingdom and Canada, and had increased by around 60% in the Netherlands, 55% in France, 45% in Spain and 25% in the United States, while remaining contained in Italy (5%) and declining in Germany.[56]

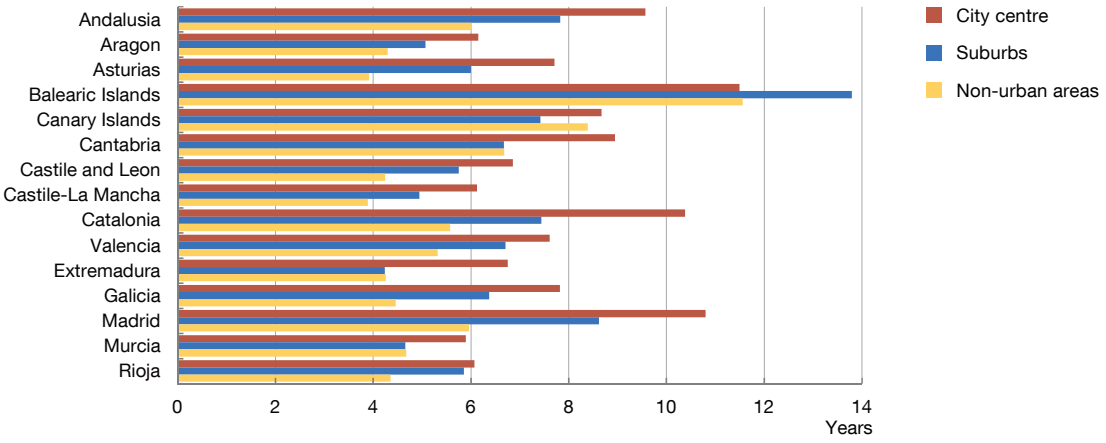
— **House purchase affordability for first-time buyers: cross-cohort heterogeneity.** House purchase affordability is lowest among renters, and within that segment among young

56 In the case of Germany, the indicator had dropped by 26% since 1995, reaching its lowest level in 2010. House prices grew notably in Germany to 2022 (see Section 2), driving a cumulative 50% increase in the indicator between its 2010 low and early 2022, followed by a correction of 19% up to end-2023.

Chart 4.20

Significant geographical heterogeneity in home ownership affordability difficulties

4.20.a Initial financial burden of house purchase. 2021 (a)



SOURCES: Household Panel (INE, AEAT, FSR 2023) and Banco de España based on data from the AEAT Tax Studies and Statistics Service.

a Calculated for households residing in each geographical area as the ratio of the average house price in the municipality of residence to gross household income, expressed in years and considering all non-homeowner households. Navarre and the Basque Country are not included since household income information is not available for those regions.

DOWNLOAD

people and foreign residents due to their lower income levels. Specifically, in 2021 (the latest year available), for the median renter household looking to buy a house in their municipality of residence, the affordability ratio described in the above point stood at 7.4 years.[57] This compares with just 4 years for the median homeowner household. Further, among households living in rented or rent-free dwellings, this affordability indicator stood at 7.8 years for the median foreign-born household and at 7.7 years for the median childless household and whose reference person is, on average, aged 35 or lower.

— **House purchase affordability: geographical heterogeneity.** For non-home owners in Spain, purchasing a house is less affordable, in gross income terms, in city centres and in certain regions of Spain (see Chart 4.20). For instance, in 2021, for the median renter household, the house purchase affordability indicator for city centres stood at 8.1 years, compared with 6.8 years for suburbs and 5.6 years for non-urban areas. At the same time, there is significant cross-region heterogeneity: buying a house is less affordable in areas with higher levels of economic activity and tourism. For instance, in 2021, for the median non-homeowner household, the affordability indicator for a city centre property stood at 10 years in the Balearic Islands, Madrid and Catalonia, compared with 6 years in Aragon, La Rioja, Castile-La Mancha and Murcia.

57 These affordability ratios are obtained by combining household income and geographical location data for 2021 taken from the Household Panel (INE, AEAT, FSR 2023), average house prices calculated based on property sales microdata provided by the Association of Registrars, and housing tenure data provided by the State tax revenue service (AEAT).

— **House purchase affordability: buyers with mortgage financing.** A further significant indicator of home ownership affordability, this one for buyers with access to mortgage credit, is the theoretical affordability of mortgage repayments as a proportion of gross household income. This indicator, which proxies the regular financial burden that an average mortgage instalment entails for households, has increased by some 8 pp since end-2021, to stand at close to 40% of the median household's gross disposable income in 2023 (see Chart 4.19.b).[58] This is the highest figure since 2011, albeit still below the highs recorded in 2007.[59] The recent increase in this indicator owes to higher financing costs and persistent house price growth, which offset the positive impact on affordability associated with the increase in per capita income (see Chart 4.21.a).[60] Similar developments have been observed in the euro area as a whole (see Chart 4.21.b). That said, since 2014 this housing affordability indicator has risen less in the euro area (around 20%) than in Spain (more than 30%).

— **House purchase affordability: renter households.** In relative terms, the scant saving capacity and low income of renter households hinder their ability to purchase a home. In 2021, an estimated 61% of households living in rented or rent-free housing had insufficient savings to purchase a home in their municipality of residence due to the size of the initial down payment (not covered by the mortgage loan) and the associated costs and taxes.[61] For the remaining 39% of renter households (those with sufficient savings to cover the initial purchase costs and down payment), 40.5% would bear a mortgage instalment equivalent to more than 35% of their net income (the recommended threshold, beyond which the probability of default for a median-income household rises).[62] Taking the average interest rate for 2023 (3.9% APR), that proportion would climb to 55%. Combining the two constraints (sufficient savings to cover the initial costs and a mortgage instalment-to-income ratio of less than 35%) suggests that, in 2021, 76.5% of renter households faced difficulties accessing a loan for house purchase. These difficulties would be more pronounced under 2023 interest rates, driving that proportion up to 82.5%. These results are in line with the 2021 Survey of Financial Competences, in which just 27% of renter households reported living in rented housing by choice or due to its lower cost.

58 The "observed" affordability ratio for mortgage loans actually arranged in 2023 is estimated to stand around 22%. The difference vis-à-vis the "theoretical" affordability indicator reveals a certain bias towards higher-income buyers in loans actually arranged.

59 However, until 2012 significant tax benefits were available for mortgage-financed house purchases, which reduced this theoretical regular burden by an estimated 5-7.5 pp during the 2000s.

60 This breakdown is based on an affordability index calculated following the methodology used in the Atlanta Fed's HOAM Index. The determinants of this index are similar to those for the indicator shown in Chart 4.19.b, although the latter is not available for the euro area.

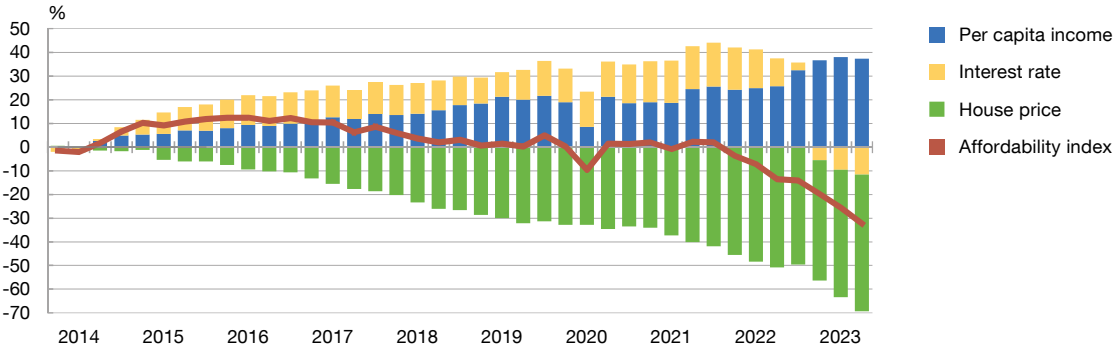
61 Simulated based on the 2021 data for households' net income and gross assets, drawn from the Household Panel (INE, AEAT, FSR 2023), considering the average purchase and rental prices for residential housing in those households' municipality of residence (AEAT and Banco de España). It is assumed that mortgage financing covers a maximum of 80% of the average appraisal value of a housing unit in their municipality of residence and that taxes and expenses amount to 10% of the average house price.

62 Mortgage instalment calculated assuming the "French method", with a fixed instalment over 25 years and based on the average synthetic mortgage rate for 2021 (1.6% APR). Net household income is defined as gross household income net of income tax and social security contributions paid by the worker.

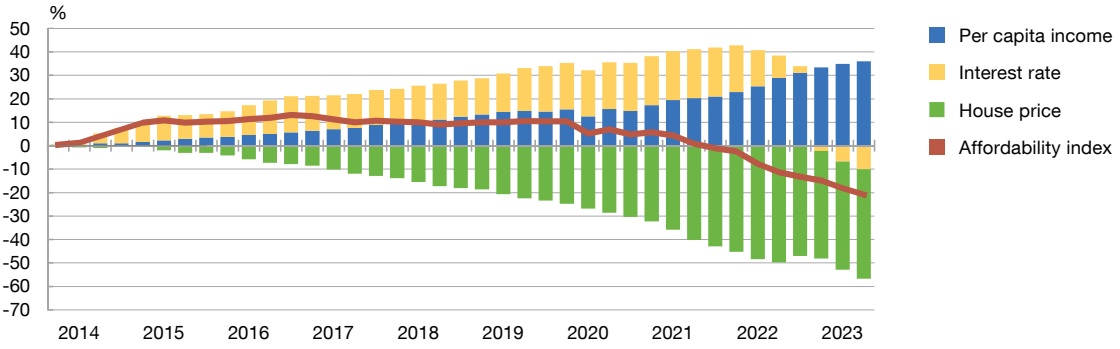
Chart 4.21

House purchase affordability has deteriorated due to price growth outpacing income growth and higher financing costs

4.21.a House purchase affordability (a). Spain



4.21.b House purchase affordability (a). Euro area



SOURCES: Eurostat, ECB and Banco de España.

a Cumulative change in the index calculated following the methodology used in the Atlanta Fed's HOAM Index. A positive (negative) value denotes an easing (tightening) of house purchase affordability compared with the base period (2013 Q4). The change in the index reflects the sum changes of its components.

DOWNLOAD

— **Overburdened mortgaged households.**[63] Selective lending by banks, which only extend credit to households with sufficient savings and income relative to the house purchase price, helps to explain the low proportion of overburdened mortgaged households in 2022 both in Spain and in the EU27 as a whole (see Chart 4.22.a). Indeed, the marked increase in financing costs in 2023 would have driven up the house purchase burden both for first-time buyers and households with variable-rate mortgages. However, the increase in the percentage of overburdened mortgaged households looks relatively contained once the increase in their disposable income is considered.[64]

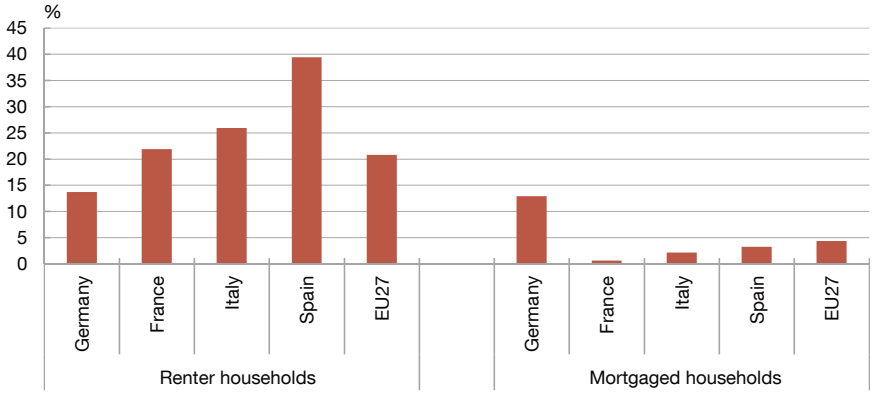
63 Eurostat sets the overburden threshold at 40% of household disposable income. It considers households above this limit to be overburdened or potentially restricted in their saving capacity due to the difficulty in reducing their housing costs. Housing costs include mortgage instalments or rent payments, along with utilities (e.g. water, gas and electricity).

64 *Report on the Financial Situation of Households and Firms* and *Financial Stability Report*.

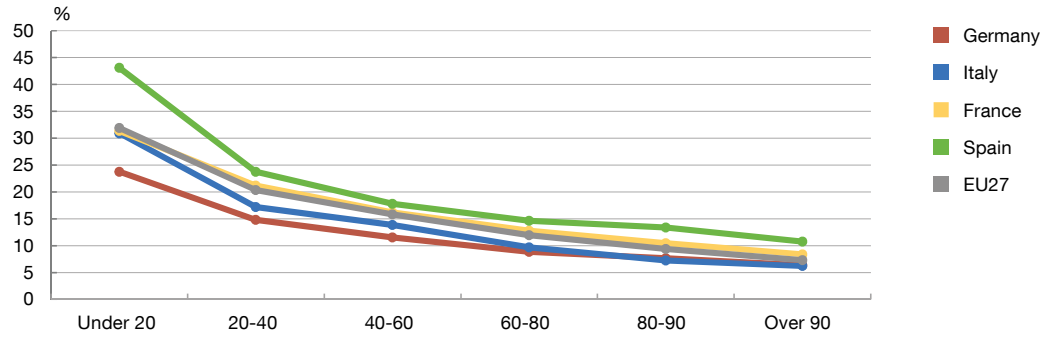
Chart 4.22

Housing cost overburdening is concentrated in the rental market, with Spain in a worse position than other major European economies

4.22.a Households spending more than 40% of their income on housing costs. 2022 (a)



4.22.b Median percentage of income spent by renter households on housing costs. 2022, by income percentile (b)



SOURCE: Banco de España, drawing on EU-SILC (2023) data.

a Housing costs include rent payments or mortgage instalments on loans to purchase main residence, along with basic utilities (e.g. water, gas and electricity). Only households renting at market rates are included.
b Housing costs refer to rent payments. Only households renting at market rates are included.

DOWNLOAD

5.3 The rent cost burden

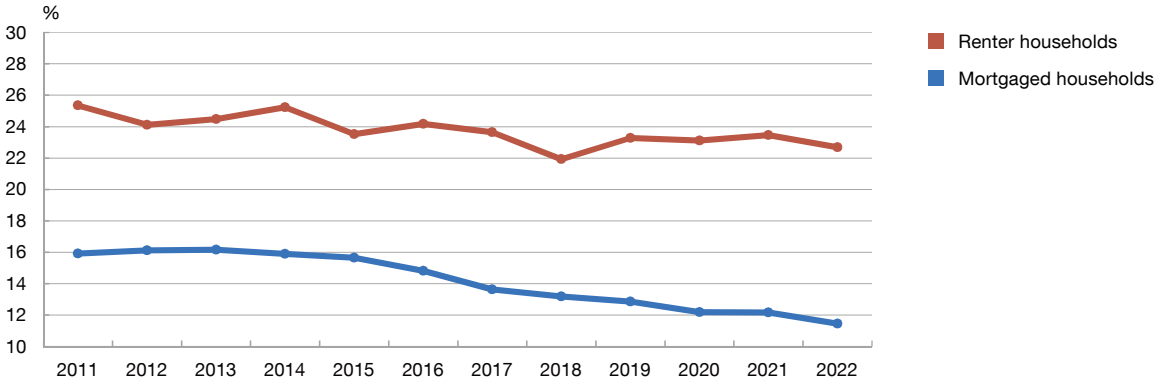
— **The cost burden associated with renting a home.** The median cost burden for households paying market rents has declined slightly over the last decade (see Chart 4.23.a), specifically from 25.5% of gross income for the median renter household in 2011 to 22.5% in 2022. However, the burden among lower-income groups is substantially higher and has increased in the last two decades (see Chart 4.23.b). In particular, in 2022 the median rent cost burden in the first quintile of the income distribution was around 45% of gross income.

— **The rent cost burden: geographical heterogeneity.** In 2021 and for the average household, the potential cost burden of renting a house, in net income terms, exceeded 25% across the different regions of Spain (see Chart 4.24.a). However, the highest ratios (around 40% of net income) were found in urban areas with the strongest population dynamics and the highest

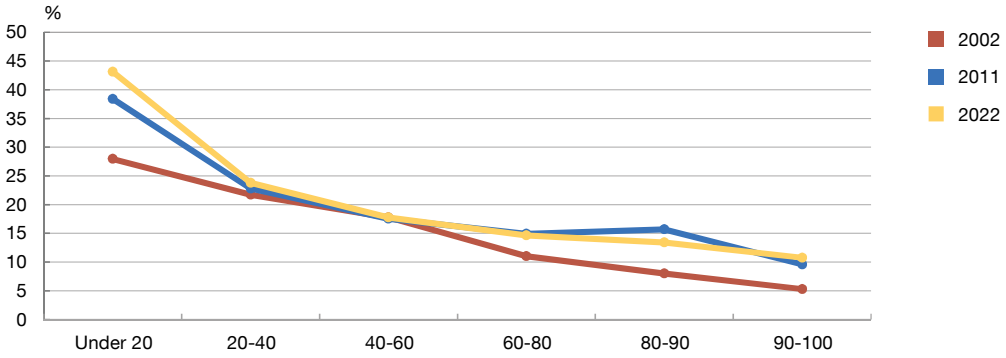
Chart 4.23

Renter households spend a higher share of their income on housing costs than mortgaged households. This cost burden is substantially larger (and growing) among lower-income renter households

4.23.a Median percentage of income spent on housing costs (a)



4.23.b Median percentage of income spent on housing costs. Renter households, by income percentile (a) (b)



SOURCES: Banco de España, drawing on EU-SILC (2023) data and the EFF.

a Housing costs refer to rent payments or mortgage instalments on loans to purchase main residence. For rental housing, only households renting at market rates are included. The household's gross income for the year prior to the survey is used.
b The data for 2002 and 2011 are taken from the Spanish Survey of Household Finances (EFF) and those for 2022 from the EU-SILC.

DOWNLOAD

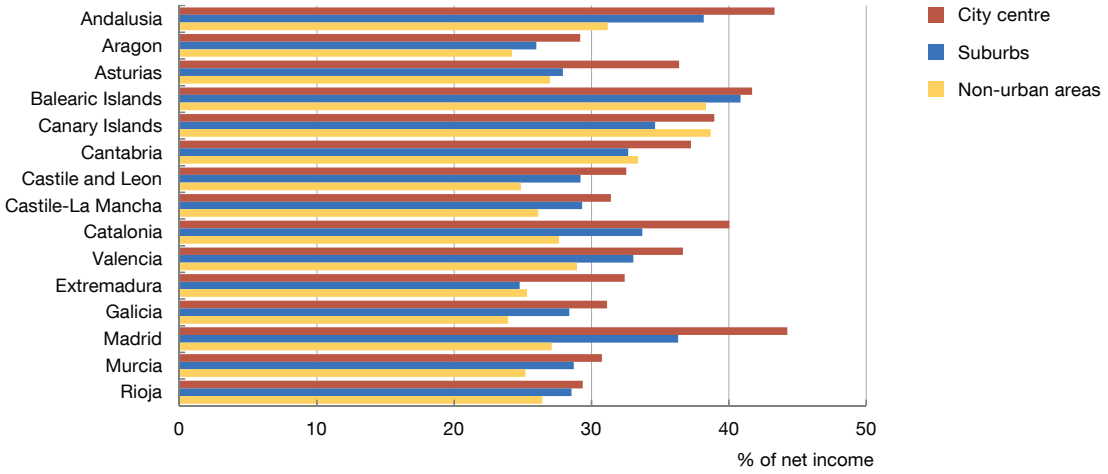
levels of tourism. Despite the heterogeneity, this relative burden indicator has less dispersion, both across regions and across urban areas, than the house purchase burden indicator discussed above (see Chart 4.20).

— **The rent cost burden: relative to household income.** The evidence available shows higher gross rental yield (GRY) in areas where both gross household income and house prices are lower (see Chart 4.25). These higher GRYs in lower-income areas could owe, at least in part, to landlords applying a positive risk premium, based on the perception that renting to tenants with lower purchasing power carries higher relative risk. Alternatively, they might reflect stronger rental demand in these areas, where households have lower income and saving capacity and therefore might find it harder to access a mortgage loan. In any event, this evidence shows that households unable to access home ownership and who live in higher-GRY areas bear comparatively higher rental costs (relative to property prices) than residents in other higher-income and lower-GRY areas.

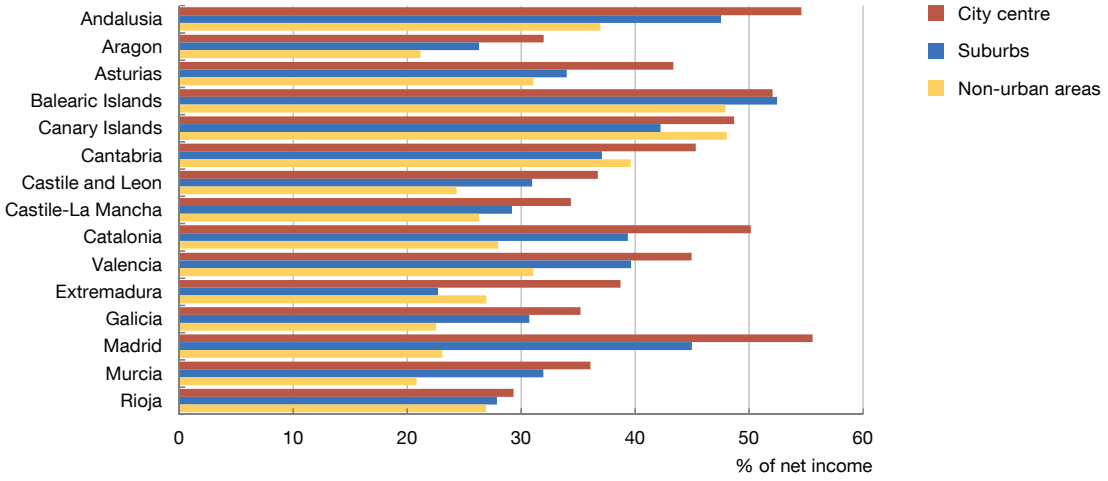
Chart 4.24

Significant geographical heterogeneity in the rent cost burden

4.24.a Regular rent cost burden. 2021 (a)



4.24.b Percentage of households that spend more than 40% of their income on rent. By region and geographical area



SOURCES: Household Panel (INE, AEAT, FSR 2023) and Banco de España based on data from the AEAT Tax Studies and Statistics Service.

a Calculated for non-homeowner households in the different regions as the ratio of the average rent in the household's municipality of residence to net household income. Navarre and the Basque Country are not included since household income information is not available for those regions.

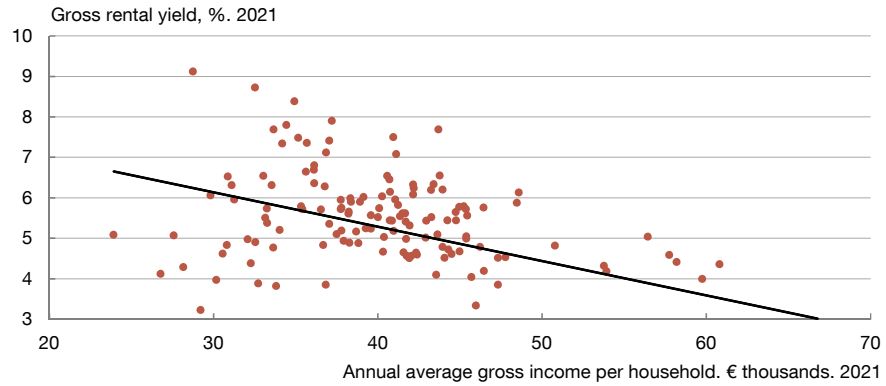
DOWNLOAD

— **Overburdened renter households.** Households across the main European economies are experiencing rental cost overburdening, but the difficulties are particularly acute in Spain among lower-income households. For instance, in 2022, Spanish households renting at market prices bore a larger cost burden (relative to their gross income) than their peers in the main European economies. This was true across all of the income percentiles considered. However, the rent burden differential vis-à-vis other countries was particularly marked in the lower tail of the income distribution, where overburdening is concentrated (see Chart 4.22.b). Thus, in 2022, around 40% of Spanish households paying market rents were overburdened,

Chart 4.25

Gross rental yields tend to be higher in municipalities with a lower average household income

4.25.a Gross rental yield and average gross income per household. Municipalities with more than 50,000 inhabitants (a) (b)



SOURCES: INE and Banco de España based on data from the Colegio de Registradores and the AEAT Tax Studies and Statistics Service.

a Gross rental yield is defined as the ratio of the average annual rent to the average house purchase price (per square metre) in a municipality.
b The six municipalities with average household incomes of over €75,000 per annum are excluded as outliers. No municipalities in the regions of Navarre and the Basque Country are included since rent price information is not available for those regions.

20 pp more than the EU27 average (see Chart 4.22.a).[65] Although this is similar to the average figure since 2007, the higher prevalence of rented accommodation meant that the share of overburdened households rose from 3.7% in 2007 to 6% in 2022.

— **Rent cost overburdening: geographical heterogeneity.** The percentage of overburdened renter households is higher in city centres and in certain Spanish regions (see Chart 4.24.b). In particular, in the Madrid region, Andalusia, the Balearic Islands and Catalonia, more than 50% of households paying market rents in city centres spend more than 40% of their net income on housing costs. This compares with 35% for renter households in suburbs and 30% for those in non-urban areas.

65 This percentage stands at elevated levels of around 30% or higher in economies such as Belgium, the Netherlands, Greece, Denmark, Portugal, Romania and Bulgaria.

6 Housing affordability: the public policy challenge

6.1 Economic and social implications

The housing affordability problems documented in the previous section can have adverse economic and social effects. They limit households' ability to save and may influence not only their consumption and investment decisions but also their decisions on where to live, whether to have children and whether to continue their education. In consequence, housing affordability problems may have both short and long-term negative implications and may give rise to lower aggregate productivity and lower economic growth.

— **Location of labour and productivity.** The impact of housing affordability problems on the location of labour could reduce aggregate productivity in the economy. In particular, areas with a shortage of residential housing and high house prices and rents have difficulty attracting new workers, and some lower-skilled workers may even move to other areas with lower real estate prices. In consequence, more productive areas but which suffer from residential housing supply constraints may fail to reach their optimal scale, leading, as a result of a spatial misallocation of labour, to aggregate losses in productivity and well-being.[66]

— **Rental market and mobility.** A properly functioning rental market favours worker mobility, especially among young workers. Worker mobility has positive economic effects, as it helps young workers gain more education and skills and thus accumulate human capital. It also helps reduce unemployment and improve labour market matching. However, the small size of rental markets in some urban areas, especially in the big cities, can limit this mobility. Indeed, people could be discouraged from accepting job offers in areas where rents are high.[67]

— **Households with budget constraints owing to their housing costs and the macroeconomic impact.** Housing affordability problems can have a negative impact on the macroeconomic situation, from both a cyclical and a long-term perspective. First, because the increase in the proportion of households whose consumption is restricted by their housing costs poses a risk to the macro-financial stability of the economy. In particular, a higher share of budget-constrained households means that aggregate consumption and economic activity are more sensitive to changes in real estate prices and in the economic cycle.[68] Second, because housing affordability problems delay household formation and can affect the decision to have children, contributing to the decline in the birth rate.[69] Accordingly, these

66 See, for example, Hsieh and Moretti (2019) or Diamond and Moretti (2021) for an analysis of the differences in consumption and lower standards of living among low-skilled workers in areas of the United States with higher real estate prices compared with other more affordable areas.

67 For an analysis of the relationship between the housing market and labour mobility see, for example, Blanchflower and Oswald (2013) or Causa and Pichelmann (2020).

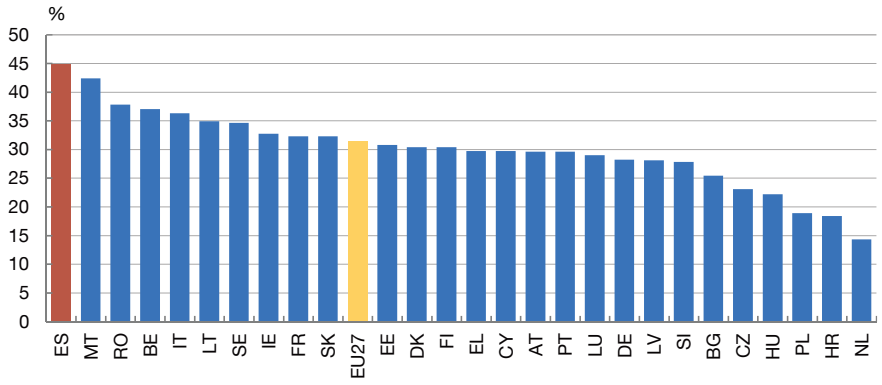
68 See, for example, Paciorek and Sinai (2012).

69 Dettling and Kearney (2014) document significant declines in birth rates among non-homeowners in the face of house price rises in metropolitan areas of the United States.

Chart 4.26

Spain has the highest percentage in the EU27 of people living in rented accommodation that are at risk of poverty or social exclusion

4.26.a Population living in rented accommodation at risk of poverty or social exclusion in 2022 (a) (b)



SOURCES: European Commission and Eurostat (2023b).

a Market-rent households. Households whose income is no more than 60% of the median equivalised income after social transfers are considered to be at risk of poverty.

b AT: Austria; BE: Belgium; BG: Bulgaria; CY: Cyprus; CZ: Czech Republic; DE: Germany; DK: Denmark; EE: Estonia; EL: Greece; ES: Spain; FI: Finland; FR: France; HR: Croatia; HU: Hungary; IE: Ireland; IT: Italy; LT: Lithuania; LU: Luxembourg; LV: Latvia; MT: Malta; NL: Netherlands; PL: Poland; PT: Portugal; RO: Romania; SE: Sweden; SI: Slovenia; SK: Slovakia; EU27: European Union.

DOWNLOAD

problems may also affect economic growth in the long run, particularly against a backdrop of progressive population ageing. Moreover, housing affordability difficulties, especially among young people, limit households' ability to invest in their education and to build up their human capital, thereby also reducing the potential growth capacity of the economy.

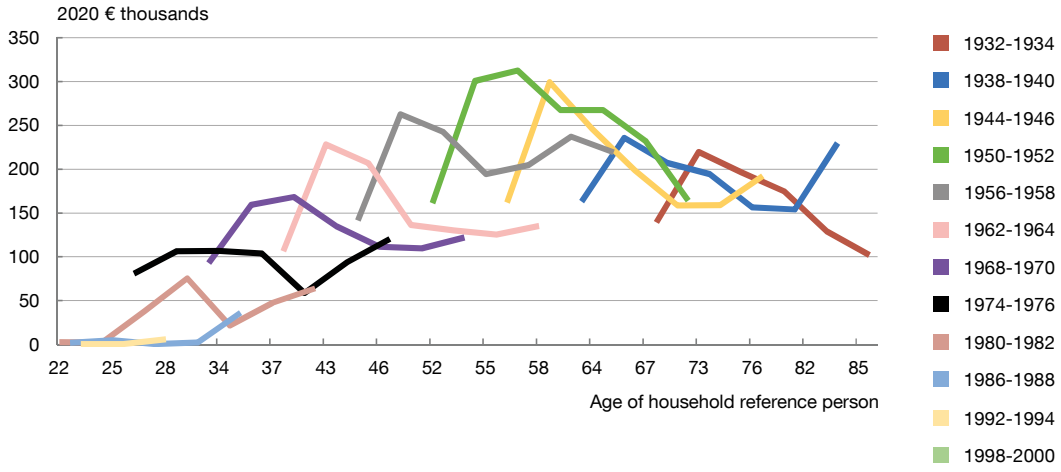
— **Social vulnerability.** The housing affordability problems faced by certain groups make them economically vulnerable. In Spain, vulnerable households are concentrated in particular in market rents and among the lowest income quintiles. Spain is the European economy with the highest percentage of people living in rented accommodation that are at risk of poverty or social exclusion (see Chart 4.26). Specifically, in 2022, 45% of Spanish renter households were at risk of poverty or social exclusion, compared with 31% in the EU27 average.

— **Intergenerational inequality in wealth accumulation.** Higher house prices and higher rents limit households' ability to save and condition their wealth accumulation over their lifetime. As discussed in the previous sections, lower-income households – and especially young lower-income households – are those most affected by the adverse consequences of housing affordability difficulties. In this respect, the Banco de España's Survey of Household Finances (EFF, by its Spanish acronym) shows that, in recent decades, young households' net wealth accumulation (financial and real estate wealth) is below that of their peers in previous generations (see Chart 4.27). The fact that they accumulate less wealth in their lifetime suggests that today's young cohorts are likely to be more vulnerable to possible future negative shocks than previous generations were. In addition, by international

Chart 4.27

Greater housing affordability problems coincide with lower median net wealth accumulation among young households compared with net wealth accumulation among previous cohorts

4.27.a Median household wealth over lifetime, by year of birth



SOURCE: EFF (2002-2020).

DOWNLOAD

standards, these generations will have borne a moderate degree of wealth inequality.[70] Specifically, in a setting of substantial increases in real estate prices, wealth inequality in Spain appears to have been contained by the predominance of home ownership and the high proportion of households that own other real estate assets.[71]

6.2 Public policies

The housing market diagnosis presented in this chapter shows how the combination of high demand-side pressures and a relatively rigid supply-side – both for house purchases and rentals – is creating housing affordability difficulties. These problems are concentrated among lower-income groups, including young people and new foreign residents, and are more acute in the large urban areas.

The adverse social and economic consequences of these difficulties warrant the adoption of economic policy measures geared to correct them. In recent years, Spain's various tiers of government with responsibility for housing have deployed a broad range of measures. These are mostly at a relatively early stage of development, but the evidence and analysis presented

70 Anghel et al. (2018).

71 According to EFF 2020 data, 32.6% of households owned at least one home other than their main residence, and 45.3% owned other real estate assets. These figures are among the highest in the euro area, where 25% of households owned real estate assets other than their main residence in 2021, specifically 16.8% in Germany, 24.3% in France and 28.6% in Italy (ECB, 2023).

in the economic literature on the effects of housing policies make it possible to offer a preliminary assessment.[72]

In any event, considering the scale of the problem diagnosed here, it seems unlikely that isolated short-term actions may be sufficient to significantly reduce today's housing affordability difficulties. At the same time, public policies must be designed to ensure that actions that may have relatively limited effectiveness in the short term do not ultimately have significant unwanted effects that hinder the functioning of the housing market in the medium and long term.

In this regard, insofar as today's housing affordability problems are the result of imbalances that have built up over many years, they must be addressed via a combination of multiple structural policies in different areas. In particular, the measures adopted should:

- envisage a broad time horizon for design, implementation and evaluation of the public policies;
- involve all the various tiers of government with responsibility for housing, in a coordinated manner and in collaboration with private initiatives;
- focus, in particular, on stimulating housing supply, especially in the rental market and social rentals, prioritising allocation of the available resources to the most vulnerable groups;
- consider, in addition, other structural aspects beyond housing policy that also have a significant impact on housing market developments, such as actions affecting the functioning of the labour market and economic productivity – both of which are fundamental determinants of household purchasing power – and the effects of tax and transport policies.

6.2.1 Recent public policy measures adopted

— **Protective measures for tenants.** Over recent years, central government has introduced a number of measures that seek to ease affordability problems in the rental market and provide greater protection for tenants. These actions notably include extending the duration of rental contracts,[73] capping annual rent increases below the rate of growth of the CPI and making it more difficult for socially vulnerable households to be evicted from their homes.[74] These measures help explain the significant drop in evictions for non-payment of rent since

72 See López-Rodríguez and Matea (2020) for a detailed analysis of housing policy design and international experience.

73 Royal Decree-Law 7/2019 establishes the minimum duration of rental agreements at five years (contracts with individual landlords) and seven years (contracts with legal entities), compared with three years previously.

74 During the pandemic, and in subsequent extensions, tighter restrictions were placed on evictions of vulnerable households and those with children in their care where there was no housing alternative available. At the same time, annual rent updates were capped at 2% for 2022 and 2023 and at 3% for 2024.

2020, according to figures provided by the General Council of the Judiciary (Consejo General del Poder Judicial (CGPJ), 2024). In 2023 there were around 20,000 such evictions, 55% of the annual average in the period 2013-2019, despite the growth in rental housing over the last ten years.

— **Protective measures for mortgaged households.** The key measures in this field are the reform of the Code of Good Practice (CGP) in late 2022 and the introduction, in late 2023, of enhanced conditions for households under its successor (CGP 2023). These measures provide protection for lower-income mortgaged households in the event, mainly as a result of the surge in interest rates in recent years, that their creditworthiness becomes impaired.

— **Medium and long-term housing market measures.** Law 12/2023 of 24 May 2023 on the Right to Housing and the various complementary measures approved seek, inter alia, to gradually increase the social rental housing stock, with a greater role for public-private collaboration. The measures to encourage the supply of private rental housing take the form of larger tax incentives for individual landlords who rent their properties at lower prices in areas under housing pressure (defined in the new Law). The Law also proposes measures that seek to improve affordability for tenants with existing contracts. In particular, it sets new caps on annual rent increases and provides for rent controls to be established in areas under pressure, in accordance with central government regulations, where agreed by the competent regional government and within a price range set by central government.[75] It also introduces support measures for young people wishing to rent or buy a home, in the form of rent subsidies and public guarantees for house purchase. Lastly, more recently, land reforms have been proposed, to enhance legal certainty,[76] and initiatives have been announced to foster the mobilisation of new subsidised social or affordable rental housing, to speed up the planning permission process and to eliminate the so-called Golden Visa programme whereby residency rights were granted linked to purchases of homes worth over €500,000.

— **Increase in the subsidised rental housing stock and the role of Sareb** (the asset management company for assets arising from bank restructuring). The various tiers of government have announced a range of plans to build social or affordable rental housing. For instance, under a multiannual framework, the Affordable Rental Housing Plan aims to increase the social or affordable rental housing stock by 184,000.[77] Compared with recent

75 Specifically, the State benchmark system for residential rental prices, published in February 2024. These benchmark prices are adjusted for housing size and characteristics and lie between the 25th and 75th percentiles of the 2022 rental price distribution in the census section corresponding to the location of the housing. The benchmark prices for 2024 are calculated based on the 2022 rental housing stock owned by individual landlords.

76 On 26 March 2024 the Council of Ministers approved the text for reform of the Land and Urban Renewal Law, for its subsequent passage through Parliament.

77 The sum of 123,000 new homes in programmes driven by the Ministry of Housing and Urban Agenda, 50,000 to be mobilised by Sareb and 11,000 from the Rental Housing Social Fund. Those under the Ministry's programmes would be mobilised through an Official Credit Institute (ICO) loan facility of €4 billion, together with a public guarantee of up to 50% of the amount of the loans granted, for housebuilding and rehabilitation of housing (43,000 units), construction of affordable housing on public land owned by SEPES, the state-owned enterprise for land (36,000), the use of European RTRP funds to build social rental housing in energy efficient buildings (20,000), aid for the regional governments under the State Housing Plan (14,000) and agreements with local authorities (around 10,000).

years, this plan will entail a significant increase in subsidised rental housing production, for instance, under central and regional government programmes, which in 2022-2023 averaged between 25% and 30% of the 9,000 homes classified as subsidised housing per annum in that period (definitive classification).[78] In addition, on public data as at July 2023, some 47,000 social rental housing units were available or under development by the Ministry of Housing and Urban Agenda, plus a further 14,000 from Sareb and around 10,000 from the Rental Housing Social Fund.

— **Measures at regional and local level.** In the most recent period, regional and local level housing measures have been very diverse, both in their design and their typology. Some of the main measures may be summarised as follows:

  - public guarantee programmes for house purchase by young people;
  - income tax relief on spending on or investment in housing, whether rented or purchased;
  - tighter regulations for tourist rental developments in certain areas;
  - higher subsidised housing quotas in residential property developments;
  - possible taxation of empty homes;
  - measures to speed up the planning permission process or to cut new housebuilding timelines;
  - measures to make public land available for social rental housing developments;
  - rent controls;
  - regulatory changes and local regulations on the volume of urban building land, the housing floor area ratio or real estate use.

6.2.2 A preliminary assessment of the measures adopted on the basis of evidence from the economic literature

— **Protective measures for tenants.** The measures adopted can be expected to have improved the conditions of households with existing contracts and, according to the economic literature, to have helped reduce uncertainty and price volatility in the rental market.[79] However, the international literature also suggests that some of these actions may have

78 The provisional classification data for new subsidised housing for the same period point to 12,000 new homes per annum, of which around 40%-45% would be rental housing.

79 Favilukis et al. (2023) analyse the welfare gains generated by affordability policies that provide greater assurance to lower-income households facing uncertainty and price volatility in rental markets under pressure.

unintended effects on the level and composition of the rental housing supply, and on prices of new rentals.[80] In particular, as a result of greater protection for the most vulnerable tenants, the risk of default for landlords increases. This could drive up rents – owing to a higher risk premium – or reduce the rental housing available for vulnerable households. For instance, the rental housing supply could be replaced by room rentals or short-term rentals (under a year) where tenants have less protection. At the same time, against a backdrop of rising operating and housebuilding costs, longer rental contracts, combined with annual rent increases below the rate of growth of the CPI, reduce incentives to increase the rental supply. These disincentives are greater for legal entities, as their tenants are afforded greater protection. In particular, rental agreements with legal entities are longer and, in the case of vulnerable households, non-payment evictions can also be stayed for longer. Lastly, longer rental contracts and rent updates below the rate of growth of the CPI could drive up prices of new rentals, as lessors seek to assure a certain flow of rental income throughout the life of the contract.

— **Protective measures for mortgaged households.** These measures have been deployed against the backdrop of prudent mortgage credit allocation over the last decade (see Section 4), accompanied by favourable developments in the most recent period in employment and economic activity.[81] These factors may explain the limited reach, to date, of the measures introduced in this area, and in particular the small number of households with mortgages under the CGP.[82]

— **Rent controls.** The introduction of rent caps has been justified by the fact that they immediately ease affordability problems for vulnerable households, yet the announcement of such controls and their sustained application over time may create fresh affordability problems.[83] First, affordability gains are concentrated mainly on households with existing contracts, where the impact will be temporary, and on new contracts entered into under the new conditions. Second, the economic literature has documented at international level the emergence of adverse effects, which may be particularly significant in the absence of structural measures to increase the housing supply. The possible effects identified at the empirical level notably include: a contraction in rental housing supply in rent-controlled areas; a shift in housing use to alternative markets (for instance, seasonal or tourist rentals); and a decline in housing quality due to lower maintenance.[84] Capping rental market prices could also have regressive distributional effects and increase affordability difficulties among lower-income households. In particular, price

80 Some studies also suggest that actions that seek to protect tenants with existing contracts could also have adverse effects on their mobility (as a change of residence would entail the loss of protection). See, for example, Bingley and Walker (2001) or Jacob and Ludwig (2012).

81 The macroeconomic situation and the measures adopted help to explain the decrease in 2023 in the number, in year-on-year terms, of mortgage foreclosures (21.5%) and evictions arising from mortgage foreclosures (38.2%). The number of evictions in 2023 (5,260) is the lowest for a decade and amounts to 37% of the 2019 pre-pandemic figure (CGPJ, 2024).

82 For more information on the design and use of the CGP, see "Box 1.2. Use in 2023 of the Codes of Good Practice introduced by Royal Decree-Laws 6/2012 and 19/2022". Banco de España. (2023).

83 See López-Rodríguez and Matea (2020) for a review of the economic literature on rent controls..

84 For the United States see, for example, Sims (2007), Autor, Palmer and Pathak (2014) and Diamond, McQuade and Qian (2019). Studies on recent experience in Germany suggest that rent controls led to higher prices in unregulated areas (Mense, Michelsen and Kholodilin, 2023) and that price cuts had less impact in lower-income areas (Breidenbach, Eilers and Fries, 2022).

caps could reduce rents that are over the regulatory maximum but increase those below that level, which would impact lower-income households.[85]

— **Tax benefits for housing demand.** Spain's various tiers of government have recently maintained or introduced tax incentives and other schemes to help households realise their demand for rentals or house purchases. In a rigid supply setting and with markets under pressure, such policies could trigger further increases in house prices and rents. These general equilibrium effects, illustrated in Box 4.2, mean that, eventually, some of these demand-side policies designed to support vulnerable households may, to a great extent, ultimately become transfers of public resources to residential property owners.[86]

— **Guarantees for house purchases by young people.** Various regional governments and, more recently, the central government have introduced public guarantee schemes, seeking to encourage house purchases and ease the pressure on the rental market. Such measures aim to make access to mortgage credit easier for young households that are financially solvent and wish to buy a home but do not have the necessary savings to meet the initial expenses. These schemes have two constraints that may limit their effectiveness (see Box 4.2). First, as mentioned in the previous paragraph, in a rigid supply setting, measures to bolster demand for home ownership tend to push up house prices.[87] Second, the evidence on income distributions, gross assets and location of young Spanish households suggests that only a small group of such households may potentially benefit from these measures in areas under pressure. In part, because of the high correlation between income and gross wealth, which means that most households that have limited access to credit, owing to their low level of savings, do not earn sufficient income for banks to grant them a mortgage. Moreover, the greater leverage involved in buying a home without previous savings means that mortgage instalments are higher, especially in the present high mortgage interest rate environment. In consequence, many potential applicants for this guarantee programme would encounter difficulties having their loan applications approved by banks, as their mortgage instalment-to-income ratios would exceed prudential thresholds. Such programmes may potentially be of most benefit to young people in locations with lower housing prices outside the large urban areas.

6.2.3 Possible future measures

— **Assess the effects of the existing policies.** As highlighted above, in the most recent period the various tiers of government with housing powers have adopted a broad set of

85 The studies available on the effects of rent controls of this kind applied in Catalonia during the pandemic (2020-2021) indicate that, although this policy reduces rents on average, in the short term, supply remains rigid (Jofre-Monseny, Martínez-Mazza and Segú, 2023) or even shrinks due to the loss of rental properties with prices above the reference price (Monràs and Garcí-Montalvo, 2023). This last paper also documents an increase in rents among lower-rent properties as a result of the regulation.

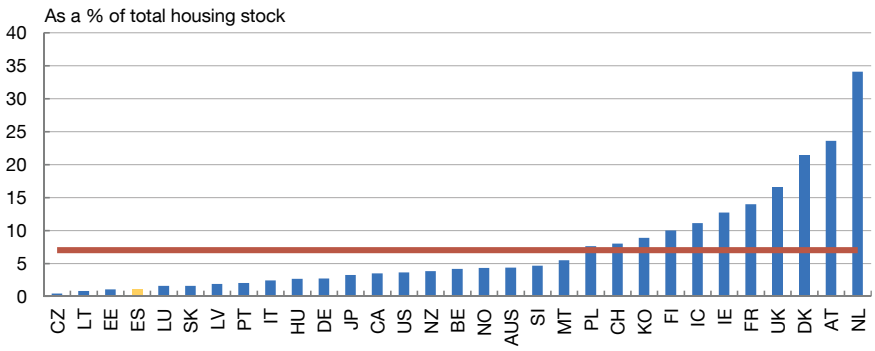
86 Among the studies that document an increase in rents due to the pass-through to prices that these policies entail see, for example, Susin (2002) for the United States, Gibbons and Manning (2006) for the United Kingdom and Laferrère and Blanc (2004) and Fack (2006) for France.

87 Carozzi et al. (2024) analyse the Help to Buy schemes in the United Kingdom whereby government-funded equity loans of up to 20% of the purchase price (40% in London and its metropolitan area) are available to buyers. The findings suggest that, as a result of this programme, house prices in London climbed, there was no increase in the housing supply, affordability difficulties did not ease and developers' profits rose.

Chart 4.28

Spain stands out among the advanced economies for its shortage of social rental housing

4.28.a Social rental housing stock in advanced economies (a) (b) (c)



SOURCE: OECD (2024).

a The data are for 2020 or for the last year with data available (for more details, see OECD (2024)). The horizontal line denotes the average for the OECD economies.
b For Spain, the public social rental housing stock amounts to some 290,000 homes, accounting for 1.6% of households.
c AT: Austria; AUS: Australia; BE: Belgium; CA: Canada; CH: Chile; CZ: Czech Republic; DE: Germany; DK: Denmark; EE: Estonia; ES: Spain; FI: Finland; FR: France; HU: Hungary; IE: Ireland; IT: Italy; JP: Japan; KO: Korea; LT: Lithuania; LU: Luxembourg; LV: Latvia; MT: Malta; NL: Netherlands; NO: Norway; NZ: New Zealand; PL: Poland; PT: Portugal; SI: Slovenia; SK: Slovakia; UK: United Kingdom.

DOWNLOAD

measures that seek to mitigate the problems of affordability both for potential homeowners and tenants. In this setting, apart from deploying new initiatives, it would be of particular interest to analyse and assess in greater depth the effects that the measures already adopted are having on the housing market. This would entail improving statistical sources on real estate prices, sharing of data and analysis between the different tiers of government and providing specialised researchers with greater access to real estate microdata.

— **Achieve greater coordination between the different tiers of government.** Powers over the functioning of the housing market in Spain are highly decentralised. For example, the regional governments have powers over regional and city planning, urban development and housing. Local authorities have powers over urban planning, management, execution and scrutiny of urban development projects and housing development and management. Lastly, central government has powers to implement basic land and housing legislation. In this framework, in order for housing policy to be effective, it is imperative that targets and measures are highly coordinated between the different tiers of government involved. This coordination is particularly important, as effective policy design should consider a metropolitan area of action and housing policies should be integrated into territorial balancing policies.

— **Increase the social rental housing supply.** Spain's public stock of social rental housing is very small compared with that of some of our neighbouring economies (see Section 2.2 and Chart 4.28). In this setting, as discussed above, the various tiers of government have announced targets and measures (such as the Affordable Rental Housing Plan) to increase this stock. While these measures are generally welcome, the quantitative scale of this challenge must be borne in mind. Given the current starting point of the social housing

stock (1.5% of main residences), converging to the average public stock levels of the advanced economies or of the EU27 would entail an extraordinary effort, requiring adding some 1.5 million new homes to the existing social rental housing supply. A 10-year plan to achieve this aim would entail an increase of over 150% in the average annual production of homes in Spain in recent years.

— **Encourage public-private collaboration to energise the rental market.** Given the scale of the challenge described in the previous paragraph and the relatively small fiscal space available to general government, rebalancing public spending priorities and collaboration with the private sector are the only options that could significantly boost the stock of affordable rental housing.[88] In this setting, the public sector can move further with the measures already approved to support the private sector, such as assigning public land and granting guarantees for rental housing developments and funding for social or affordable rental housing developments. Updating social rental modules (the benchmarks used to set maximum social rents), to absorb part of the increase in construction and funding costs, would also help in this respect. However, the low income levels of vulnerable households that have housing affordability difficulties could mean that they are unable to afford even below-market rents. In such cases, the various tiers of government could design guaranteed income or direct support programmes to supplement tenants' rent payments and thus ensure access to housing for the most vulnerable households.

— **Foster a more professional profile for the rental market.** The institutional private sector can play an important role in increasing the rental housing supply. Yet, as seen in Sections 2 and 3 above, in the Spanish residential rental market non-professional individual landlords predominate. Such individuals cannot benefit from the economies of scale and risk diversification associated with larger managed housing portfolios, which may give rise to higher costs and, therefore, higher rents. In this sense, measures to increase the part played by professional agents would be positive, increasing supply and thus easing upward rent dynamics. Two such measures would be key. First, removing the differential treatment currently afforded, in all types of regulations and contractual rules, to legal entities and landlords with more than ten properties[89] compared with small, individual landlords. Second, aligning the tax treatment of these agents (landlords with more than ten properties) with that applicable in other European countries where the professional rental sector plays a greater part. In particular, it would be desirable to link tax relief for landlords to social or affordable rentals.

— **Strengthen legal and regulatory certainty.** Housing policy at all levels of government must provide regulatory certainty, to ensure that agents are aware of the risks they assume when

88 See Trilla (2024) and García-Montalvo, Raya and Sala Roca (2024) for a discussion of possible public-private collaboration to enhance housing policy efficiency and, in particular, to boost the affordable social rental market.

89 The greater economic power associated with the accumulation of real estate assets could be subject to higher taxation. Furthermore, if increasing the activity of these professional landlords were to create the risk of potential market power situations, competition policy measures could be used to address them.

making their decisions. In particular, periodic changes to regulations affecting the main conditions of existing rental agreements, or successive changes to local urban planning requirements for housebuilding, should be avoided. Moreover, given that individual landlords have less capacity to manage the risks associated with this activity than professional agents, incentivising greater development of the rental housing insurance market, to extend its current limited scope, could be appropriate in the context of public-private collaboration. This measure could be complemented, in addition, by speedier administrative and judicial procedures in the event of non-payment, and by greater compensation payments to landlords with vulnerable tenants who are unable to pay their rent and and to whom the public sector has been unable to offer a housing alternative.

— **Improve how administrative processes relating to land and urban planning policies are managed.** The time needed for development of new build-ready land and for housebuilding is a constraint on new housing production. New measures are being taken to improve the situation in this respect, but the various tiers of government should analyse whether it is possible to further simplify and speed up these processes, and increase coordination between the different tiers to reduce the current long lead times. Also, given the housing shortage in large urban areas, the possibility of adjusting real estate and land use so that a larger proportion may be assigned to residential use could be considered. Making these decisions at metropolitan area – rather than local – level could generate efficiency gains in areas where housing markets are under pressure.

— **Promote measures for rehabilitation and take-over of housing.** The current housing shortage, combined with high construction costs and long lead times in new housing production, demands optimal mobilisation of the existing housing stock for residential use. In this respect, it is imperative to speed up the absorption of NextGenerationEU (NGEU) funds, to align housing rehabilitation ratios with those of the main EU economies (see Section 3). At the same time, it would be desirable to assess the appropriateness of establishing different mechanisms and incentives for dwellings that are empty or are used only sporadically to be taken over by the public sector, for use as social rental housing.

— **Review housing taxation.** Under the Spanish tax system, real estate assets and, in particular, housing account for a larger share of taxation than in the EU27 economies. For instance, reflecting this higher taxation on housing, property tax revenue amounted to 2.8% of GDP in Spain in 2022, compared with an average of 1.4% of GDP in the EU27 economies and of 1.6 % of GDP in the euro area.[90] Moreover, in Spain, taxes on housing production and house purchase (non-recurrent taxes) account for a larger share of real estate taxation, and taxes on property ownership (recurrent taxes) for a smaller share (40% in Spain compared with around 50% on average in the EU27), even though the housing stock per person is higher in Spain. In this respect, in addition to increasing the efficiency of the tax

90 See López-Rodríguez and García Ciria (2018) for a more detailed description of the composition of Spanish tax revenue in the context of the EU27, and the Committee of Experts (2022) for a discussion of high real estate taxation in Spain compared with real estate taxation in other advanced economies.

system,[91] raising recurrent taxation on property ownership – for instance, through Spanish property tax (IBI, by its Spanish acronym) – could make access to housing easier (see Box 4.2). This tax increase should be offset by a cut in all other taxes on house purchase or housing production in order to avoid over-taxation of housing. Nevertheless, proposals to cut the non-recurrent taxes should only be considered when the supply and demand mismatches in the housing market have been reduced (see Box 4.2). Otherwise, a significant part of the tax cut may be passed on in the form of higher final house prices, transferring public resources to developers and house sellers.

— **Consider applying restrictive measures to non-residential accommodation, subject to an overall assessment that takes into account the potential effects on housing affordability and economic activity.** Increased demand for housing from non-residents and the boom in holiday and seasonal rentals are reducing the residential housing supply in certain areas (see Section 3). This is a widespread international phenomenon affecting, in particular, big cities and tourist areas. In consequence, various countries have introduced limits or tax surcharges, or have eliminated tax benefits, on house purchases by foreign buyers, while some have placed limits on holiday rentals.[92] In the same vein, various Spanish cities and regional governments have tightened the conditions for operating tourist rentals as an economic activity,[93] although it is extremely difficult to effectively enforce such regulations. These measures have been justified by the role these activities have played in pushing up prices, against a backdrop of housing shortages and affordability problems (see Section 3), and by the negative externalities that holiday rentals may generate among residents. But tourist rentals can be justified by their potential to contribute to economic activity and employment, where demand cannot be absorbed by the professional sector (hotels). In this context, any restrictive measures considered should be subjected to a cost-benefit analysis, taking into account not only the impact on the housing market but also the effects on economic activity.

— **Foster structural policies.** A very significant proportion of housing affordability difficulties are linked to low-income households' low wages and, in particular, to working conditions and youth unemployment. This is partly due to the productivity deficit of the economy, a sectoral composition with a relatively low weight of high value-added activities, and the constraints on workers' continuous training and human capital. Driving structural policies to correct these shortcomings would help improve the financial situation and relative income of lower-income households, making it easier for them to access housing. But purchasing power gains among lower-income households should be accompanied by an increase in the main residence housing stock. Otherwise, in an insufficient supply setting, greater

91 See Mirrlees et al. (2010) for an analysis of optimal taxation and efficiency in the design of the tax system, and Best and Kleven (2018) for an analysis of the distortions created by high taxes on residential property transactions.

92 For example, restrictions on house purchases approved in Canada and New Zealand, tax surcharges in Australia and tighter criteria envisaged for availing of tax benefits linked to residence in Portugal. Tourist rentals are subject to growing limitations and restrictions in cities such as New York, Florence, Berlin, Amsterdam, San Francisco, London and Paris.

93 For instance, limits introduced by local authorities in cities such as Palma de Mallorca, Madrid and Barcelona, and restrictions in Málaga, Valencia, San Sebastián, Cádiz and Santiago de Compostela. Spain's regional governments have also regulated this activity and some – such as Andalusia, Madrid or Catalonia – have progressively tightened the requirements.

purchasing power on the demand side could pass through, in part, to higher real estate prices (see Box 4.2).

— **Improve public transport in metropolitan areas.** The current housing shortage demands that existing housing be mobilised for residential use and that new housing be built. In urban areas, potential development land tends to be more plentiful in the suburbs, and more so the greater the distance from the city centre. The existence of a metropolitan public transport network, combined with good urban transport, makes it possible to increase the potential size of urban areas, extend the benefits of agglomeration economies and ease pressure on real estate prices (see Section 3). The gradual build-up of population in Spain's large urban areas, and the ensuing congestion costs (see Section 3), require higher investment in urban and interurban public transport.[94]

94 See Monte, Redding and Rossi-Hansberg (2018) for an analysis of the welfare gains associated with lower commuting costs through better allocation of workers to more productive locations other than their place of residence where housing is in greater supply.

References

Adams, Brian, Lara Loewenstein, Hugh Montag and Randal J. Verbrugge. (2022). "Disentangling rent index differences: data, methods, and scope". Working Paper, 22-38. Federal Reserve Bank of Cleveland. https://doi.org/10.26509/frbc-wp-202238r

Alves, Pana, Carmen Broto, María Gil and Matías Lamas. (2023). "Risk and vulnerability indicators for the Spanish housing market". Documentos Ocasionales, 2314, Banco de España. https://repositorio.bde.es/handle/123456789/36275

Anghel, Brindusa, Henrique Basso, Olympia Bover, José María Casado, Laura Hospido, Mario Izquierdo, Ivan Kataryniuk, Aitor Lacuesta, José Manuel Montero and Elena Vozmediano. (2018). "Income, consumption and wealth inequality in Spain". *SERIEs* 9(4), pp. 351-387. https://doi.org/10.1007/s13209-018-0185-1

Arellano, Manuel, Stéphane Bonhomme, Micole De Vera, Laura Hospido, and Siqi Wei. (2022). "Income Risk Inequality: Evidence form Spanish Administrative Records". *Quantitative Economics,* 13(4), pp. 1747-1801. https://doi.org/10.3982/QE1887

Autor, David H., Christopher J. Palmer and Parag A. Pathak. (2014). "Housing market spillovers: evidence from the end of rent controls in Cambridge, Massachusetts". *Journal of Political Economy,* 122(3), pp. 661-717. https://doi.org/10.1086/675536

Autoridad Independiente de Responsabilidad Fiscal. (2020). "Infraestructuras de Transporte". Evaluación del gasto público 2019. https://www.airef.es/wp-content/uploads/2020/09/INFRAESTRUCTURAS/200730.-INFRAESTRUCTURAS.-ESTUDIO.pdf

Banco de España. (2021). "Chapter 4. The spatial distribution of population in Spain and its economic consequences". Banco de España, pp 249-293, *Annual Report 2020.* https://repositorio.bde.es/handle/123456789/16610

Banco de España. (2023). "Box 1.2. Use in 2023 of the codes of good practice introduced by Royal Decree-Laws 6/2012 and 19/2022". *Financial Stability Report. Autumn 2023,* pp. 66-69. https://repositorio.bde.es/handle/123456789/34656

Banco de España. (2024). *Report on the Financial Situation of Households and Firms. Second half of 2023.* https://repositorio.bde.es/handle/123456789/35993

Banquet, Alexandre, Paul Delbouve, Michiel N. Daams and Paolo Veneri. (2022). "Monitoring land use in cities using satellite imagery and deep learning". OECD Regional Development Papers, 28, OECD Publishing. https://doi.org/10.1787/dc8e85d5-en

Barceló, Cristina, and Ernesto Villanueva. (2018). "The risk of job loss, household formation and housing demand: evidence from differences in severance payments". Documentos de Trabajo, 1849, Banco de España. https://repositorio.bde.es/handle/123456789/8852

Basel Committee on Banking Supervision. (2022). *Evaluation of the impact and efficacy of the Basel III reforms.* https://www.bis.org/bcbs/publ/d544.pdf#page9

Best, Michael Carlos, and Henrik Jacobsen Kleven. (2018). "Housing market responses to transaction taxes: evidence from notches and stimulus in the UK". *The Review of Economic Studies,* 85(1), pp. 157–193. https://doi.org/10.1093/restud/rdx032

Bingley, Paul, and Ian Walker. (2001). "Housing Subsidies and Working Incentives in Great Britain". *The Economic Journal,* 111(471), pp. C86-C103. https://doi.org/10.1111/1468-0297.00621

Blanchflower, David G., and Andrew J. Oswald. (2013). "Does high home-ownership impair the labor market?". NBER Working Paper Series, 19079. National Bureau of Economic Research. https://doi.org/10.3386/w19079

Breidenbach, Philipp, Lea Eilers and Jan Fries. (2022). "Temporal dynamics of rent regulations - The case of German rent control". *Regional Science and Urban Economics,* 92, 103737. https://doi.org/10.1016/j.regsciurbeco.2021.103737

Castro, Christian, Ángel Estrada and Jorge Martínez. (2016). "The countercyclical capital buffer in Spain: an analysis of key guiding indicators". Documentos de Trabajo, 1601, Banco de España. https://repositorio.bde.es/handle/123456789/7216

Causa, Orsetta, and Jacob Pichelmann. (2020). "Should I stay or should I go? Housing and residential mobility across OECD countries". OECD Economics Department, Working Papers, 1626, Organization for Economic Co-operation and Development. https://one.oecd.org/document/ECO/WKP(2020)34/En/pdf

Carozzi, Felipe, Christian A. L. Hilber and Xiaolun Yu. (2024). "On the economic impacts of mortgage credit expansion policies: Evidence from help to buy". *Journal of Urban Economics,* 139, 103611. https://doi.org/10.1016/j.jue.2023.103611

Comité de Personas Expertas. (2022). Libro Blanco sobre la Reforma Tributaria. Instituto de Estudios Fiscales, Ministerio de Hacienda y Función Pública. https://www.ief.es/docs/investigacion/comiteexpertos/LibroBlancoReformaTributaria_2022.pdf

Consejo General del Poder Judicial. (2024). Data series on the effect of the crisis on judicial bodies. https://www.poderjudicial.es/cgpj/es/Temas/Estadistica-Judicial/Estudios-e-Informes/Efecto-de-la-Crisis-en-los-organos-judiciales/

Dettling, Lisa J., and Melissa S. Kearney. (2014). "House prices and birth rates: the impact of the real estate on the decision to have a baby". *Journal of Public Economics,* 110, pp. 82-100. https://doi.org/10.1016/j.jpubeco.2013.09.009

Diamond, Rebecca, Tim McQuade and Franklin Qian. (2019). "The effects of rent control expansion on tenants, landlords and inequality: evidence from San Francisco". *American Economic Review,* 109(9), pp. 3365-3394. https://doi.org/10.1257/aer.20181289

Diamond, Rebecca, and Enrico Moretti. (2021). "Where is standard of living the highest? Local prices and the geography of consumption". NBER Working Paper, 29533. National Bureau of Economic Research. https://doi.org/10.3386/w29533

European Central Bank. (2023). "Household finance and consumption survey: results from the 2021 wave". ECB Statistics Paper Series, 46, European Central Bank. https://www.ecb.europa.eu/pub/pdf/scpsps/ecb.sps46~3563bc9f03.en.pdf?0a1159f78d18c469a8cd9348bada56b9

European Commission, Eurostat. (2019). *Methodological manual on territorial typologies – 2018 edition.* Publications Office. https://doi.org/10.2785/930137

European Commission, Eurostat. (2023a). "Household composition statistics". *Eurostat Statistics Explained.* https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Household_composition_statistics

European Commission, Eurostat. (2023b). EU statistics on income and living conditions. https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions

European Systemic Risk Board. (2024). "Follow-up report on vulnerabilities in the residential real estate sectors of the EEA countries". ESRB Reports, European Systemic Risk Board. https://www.esrb.europa.eu/pub/pdf/reports/esrb.report.vulnerabilitiesresidentialrealestatesectors202402~df77b00f9a.en.pdf

Fack, Gabrielle. (2006). "Are housing benefit an effective way to redistribute income? Evidence from a natural experiment in France". *Labour Economics,* 13(6), pp. 747-771. https://doi.org/10.1016/j.labeco.2006.01.001

Favilukis, Jack, Pierre Mabille and Stijn Van Nieuwerburgh. (2023). "Affordable Housing and City Welfare". *Review of Economic Studies,* 90(1), pp. 293-330. https://doi.org/10.1093/restud/rdac024

Forte-Campos, Víctor, Enrique Moral-Benito and Javier Quintana. (2021). "A cost of living index for Spanish cities", *Economic Bulletin – Banco de España,* 3/2021. https://repositorio.bde.es/handle/123456789/17535

Galán Camacho, Jorge E., and Matías Lamas. (2019). "Beyond the LTV ratio: new macroprudential lesson from Spain". Documentos de Trabajo, 1931, Banco de España. https://repositorio.bde.es/handle/123456789/9810

Ganics, Gregely, and María Rodríguez Moreno. (2022). "A house price-at-risk model to monitor the downside risk for the Spanish housing market". Documentos de Trabajo, 2244, Banco de España. https://repositorio.bde.es/handle/123456789/29472

Garcia-López, Miquel-Àngel, Jordi Jofre-Monseny, Rodrigo Martínez-Mazza and Mariona Segú. (2020). "Do short-term rental platforms affect housing markets? Evidence from Airbnb in Barcelona". *Journal of Urban Economics,* 119, 103278. https://doi.org/10.1016/j.jue.2020.103278

Garcia-Montalvo, José, Josep Maria Raya and Carles Sala Roca. (2024). "La colaboración público-privada y su relevancia cuantitativa en la mejora de la eficiencia del gasto público en el sector de la vivienda". *Revista del IEE,* 1, pp. 55-68. https://www.ieemadrid.es/wp-content/uploads/Revista-del-IEE-N.o-1-2024.-La-colaboracion-publico-privada-y-el-reto-de-la-vivienda.pdf

Gibbons, Stephen, and Alan Manning. (2006). "The incidence of UK housing benefit: evidence from the 1990s reforms". *Journal of Public Economics,* 90(4-5), pp. 799-822. https://doi.org/10.1016/j.jpubeco.2005.01.002

Hsieh, Chang-Tai, and Enrico Moretti. (2019) "Housing constraints and spatial misallocation". *American Economic Journal: Macroeconomics,* 11(2), pp. 1-39. https://doi.org/10.1257/mac.20170388

Instituto Nacional de Estadística. (2023a). Population and Housing Censuses 2021. https://www.ine.es/en/prensa/censo_2021_jun_en.pdf

Instituto Nacional de Estadística. (2023b). Population Continuous Statistics. https://www.ine.es/CDINEbase/consultar.do?mes=&operacion=Estad%EDstica+continua+de+poblaci%F3n&id_oper=Ir

Instituto Nacional de Estadística. (2024a). Living Conditions Survey. https://www.ine.es/dyngs/Prensa/en/ECV2023.htm

Instituto Nacional de Estadística. (2024b). Population Continuous Statistics. https://www.ine.es/dyngs/Prensa/en/ECP4T23.htm

Jacob, Brian, and Jens Ludwig. (2012). "The effects of housing assistance on labor supply: evidence from a voucher lottery". *American Economic Review,* 102(1), pp. 272-304. https://doi.org/10.1257/aer.102.1.272

Jofre-Monseny, Jordi, Rodrigo Martínez-Mazza and Mariona Segú. (2023). "Effectiveness and supply effect of high-coverage rent control policies". *Regional Science and Urban Economics,* 101, 103916. https://doi.org/10.1016/j.regsciurbeco.2023.103916

Khametshin, Dmitry, David López-Rodríguez and Luis Pérez. (2024). "El mercado del alquiler de vivienda residencial en España: evolución reciente, desequilibrios y vulnerabilidad social". Documentos Ocasionales, Banco de España. Forthcoming.

Koster, Hans R. A., Jos Van Ommeren and Nicolas Volkhausen. (2021). "Short-term rentals and the housing market: Quasi-experimental evidence from Airbnb in Los Angeles". *Journal of Urban Economics,* 124, 103356. https://doi.org/10.1016/j.jue.2021.103356

Laferrère, Anne, and David Le Blanc. (2004). "How do housing allowances affect rents? An empirical analysis of the french case". *Journal of Housing Economics,* 13(1), pp. 36-67. https://doi.org/10.1016/j.jhe.2004.02.001

Lájer, Andrés, David López-Rodríguez and Lucio San Juan. (2024). "El mercado de la vivienda residencial en España en perspectiva: hechos estilizados y evolución reciente". Documentos Ocasionales, Banco de España. Forthcoming.

López-Rodríguez, David, and Cristina Garcia Ciria. (2018). "Spain's tax structure in the context of the European Union". Documentos Ocasionales, 1810, Banco de España. https://repositorio.bde.es/handle/123456789/13308

López-Rodríguez, David, and María de los Llanos Matea Rosa. (2020). "Public intervention in the rental housing market: a review of international experience". Documentos Ocasionales, 2002, Banco de España. https://repositorio.bde.es/handle/123456789/13302

Martínez Pagés, Jorge, and Luis Ángel Maza. (2003). "Analysis of house prices in Spain". Documentos de Trabajo, 0307, Banco de España. https://repositorio.bde.es/handle/123456789/6781

Mense, Andreas, Claus Michelsen and Konstantin A. Kholodilin. (2023). "Rent control, market segmentation, and misallocation: causal evidence from a large-scale policy intervention". *Journal of Urban Economics,* 134, 103513. https://doi.org/10.1016/j.jue.2022.103513

Ministerio de Vivienda y Agenda Urbana. (2024). *Sistema estatal de referencia del precio del alquiler de vivienda.* https://www.mivau.gob.es/vivienda/alquila-bien-es-tu-derecho/serpavi

Mirrlees, James A. (dir.), Stuart Adam, Timothy Besley, Richard Blundell, Stephen Bond, Robert Chote, Malcolm Gammie, Paul Johnson, Gareth Myles and James Poterba (eds.). (2010). *Tax by Design. The Mirrlees Review.* Oxford University Press. https://www.jstor.org/stable/24440228

Monràs, Joan, and José García-Montalvo. (2022). "The Effect of Second Generation Rent Controls: New Evidence from Catalonia". Working Papers, 1345, Barcelona School of Economics. https://bse.eu/research/working-papers/effect-second-generation-rent-controls-new-evidence-catalonia

Monte, Ferdinando, Stephen J. Redding and Esteban Rossi-Hansberg. (2018). "Commuting, migration, and local employment elasticities". *American Economic Review,* 108(12), pp. 3855-3890. https://www.aeaweb.org/articles?id=10.1257/aer.20151507

Observatori Metropolità de l'Habitatge de Barcelona. (2023). "L'Oferta de lloguer de temporada de Barcelona. Informe preliminar". https://ohb.cat/wp-content/uploads/2024/03/O23023_LAB_Lloguer-Temporada-1.pdf

Organisation for Economic Co-operation and Development. (2024). *Affordable housing database.* Retrieved 4 April 2024. https://www.oecd.org/housing/data/affordable-housing-database/

Paciorek, Andrew, and Todd Sinai. (2012). "Does home owning smooth the variability of future consumption?". *Journal of Urban Economics,* 71(2), pp. 244-257. https://doi.org/10.1016/j.jue.2011.11.001

San Juan, Lucio. (2023). "The housing supply and demand mismatch and its relationship with house prices". *Economic Bulletin - Banco de España,* 2023/Q3, 09. https://repositorio.bde.es/handle/123456789/30289

Sims, David P. (2007). "Out of control: what can we learn from the end of Massachusetts rent control?". *Journal of Urban Economics,* 61(1), pp. 129-151. https://doi.org/10.1016/j.jue.2006.06.004

Susin, Scott. (2002). "Rent vouchers and the price of low-income housing". *Journal of Public Economics,* 83(1), pp. 109-152. https://doi.org/10.1016/S0047-2727(01)00081-0

Trilla Bellart, Carme. (2024). “La colaboración público-privada y su magnitud cuantitativa para el aumento de la eficiencia del gasto público en el sector de la vivienda en España”. *Revista del IEE,* (1), pp. 78-87. https://www.ieemadrid.es/wp-content/uploads/Revista-del-IEE-N.o-1-2024.-La-colaboracion-publico-privada-y-el-reto-de-la-vivienda.pdf#page=78

Zillow. (2024). Zillow Observed Rent Index. https://www.zillow.com/research/data/

Box 4.1

THE COMMERCIAL REAL ESTATE MARKET AND ITS FINANCIAL STABILITY IMPLICATIONS

The commercial real estate (CRE) sector engages in the acquisition, construction, development and management of real estate used for business activities.[1] This sector's performance is important due to its potential implications for the financial system and the economy as a whole. First, CRE is a factor of production necessary for firms in other sectors to do business, meaning that such firms may be affected by the valuation and availability of these assets. Second, turnover and asset prices in this sector tend to exhibit large swings over business cycles, more so than in the residential market. This is partly because demand for these assets is highly sensitive to the business cycle. Moreover, sometimes asset overvaluations occur, which, when corrected, can have adverse effects on macroeconomic developments and financial stability.

Globally, this sector currently exhibits certain vulnerabilities linked to both cyclical and structural factors. In relation to the former, the recent increase in interest rates raises the debt burden of firms in this sector and hampers their ability to refinance themselves and access new financing. While firms in other sectors are also affected by the same factors, those operating in the CRE market are, on average, more exposed to the effects of rising interest rates, since they have a higher degree of leverage.

As regards structural factors, the greater use of e-commerce and the expansion of teleworking following the COVID-19 pandemic have reduced demand for office space and certain retail premises. This results in lower revenue-generating capacity for the firms managing these assets and decreases their value.[2] The fall in CRE prices generates potential losses for owners while limiting their ability to raise new financing, as these assets are often used as loan collateral. In addition, it is more difficult for lenders to recover the amounts lent through the liquidation of such collateral in the event of default.

Another structural factor that affects the CRE sector is climate change-related economic policies, including more stringent construction standards. The implementation of these measures will lead to higher building and maintenance costs for commercial property.

Given these vulnerabilities in the CRE sector, several international organisations have recently expressed concern about the potential implications for financial stability. Although in European countries banks are far less exposed, in aggregate terms, to the CRE sector than to the residential sector, potential negative developments in this segment could amplify an adverse scenario and spill over to the rest of the financial system (as noted by the European Central Bank (ECB))[3] and have a negative effect on economic growth (as suggested by the International Monetary Fund (IMF)).[4]

In late 2022 the European Systemic Risk Board (ESRB) issued a recommendation on vulnerabilities in the CRE sector with the aim of improving monitoring of the sector and the related risks.[5] This took place against a background in which the CRE sectors of various European countries had been highly expansionary since the end of the global financial crisis. Such monitoring remains important despite the growth of bank exposure to this sector having slowed since 2020. This slowdown was broad-based, but more pronounced in some of the European countries where signs of vulnerability were more evident, such as Belgium, Finland, France, Italy, Luxembourg and Portugal. The slowing momentum in this sector has potentially been influenced by the tightening of monetary policy, but also, in some countries, by the effect of macroprudential measures implemented in the CRE sector (e.g. Norway, Poland and Romania) and in the residential sector (e.g. Belgium, Finland and the Netherlands).

Beyond the European context, vulnerabilities in this sector are also observed in other global systemically important economies. For instance, commercial property prices in the United States have experienced a very pronounced

1 CRE includes, inter alia, offices, industrial premises and commercial premises.

2 By contrast, there has been an increase in demand for industrial premises used for e-commerce logistics.

3 See European Central Bank. (2023). "Real estate markets in an environment of high financing costs". *Financial Stability Review,* November 2023, Special Feature B, noting that in 2022 Q4 the exposure of euro area banks as a whole to residential mortgage lending accounted for almost 30% of total loans, while CRE credit accounted for 10% of the total.

4 International Monetary Fund. (2021). "Chapter 3: Commercial real estate. Financial stability risks during the COVID-19 crisis and beyond". *Global Financial Stability Report,* April 2021.

5 See Recommendation ESRB/2022/9 on vulnerabilities in the commercial real estate sector in the European Economic Area. The publication of the recommendation was accompanied by a technical report by the ESRB, *Vulnerabilities in the EEA commercial real estate sector,* January 2023. The Banco de España has formally adopted this recommendation and is currently working on strengthening its CRE sector risk monitoring framework (see Box 3.1 of the 2023 *Supervision Report).*

Box 4.1
THE COMMERCIAL REAL ESTATE MARKET AND ITS FINANCIAL STABILITY IMPLICATIONS (cont'd)

correction in the recent period, raising some doubts about the impact on banks exposed to this sector.[6] In China, the weakness of the real estate sector adversely affects the overall economic climate[7] and there are some concerns about its interconnectedness with non-bank financial intermediaries.[8]

Chart 1
Relative weight of commercial real estate credit in total credit (a)

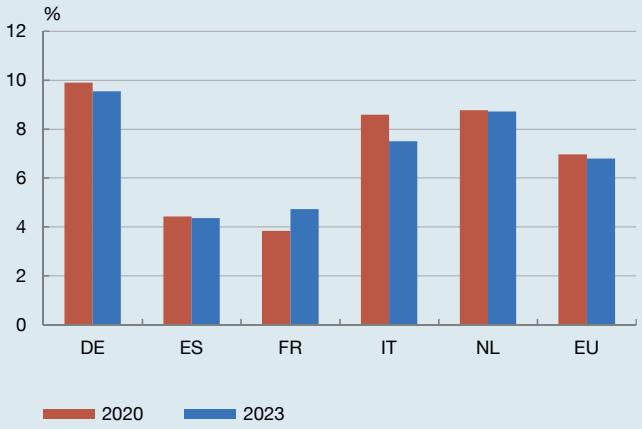


Chart 2
Commercial real estate hedonic price index (b)

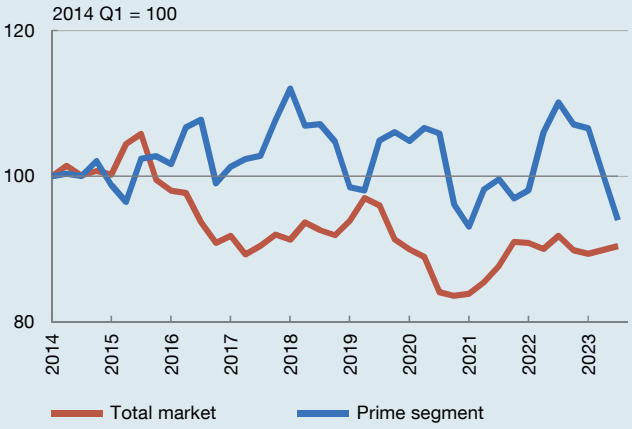
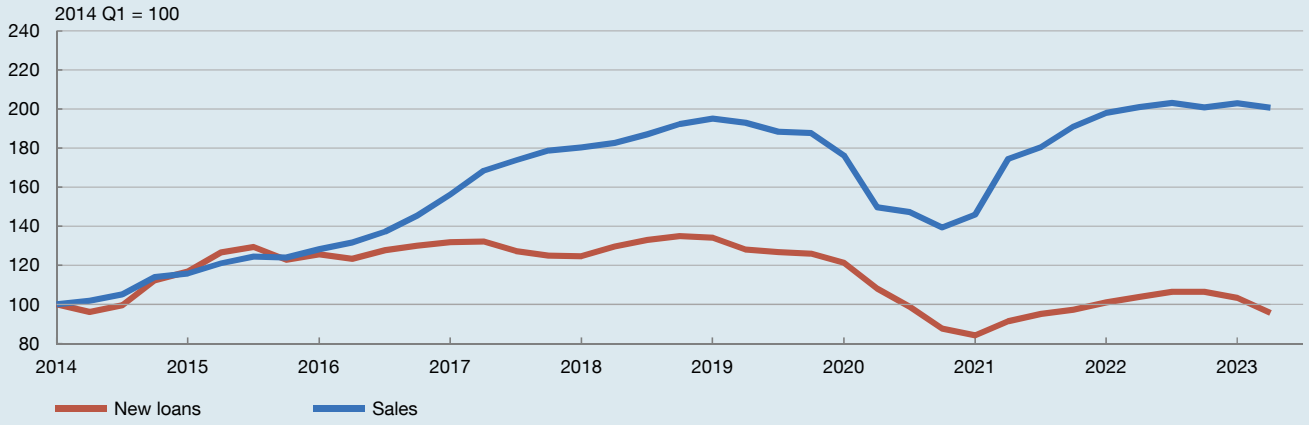


Chart 3
Commercial real estate sales and new loans (c)



SOURCES: Banco de España, Colegio de Registradores and EBA Risk Dashboard.

a The series show total exposures to the commercial real estate sector relative to total credit by country. The information is provided at consolidated level.
b The series show changes in the hedonic price index for the commercial real estate market as a whole and for the prime segment on a 2014 Q1 = 100 basis.
c The series show the four-period moving average of the number of commercial real estate sales and the number of new commercial real estate loans. All the series are shown on a 2014 Q1 = 100 basis.

6 For a discussion of risks, see, for example, "Commercial Real Estate: Where Are the Financial Risks?", *Economic Synopses,* No 22, Federal Reserve Bank of St. Louis.

7 See, for example, "China's Real Estate Sector: Managing the Medium-Term Slowdown", IMF, February 2024.

8 Box 1.1. of the autumn 2023 *Financial Stability Report,* "The slowdown in China's real estate sector and its potential channels of domestic and international transmission".

Box 4.1
THE COMMERCIAL REAL ESTATE MARKET AND ITS FINANCIAL STABILITY IMPLICATIONS (cont'd)

In Spain, banks' credit exposure to CRE is relatively low.[9] At end-2023, the stock of credit granted to this sector represented 4.4%[10] of the total loan portfolio (excluding those held for trading)[11], which is below the European average and has remained stable in recent years (see Chart 1).

CRE prices in Spain have, on average, remained relatively steady since mid-2021, having followed a declining trajectory in previous years. Thus, by end-2023 these prices were around 10% below their levels in early 2014 (see Chart 2).[12] Meanwhile, CRE prices in the most buoyant areas, known as prime areas, have shown greater volatility, with a stronger recovery following the pandemic, and a steeper fall since the start of the ECB's interest rate hikes in 2022.

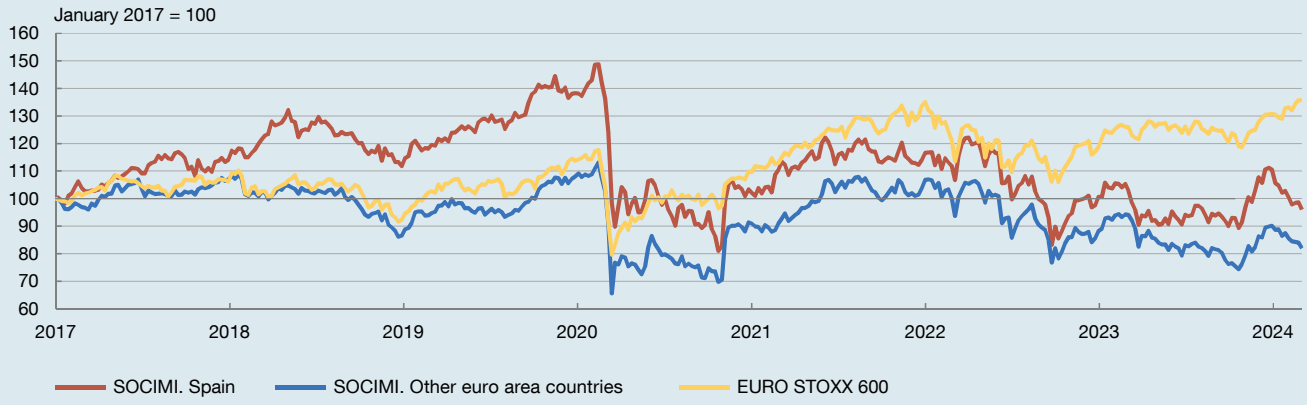
The number of commercial property transactions grew rapidly from 2021 as the social restrictions imposed to contain the COVID-19 pandemic were lifted, stabilising in 2022 and 2023 just above pre-health crisis levels. The number of transactions doubled between 2014 and 2019, but this notable increase was not accompanied by a rise in prices.

In contrast to other European countries, Spain has not seen strong expansionary dynamics in lending to the CRE sector. Having held steady between 2016 and 2020, the number of bank loans extended dropped significantly during the health crisis, recovering subsequently, albeit without reaching pre-pandemic levels (see Chart 3).

Lastly, the role of institutional investors in this sector is worth examining. In Spain's case, real estate investment trusts (SOCIMIs), which grew substantially before the outbreak of the COVID-19 pandemic, are particularly noteworthy. These firms typically purchase dwellings and properties for commercial use, such as offices, shopping centres and hotels, with the aim of obtaining a return through their sale or rental.

Despite their relatively small scale (in March 2024 the stock market value of the main SOCIMIs listed in Spain was less than 2% of the market value of all IBEX 35 companies, compared with 32% in the case of banks), monitoring SOCIMI activity is important from a financial stability viewpoint for several reasons. First, investor appetite for equity or debt issued by these firms significantly affects their ability to invest in real estate, in contrast to traditional

Chart 4
SOCIMI stock prices (a)



SOURCES: Datastream (Refinitiv) and Banco de España.

a SOCIMI indices based on a selection of such firms that are traded with a certain frequency in the markets.

9 *Vulnerabilities in the EEA real estate sector,* January 2023.

10 According to supervisory data (individual data, businesses in Spain), at end-2023 13.5% of credit to the CRE sector was for the purchase of properties (including dwellings) on a buy-to-let basis.

11 The accounting designation "held for trading" applies to assets originated or acquired for the purpose of selling them in the short term to make a financial gain. It applies to few bank lending transactions.

12 The commercial real estate market in Spain is heavily concentrated in the commercial premises asset class, which accounts for almost 80% of transactions. By contrast, offices account for less than 5%. Price developments tend to be similar in both asset classes.

Box 4.1
THE COMMERCIAL REAL ESTATE MARKET AND ITS FINANCIAL STABILITY IMPLICATIONS (cont'd)

real estate companies, which are more dependent on bank financing. Therefore, a worsening of investor sentiment may lead to pressure to generate liquidity and negatively impact prices in the CRE. Second, SOCIMI stock market prices may, more generally, be a useful source of information on investors' outlook for the CRE market. In addition, SOCIMIs are a financial vehicle widely used by international investors to acquire exposure to commercial buildings in Spain, which may also be a transmission channel for global shocks to the Spanish CRE market.

In recent years, the stock prices of SOCIMIs domiciled in Spain have moved very much in line with those of other similar European firms. In particular, a downward pattern has been observed since spring 2022, partly capturing the effects of the tightening of the monetary policy stance. These firms' stock prices have underperformed those of other listed enterprises (see Chart 4). Stock prices have decreased significantly with respect to 2019, reflecting, at least in part, the effect of the structural transformations described above.

Box 4.2

AN ANALYSIS OF ALTERNATIVE PUBLIC POLICIES TO REDUCE THE PROBLEMS OF HOUSING AFFORDABILITY

The main text of this chapter details the existence of housing affordability problems, in both purchases and rentals, which are especially acute among those with lower incomes and, in particular, among young people. This situation has several adverse socio-economic implications that justify government intervention in the housing market. In this box, a variant of the structural model developed in Ferreira, Gálvez and Pidkuyko (2024)[1] is used to analyse the effects of various economic policy alternatives that seek to improve housing affordability for both rentals and purchases.

The model used assumes that households make consumption, debt and saving decisions in the form of investing in housing and other more liquid financial assets at different points in the life cycle. One of these decisions is whether to rent or own a home. Mortgage credit can be used to fund a house purchase, subject to two initial restrictions: a maximum loan-to-value (LTV) ratio of 80% and a maximum debt service-to-income (DSTI) ratio of 35%.[2] Rental housing is managed by specialised firms owned by households that invest in real estate assets. These lessors have a long-term profit objective and also operate in the residential housing market to tailor their inventory to short-term shifts in demand. For an aggregate housing stock that is assumed to be constant (i.e. the housing supply is absolutely inelastic in the short term), this market structure determines the price per square metre that the two markets clear endogenously on the basis of the housing demand of households and firms.

The model is calibrated for Spain using household-level data from the 2020 edition of the Spanish Survey of Household Finances (EFF, by its Spanish abbreviation) to match various patterns observed in the data across the overall age, income and wealth distribution. In particular, as shown in Chart 1, the estimated model fairly accurately replicates housing tenure among households over their lifetime.[3]

Initially, without new housing policies, the model generates a life cycle dynamic in which a high percentage (around 90%) of young households – under the age of 35 – do not have sufficient savings to be eligible for a mortgage (upfront payment of 30% of the value of a house, consisting of 20% for the down payment and 10% for the necessary costs of a house purchase).[4] Furthermore, for a significant proportion of these households, around 40%, their income is still insufficient to assure they will be able to make their mortgage payments, since their DSTI ratio exceeds 35%. As households age, more can afford home ownership, if they choose it. However, households that continue to rent or return to renting after selling their home are generally constrained by the DSTI limit as a result of their low income.

Starting from the baseline situation, the first measure analysed is the *introduction of a public guarantee that would cover the risk of up to 20% of a mortgage's collateral value.*[5] This could potentially benefit those rental households that wish to purchase housing and have savings amounting to more than 10% of the price of a house (that is, they can cover the costs and taxes) but less than 30%. However, the size of the mortgage instalment is a fundamental hindrance to the effectiveness of this measure. Specifically, for a significant share of households whose income would cover a mortgage instalment on a loan that does not exceed the 80% LTV limit, purchasing housing with a public guarantee and an LTV ratio of 100% entails a mortgage instalment in excess of 35% of their income. As such, the effectiveness of this measure is very limited. As Chart 2 shows, both rental and purchase prices in the new long-term equilibrium increase very slightly (0.1%) as a result of the guarantee being made available. These minor price changes are largely the result of the limited scope of this measure. In particular, in equilibrium, the public guarantee gives rise to an increase of 0.5 percentage points (pp) in the share of owner-occupier households in the under-35 age group, while not boosting ownership rates significantly for those aged 35 and over (see Chart 3). The impact of this measure on the housing cost burden (defined as the ratio of rental payments or mortgage instalments to a household's net income) is also minimal. In particular, the

1 Clodomiro Ferreira, Julio Gálvez and Myroslav Pidkuyko. (2024). "Housing Tenure, Consumption and Household Debt: Life-Cycle Dynamics during a Housing Bust". Documentos de Trabajo, Banco de España (forthcoming).

2 These values are consistent with a prudent mortgage lending policy by banks. See Section 4 for more details on changes in mortgage standards in Spain over the last decade.

3 The difference between the data observed and the model's calibration for households over the age of 65 is quantitatively small and may be partly explained by possible differences in the assumptions regarding this group's preferences and transaction costs relative to other households.

4 These costs are, chiefly, 10% VAT on new house purchases, and transfer tax and stamp duty on second-hand purchases. Stamp duty varies across regions but, for the purposes of this exercise, a 10% rate is assumed.

5 In the simulation exercises in this box, there are no limits on access to public guarantees depending on household characteristics.

Box 4.2

AN ANALYSIS OF ALTERNATIVE PUBLIC POLICIES TO REDUCE THE PROBLEMS OF HOUSING AFFORDABILITY (cont'd)

increase in the burden is virtually zero for households that do not change their housing tenure status or their housing characteristics. However, in equilibrium, households that make use of the guarantee change their tenure-related decisions and their housing characteristics leading them to take on slightly more debt. As such, the public guarantee allows the small number of beneficiary households to purchase better (for example, larger) homes, resulting in an increase of between 1 pp and 1.5 pp in the share of overburdened households (see Chart 4).[6]

Chart 1
Home ownership (a)

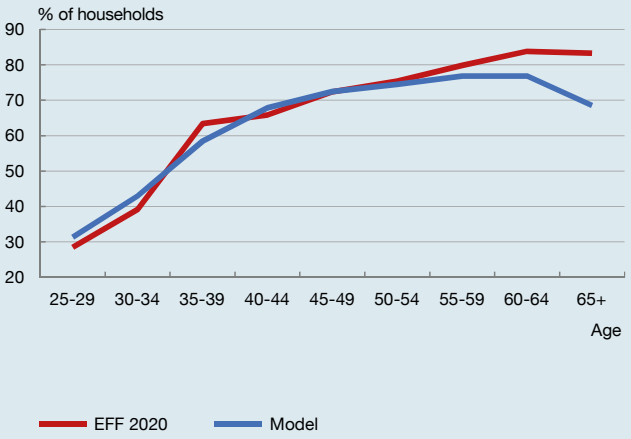


Chart 2
Simulation of % changes in house prices and rentals vis-à-vis initial situation (b)

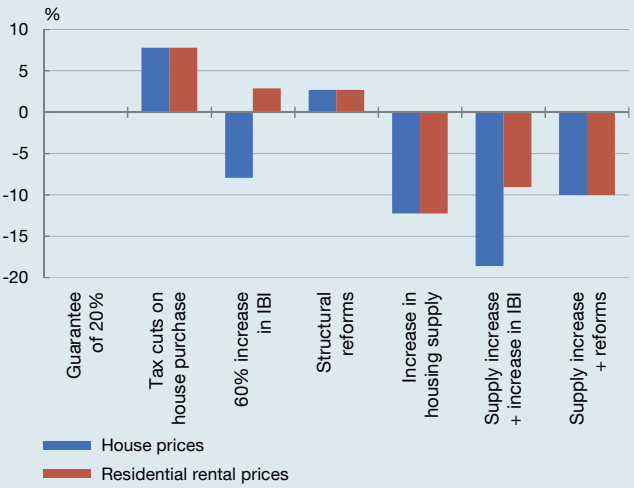


Chart 3
Simulation of changes in home ownership vis-à-vis initial situation (b)

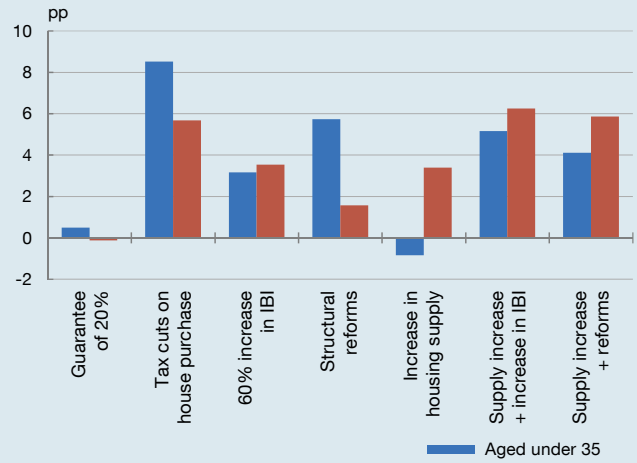
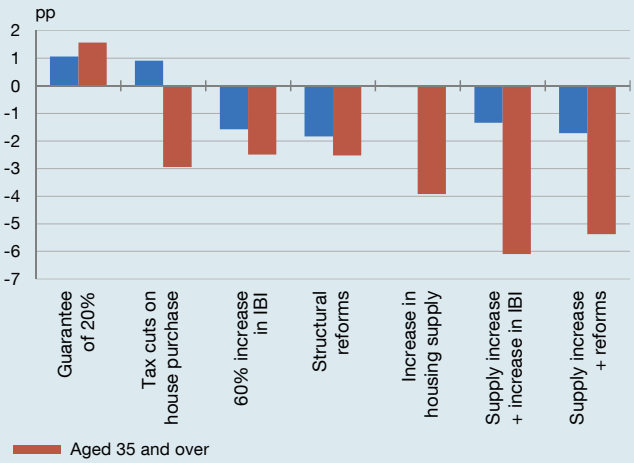


Chart 4
Simulation of change in proportion of overburdened households (b) (c)



SOURCE: Banco de España.

a Comparison between EFF 2020 and the simulations developed under the model in Clodomiro Ferreira, Julio Gálvez and Myroslav Pidkuyko. (2024). "Housing Tenure, Consumption and Household Debt: Life-Cycle Dynamics during a Housing Bust". Documentos de Trabajo, Banco de España (forthcoming).
b The "Tax cuts" scenario envisages eliminating the taxes and associated expenses on house purchases which amount to 10% of the purchase price. The "Structural reforms" scenario considers the effects of a set of policies that in total would raise the relative income of young households (aged under 35) by 15%.
c Households are deemed to be overburdened when they spend more than 40% of their net income on rent or mortgage payments.

6 Throughout this box, households are deemed to be overburdened when they spend more than 40% of their net income on rent or mortgage payments.

Box 4.2
AN ANALYSIS OF ALTERNATIVE PUBLIC POLICIES TO REDUCE THE PROBLEMS OF HOUSING AFFORDABILITY (cont'd)

The second measure analysed is *eliminating the expenses and taxes linked to a house purchase.* This measure is often put forward with a similar aim to the public guarantee – to lower barriers to home ownership. The removal of these upfront costs has a direct impact on the actual expense for households wanting to buy a home. Immediately upon introduction of this measure, and before the general equilibrium effects materialise, the post-tax purchase price per metre falls in the same proportion as the tax (10%). This could simultaneously ease both obstacles faced by potential buyers. First, it reduces the liquidity needed to purchase a home by 10%. Second, the lower post-tax final purchase price means a cut in the potential mortgage instalment as a proportion of household income. Once the general equilibrium effects are taken into account, these two positive impacts for home ownership affordability result in an increase in owner-occupier rates of around 8.5 pp for households under 35 and of 5.7 pp for those aged 35 and over, as shown in Chart 3. However, housing supply rigidity in the face of rising demand entails an increase in both purchase and rental equilibrium prices of 7.8% (see Chart 2).[7] Such real estate price growth, unaccompanied by an increase in household incomes, has an adverse impact on the housing cost burden and, more generally, on the vulnerability of younger households. In particular, this measure leads to greater difficulties for households that continue renting, as rental market prices rise. These effects are concentrated on younger households, with around 1 pp more becoming overburdened (see Chart 4). At the same time, higher rents cut rental households' ability to save, which could hold them back from home ownership in the future. Conversely, it becomes easier to buy a house owing to lower post-tax prices, although the impact is only moderate, since the easing of the tax burden is largely countered by rising prices. As such, the proportion of overburdened households aged 35 and over falls by 3 pp. Nevertheless, this measure comes at a high cost in terms of tax revenue.[8]

The third measure considered is an *increase in property tax* (IBI, by its Spanish abbreviation). Specifically, a 60% increase in IBI is simulated.[9] Unlike the two previous measures, an IBI hike does not have a direct impact on restrictions on gaining a mortgage. However, the measure entails an immediate uptick in costs for owner-occupiers and firms that manage rental housing. As such, real estate prices shift until they reach a new equilibrium on the purchase and rental markets. Specifically, these changes in taxation lead to an increase in the overall cost of owning a home, which may lead some households to purchase a smaller home or to choose to rent. This flow of demand towards the rental market, along with the impact of the price decisions made by management firms in the real estate market, cause rent prices to rise by nearly 3% and purchase prices to fall by around 8% (see Chart 2). Accordingly, changes in the relative prices of both markets eventually counteract the initial effect of the IBI hike and result in a rise of 3.2 pp in the proportion of owner-occupiers under the age of 35 and of 3.5 pp in those aged 35 or over (see Chart 3). The drop in house prices causes the share of overburdened households to fall by between 1.5 pp and 2.5 pp (see Chart 4). However, rising rents increase the housing cost burden for households remaining in rental accommodation, with lower-income groups being more negatively affected.

Young people have higher rates of unemployment and part-time work, along with weaker wage growth relative to real estate prices. Together, these factors help to partly explain their difficulties in accessing housing, whether for purchase or rent. In order to study the role played by young people's lower purchasing power in their housing affordability difficulties, a scenario is simulated in which the labour income of households under 35 is increased by 15%. This scenario combines, in a limited fashion, the impact of a set of *structural reforms* which, for example, may alleviate the Spanish labour market's structural problems and the shortfalls in human capital and worker training. These measures would have the most positive impact on young people's income. The income hike has a positive impact on housing affordability for young people through three channels by: (i) loosening the restriction on regular mortgage instalment amounts for households with

7 Rent prices rise because an equilibrium relationship between purchase and rental prices is assumed in the model. This means that, in practice, prices on both markets move by the same amount, unless the measure under consideration affects each market differently. For the sake of simplicity, it is assumed that firms operating on the real estate market are affected in the same way as households by changes in taxation of housing purchases.

8 Depending on the annual volume of real estate transactions, removing the tax burden associated with households' housing purchases could entail a loss of revenue of between 1% and 1.5% of GDP.

9 This figure would be equivalent to the ex ante increase in revenue needed for the structure of Spanish property and conveyancing taxes to converge with the average of the European Union.

Box 4.2
AN ANALYSIS OF ALTERNATIVE PUBLIC POLICIES TO REDUCE THE PROBLEMS OF HOUSING AFFORDABILITY (cont'd)

enough savings to make a down payment on a home and obtain a mortgage, (ii) allowing households without sufficient savings to build up the necessary savings in less time, and (iii) allowing households that choose to continue renting to afford larger or better quality homes. In equilibrium, the result of these effects is a 5.7 pp increase in the share of young owner-occupiers (see Chart 3). However, since the total housing stock remains the same, rental and purchase prices rise by 2.7%. In equilibrium, these effects result in a slight drop (between 1.8 pp and 2.5 pp) in the proportion of overburdened households (see Chart 4).

The simulation exercises analysed above assume that the aggregate housing supply, i.e. the existing housing stock, is rigid. This assumption is made to isolate the role of various housing affordability challenges faced by households and, moreover, enables approximation of the current relatively rigid supply situation on the Spanish market. However, one of the consequences of an unchanging housing stock is that the effects of housing affordability policies are limited by their effects on real estate asset prices. In addition, the assumption of a rigid housing supply does not allow the effects of various policies that influence the housing stock and composition of the supply to be taken into account. In particular, the possible mobilisation of existing non-residential housing for sale or rental and incentives for new housebuilding.

To illustrate the *importance of housing supply* for price dynamics and affordability, *three additional scenarios* are simulated: (i) an increase in the housing stock of 1% per year for ten years;[10] (ii) this growth in housing stock, combined with the increase in IBI discussed previously; and (iii) this growth in housing supply, accompanied by structural policies that entail higher incomes for young households. As Chart 2 shows, under all three scenarios the fall in house prices and rentals is significant, between 9% and 19%, in equilibrium. However, the impact on the proportion of young homeowners varies considerably. Under the scenario of an increase in the housing supply but with none of the other measures considered under scenarios 2 and 3, the proportion of young homeowners decreases by around 1 pp. However, the greater ability to save at an early age, owing to greater rental affordability, means that the proportion of homeowners aged over 35 increases by 3.4 pp. When the growth in housing supply is combined with the increase in IBI or with higher incomes for young people, the proportion of young homeowners climbs by 5.1 pp and 4.1 pp, respectively. At the same time, the greater ability to save as a result of lower rents pushes up home ownership for households aged over 35 by 6.2 pp and 5.8 pp, respectively. Affordability relating to housing costs also improves, and more so when the growth in supply is combined with either of the two other measures considered (see Chart 4).

Overall, based on the model used, the simulations presented show that the measures that have the most positive impact on housing affordability (home ownership and rentals) are those affecting housing supply and household income determinants. Measures that impact final prices – through lower taxes on transactions – with no accompanying supply measures have a very high cost in terms of revenue and may exacerbate housing affordability difficulties among lower-income households. Introducing public guarantees for house purchases would have a limited impact, as the low income levels of many rental households with no savings mean they are able to assume only limited leverage. Increases in recurrent property taxes, in addition to generating efficiency gains in the design of the tax system, could help ease affordability problems. Nevertheless, these tax changes would have greater impact if they were accompanied by growth in supply.

In any event, the outcomes of the different scenarios presented, and the conclusions drawn, should be viewed with caution. Despite considering the main characteristics and constraints that affect the Spanish housing market, and the decisions faced by households over their lifetime, the model used does not capture the key characteristics of the market, mainly on the supply side. These limitations could affect the final impact of the policies considered. Specifically, there are three elements not included in the model used that are of particular significance in the case of Spain: (i) young people's emancipation decisions; (ii) second homes and empty properties; and (iii) social or affordable rental housing.

10 This increase is assumed to be in the private sector, distributed in equilibrium between rental and home ownership, and would mean more than doubling current new housing production.

INDEX OF PHOTOGRAPHS

Cibeles frontage. © Banco de España COVER

Pablo Hernández de Cos, Governor of the Banco de España. © Banco de España 9

Corner of calle Alcalá and calle Marqués de Cubas, Cibeles headquarters (detail). © Banco de España 40

Stained-glass window in the calle Alcalá entrance hall, Cibeles headquarters (detail: harvesting). © Banco de España 42

Main entrance door to the Palma de Mallorca branch office (detail). © Banco de España 91

Stained-glass window in the Banking Hall, Cibeles headquarters (detail: the grape harvest). © Banco de España 93

Main entrance door to the Seville branch office. © Banco de España 160

Stained-glass window in the calle Alcalá entrance hall, Cibeles headquarters (detail: metal working). © Banco de España 162

Entrance hall of the Palma de Mallorca branch office. © Banco de España 208

Stained-glass window in the Banking Hall, Cibeles headquarters (detail: fishing). © Banco de España 210

The Banco de España publishes various types of documents providing information on its activity (economic reports, statistics, research papers, etc.), which can be consulted in the Institutional Repository at https://repositorio.bde.es/.

Most of these documents are available in PDF format and can be downloaded free of charge from the Banco de España website at http://www.bde.es/webbde/en/secciones/informes/.

ISSN: 1695 - 436X (online edition)

ACRONYMS AND ABBREVIATIONS

AEAT	State tax revenue service
AIReF	Independent Authority for Fiscal Responsibility
AMCESFI	Spanish Macroprudential Authority
APP	Asset Purchase Programme
BCBS	Basel Committee on Banking Supervision
BE	Banco de España
BIS	Bank for International Settlements
BLS	Bank Lending Survey
CBQ	Central Balance Sheet Data Office Quarterly Survey
CBSO	Central Balance Sheet Data Office
CCR	Central Credit Register
CCyB	Countercyclical capital buffer
CNE	Spanish National Accounts
CNMV	National Securities Market Commission
CPI	Consumer Price Index
DFR	Deposit facility rate
DGS	Deposit guarantee scheme
EBA	European Banking Authority
EBAE	Banco de España Business Activity Survey
ECB	European Central Bank
EFF	Spanish Survey of Household Finances
EFSF	European Financial Stability Facility
EIB	European Investment Bank
EONIA	Euro Overnight Index Average
EPA	Spanish Labour Force Survey
ERTE	Job retention and short-time work schemes
ESCB	European System of Central Banks
ESM	European Stability Mechanism
ESRB	European Systemic Risk Board
€STR	Euro short-term rate
ETS	Emissions trading system
EURIBOR	Euro Interbank Offered Rate
EUROSTAT	Statistical Office of the European Communities
FASE	Financial Accounts of the Spanish Economy
FDI	Foreign direct investment
FSB	Financial Stability Board
GDI	Gross disposable income
GDP	Gross domestic product
GFCF	Gross fixed capital formation
GHG	Greenhouse gas
GOP	Gross operating profit
GOS	Gross operating surplus
GVA	Gross value added
HICP	Harmonised Index of Consumer Prices
ICO	Official Credit Institute
IEA	International Energy Agency
IGAE	National Audit Office
IIP	International Investment Position
IMF	International Monetary Fund
INE	National Statistics Institute
IRENA	International Renewable Energy Agency
LTP	Loan-to-price ratio
MCVL	Social security administrative labour records
MREL	Minimum requirement for own funds and eligible liabilities
MTBE	Quarterly Model of the Banco de España
NCBs	National central banks
NDCs	Nationally determined contributions
NDER	Narrowly defined effective rate
NFCs	Non-financial corporations
NGEU	Next Generation EU
NGFS	Network for Greening the Financial System
NPISHs	Non-profit institutions serving households
NPLs	Non-performing loans
OECD	Organisation for Economic Co-operation and Development
OIS	Overnight index swap
PELTROs	Pandemic emergency longer-term refinancing operations
PEPP	Pandemic Emergency Purchase Programme
PIAAC	Programme for the International Assessment of Adult Competencies
PMI	Purchasing Managers' Index
PPP	Purchasing power parity
QNA	Quarterly National Accounts
R&D&I	Research, development and innovation
REACT EU	Recovery Assistance for Cohesion and the Territories of Europe
RRF	Recovery and Resilience Facility
RTRP	Recovery, Transformation and Resilience Plan
SAFE	ECB Survey on the Access to Finance of Enterprises
SGP	Stability and Growth Pact
SMA	Survey of Monetary Analysts (ECB)
SMEs	Small and medium-sized enterprises
SPF	Survey of Professional Forecasters (ECB)
SRB	Single Resolution Board
SRM	Single Resolution Mechanism
SSM	Single Supervisory Mechanism
TFP	Total factor productivity
TPI	Transmission Protection Instrument
TLTROs	Targeted longer-term refinancing operations
ULCs	Unit labour costs
UNEF	Spanish Solar Photovoltaic Association
VAT	Value Added Tax
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

COUNTRIES AND CURRENCIES

In accordance with the protocol order, the EU Member States are listed using the alphabetical order of the country names in the national languages.

BE	Belgium	EUR (euro)
BG	Bulgaria	BGN (Bulgarian lev)
CZ	Czech Republic	CZK (Czech koruna)
DK	Denmark	DKK (Danish krone)
DE	Germany	EUR (euro)
EE	Estonia	EUR (euro)
IE	Ireland	EUR (euro)
GR	Greece	EUR (euro)
ES	Spain	EUR (euro)
FR	France	EUR (euro)
IT	Italy	EUR (euro)
HR	Croatia	EUR (euro)
CY	Cyprus	EUR (euro)
LV	Latvia	EUR (euro)
LT	Lithuania	EUR (euro)
LU	Luxembourg	EUR (euro)
HU	Hungary	HUF (Hungarian forint)
MT	Malta	EUR (euro)
NL	Netherlands	EUR (euro)
AT	Austria	EUR (euro)
PL	Poland	PLN (Polish zloty)
PT	Portugal	EUR (euro)
RO	Romania	RON (New Romanian leu)
SI	Slovenia	EUR (euro)
SK	Slovakia	EUR (euro)
FI	Finland	EUR (euro)
SE	Sweden	SEK (Swedish krona)
UK	United Kingdom	GBP (Pound sterling)
JP	Japan	JPY (Japanese yen)
US	United States	USD (US dollar)

CONVENTIONS USED

M1	Notes and coins held by the public + sight deposits
M2	M1 + deposits redeemable at notice of up to three months + deposits with an agreed maturity of up to two years
M3	M2 + repos + shares in money market funds and money market instruments + debt securities issued with an agreed maturity of up to two years
Q1, Q4	Calendar quarters
H1, H2	Calendar half-years
bn	Billions (10^9)
m	Millions
bp	Basis points
pp	Percentage points
...	Not available
—	Nil, non-existence of the event considered or insignificance of changes when expressed as rates of growth
0.0	Less than half the final digit shown in the series