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Foreword by the Governor Pablo Hernández de Cos

Following a year of enormous cost – in terms of human lives and economic setbacks – caused by the COVID 19 pandemic, the Banco de España *Annual Report 2020* is published today in a setting marked by a change in expectations prompted by the discovery of vaccines and their rollout to the general public. As a result of this change, a vigorous global economic recovery is discernible in the coming quarters.

As illustrated in Chapter 1, among the developed countries, the Spanish economy has been one of the most severely affected. The double digit decline in GDP in 2020 was unprecedented in peacetime. Moreover, the recovery stalled in the second half of the year, as a consequence of the fresh outbreaks of the disease and the measures applied to contain them. The impact was very uneven across sectors (being concentrated especially in hospitality, leisure, retail and wholesale trade, and transport), geographical areas (activity falling most in the island and Mediterranean coast provinces), groups of workers (the brunt of the crisis was borne by low-income young workers on temporary contracts) and firms (with smaller firms experiencing a larger decline in turnover). The adverse effects of the pandemic on the levels of GDP, employment and public finances may last several years.

Against this background, materialisation of the recovery and its strength will continue to depend crucially on the course of the pandemic, including the speed of the vaccination rollout and its effectiveness against possible new strains. However, as detailed in Chapter 2 of this Report, appropriate economic policies will also need to be applied.

We can draw some lessons from the experience of the past year; though preliminary, they may be relevant to the management of the crisis in the coming quarters and also in the medium and long term.

First, the importance of a rapid and forceful economic policy response needs highlighting. The unprecedented magnitude of the shock has also had an unprecedented economic policy response, which has mitigated the short-term costs, averted even more extreme negative scenarios and will probably reduce the medium and long-term damage arising from the crisis. Globally, the International Monetary Fund estimates that the fall in activity in 2020 could have been three times higher without the measures applied and, also, countries where

the economic response has been stronger have tended to endure less pronounced recessions.

The forcefulness of the response is well illustrated by the reaction of the European Central Bank (ECB) – with the approval of the pandemic emergency purchase programme (PEPP), which enabled asset purchases equivalent to 6.7% of euro area GDP in 2020 – and by the increase (by 6.5 percentage points of GDP) in the budget deficit that same year in the euro area, which includes the impact of the discretionary measures and automatic stabilisers.

Second, the comprehensive nature of the response has also been crucial; most of the transmission channels of a crisis with very specific characteristics, affecting both supply and demand, have been covered.

Monetary policy has mainly acted in two areas: the purchase of financial assets and the provision of liquidity to commercial banks, thus covering the euro area's main financing channels. Budgetary policy, meanwhile, has deployed a large variety of instruments to mitigate the effects of the crisis on households and firms, especially as these effects are highly heterogeneous. And prudential financial policy has included measures that have, on one hand, increased the solvency of financial institutions and, on the other, promoted the provision of solvent credit to the economy.

Third, the ability to adapt economic policy to the course of the pandemic and to its effects on the economy has been particularly notable.

The successive extensions to the measures to support the incomes of the households and firms most affected by the pandemic are a good example of this flexibility. So too are the various extensions to the horizon of the ECB's PEPP (the net purchase horizon is currently until the end of March 2022), and its design. That has enabled purchases to be concentrated in the most critical months of the crisis and in those countries whose financing conditions have been under most strain, at any given moment, allowing financial fragmentation risks to be eliminated and favourable financing conditions for all economic agents to be preserved.

Fourth, we must acknowledge the role played by the highly complementary nature of the measures applied by the various economic authorities (monetary, fiscal and financial), each in the discharge of their respective mandates.

From this standpoint, the monetary policy decisions adopted by the ECB have been of singular importance, since they have afforded the fiscal authorities scope to extend and maintain their measures to support the economy. Thus, the net asset purchases under the PEPP in 2020 reached an amount equivalent to more than 90% of the net public financing needs of the euro area countries that year (and almost 30% of their gross needs). This has been particularly important in countries such as Spain, that have been especially affected by the COVID 19 crisis and started with high budget deficit and public debt levels. The ECB's actions have prevented an increase in financing costs that would have significantly limited the capacity of the national fiscal authorities to support their economies.

The fact that the ECB's measures complement those adopted by national governments (in particular the public guarantee schemes for lending) and prudential authorities (to allow financial institutions to use some of the capital buffers built up in recent years) has also been fundamental in maintaining the solvency of the banking sector and smoothing the flow of financing to the economy during the crisis.

Fifth, the crisis has demonstrated that, in a highly globalised environment, concerted and coordinated international action is essential. And that is particularly important in Europe, given the high degree of integration in place. Indeed, on this occasion, in addition to the national policy response, there has also been a genuine common European response to the crisis, notably including the creation of the Next Generation EU (NGEU) recovery fund. This fund introduces important elements to ensure the burden of the economic recovery effort is shared, some of which are unprecedented, such as the large-scale issue of supranational European public debt to finance reforms and investment in those Member States most affected by the pandemic.

Finally, a further necessary consideration concerns the importance of maintaining at all times a balanced and resilient economic position. Economic shocks can have very different origins. In this case, the shock has been completely exogenous and unexpected. However, its effects depend crucially on the economy's starting

position, in terms of imbalances and resilience. In this respect, the improvements in the solvency of the banking sector and in the financial position of firms and households, following the deleveraging carried out over the last decade in Spain, have enabled the consequences of the crisis to be better weathered. On the other hand, the initial position of public finances, characterised by a high level of indebtedness and a large structural deficit, has constrained the ability of economic policy to respond to the crisis and has meant that the attendant impact has led to a significant increase in the vulnerability of our economy.

It is essential that these lessons be incorporated into the management of the crisis over the coming quarters. The expectations of recovery are real, but its speed and extent are subject to much uncertainty. In the case of the Spanish economy, the outlook over the coming months depends primarily on three sources of uncertainty: vaccination; the recovery in tourism; and the strength of household consumption out of the reservoir of saving built up during the pandemic. Over a longer time horizon, two further significant elements of uncertainty can be identified: the magnitude of the destruction of the productive system and its possible financial consequences; and the degree of take-up and effectiveness of the European recovery programme funds.

In this context, economic policy actions must pursue three objectives: maintaining support to the economy in the short-term; facilitating the structural adjustment caused by the pandemic; and decisively addressing the structural problems that limit our growth capacity and the enhancement of Spanish citizens' well-being.

Indeed, support must be maintained until the recovery has firmed, since its premature withdrawal would lead to a risk of the recovery derailing. This applies to monetary and fiscal policy alike, which must continue to complement one another. The flexibility with which the support is applied must also be maintained, given that, depending on how the elements of uncertainty mentioned above evolve, the recovery may switch from very benign scenarios to others in which the crisis is more persistent and severe.

Concerted global action also continues to be fundamental, in particular in a setting in which the recovery will be uneven across geographical areas. This will require some coordination of crisis exit strategies and, in parallel, support for the most vulnerable countries. International cooperation is particularly important both for

stepping up the production of vaccines and for ensuring that their distribution is equitable and accessible to all.

In the case of monetary policy, we must prevent a premature tightening of financing conditions. For this purpose, we on the Governing Council of the ECB have emphasised that the purchases made under the PEPP and any extension thereof will be adjusted so as to counter any increase in interest rates not accompanied by a return of the medium-term inflation projection to its pre-pandemic level. The increase in the volume of monthly purchases agreed in March was justified precisely on this basis. Within this framework, the tempo of purchases made in the context of the PEPP will be determined considering coincident and leading indicators, not retrospective ones. Specifically, the overall assessment to determine the rate of PEPP purchases will be based on the situation of financial conditions in comparison with the expected future inflation path.

In the banking field, we supervisory authorities have continued to emphasise that the use of capital buffers by banks to recognise credit impairment and to continue providing solvent credit to households and firms is appropriate. Banks will have sufficient time to return to compliance with capital requirements. The process will not under any circumstances be started before the main effects of the pandemic have dissipated. In parallel, given that uncertainty still persists, that the impact of the pandemic on bank balance sheets has yet to become fully apparent and that banks continue to benefit from diverse public support measures, we have recommended that banks act with utmost caution in their dividend distribution and variable remuneration policies. At the same time, banks must maintain a policy of prompt impairment recognition, ensuring that it is appropriate and timely, as required by supervisory guidelines.

With regard to budgetary policy, the maintenance of stimulus measures must be compatible with greater focus on the most affected sectors, firms and groups of workers, while the necessary flexibility to address the challenges arising from this new phase of the crisis must also be maintained.

Chapter 3 of the Report addresses in detail one of the challenges which we consider most important: the scarring caused to the productive system by the crisis, some of

which could be permanent. The effects of the crisis on the corporate sector influence both the momentum with which business investment, employment and activity recover in the short term and the impact the pandemic may have on potential growth in the long term. In particular, the closure of ailing but still viable firms could trigger job losses and disruption to certain production chains, leading to less favourable economic activity developments. This possibility also poses a risk to the banking sector and financial stability, especially if accompanied, in extreme situations, by a wave of failures among the firms affected. A substantial increase in defaults may affect the ability of some financial institutions to provide fresh credit, generating feedback loops.

Accordingly, coordinated and sufficient economic policy action, to support firms that are in difficulty but still viable, remains essential. A package of assistance to the business sector and the self-employed has recently been approved. To be useful, it is particularly important that this assistance be implemented rapidly and evenly, with distribution mechanisms allowing it to be focused precisely on firms with solvency problems that are viable. Also the volume and use of the funds committed needs to be flexible, to adapt to the course of the pandemic and the possible materialisation of risks.

At the same time it is crucial to pave the way for the economy to adjust to the new post-pandemic realities, as illustrated by the intensification of digitalisation and remote working over the last year. In the case of Spain, this necessarily involves allowing the use of mechanisms established by legislation (in particular, labour legislation) so that firms make these adjustments. Given that the crisis may speed up resource reallocation across sectors and firms, these flexibility mechanisms are fundamental. Also, the functioning of debt restructuring and company liquidation mechanisms needs to be improved, particularly for business projects that are not viable in the medium term, i.e. those for which negative returns are forecast even when the pandemic is over. And, simultaneously, emphasis must also be placed on policies to support and train workers to provide the appropriate professional retraining and smooth the transition to the activities of the future.

That said, perhaps the most important message at the present moment is that short-term pandemic management should now be accompanied by economic policy

action to address the structural challenges arising from the pandemic and the pre-existing ones alike. And this principle should be applied to all economic policies.

Many of the structural challenges facing our economies are global and require a global response. The present juncture is, in fact, a particularly suitable one for giving fresh impetus to multilateralism (in which international institutions must play a crucial role, in coordination with regional institutions and mechanisms). The aim should not only be to entrench the global economic recovery, but also to combat the reverses in inequality and poverty as a result of the pandemic, and to address jointly the common structural challenges arising from digitalisation and the fight against climate change.

And this without forgetting the need to reinforce the common pre-emptive and response instruments for systemic crises such as the present one. In this respect, the G-20 agreements reached on debt relief measures to respond to the impact of the crisis in low-income economies are praiseworthy. But we now need to forge a consensus to tackle the situation which the middle-income countries (under which heading are a good number of the Ibero-American nations) are also facing; they are addressing this crisis with limited scope for a national policy response.

As regards monetary policy, we are in a setting marked by inflation standing persistently below our objective in the past decade, by very low estimates of the so-called "real natural interest rate" and by the widespread application of non-standard measures, such as the asset purchase programmes. The ECB's Governing Council has duly decided to launch a review of its monetary policy strategy, which will be completed in the second half of this year.

Other central banks have conducted similar reviews in recent years. The experience of the US Federal Reserve is, in my opinion, particularly significant. Its strategy review illustrates the advantages of allowing its inflation objective to be moderately and temporarily exceeded in a setting – like that characterising the euro area in recent years – in which inflation is persistently below target and nominal interest rates have reached their lower bound or are close to doing so.

In our case, however, a pre-requisite for an effective strategy allowing inflation to rise above target is, precisely, that there should be a clear numerical inflation objective.

The current ECB objective – an inflation rate below, but close to, 2% – is no help in this respect, as it does not indicate a specific numerical objective to act as a reference point. Accordingly, the hypothetical adoption of a strategy of these characteristics would necessarily have to be accompanied by a clarification of the ECB's inflation objective. Setting a rate of 2% as a precise and symmetrically understood objective would be a good option here.

In any event, the US experience also helps illustrate the crucial role fiscal policy plays in the current context, and also in relation to the challenges facing monetary policy. In this respect, a fiscal stimulus to aggregate demand would exert upward pressures on prices. More subtly, if fiscal stimulus packages are appropriately designed, they may raise the economy's potential growth rate and, therefore, the "real natural interest rate". That would narrow the gap between effective and natural interest rates, providing additional support to aggregate demand and to inflation.

Evidently, the European institutions have already made substantial headway in the fiscal realm with the launch of the NGEU programme. That said, the NGEU cannot and should not be considered as the cyclical stabilisation mechanism the euro area needs to complement the Eurosystem's single monetary policy. A true macroeconomic stabilisation mechanism should be permanent in nature, with sufficient funding and tax and debt capacity.

This ties in with the current debate on the possibility of reforming the EU's fiscal rules, to better align them to the structural economic transformations that have come about since they were formulated. The current rules were conceived for a completely different economic context. On one hand, the secular decline in long-term interest rates means that higher debt levels can be maintained without compromising the public finances in the long run, provided that potential growth has not fallen in parallel. On the other, the international financial crisis and the COVID 19 pandemic have shown that the non-manageability of tail risks might not be confined to the domestic front. Indeed, it is possible that most of the biggest euro area countries, even if they follow the Stability and Growth Pact rules, will lack the fiscal buffer needed to face a recession in the coming decade. Thus, a new framework is needed in which the national and supranational fiscal authorities complement one another. Coordination by national fiscal authorities should be orientated towards medium-

term budgetary objectives, with public debt sustainability as the main goal, and tackling asymmetric shocks. Meantime, supranational authorities should respond to tail events and adapt the fiscal policy stance at the euro area aggregate level so that monetary policy has more leeway. There is also a need to simplify the current framework, improving its hitherto scant capacity to ensure that countries build up fiscal buffers in good times for use in future crises.

Nor can we forget that we still do not have a complete banking union, which will call for a common and fully mutualised deposit guarantee scheme, and that capital markets in Europe remain relatively under-developed and under-integrated. Hence the need to move resolutely towards approving the measures included in the capital markets union project.

From a purely national standpoint, the medium-term outlook for the Spanish economy is conditional not only upon the duration of the current health crisis, but also on a series of critical structural challenges. Even before the pandemic, the Spanish economy faced the need to raise its growth potential, to correct certain dysfunctions in several goods and factor markets (with the labour market a particular case in point), to shore up public finances sustainability and to tackle the significant challenges related to population ageing, inequality and climate change.

The economic crisis brought on by the coronavirus has increased the scale of some of these challenges. Specifically, it has highlighted some of the main shortcomings in our labour market that see the most vulnerable groups of workers bear the brunt of adjustments during recessions. The fiscal policy measures in response to the challenges posed by the crisis have prompted a steep deterioration in the public finances, which were already in a highly vulnerable position before the pandemic. Further, the crisis might adversely affect the growth capacity of some economic sectors and increase inequality levels.

Against this background, the deep-seated structural transformation the Spanish economy needs calls for the design of a comprehensive strategy. Three essential levers should be considered here: the design and approval of an ambitious structural reform agenda; the implementation of those public investment projects with most long-term traction under the NGEU programme; and the definition and application of

a multi-year budgetary plan that enables fiscal policy leeway to be recovered once the current crisis is behind us.

First, a comprehensive structural reform strategy must be defined and implemented without delay. To increase productivity, it would be particularly advisable to deploy policies conducive to human and technological capital accumulation, areas where Spain has undeniable shortcomings compared with other advanced economies. The education system is evidently an essential lever for achieving this objective. Next, lessening the high duality between temporary and permanent employees would help reduce some of the main structural flaws of the Spanish labour market and mitigate the high levels of inequality. The challenge of population ageing and its implications for the financial sustainability of the public pension system must also be tackled. Finally, moving towards a more sustainable growth model will require a profound economic and technological transformation to mitigate the effects of climate change, seeking the highest degree of international coordination possible.

Improving productivity and the functioning of the labour market will generate benefits in terms of reducing the high levels of inequality in place. However, the recent course of inequality in Spain has different dimensions, which require different instruments to tackle them. In particular, what is needed is an ongoing assessment of the effectiveness of the minimum income scheme and the approval of measures aimed at increasing rental housing supply. But the sizable disparities in the demographic dynamics of our country's different regions have also been gaining prominence in public debate. Chapter 4 of the Report addresses these issues. Given the large number of municipalities at risk of disappearing, it is important to consider both depopulation-mitigation policies (which seek to check demographic decline and promote the medium-term development of rural areas) and depopulation-adaptation policies (whose aim is to maintain a minimum level of services that ensure the well-being of rural dwellers). In any event, it is vital to assess the effectiveness and efficiency of such policies so as to promote their best possible design, always from a comprehensive standpoint that takes the long view.

Second, the European NGEU programme is, in light of the amounts of funds involved and its structural focus, a unique opportunity to boost the transformation of the Spanish economy, especially in the digital and environmental areas. However,

maximising the effect of this programme on long-term economic growth also poses deep-seated challenges that should not be underestimated. On one hand, project selection should be based on appropriate public procurement procedures and on the suitable design of methodologies to assess the different initiatives. On the other, as I stressed earlier, we must ensure there are no obstacles in our institutional framework that hamper the reallocation of resources across firms and sectors that the future structural change to our economy will require. Lastly, to spur the implementation of certain structural reforms, a portion of the NGEU programme's funds could be used to mitigate the costs that these reforms might entail for certain groups in the short term, in pursuit of the benefits they would generate for society as a whole in the medium and long term. Chapter 2 of the Report offers a specific example of a mechanism designed to reduce labour market duality and promote labour mobility. The implementation of this mechanism could indeed be advanced by the use of European funds to cover a portion of its launch costs.

Third, once the ongoing recovery takes root, it will be vital to rebuild fiscal policy leeway and reduce the financial and macroeconomic vulnerability derived from persistently high public debt levels. The increase in debt and a high structural budget deficit leaves the Spanish economy more vulnerable to potential changes in financing conditions and in investor sentiment, which could feed through to other economic agents. The timely design of this necessary fiscal consolidation strategy would have unquestionable advantages in terms of improving the credibility of our economic policy. In this connection, it is essential to overhaul the Spanish tax system and review the efficiency of all public spending items.

Finally, in the banking arena, the COVID 19 crisis has highlighted the importance of a sector with sufficient buffers to absorb unexpected risks. Looking ahead, we should ensure that the banking sector remains resilient in the face of potential new risks that may emerge.

In this respect, as chair of the Basel Committee on Banking Supervision, I should stress that the full, timely implementation of the Basel III reforms – to which all the members of the BCBS, including the European members, have committed – remains pending. The aim is to homogenise the calculation of risk-weighted assets across banks. To achieve this, a key element is the so-called "output floor", by means of

which a floor is set to the deductions banks may obtain through the use of in-house models to calculate minimum capital requirements as opposed to the standard approach. This aim remains fully pertinent.

In February this year, the Banco de España submitted to public consultation a draft amendment of its Circular 2/2016 on the supervision and solvency of credit institutions, in order to render operational the new macroprudential instruments recently conferred upon it by national legislation. These will enable the Banco de España to set a countercyclical capital buffer requirement in specific sectors, limits on the sectoral concentration of credit in relation to bank capital and lending standard requirements (e.g. regarding loan size relative to collateral value). The full implementation of Basel III and the new tools available to the Banco de España will improve its capacity to act ahead of potential episodes of excessive or inappropriate credit growth in the future.

Aside from these improvements, we would be well-advised to reflect on our institutional financial architecture. In the wake of the past international financial crisis, some countries have altered their models, generally towards more integrated arrangements involving a bigger role for central banks. Among these arrangements is the separation of responsibilities for preserving the financial soundness of all financial institutions irrespective of their nature (banking, insurance, securities, etc.) and for overseeing conduct in their relations with clients, and their assignment to separate authorities (to the Banco de España and to the National Securities Market Commission (CNMV), respectively). This is, in my view, an optimal institutional arrangement for managing potential conflict between these two responsibilities and for improving the efficiency and effectiveness of supervisory activity.

It will also be important for the banking sector to respond to the new risks that may arise over a longer time horizon, such as those relating to climate change and digitalisation. Here, it is crucial that the sector should incorporate climate change-associated risks – both physical and transition risks – into their decision-making processes. Intervention by the fiscal and environmental authorities should provide for an orderly and predictable energy transition, mitigating risks with a high impact on financial stability. We financial supervisors must ensure that banks correctly

assess these risks and include them in their management, along with promoting the development of information standards and suitable databases to measure them.

Turning to the risks arising from new technological developments, I should stress, in addition to those associated with cyber-attacks, the possibility that growing competition from BigTech may become potentially disruptive. The various prudential and regulatory authorities will need to adopt a proactive stance to question the regulatory perimeter so as to ensure the maxim "same activity, same risks, same rules" applies. Also, technological competition might exert additional pressure on the sector's profitability, which has already been weakened by the impact of the pandemic. It is thus essential that banks should further explore the scope for efficiency gains, cutting costs and using new technologies more intensively.

In our capacity as central banks and financial supervisors, we must also adapt to the risks and opportunities the new technologies offer. Thus, in the Eurosystem we are in the process of setting the objectives and terms for a future digital euro, conceived as a tool to stimulate innovation and act as a catalyst for competitiveness and growth. It would also provide essential support in safeguarding our monetary sovereignty and could, moreover, increase the external role of our currency and, by extension, our capacity to exert influence beyond our borders. This is an ambitious approach which will necessitate addressing the design of the digital euro with an open mind, while taking the necessary precautions to ensure that all relevant dimensions (such as financial stability, monetary policy and the configuration and role of the finance industry, which are so important for society and, of course, for a central bank) are appropriately taken into account.

Domestically, the launch of the financial sandbox as a controlled space for testing should act as a catalyst for the development of innovative financial solutions that offer a response to clients' new demands. And, at the same time, it will provide regulators and supervisors with a unique opportunity to better understand the new business models and risks that might ensue so they can offer a more proportionate and appropriate regulatory or supervisory response.

Allow me to conclude by reiterating one of the main messages I have wished to convey to Spanish society since the start of this unprecedented crisis. The challenges

the Spanish economy faces are structural, and structural challenges require structural responses. The design and implementation of this response should be based on broad consensus, so that it may endure and prove credible. Such consensus must be compatible with the ambition and urgency needed to successfully tackle the enormous challenges to our economy.

Pablo Hernández de Cos

Governor of the Banco de España

Foreword to the *Annual Report 2020*.

13 May 2021.

Annual Report: Digest

Global and euro area activity

- The pandemic has caused a global health, social and economic crisis unprecedented in modern times.
- Economic activity shrank sharply worldwide in 2020 H1, owing to strict lockdowns. The recovery has since been incomplete, on a volatile path and governed by fresh outbreaks of the virus and by the lockdown measures adopted.
- The extraordinary economic (monetary, fiscal and financial) policy measures have helped mitigate the impact of the crisis and support the recovery. Following the first wave of the pandemic, the restrictions introduced to contain the spread of the virus have focused increasingly on the activities most exposed to social interaction. This has contributed to lessening the economic impact.
- Economic developments across countries have been uneven. Among the main world economies, the decline in output in 2020 was 3.5% in the United States and 6.7% in the euro area, while GDP grew by 2.3% in China. Among the emerging economies the impact was especially severe in Latin America, with a 7% fall in GDP
- The asymmetry in economic developments can also be seen in the euro area, with comparatively more unfavourable results in France, Italy and Spain.
- The buoyancy of international goods trade, which has picked up swiftly following the disruptions in the first half of 2020, is proving a significant lever for exiting the crisis. International tourism flows, by contrast, have remained weighed down by the restrictions on mobility.

Activity in Spain: the impact of the crisis

- Spain has been one of the countries most acutely affected by the pandemic, particularly in the first wave.
- GDP contracted by 10.8% on average in 2020. In 2021 Q1, it still stood 9.4% below its end-2019 level. Among the advanced economies, Spanish GDP has moved on one of the most unfavourable trajectories since the start of the pandemic.
- The unevenness across sectors of the impact of COVID-19 is very high. The effects have been more pronounced in activities subject to a greater degree of social interaction. Gross value added in the retail, transport and hospitality, and artistic and recreational activities sectors thus stood, in 2021 Q1, 21.3% and 32.8% below their pre-crisis levels, respectively.
- The crisis also evidences high disparity in other respects. First, the impact on SMEs and the self-employed is greater than is the case for large corporations. From a regional standpoint, the island and Mediterranean arc provinces have been most affected. Finally, the downturn in the labour market has impacted temporary, younger and lower-income employees to a greater extent.
- All domestic demand components except government consumption fell forcefully in 2020. Household consumption declined by 12.4%. The similar-scale contraction in business investment was, however, less than might have been expected given the size of the decline in GDP.
- External demand contributed 2 pp to the decline in GDP in 2020. In nominal terms, foreign tourism receipts fell by 75.9%. As a result, there was a 1.4 pp reduction in the Spanish economy's net lending capacity to 1.1% of GDP.
- The public finances worsened most significantly last year. In 2020, the general government deficit increased by 8.1 pp to 11% of GDP and public debt by 24.5 pp to 120% of GDP. Around 85% of the increase in public spending was related to the pandemic.
- The impact of the crisis on consumer prices has so far been patently disinflationary. In early 2021, inflation has increased in a foreseeably temporary fashion owing to energy prices, although the core component has also risen slightly.

Activity in Spain: sources of uncertainty and growth outlook

- Headway in the vaccination process and the improved external environment have reduced the risks surrounding the economic outlook.
- But other sources of uncertainty remain active. These include the degree of implementation and effects of the European NGEU programme, the capacity of economic policies to adapt to the changing circumstances of the crisis and the scarring the pandemic may have caused to the productive system and the labour market.
- Economic developments in the coming quarters will be further influenced by the pace at which the reservoir of saving accumulated by Spanish households in 2020 diminishes and by the path of recovery of international tourism.
- The latest Banco de España projections (March 2021) point to a relatively robust recovery as from the second half of the year. However, the impact of the crisis on the level of GDP, employment and the public finances will be relatively persistent. Thus, for example, the end-2019 level of GDP would not be recouped, under the baseline scenario, until 2023.

MAIN FACTORS OF UNCERTAINTY OVER THE FORECASTING HORIZON

SOURCE: Banco de España.

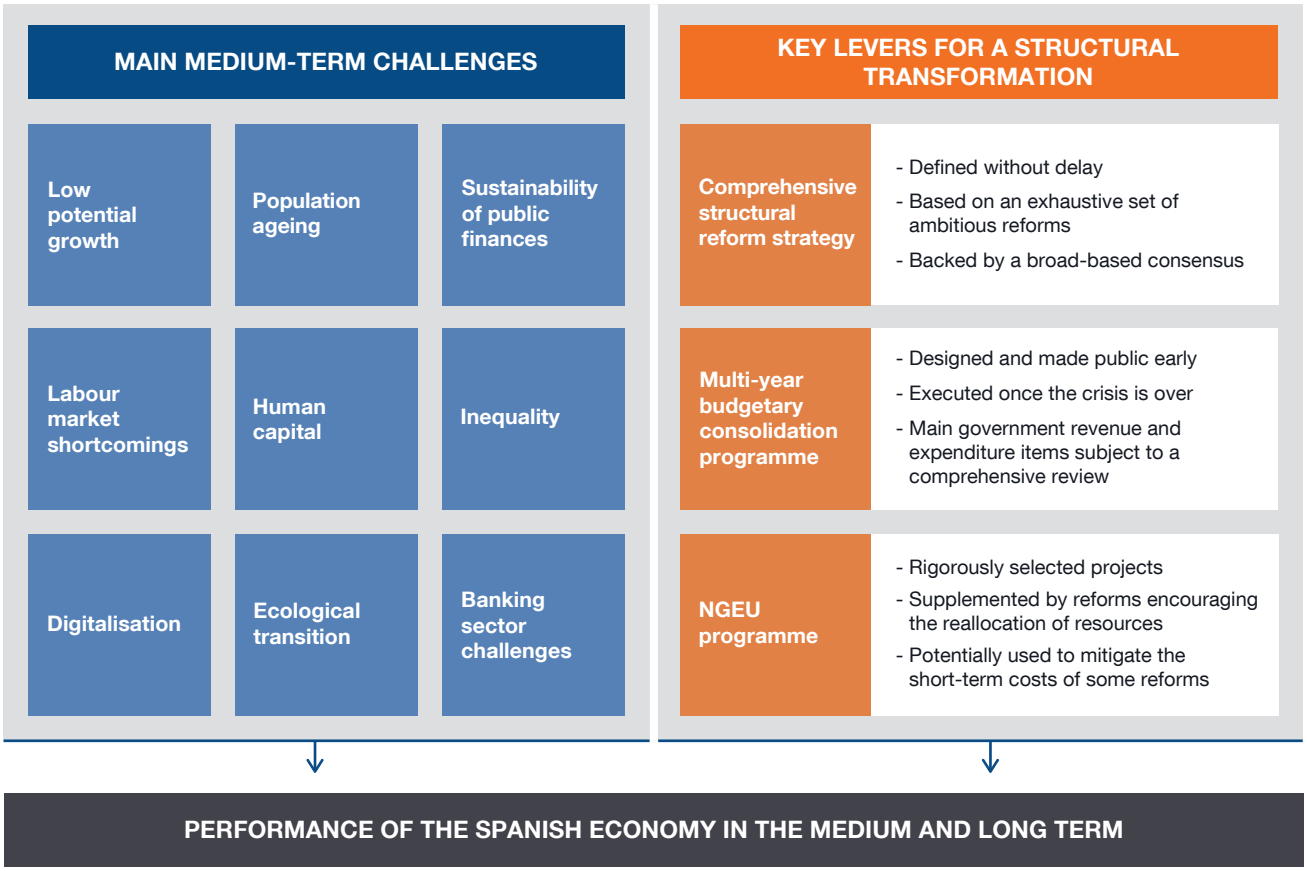
Economic policies in the short term

- The persistence of the crisis is seeing the economic policy measures initially deployed maintained or extended, in a setting in which it is essential to prevent a premature withdrawal of the support lent.
- In the prudential realm, the international authorities have retained the recommendations made at the onset of the pandemic regarding the release of credit institutions' capital and liquidity buffers.
- The ECB response has been pivotal in ensuring favourable financing conditions in the euro area and preventing the financial fragmentation of the region. The flexibility of its pandemic emergency purchase programme (PEPP) is key in this respect. The PEPP has afforded fiscal authorities leeway to extend and maintain the measures supporting the economy.
- The fragility still marking the ongoing economic recovery and price dynamics in the euro area recommend maintaining a highly accommodative monetary policy in the coming quarters.
- On the domestic front, the economic policy response was swift and resolute in the early stages of the pandemic. The Spanish authorities provided the health system with greater resources and launched a range of measures aimed at protecting labour income, supporting the most vulnerable households and providing firms with liquidity.
- The ICO's public guarantee programmes were, at the start of the crisis, effective in providing financing for the liquidity needs of the self-employed and firms, especially smaller ones. Subsequently, the shift in concern to the problems of business viability and solvency led to the approval, in March 2021, of a new aid package.
- Furlough schemes have been an essential mechanism for protecting labour income and mitigating the increase in the unemployment rate. Looking ahead, the schemes must continue adapting to the changing economic and health circumstances. In that connection, increasingly focused arrangements are needed for the necessary reallocation of employment to more productive firms and sectors.

Main medium-term challenges and levers for a structural transformation

- The medium and long-term outlook for the Spanish economy hinges not only on overcoming the present health crisis, but also on addressing a series of key structural challenges.
- The pre-pandemic challenges included the need to increase growth potential, correct dysfunctions in several goods and factor markets, enhance the sustainability of public finances and address important challenges linked to population ageing, inequality and climate change.
- The pandemic has magnified some of these challenges and has also posed some new ones. In particular, this crisis has brought about certain changes in the behaviour patterns of households and firms, many of which are linked to greater digitalisation of economic activity. In addition, the international trade disruptions in the early stages of the pandemic could give rise to a series of profound changes in the trade globalisation process.
- The Spanish economy has three main levers with which to address these challenges:
  - The design and approval of an ambitious structural reform agenda.
  - The definition and execution of a multi-year budgetary consolidation programme once the present crisis is over.
  - The NGEU recovery programme.

THE MAIN MEDIUM-TERM CHALLENGES FACING THE SPANISH ECONOMY AND THE KEY LEVERS FOR ADDRESSING THEM



SOURCE: Banco de España.

Some effects of the pandemic with potentially lasting implications

Impact on households

- Changes in households' daily activity patterns: mobility, remote working and consumption habits
  - — Since the start of the pandemic, the Spanish population's mobility patterns have changed. Mobility has been lower during the working day thanks to the increase in working from home.
  - — The increase in remote working could affect the recovery in demand for certain products, especially in the big cities (see Box 2.1).
  - — However, Spain's relatively small cities, small firm size, high ratio of temporary employment and low intangible investment are all elements that could limit the growth of remote working in Spain.
  - — E-commerce has surged as a result of the crisis, and it will likely continue to grow in the future as digital skills become more widespread. This should encourage competition among firms and reduce demand for the products of less competitive firms.
- Employment
  - — The adverse impact of the pandemic on employment is being felt most acutely by the most vulnerable workers (employees with temporary contracts, younger workers and employees with a lower level of education). Should these labour market dynamics persist, they could heighten inequality in Spain and hamper economic growth potential.
  - — The pandemic may quicken the process of automation of certain occupations and the need to reallocate workers to other tasks. This reallocation process could affect above all occupations that are currently primarily held by women and by workers with a low level of education.
- Education
  - — School and university closures during the last term of the 2019/2020 academic year led face-to-face teaching to be replaced with digital online home learning. This change in teaching method may have had an adverse impact on academic achievement in the short term, especially among the most disadvantaged groups.
  - — However, as yet it seems that the pandemic has not accelerated early school leaving in Spain.
- Health
  - — The incidence of health problems among the older population varies considerably across European countries. These problems are more prevalent among women and among those with a lower level of education.
  - — As a result of the pandemic, the incidence of mental health problems has increased for all population groups, owing, above all, to uncertainty about the future.
  - — In some European countries there have been considerable restrictions on and delays in access to health care as a result of the pandemic; this may have long-term consequences for the health of the population.
- Inequality
  - — After several years of declining labour income inequality, owing to the favourable employment performance in the last upturn, the outbreak of the pandemic triggered a fresh increase in this form of inequality.
  - — The health crisis also appears to have increased uncertainty about future income. This primarily affects the younger population, employees with temporary contracts and lower income groups.

Some effects of the pandemic with potentially lasting implications (cont'd)

Impact on potential economic growth

- The scale and persistence of the effects of the pandemic on potential output will crucially depend on the duration of the shock.
- The nature of the jobs lost as a result of the crisis suggests it could have an adverse effect on the labour input contribution to potential output by pushing up structural unemployment.
- The effects of the pandemic on capital stock in the long term are likely to be predominantly negative, although some public policies will help preserve and modernise the Spanish economy's productive capital.
- The channels through which the crisis could affect total factor productivity are numerous, although the net impact is uncertain. On the one hand, the pandemic appears to have accelerated the take-up of new technologies, and the projects associated with the NGEU programme should also generate productivity gains. On the other, a hypothetical brake on world trade could adversely affect productivity.

Banking sector

- The economic crisis triggered by the COVID-19 pandemic and certain extraordinary adjustments drove the profitability of the Spanish banking system into negative territory in 2020. However, average solvency ratios rose.
- Overall, the prudential and accounting measures adopted by the different financial authorities appear to have helped sustain the momentum of the flow of credit to the private sector throughout 2020. Indeed, bank lending to the non-financial private sector picked up again in 2020 after more than a decade of gradual deleveraging.
- Credit risk is one of the major challenges for the banking system in the coming years. The low interest rate environment, the digitalisation of the economy and climate change will be the key challenges for deposit institutions in the longer term.

Public finances

- Before the onset of the COVID-19 pandemic, the Spanish economy had managed to recover only part of its fiscal space, which had deteriorated sharply following the global financial crisis and the European sovereign debt crisis.
- Since the start of the health crisis, fiscal policy has remained clearly expansionary. Specifically, the impact of the measures approved in 2020 on the budget balance is estimated at around 4.5 pp of GDP.
- In 2021, the fiscal policy stance will remain expansionary and this will help shore up the still fragile recovery of the Spanish economy.
- As a consequence of the crisis, public finances have become more vulnerable and future fiscal space has decreased. A budgetary consolidation process will therefore be essential once the recovery takes hold.

Global impact

- The disruptions to world trade caused by the pandemic could amplify some previous trends relating to the growing importance attached to national considerations in the solution of multilateral problems and to the partial questioning of the WTO rules-based international framework (see Box 2.2)
- A framework of shared multilateral rules is essential to address the long-term challenges facing national economies.
- Against this background, the European Union's Open Strategic Autonomy is designed as a framework for coordination of a broad set of policies to propel the external projection of the European Union, advocating trade openness and multilateralism and strengthening the region's economic and financial resilience.

SOME EFFECTS OF THE PANDEMIC WITH POSSIBLE LASTING IMPLICATIONS

HOUSEHOLDS

- The health crisis has affected households' mobility and consumption habits. This could have lasting implications for economic activity.
- Despite the recent growth in remote working, certain structural factors could limit its future growth in Spain.
- The pandemic has also posed new challenges associated with delays to health care, mental health problems, increased inequality and income uncertainty.

POTENTIAL GROWTH

- The scale and persistence of the effects of the pandemic on potential output will depend on the duration of the shock.
- A possible negative impact via an increase in structural unemployment and a decrease in capital stock is to be expected.
- The effect of the pandemic on long-term productivity remains uncertain.

BANKING SECTOR

- The profitability of the Spanish banking system entered negative territory in 2020. However, average solvency ratios rose slightly.
- The prudential and accounting measures appear to have added momentum to lending to the private sector, which picked up again in 2020.
- Credit risk is one of the biggest challenges facing the banking system in the coming years.

PUBLIC FINANCES

- Since the onset of the health crisis, the fiscal policy stance has been clearly expansionary. This has enabled the adverse economic effects of the pandemic to be mitigated.
- However, as a result of the crisis, public finances are more vulnerable and there is less fiscal space available for the future.

GLOBAL IMPACT

- The pandemic has triggered some shocks to global trade. These could amplify certain pre-pandemic trends that called into question the multilateral framework.
- Against this background, the European Union's Open Strategic Autonomy seeks to boost the region's projection abroad by committing to trade openness and multilateralism, while strengthening the Union's economic and financial resilience.

SOURCE: Banco de España.

Tools available to the Spanish economy to undertake its structural transformation

Structural reforms

- The challenges the Spanish economy will have to face in the coming years are substantial and closely interrelated. Tackling them requires a comprehensive strategy of ambitious and lasting structural reforms.
- Within this overall growth strategy certain lines of action stand out. In particular, to boost productivity, policies should be rolled out that encourage both business growth and human and technological capital accumulation.
- In the Spanish labour market, the high duality between workers with temporary and permanent employment contracts must be corrected and an in-depth review of active labour market policies must be undertaken.
- The numerous economic implications of population ageing should be addressed with decisive action in various spheres, for example, promoting longer working lives for older workers and analysing the reasons for Spain's low fertility rate.

Tools available to the Spanish economy to undertake its structural transformation (cont'd)

- The financial sustainability of the public pension system must also be reinforced, based on an assessment of the level of benefits to be provided by the system and the resources committed to fund them.
- Moreover, to mitigate the adverse effects of high levels of inequality, public policy measures across a wide range of areas must be rolled out and continuously assessed. These include regulatory reform of the labour market and of the education system, different fiscal measures regarding transfers and taxes, and measures to encourage a sustained increase in the supply of rental housing.
- Moving towards a more sustainable growth model and mitigating the effects of climate change will require a profound economic, social and technological transformation in Spain and globally. It is essential that the numerous implications of each economic policy initiative adopted be rigorously assessed and that the highest possible level of international coordination be sought.

Budgetary consolidation strategy

- The much-needed expansionary fiscal policy stance during the current crisis should give way, once the recovery takes hold, to a restructuring of public finances that enables the rebuilding of fiscal space for future crises.
- Correcting the structural imbalance of public finances will require a firm commitment and a sustained effort over time.
- It would be desirable for the main details of the fiscal consolidation process to be defined and made public early to reinforce its credibility.
- The effectiveness and credibility of the budgetary rebalancing plan would also be enhanced if it were accompanied by the implementation of an ambitious structural reform package and involved all tiers of general government.
- The decision on how to distribute the fiscal adjustment among the different budget items should be based on a comprehensive review of all public expenditure and revenue items and a rigorous analysis of the implications of any fiscal policy action in terms of economic efficiency and fairness.
- On the expenditure side, priorities need to be set in the use of public resources and efficiency increased.
- On the revenue side, it would be advisable to undertake a comprehensive review of the Spanish tax system to ensure that tax revenue is sufficient to finance the desired level of spending.

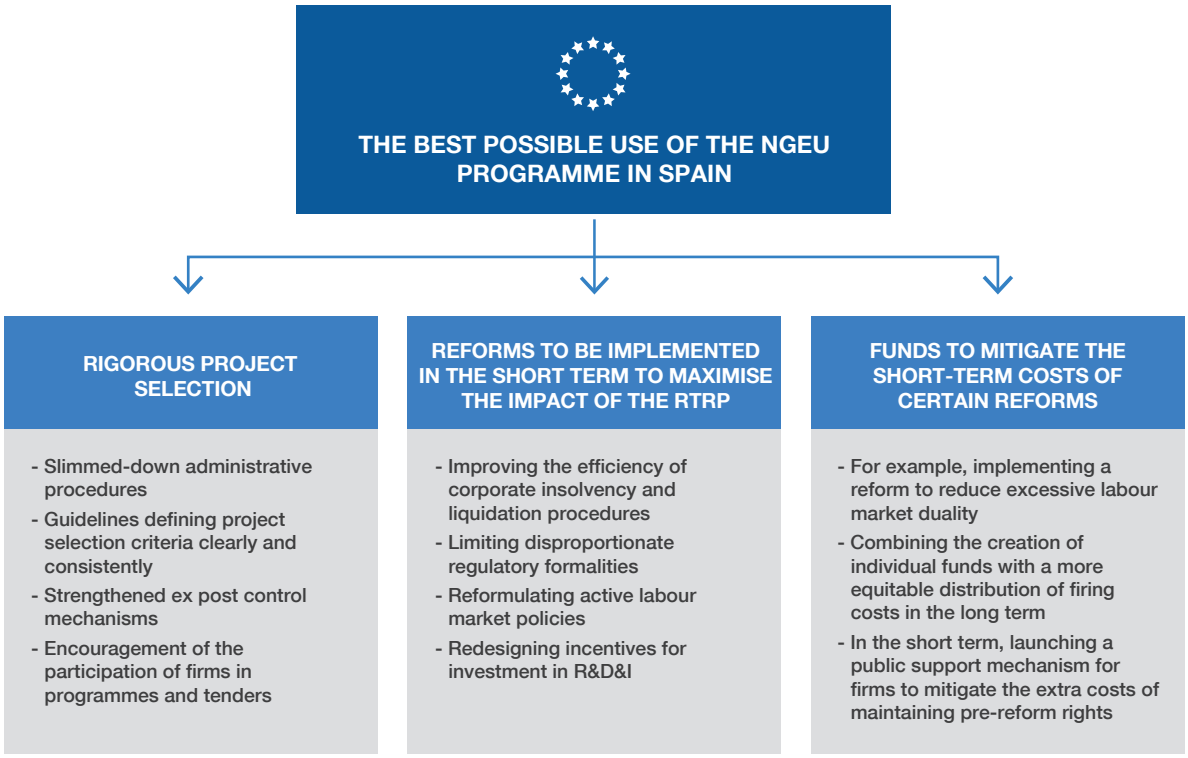
The challenge of making the best possible use of the NGEU programme

- The NGEU programme will help to make up for the lack of a common automatic fiscal stabilisation capacity, one of the main shortcomings in the EU's institutional architecture (see Box 2.3).
- NGEU financing through large-scale supranational debt issuance represents an unprecedented step that will contribute to reducing the relative scarcity of euro-denominated safe assets.
- To maximise the positive effects of this programme in Spain, the reforms contemplated in the Recovery, Transformation and Resilience Plan (RTRP) approved by the Spanish Government will have to be appropriately defined and decisively implemented, and the different expenditure projects carefully selected. In this respect, three aspects are particularly important:
  - First, the projects should be selected under an appropriate public procurement framework and according to an appropriate design of methodologies for assessment of the different initiatives.
  - Second, it should be ensured that there are no obstacles in the Spanish institutional framework to the reallocation of resources among firms and among sectors that will likely result from implementation of the programme. This could require, in particular, making it easier for firms to enter and leave the market, redesigning the incentives to encourage investment in R&D&I and reformulating active labour market policies.
  - Third, to encourage the introduction of certain structural reforms, it would be desirable to consider using part of the funds of the NGEU programme to ease the costs that these reforms, although beneficial in the medium and long term, may have for certain groups in the short term (see Box 2.4).

COMPREHENSIVE STRUCTURAL REFORM STRATEGY

SOURCE: Banco de España.

THE BEST POSSIBLE USE OF THE NGEU PROGRAMME IN SPAIN



SOURCE: Banco de España.

Impact on liquidity situation

- Firms' revenues fell sharply in 2020 on account of the COVID-19 crisis, although changes were highly heterogeneous.
  - By sector, the largest falls were observed in those whose activity entails greater social interaction, e.g. entertainment, and in those that rely on personal mobility, such as transport and tourism services.
  - By size, the fall-off in turnover was sharper in smaller firms.
- The decline in firms' turnover increased the aggregate liquidity needs derived from a shortfall between revenues and payments associated with their operating activity (such as rents and salaries), the repayment of outstanding debt and, to a lesser extent, fixed asset investments.
- Firms' liquidity buffers (such as bank deposits and undrawn credit facilities) were, in many cases, insufficient to cover this liquidity shortfall.
- However, the credit support policies deployed by the tax, monetary and financial authorities smoothed the availability of financing; the public guarantee schemes for loans, managed by the Official Credit Institute (ICO, by its Spanish abbreviation), played a key part in this respect.
- Thus, many firms and sole proprietors were able to cover their liquidity shortfalls by resorting to debt, chiefly bank loans.
- Nevertheless, some firms had more limited access to credit and could have covered part of their shortfall by making use of their internal liquidity buffers.
- In 2021, some risks relating to the liquidity situation persist, especially for firms and sole proprietors in the sectors hit hardest by the pandemic and for which access to external financing is more difficult.

VULNERABILITY OF THE PRODUCTIVE SECTORS

VULNERABILITY OF THE PRODUCTIVE SECTORS: INDICATORS, ECONOMIC EFFECTS AND POLICIES

	Short term	Medium term
Indicators	**Liquidity risk** When firms' liquidity needs exceed their liquidity buffers (liquid assets and credit facilities)	**Low profitability** When the return on assets is negative **High indebtedness** When the ratio of net financial debt to ordinary earnings exceeds a certain threshold
Economic and financial effects	**Bankruptcy,** which has an economic impact through: 1 Loss of the productive system and employment 2 Possible contraction in the supply of credit if debt defaults affect a notable portion of banks' credit portfolios	**Obstacles to investment and hiring plans (debt overhang)**
Economic policies	1 Income support (short-time work schemes) 2 Payment deferrals (loan moratoria, Social Security contributions) 3 Credit support: — ICO guarantees — TLTRO III	Income support (short-time work schemes)

SOURCE: Banco de España.

VULNERABILITY OF THE PRODUCTIVE SECTORS (cont'd)

VULNERABILITY OF THE PRODUCTIVE SECTORS: INDICATORS, ECONOMIC EFFECTS AND POLICIES

	Long term
Indicators	**Viability** Firms with **viability risks** are those whose ordinary earnings are expected to be negative in 2023 **Solvency** **Overindebted viable firms** are those whose ordinary earnings are expected to be positive in 2023 and whose ratio of expected net debt (in 2022) to ordinary earnings (in 2023) exceeds a certain threshold
Economic and financial effects	1 **Bankruptcy of non-viable firms** — Loss of the productive system and employment — Possible contraction in the supply of credit if debt defaults affect a notable portion of banks' credit portfolios 2 **Survival of non-viable firms ("zombification")** — Inefficient allocation of resources, harming economic growth in the long term 3 **Inefficient liquidation of overindebted viable firms** — Loss of the productive system and employment — Possible contraction in the supply of credit if debt defaults affect a notable portion of banks' credit portfolios
Economic policies	1 **Aimed at overindebted viable firms** — Income support (short-time work schemes) — Direct assistance grants — Recapitalisation — Debt restructuring — Improvements in restructuring procedures 2 **Aimed at non-viable firms** — Improvements in firm liquidation procedures

SOURCE: Banco de España.

Impact on profitability and indebtedness

- The fall in firms' turnover has substantially reduced their profitability. The simulations conducted by the Banco de España suggest that more than half of firms posted accounting losses in 2020.
- The proportion of firms with high debt levels also increased in 2020.
- The decline in profitability and the increase in debt appear to have been sharper among companies operating in the sectors hit hardest by the crisis and among smaller firms.
- Financial vulnerability in the productive sectors is expected to decline gradually from 2021 H2, in line with the projected recovery of economic activity.

Effects on viability and solvency

- The simulations conducted by the Banco de España point towards a moderate increase in the proportion of firms at risk of becoming non-viable on account of the COVID-19 crisis (between 2 pp and 3 pp, depending on the course of economic activity).
- The proportion of firms that, while remaining viable, would become overindebted is also expected to rise moderately (between 3 pp and 4.7 pp). A firm is defined as being overindebted when it has difficulties in repaying its accumulated debt out of its future earnings expected in the medium term.

Economic effects associated with financial vulnerability in productive sectors

- The greater financial vulnerability of firms and sole proprietors could hamper the economic recovery through various channels:
  - — Firms that are more financially vulnerable find it more difficult to undertake investment plans and expand their workforce.
  - — Some viable but overindebted firms could fail if they are unable to turn around their situation. This could adversely affect economic growth through two channels:
    - – Loss of production capacity and employment.
    - – Defaults on their debt having a negative impact on both financial and non-financial creditors; under extreme circumstances, this could limit the banking system's capacity to grant new loans.
  - — The failure of firms that become non-viable as a result of the crisis would also trigger immediate losses in terms of production and bank defaults. However, these firms' exit from the market can benefit economic growth in the medium and long term, since their prolonged survival tends to result in an inefficient allocation of resources.
- The Spanish government has recently implemented several measures to support business solvency, aimed at preventing the failure of viable but overindebted firms. The effectiveness of these measures would benefit from a swift and flexible application, allowing for the possibility of their recalibration, if deemed necessary, in terms of both their volume and their allocation among the different tools envisaged.

Impact on banks

- Thus far, there has been no increase in the volume of non-performing loans in bank credit to non-financial corporations and sole proprietors, despite the sharp decline in GDP in 2020 and these sectors' deteriorating financial position.
- This is largely explained by the public support measures, such as the guarantee schemes and loan moratoria, which appear to have eased some borrowers' debt repayment difficulties.
- In any event, loans to non-financial corporations and sole proprietors have shown some signs of credit quality deterioration, particularly in the sectors hardest hit by the crisis.
- In particular, Stage 2 loans (i.e. those whose credit default risk has increased significantly since they were granted, but not enough to be classified as non-performing) rose sharply in 2020 Q4.
- Further, in anticipation of a possible upsurge in defaults, banks generally built up reserves in the form of provisions in 2020, which had a negative impact on their profitability.
- Going forward, the quality of banks' credit portfolios could be affected if the crisis ultimately brings about persistent damage to corporate sector balance sheets.
- Under the more adverse scenarios, this could limit the supply of bank credit, with the consequent adverse impact on the prospects of economic recovery.
- In this context, close monitoring of firms' financial position is important so as to identify any signs of additional deterioration at an early juncture and to adopt the containment measures needed, should such deterioration occur.

Rural depopulation in Spain

- The secular depopulation of Spanish rural areas is part of a global trend towards greater urbanisation, as a result of the process of economic development that has also been observed in many other advanced economies.
- However, compared with Europe, Spain is an exception since a very high percentage of its surface area is uninhabited and its population is more highly concentrated.
- Spanish urbanisation since 1950 is characterised by two distinct phases:
  - The first stage, dubbed the "rural exodus", which ran from 1950 to 1991. During this stage, the percentage of urban population rose significantly, from 59% to 79%, as a result of the deagriculturalisation of the Spanish economy, with significant inter-regional migration.
  - The second, from 1991 onwards, in which the percentage of urban population grew at a much slower pace to stand slightly above 80%, mainly due to negative natural population growth in those rural municipalities that underwent negative migration during the rural exodus.
- There are more municipalities at risk of depopulation in Spain than in other European countries. Furthermore, they present significant shortcomings in terms of access to various services.
- The loss of momentum in smaller urban areas seems to have contributed to rural depopulation over recent decades in Spain.

Population decline in small Spanish urban areas

- Younger adults migrating to a few big cities explains population decline in smaller urban areas.
- The decision to move from a small to a larger urban area is made by comparing costs and benefits:
  - Living in bigger cities is associated with advantages in the form of higher wages and greater professional opportunities, in addition to a wider range of public and private services.
  - However, it is also linked to disadvantages related to the various costs of congestion, such as higher house prices, increased exposure to pollution and longer commute times.
- The wage premium associated with working in big cities is higher for workers in high-skilled occupations. Indeed, when wages adjusted for differences in the cost of living between cities are considered, workers in low-skilled occupations do not earn higher wages in big cities.
- These differences in the wage premium between groups of workers explain why large Spanish urban areas have a negative net migration balance for workers in low-skilled occupations.
- These dynamics lead to an increase in the concentration of high-skilled employment in a few large urban areas, resulting in greater income disparity between urban areas.

Economic policies

- Place-based public policies account for a significant share of public budgets: 33% of the EU budget goes to economic, social and territorial cohesion policies.
- As these policies seek to encourage development in more disadvantaged areas through public investment, subsidies, tax exemptions, etc., they may be considered redistributive policies since, by one means or another, they transfer public resources to households in more disadvantaged areas.
- In light of the evidence presented in this chapter, two types of redistributive policies to alleviate the effects of population concentration in big cities may be considered:
  - Adaptation policies to ensure that a certain level of services is available to inhabitants of rural municipalities.
  - Mitigation policies that seek to reverse the population dynamics in those municipalities with growth the possible comma given the circumstances and opportunities in their surroundings.

Economic policies (cont'd)

- Some successful international experiences can serve as benchmarks. Upon review, some elements to be considered emerge, such as:
  - — A comprehensive, lasting strategy built on broad political consensus.
  - — Powers that are clearly distributed among the different tiers of government and collaboration between municipalities.
  - — Clearly defined, measurable ex ante objectives and an ex post assessment.
- Lastly, any public policy should be assessed in depth, comparing the potential benefits in terms of greater regional equity with the costs it might incur for society as a whole in the form of efficiency losses and opportunity costs.

THE SPATIAL DISTRIBUTION OF POPULATION IN SPAIN AND ITS ECONOMIC CONSEQUENCES

CONCENTRATION OF POPULATION

Compared with Europe, the population in Spain is very highly concentrated in both urban and rural areas.

In Spain an abnormally high percentage of the territory is uninhabited and this anomaly is not due to geo-climatic factors.

Only 13% of the 1 km^2 cells in Spain are inhabited (red dots on the map).

MUNICIPALITIES AT RISK OF DEPOPULATION

A total of 3,403 municipalities at risk of depopulation are identified (42% of municipalities in Spain). This is much higher than the figure for the euro area as a whole.

They display socioeconomic and orographic idiosyncrasies and have worse access to services than urban municipalities and other rural municipalities.

CITIES AS A DRIVING FORCE

The provinces with a higher incidence of municipalities at risk of depopulation are those with a smaller provincial capital.

Rural municipalities neighbouring urban centres display greater momentum when commuting costs are lower.

Over recent decades, internal migration from smaller urban areas to big cities has contributed to the lower momentum of rural municipalities surrounding smaller urban areas.

CONCENTRATION OF HIGH-SKILLED EMPLOYMENT IN BIG CITIES

The wage premium associated with city size is the main driver of migration towards large urban areas over the last two decades, particularly for workers in high-skilled occupations. This premium disappears for workers in low-skilled occupations when wages are adjusted to reflect purchasing power in each city.

Over the period 2005-2018, the largest urban areas recorded a net loss of workers in low-skilled occupations.

SOURCE: Banco de España.


ESPAÑA

1

THE ECONOMIC IMPACT OF THE PANDEMIC

1 Introduction

The COVID-19 pandemic has caused a global health, social and economic crisis, unprecedented in modern times. Since the crisis broke, and over the course of several waves, the pandemic has cost the lives of over 3 million people worldwide – over 78,000 in Spain – and has posed an extraordinarily deep-seated challenge for most countries' health systems. Moreover, it has necessitated social distancing measures which, under different formulations and degrees of stringency, have led to restrictions never before witnessed in peacetime on people's mobility and on activity in specific sectors. The crisis prompted by this exogenous shock resulted in a very deep contraction in global economic activity in the first half of 2020 from which most economies worldwide have not yet emerged, despite the fragile recovery path initiated in the second half of last year.

Along with its considerable scale, the economic impact of the pandemic has been characterised by its extraordinary heterogeneity in several dimensions. The social distancing measures set in place in many countries for much of the recent quarters have had a far greater effect on activity in those services requiring a high degree of personal interaction – retail, hospitality, transport and leisure – than in manufacturing, the primary sector or areas linked to the public sector. The impact of the crisis has also been very asymmetrical across countries and the major geographical areas, mainly as a result of differences in the productive structure of each economy, in the epidemiological course of the pandemic and in the type of measures implemented to contain it. Often, moreover, the current crisis has exerted more of a negative influence precisely on the more vulnerable groups of firms and workers, posing an additional challenge in economic and social terms.

The economic policy response to the health crisis has generally been swift and resolute, which has contributed to mitigating its adverse economic effects. Indeed, since the start of the pandemic, economic policymakers' response has been most extensive, both domestically and supranationally, and in the fiscal, monetary, prudential and regulatory spheres. This has made it possible to partially protect households' and firms' incomes and liquidity, to stabilise the markets in the financial system and to lessen the potentially adverse effects of this crisis on economies' medium-term growth capacity. In the case of monetary policy, some of the main measures adopted, such as the large-scale purchase of government bonds, has contributed to broadening the fiscal authorities' leeway to implement measures supporting the economy.

The notable adaptability of households and firms to the new economic and health circumstances is estimated to have also helped progressively reduce the impact of the pandemic on activity. Since the outbreak of the health crisis, there have been very significant changes in households' consumption, working and leisure habits. And firms, meanwhile, have established new ways of organising their productive activities and have, in some cases, set up alternative sales channels. These changes, largely related to a greater digitalisation of economic activity, have helped mitigate the negative impact of the crisis in the short term and may possibly have accelerated a structural transformation of the economy, which will foreseeably continue to unfold in the coming years and whose overall consequences cannot yet accurately be known.

In recent months, the successful development of effective vaccines against COVID-19 and their ongoing roll-out to immunise the world population have reduced the risks to global economic activity. The pandemic evolved relatively unfavourably in the final stretch of 2020 and in early 2021, with the virus causing more deaths than during its initial phase. But the proven effectiveness of the various vaccines developed against COVID-19 in a very short space of time and the progress in vaccination have helped brighten the global economic outlook in the short term, especially as from the second half of 2021. The IMF's latest April forecasts testify to this.[1] Among other aspects that have contributed to this improvement are the fiscal stimuli approved in the United States in late 2020 and early 2021, and the lesser risks to activity as a result of the United Kingdom-EU Withdrawal Agreement.

In any event, recovery in the world economy remains subject to high uncertainty. That advises retaining the support measures, albeit in a more focused fashion and bearing in mind their potential implications in the medium term. In a setting in which the global economic recovery is still fragile and very asymmetrical (across sectors, countries, households and firms), we cannot rule out the possibility of new strains of the virus emerging and setting back the time at which the health crisis will be overcome. It is also difficult to accurately gauge the durable damage the pandemic has already inflicted on employment and the productive system. Accordingly, a premature withdrawal of the support measures would be ill-advised. However, it would be worth adapting these measures to the changing economic circumstances – as has largely been the case in recent quarters – so that they are more targeted and are not, in themselves, an obstacle to a sustainable recovery.

The pandemic has had an extraordinarily high impact on the Spanish economy, both from a historical standpoint and in comparative terms internationally. All the previously described developments and conditioning factors are perfectly valid for describing the impact of the current crisis on the Spanish economy. Thus, Spanish GDP shrank most sharply in the first half of 2020 – far more than output in

1 See IMF (2021).

the euro area as a whole did – and, thereafter, it moved onto what has been a fragile path of recovery. In particular, following very sharp growth in Q3, output in the Spanish economy flattened out in the final stretch of 2020 and even fell back slightly in Q1 this year. In fact, Spanish GDP is still 9.4% below its pre-crisis level, a gap clearly wider than that in the euro area as a whole and in other advanced economies. There are several reasons for this greater adverse impact of the pandemic in Spain. Some of these factors concern the course of the pandemic in our country. But others are more structural in nature and related to the particularities of the Spanish productive structure, in which the sectors, firms and workers with a high relative share are, precisely, those that have been most affected by the pandemic.

The short-term outlook is for the Spanish economy to recover relatively vigorously as from the second half of this year, although the adverse effects of the pandemic on the level of GDP, employment and public finances will persist for several years. As from the second half of 2021, the recovery of the Spanish economy is expected to be especially assisted by progress in the vaccination campaign and the gradual return to normality health wise. The start of the implementation in Spain of the European NGEU programme will also help. However, the intensity of the recovery might vary considerably depending on several factors, over which there is considerable uncertainty. These factors include most notably the speed at which international tourist flows pick up and the intensity with which Spanish households resort, in the coming quarters, to the reservoir of saving they have built up since the onset of the pandemic. The degree of momentum of Spanish economic activity in the short term will also depend on how the main economic policy instruments deployed in Spain to counter the pandemic – namely, furlough schemes and the liquidity and business solvency support measures – adjust to a continuously changing economic situation. Further, avoiding a persistent reduction in our growth capacity will hinge on the effectiveness of these instruments.

Over a longer time horizon, the outlook for the Spanish economy will be conditional upon a series of structural challenges and on how economic policy addresses them. As Chapter 2 of this Report sets out, the economic policy response to the extraordinarily deep-seated challenges Spain must unavoidably address in the coming years will determine the robustness and sustainability of our growth path in the medium and long term.

2 The behaviour of global and euro area activity

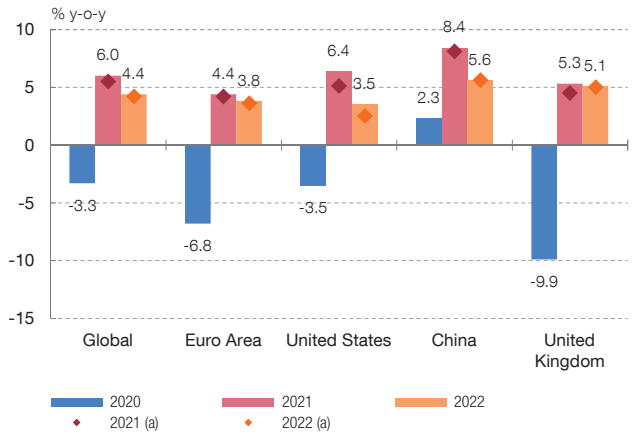
Global economic activity contracted abruptly in the first half of 2020 and has since been recovering, with a profile characterised by high volatility. Global GDP fell by 3.3% in 2020 as a whole (see Chart 1.1.1), in contrast to the increase of the same order that the IMF had forecast for this period in January that same year, just before the international spread of the virus. This decline in output was

Chart 1.1

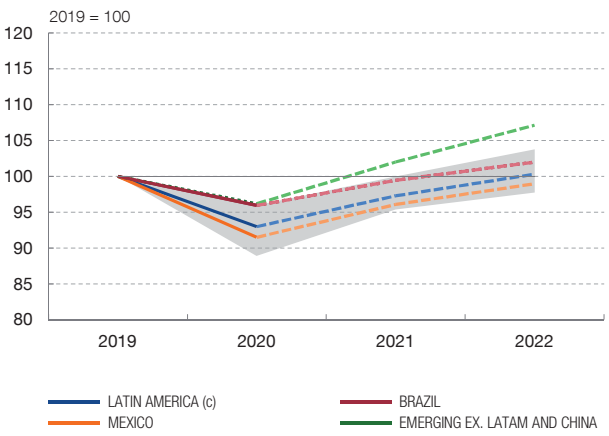
RECOVERY IN THE WORLD ECONOMY IS GAINING TRACTION, AT A RATE GOVERNED BY THE PERSISTENCE OF THE PANDEMIC AND UNEVENLY ACROSS COUNTRIES

Pandemic-related developments and the lockdown measures to check it influenced global economic activity in 2020, with a decline in aggregate GDP of 3.3%. However, the economic impact of the pandemic has been uneven across economies. Thus, the intensity of the fall in the euro area was greater than in the world economy as a whole or in the United States, and its recovery less robust. Within the euro area, the divergences are on account both of the different cross-country incidence of the pandemic and various structural factors. Among the emerging economies, Latin America is the region most affected by the pandemic.

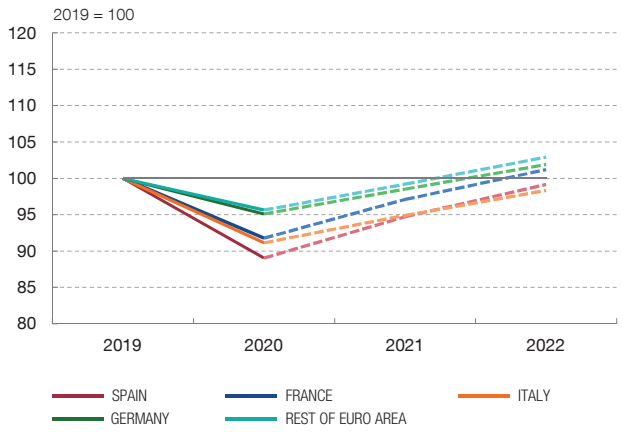
1 GDP GROWTH AND FORECASTS (IMF, APRIL)



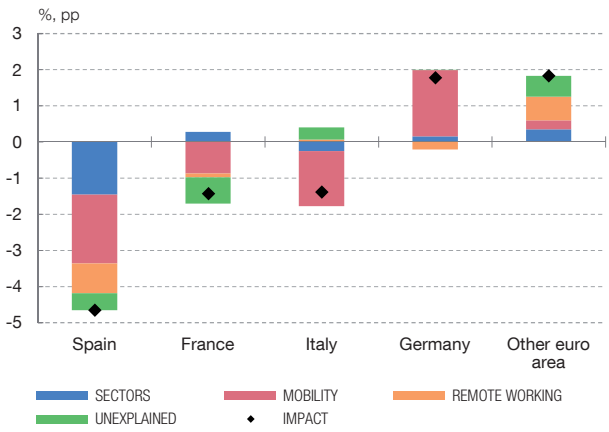
2 GDP LEVELS IN LATIN AMERICA (b)



3 GDP LEVELS IN THE EURO AREA



4 ECONOMIC IMPACT AND CONTRIBUTIONS (DIFFERENCES VIS-À-VIS THE EURO AREA IN 2020) (d)



SOURCES: Banco de España, national statistics, Eurostat, IMF (WEO, April 2021) and Refinitiv.

a IMF January 2021 forecast.
b The shaded area covers the range between the maximum and the minimum value for each year, among the six main Latin American economies (Argentina, Brazil, Chile, Colombia, Mexico and Peru).
c Aggregate for Latin America and the Caribbean (according to the IMF definition).
d The economic impact is measured as the difference between the change observed in GDP in 2020 and that forecast before the health crisis. See Gómez and Del Río (2021).

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predominantly in the first half of the year, when activity contracted across the board globally, mainly as a result of the strict lockdown that the vast majority of national authorities imposed in the spring in an attempt to contain the spread of the pandemic. Activity has since progressively recovered, with a profile much influenced by the emergence of new strains of the virus and by the containment measures adopted

(see Box 1.1). This has resulted in high volatility in global economic dynamics in the second half of 2020 and in early 2021.

The forceful economic policy response globally has helped mitigate the adverse impact of the crisis and support the recovery. The various national and supranational authorities reacted to the economic crisis prompted by the pandemic by adopting extraordinary monetary, fiscal and financial support measures. These have been broadened and adapted to the changing health situation, as described in Section 1.4. Their deployment has mitigated the incidence of the crisis at the business activity and employment levels. A further contributing factor here is the fact that, after the first wave of the pandemic, the authorities adopted more targeted measures to contain the spread of the virus, and households and firms began to prove notably adaptable to the new health, social and economic situation prevailing.

The pandemic and the lockdown measures have borne down particularly on the economic sectors most dependent on personal interaction and on private spending decisions (see Chart 1.2.1). The impact of the pandemic is proving very uneven across sectors of activity, and the intensity and persistence of the decline in services contrast with the brisker recovery in the manufacturing sector. In services, the sectors most affected are those that entail a greater degree of personal interaction – such as retail, transport and hospitality – and, therefore, they have been more influenced by the social distancing measures set in place (see Chart 1.2.2). Turning to the demand components, the sluggishness of activity has mainly been reflected in private consumption (see Chart 1.2.3). Some of the fall-off in consumption would have been due to households' difficulty in undertaking some of their usual spending because of the pandemic-associated restrictions ("forced" saving), while a further portion could be explained by the increase in precautionary saving, given the uncertain health and macrofinancial situation (see Chart 1.2.4). Both factors led to the build-up of a substantial reservoir of saving by households in the main advanced economies in 2020.[2] As the course of the pandemic improves and uncertainty abates, households will foreseeably use these savings, at least in part, thereby boosting the recovery in consumption and activity. In this respect, it has been seen how, in those countries such as China where the health situation has normalised, household consumption has already recouped its pre-pandemic levels.

Economic developments over the past 18 months have also been uneven across countries and geographical areas. And the future prospects of recovery mirror this unevenness (see Chart 1.1.1). Among other aspects, this unevenness reflects differences in the epidemiological incidence of the pandemic, in the public (health and economic) policy response and in the productive structure of each economy (mainly in terms of the weight of the sectors most exposed to social

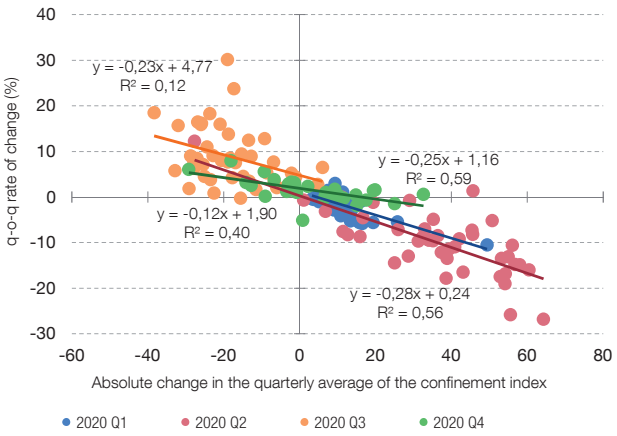
2 For more information, see Cuenca y del Río (2020).

Chart 1.2

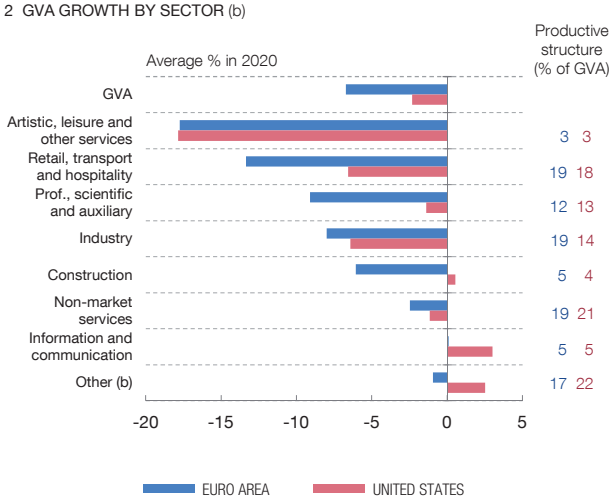
THE SPEED OF THE EXIT FROM THE CRISIS DEPENDS ON HOW NORMALISED AGENTS' SPENDING PATTERNS ARE AND ON THE RECOVERY OF THE MOST AFFECTED SECTORS

GDP dynamics in 2020 were largely determined by the strong fall in private consumption, owing both to precautionary reasons and to the difficulty of undertaking the usual expenditure as a result of the restrictions imposed on mobility and on the activity of specific sectors to curb the pandemic. By productive sector, services were more affected than manufacturing. Within services, the sectors most affected are those most exposed to the lockdown measures.

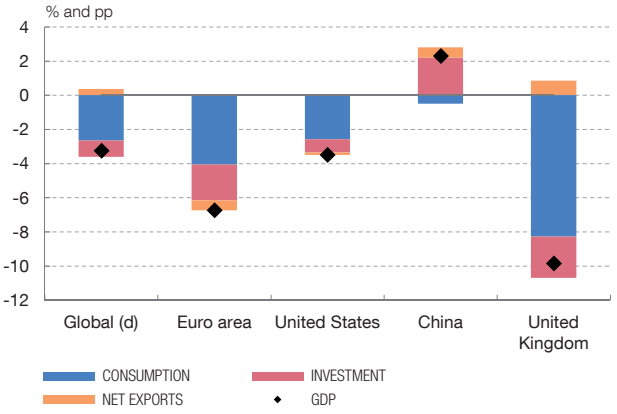
1 GDP GROWTH AND CHANGES IN THE LOCKDOWN INDEX (a)



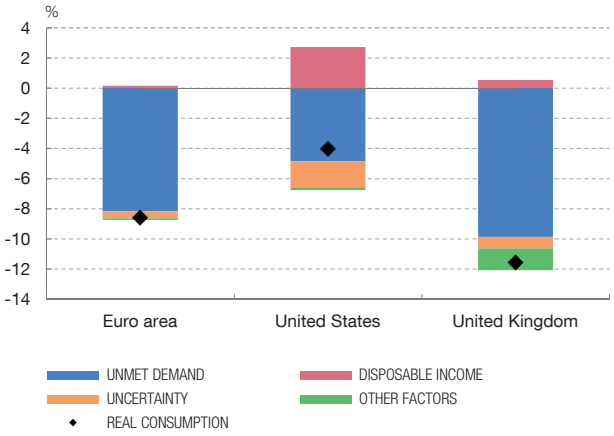
2 GVA GROWTH BY SECTOR (b)



3 BREAKDOWN OF GROWTH IN 2020 (c)



4 HOUSEHOLD CONSUMPTION. CUMULATIVE CHANGE IN THE FIRST THREE QUARTERS OF 2020 (e)



SOURCES: Banco de España, BEA, Eurostat, IHS Markit, ONS and University of Oxford.

a Countries with quarterly accounts, a total of 44 (33 for 2020 Q4). The Goldman Sachs lockdown index, which combines mobility indicators, and the Oxford stringency index are used.
b The category "Other" includes the primary sector and other market services (financial activities, insurance and real estate activities).
c Provisional data.
d Aggregate constructed on the basis of 56 economies accounting for 83% of global GDP.
e Drawn from a quarterly error correction model for household consumption based on Cuenca and Del Río (2020). The explanatory variables in the long-term equation are income, wealth and the interest rate. Uncertainty comes into the short term contemporaneously and in levels. "Other factors" include wealth, the interest rate and the residual.

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interaction). Hence, among the main world economies, the decline in output in 2020 was 3.5% in the United States, 6.7% in the euro area, 4.8% in Japan and 9.8% in the United Kingdom, while GDP expanded by 2.3% in China. Among the emerging economies, the impact was especially acute in Latin America, where GDP declined

by 7% in the region as a whole. As to the economic outlook, on available forecasts,[3] subject to the still-uncertain course of the health situation, the expectation is that the recovery of pre-pandemic levels of activity will take place very unevenly across the main world economies. Thus, whereas China had already recouped these levels at end-2020, the United States and the euro area as a whole are forecast to do so in 2021 and 2022, respectively. For Latin America as a whole, the pre-crisis level of activity is expected to be reached in 2022 (see Chart 1.1.2). However, there is notable heterogeneity in Latin America, with economies – such as Brazil and Chile – that will practically attain their previous level in 2021 already and others – such as Argentina and Mexico – that will still have not done so in 2022.

The asymmetry of economic developments is also discernible in the euro area. In the main economies in the area, the contraction in GDP in 2020 was slightly higher than 5% in Germany, at around 8% in France and 9% in Italy, and up to 10.8% in Spain (see Chart 1.1.3). On the evidence available,[4] the more unfavourable course of the pandemic in France, Italy and Spain, and the relatively more stringent containment measures, would contribute to accounting for the bigger fall in output in these countries than in the euro area as a whole (see Chart 1.1.4). Moreover, productive specialisation would lie behind the relatively greater impact of the crisis in economies such as Spain and Greece. The sectors of hospitality, artistic and recreational activities, and other services activities account in these two countries for over 10% of GVA, compared with 6% in the euro area. The heterogeneity across the euro area economies likewise reflects the different speed of the expected recovery of pre-pandemic output levels. Thus, on the latest IMF forecasts, in April this year, whereas German GDP is expected to be above its pre-crisis level next year already, this will foreseeably not be the case for output in Spain until 2023.

Among the emerging economies, certain structural characteristics might explain why Latin America has been more affected than other areas.[5] Health wise, the greater incidence of the pandemic in this region has come about despite the fact that, in several Latin American countries, more restrictive and earlier measures on people's mobility and on the shutdown of activity were adopted than in other emerging economies.[6] Some of the structural characteristics of Latin America that might be behind this greater health and economic vulnerability in the face of the pandemic are high poverty levels, lower institutional quality, the high rate of labour market informality, the weakness of health systems and the large proportion of the population residing in urban areas.

Maintaining appropriate financial conditions and the normal flow of capital between economies is crucial for global economic recovery. Financial markets

3 See IMF (2021).

4 See Gómez and del Río (2021), forthcoming.

5 Véase Banco de España (2020a).

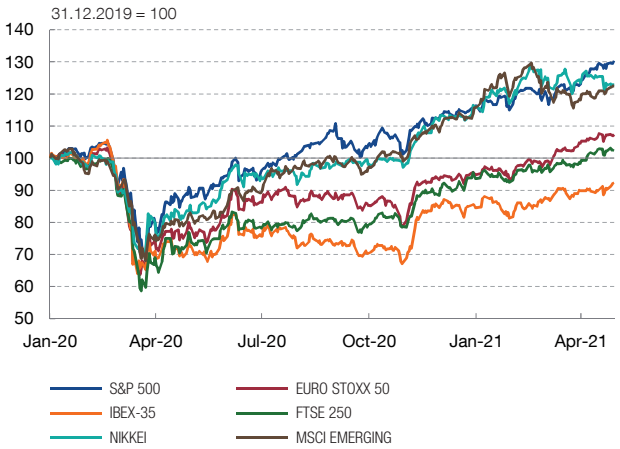
6 See Banco de España (2020f).

Chart 1.3

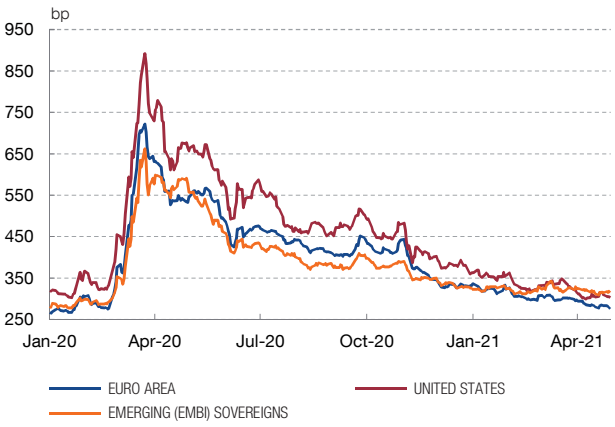
RECOVERY ON INTERNATIONAL FINANCIAL MARKETS

Public policies and the development of effective vaccines against COVID-19 have allowed for the recovery of financial markets. In recent months there have been across-the-board gains on stock markets and higher yields on higher-graded long-term sovereign debt. Moreover, sovereign risk premia in the euro area have declined, as have corporate credit risk spreads and sovereign spreads in the emerging economies.

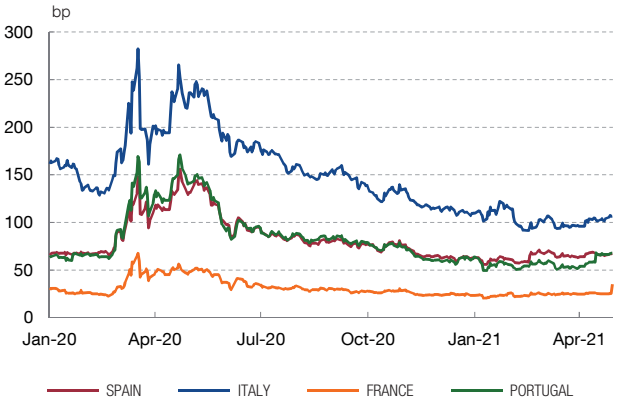
1 STOCK MARKET INDICES



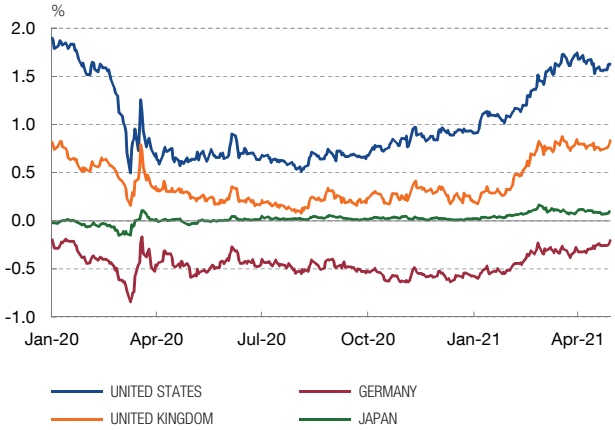
2 HIGH-YIELD BOND SPREADS RELATIVE TO THE SWAP CURVE AND EMERGING (EMBI) SOVEREIGN SPREADS (a)



3 10-YEAR GOVERNMENT BOND SPREADS VIS-À-VIS GERMANY



4 10-YEAR GOVERNMENT BOND YIELDS



SOURCE: Thomson Reuters Datastream.

a Bank of America Merrill Lynch Single-B High Yield ICE Index.

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have trended positively in recent quarters, in the advanced and emerging economies alike. Stock market prices have risen across the board and record highs were recently posted on the S&P 500 and MSCI emerging markets indices (see Chart 1.3.1). On the fixed-income markets, corporate spreads have narrowed, both in the high-yield and the investment-grade segments, supported by central banks' asset purchase programmes and by the progressive reduction in uncertainty (see Chart 1.3.2). These factors have also been conducive to the reduction in sovereign risk premia in the euro area (see Chart 1.3.3) and in the emerging economies. Investors' lower risk aversion and the improvement in growth and inflation expectations have

contributed to an increase in the long-term yields on higher-rated sovereign debt, especially since early 2021 (see Chart 1.3.4). Moreover, in this favourable financial setting, the dollar has held over the course of the year on a depreciating path against the euro and sterling, which has been partly reversed at the start of 2021. Portfolio capital flows, for their part, have progressively returned to the emerging economies, following the heavy outflows witnessed in March and April 2020.

However, in some markets financial asset prices are relatively high which, further ahead, could pose a price-adjustment risk. Against this backdrop of relatively high prices, sharp corrections might be triggered in the prices of some financial assets, adversely impacting global financial conditions and real activity. Some such potential triggers might, for example, be a sharp, across-the-board rise in global interest rates or revised investor expectations about future economic developments, the corporate sector's debt repayment capacity and the duration of public support programmes.[7]

The buoyancy of international trade is another key lever for the global recovery. Unlike events in the wake of the 2008 financial crisis, in the present COVID-19 crisis world trade in goods has recovered swiftly from the disruption to trade flows in the first half of 2020, thanks largely to the buoyancy of the Chinese economy (see Chart 1.4.1). In this respect, the resilience of the global value chains has allowed much of the initial decline to be recovered, ensuring the supply of certain goods of critical importance. And this despite the fact that, at some junctures of the pandemic, trade in medical products was hampered by protectionist-like measures (see Box 2.2 of Chapter 2 of this Report). Trade in services is also picking up, albeit with less intensity, as it is weighed down by the restrictions on people's movement, which particularly affect international tourism.

Euro area exports have nevertheless shown less relative momentum in recent quarters. In December 2020, goods exports from the euro area countries had not recovered the level recorded in the same month a year earlier, whereas in the advanced economies as a whole and in China, these exports had grown by 1.6% and 8.3%, respectively (see Chart 1.4.2). Some particular factors have contributed to this relative lesser momentum of euro area exports. First, the greater intensity of the health crisis and the lesser impetus of the economic recovery in the region have borne adversely on intra-euro area trade, which gained in weight in the past decade (see Chart 1.4.3). Further, the sectoral structure of extra-euro area exports shows a significant share – especially in some of the euro area countries – of certain goods and services that have performed relatively more negatively in this crisis, such as transport machinery and tourist services (see Charts 1.4.3 and 1.4.4). In any event, set against the adverse scenarios prevailing in late 2020, the United Kingdom-EU Withdrawal Agreement has helped significantly reduce trade uncertainty in relation

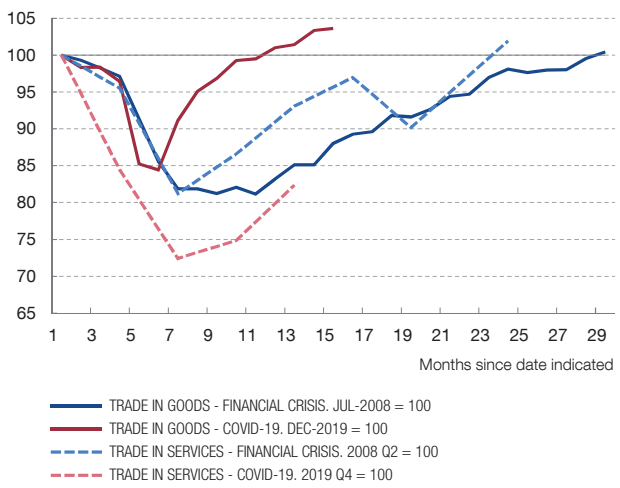
7 See Banco de España (2021a). Forthcoming.

Chart 1.4

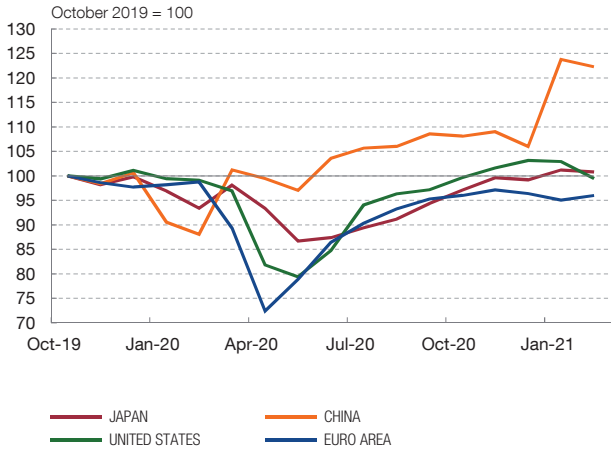
GLOBAL TRADE IS PICKING UP FORCEFULLY, EXCEPT FOR SERVICES, WHICH EXERTS A GREATER ADVERSE IMPACT ON EURO AREA EXPORTS

Trade in goods has shown a greater capacity for recovery in this crisis than that observed after the global financial crisis. Marking developments has been China's swift recovery. The recovery in trade flows has been slower in the euro area, owing to the greater relative share in these flows of specific goods and services, such as tourism, which have been more adversely affected in this crisis.

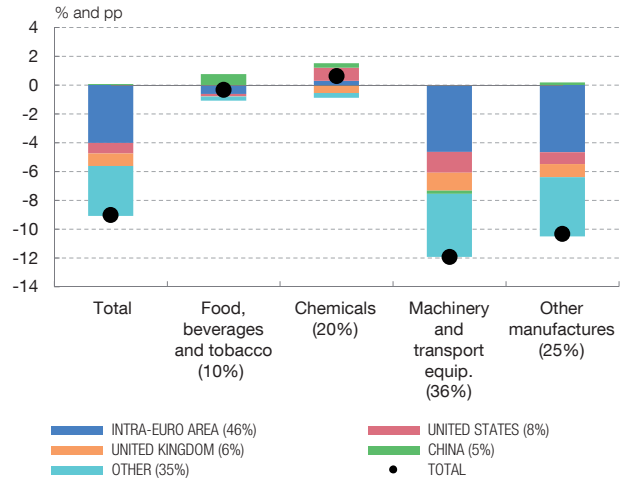
1 INTERNATIONAL TRADE COMPARED (a)



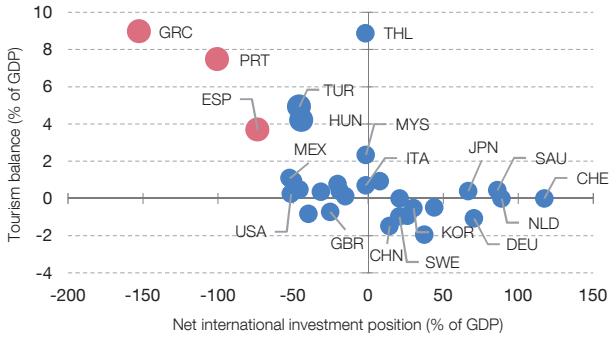
2 TRADE IN GOODS BY AREA



3 EURO AREA GOODS EXPORTS BY PRODUCT AND AREA (b). NOMINAL. CHANGE IN 2020 AND CONTRIBUTIONS



4 TOURISM BALANCE AND NET INTERNATIONAL INVESTMENT POSITION IN 2019



SOURCES: CPB, Eurostat, IMF, UNWTO and OECD.

a Services trade data are quarterly. The weighted average for countries with available data is reported.
b In brackets is the share of each product and destination for total euro area goods exports in 2020.

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to the UK. Though some doubts persist as to what will happen once the transition period envisaged in this agreement concludes,[8] the reduction in uncertainty should contribute to trade flows between both areas recovering in the coming quarters.[9]

8 See Buesa et al. (2021).

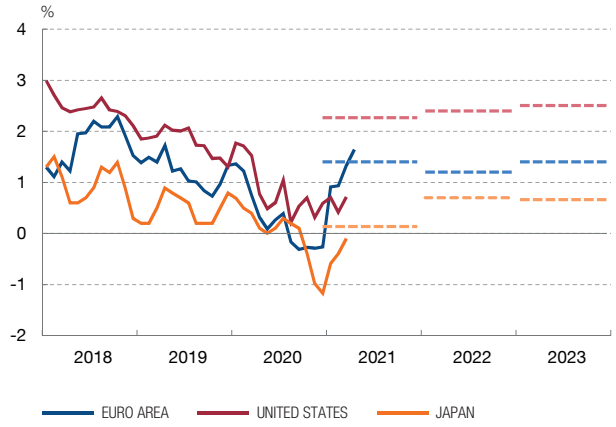
9 On the adverse economic effects of trade uncertainty, see Albrizio et al. (2021), forthcoming.

Chart 1.5

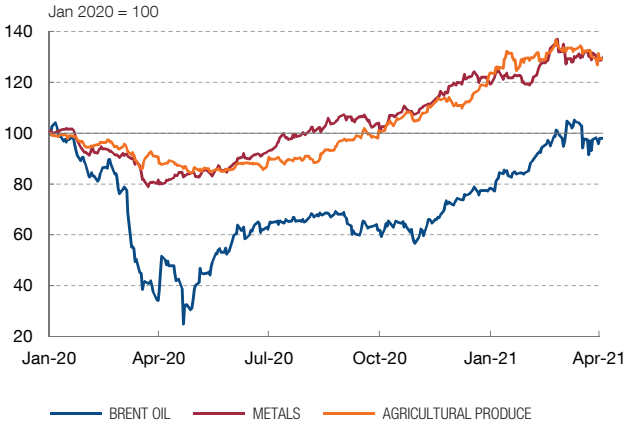
THE CRISIS HAS ACCENTUATED DISINFLATIONARY TRENDS

The increase in commodities prices and the closing of the output and unemployment gaps as the economic recovery progresses will provide for a gradual increase in inflation.

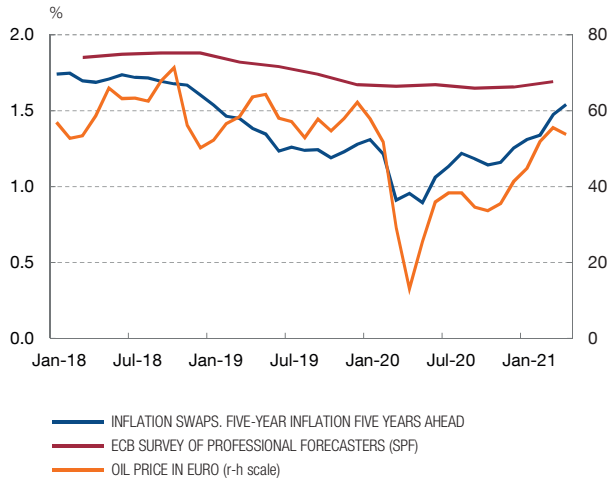
1 INFLATION IN ADVANCED ECONOMIES
Monthly developments and annual forecasts (a)



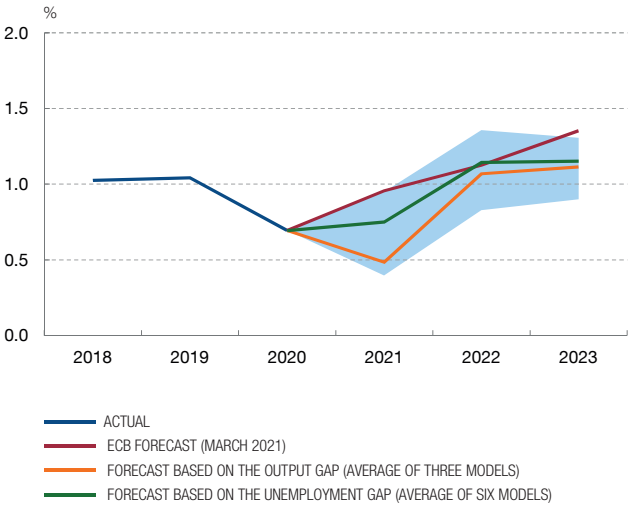
2 COMMODITIES PRICES



3 LONG-TERM INFLATION EXPECTATIONS IN THE EURO AREA



4 CORE INFLATION OUTLOOK IN THE EURO AREA (b)
Seasonally adjusted year-on-year growth



SOURCES: ECB, Eurostat, IMF and Thomson Reuters

a IMF forecasts (*WEO*, April 2021).
b Forecasts drawing on nine Phillips curve models for the HICP, excluding energy and food, which consider different inflation expectations measures, with the range between the maximum and minimum value shaded. See Álvarez and Correa-López (2020).

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As to inflation, the weakness of aggregate demand pushed prices downwards across the board for most of last year. Inflation rates globally in 2020 were down on 2019, both in the advanced and emerging economies, against a backdrop of very negative output gaps and declines in commodity prices (see Chart 1.5.1). Both factors more than offset the upward pressures on the prices of some goods and services – such as unprocessed food – stemming from specific one-off disruptions on the supply side. In the OECD countries as a whole, annual rates of overall and

core inflation, the latter excluding energy and food prices, stood at end-2020 at 1.2% and 1.6%, respectively. In the euro area, which before the pandemic broke already had a persistent negative difference in relation to the rates observed in the other advanced economies, inflation fell to even lower rates of 0.3% and 0.7%, respectively. Some specific factors contributed to these low rates, such as the appreciation of the euro against the basket of currencies of its main trading partners and the temporary cut in indirect taxes in Germany.

The improved outlook for recovery has been reflected in the increase in some inflation expectations indicators since late 2020. Progress in the vaccination roll-out and new fiscal stimuli have entailed an upward revision in the global growth and inflation outlook. In the case of the latter, this perception, visible above all in the financial indicators of inflation expectations (see Chart 1.5.2), has been amplified by certain conjunctural factors. First, the circumstantial mismatches between supply and demand have given rise to certain cost pressures, owing to the increase in the prices of food, commodities and other inputs, such as semiconductors and maritime freight (see Chart 1.5.3). Moreover, in the case of consumer prices, the rapid rise in crude oil to levels close to those prevailing pre-crisis in the opening months of the year led to increases in inflation rates, which in principle should be fundamentally temporary. So too did various idiosyncratic factors, such as those arising from the changes in early 2021 to HICP weights to align them to the new household spending patterns. Lastly, some analyses have warned of the danger of the US economy overheating further to the two fiscal policy packages adopted since end-2020, which could have significant effects in terms of US growth, employment and inflation.[10] However, under the assumption that inflation expectations remain properly anchored, these effects would be transitory and progressively fade as from 2022.

In the medium term, the persistence of negative output gaps and relatively high unemployment rates in most of the main economies does not augur significant underlying inflationary tensions. The forecasts available point to moderate and gradual increases in inflation rates in the coming years in the developed countries. In the case of the euro area, the latest Eurosystem projections[11] are for a temporary rise this year to a rate of 2% in 2021 Q4. In 2023, at the end of the projection period, inflation would stand at 1.4%, slightly down on the same three-year horizon forecast made before the pandemic broke, and still some way off the ECB's monetary policy objective (see Chart 1.5.4).

The outlook for the global and the euro area economy is subject to major factors of uncertainty. In the short term, the vaccination roll-out in the opening months of 2021 has helped largely dispel doubts over the course of the pandemic, especially in the developed countries. However, downside risks persist owing to the

10 See Párraga and Roth (2021).

11 See European Central Bank (2021).

uneven pace of the vaccination campaign globally and to how this may condition the future course of the pandemic if new strains of the virus potentially more resistant to the current vaccines were to emerge. It is essential in this connection to reinforce multilateral collaborative initiatives, such as COVAX,[12] whose aim is to accelerate the development and manufacture of vaccines and to ensure fair and equitable access to all countries. Health matters aside, there is also high uncertainty over how households and firms will adapt their spending and output patterns once the pandemic is behind us. Also very uncertain is the scale of the scarring the current, profound economic crisis may leave in the form of damage to economies' productive capacity and macroeconomic imbalances, in both the public and private sectors. Against this background, Section 1.4 and, more extensively, Chapter 2 analyse economic policies, which are playing an essential role in the stabilisation phase of the crisis. These policies must also be to the fore in the recovery phase and in absorbing the imbalances generated by the pandemic.

3 The behaviour of economic activity in Spain

Since breaking, the COVID-19 pandemic has prompted the biggest health crisis in Spain's recent history. Over the course of several waves, of differing intensity and duration, the pandemic has posed a deep-seated challenge for the Spanish health system and has exacted an extraordinarily high cost in terms of human lives (see Chart 1.6.1).[13] Thus, on the latest official data available, more than 78,000 people have died in Spain from COVID-19 since the start of the pandemic. That would place Spain among the countries with the highest per capita death rate for this cause.[14]

The pandemic has also meant unprecedented disruption to economic activity in Spain (see Section 1.3.1). The scale of this impact has been extraordinary in at least three respects. First, because of its magnitude. Hence, most macroeconomic aggregates underwent a historical downturn in the first half of 2020. The ensuing recovery in Q3 last year has so far only allowed a part of this initial deterioration to be corrected. Second, the economic impact of the pandemic has been notably and markedly uneven. In particular, the crisis has affected the various productive sectors, provinces, firms, households and groups of workers most asymmetrically, which requires an assessment of the economic context that goes beyond an analysis of the major activity aggregates. Lastly, the extraordinarily disruptive nature of the COVID-19 crisis is also discernible in the highly

12 COVAX is the vaccines pillar of the Access to COVID-19 Tools (ACT) Accelerator, a global collaboration initiative promoted by the World Health Organization to accelerate the development, production and equitable access to COVID-19 tests, treatments and vaccines.

13 When analysing the course of the virus in Spain, it should be borne in mind that, in the first wave, contagion figures were underestimated compared with subsequent outbreaks, owing to the lack of available tests and to the collapse of the health system that came about in this episode in the areas most afflicted by the pandemic.

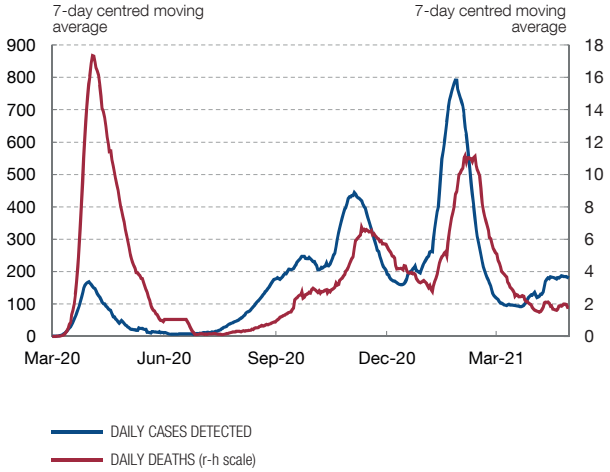
14 Other sources that estimate excess mortality, such as INE, would have higher figures for deaths. Comparisons of international data should be made with caution, owing to the differences there may be regarding, inter alia, diagnostic capacity, recording criteria, data quality and data coverage.

Chart 1.6

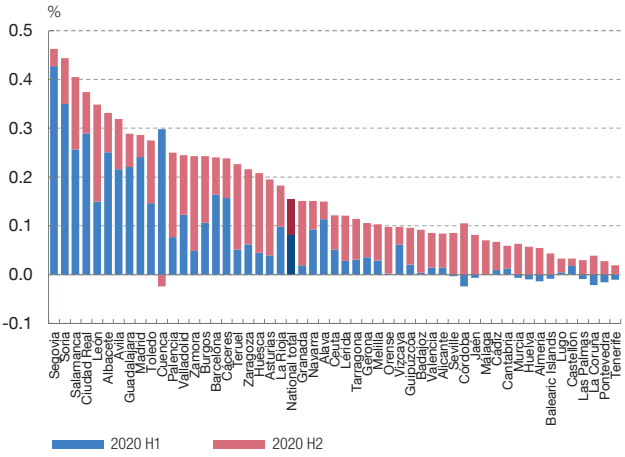
THE COVID-19 PANDEMIC HAS POSED AN EXTRAORDINARY PUBLIC HEALTH CHALLENGE IN SPAIN

Over the course of several waves, of differing intensity and duration, the COVID-19 pandemic has posed a deep-seated challenge to the Spanish health system and exacted an extraordinarily high cost in terms of human lives, unevenly distributed across Spain.

1 THE COVID-19 PANDEMIC IN SPAIN
Daily cases per million inhabitants



2 EXCESS MORTALITY
(DEATHS IN 2020 - AVERAGE DEATHS IN 2019 AND 2018) / POPULATION



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SOURCES: INE and Ministerio de Sanidad.

significant changes it has caused in the behaviour of economic agents, who have attempted to adapt to the pandemic and its consequences in a short space of time. For example, very notable changes have been seen in people's mobility patterns, in household consumption habits and in the provision and organisation of work, whose implications and persistence can still not be accurately assessed. The economic authorities have also been obliged to react resolutely to the challenges posed by the health crisis – in many cases deploying measures of an unprecedented nature and scale – and to progressively recalibrate their actions in the face of the changing nature of the crisis.

As the vaccination process progresses, the outlook for the Spanish economy will be increasingly conditional upon essentially economic factors. Since the onset of the pandemic, the health situation and the tightening or easing of the measures deployed to contain the virus have been the main conditioning factors of Spain's economic dynamics. In the coming months, however, the vaccination roll-out will foreseeably mean that other, genuinely economic factors will take on greater importance in determining how buoyant economic activity is in the short and medium term. These factors, all of which are interrelated and shrouded in considerable uncertainty, include most notably: the pace, scope and effectiveness of the implementation of the NGEU programme; the stance of the main economic policies; and the scale of the lasting damage the pandemic may have caused to employment and the productive system. More particularly, the outlook for the Spanish economy in the coming quarters will also depend on three elements: the intensity and pace at which households reduce the saving they have built

up since the start of the crisis; the capacity for recovery of business investment; and the contribution of external demand – in particular tourism exports – to growth.

3.1 The impact of the crisis: scale and heterogeneity

After plummeting by 13.8% in the first half of 2020, Spanish GDP was, at the end of 2021 Q1, still 9.4% below its pre-pandemic level (see Chart 1.7.1). The outbreak of the COVID-19 crisis in our country, in March 2020, and the major restrictions on people's mobility and on activity in specific sectors led GDP to shrink by 5.4% and 17.8% quarter-on-quarter in the first two quarters of last year. Thereafter, GDP embarked on a path of recovery – thanks to the improvement in the epidemiological situation in the spring and gradual lockdown-easing – which soon began to show signs of fragility. Indeed, the worsening of the health crisis in autumn 2020 and in early 2021, and the tightening or reintroduction of some of the lockdown measures led activity to stagnate in 2020 Q4 and, subsequently, to a slight contraction in 2021 Q1. As a result, Spanish GDP, which shrank by 10.8% in the course of 2020, was still 9.4% below its end-2019 level in 2021 Q1.

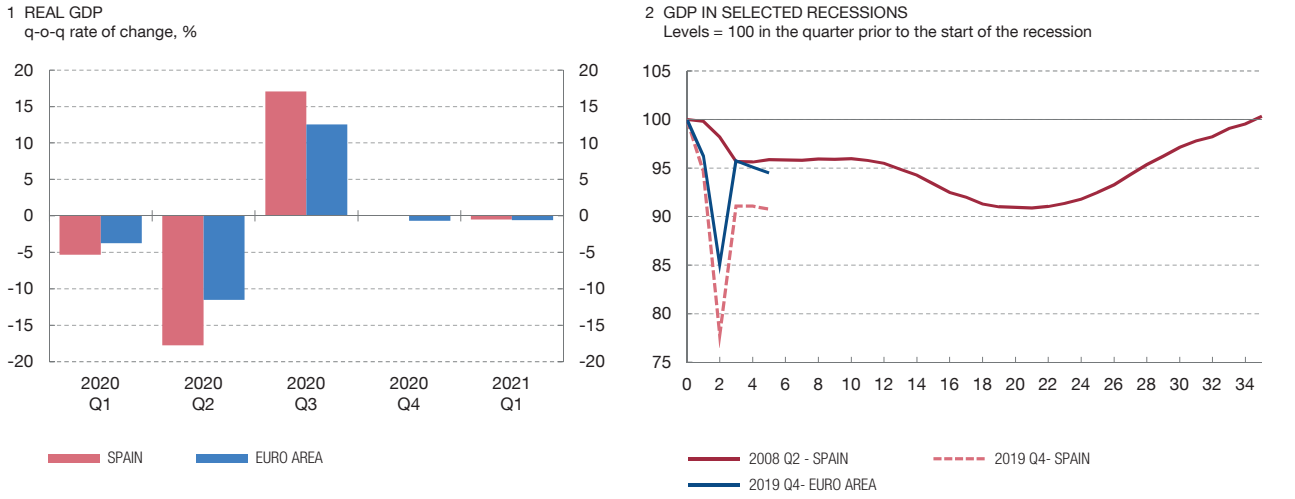
This downturn in activity is unprecedented in the Spanish economy's recent history. From a historical standpoint, the current crisis is notable for the intensity with which economic activity has contracted in a short space of time. Thus, for example, the downturn in Spanish GDP since the onset of the pandemic is practically the same as the cumulative reduction it underwent over more than five years from 2008 Q2 to 2013 Q3. The decline in this latter period came about against a domestic background marked by the correction of deep-seated macrofinancial imbalances and a very complex international scenario which saw the global financial and European sovereign debt crises (see Chart 1.7.2 and Table 1.1).

The contraction in Spanish GDP since end-2019 is among the biggest declines recorded in the advanced economies. In particular, this decrease is bigger than that observed in the euro area as a whole – whose GDP in 2021 Q1 was 5.5% below its pre-pandemic level – and in the region's main economies. Significantly, though, the Spanish economy's relatively worse performance is estimated to have been essentially in the first half of 2020 when, in comparative terms, the incidence of the pandemic was greater in our country and more stringent lockdown measures were implemented. Conversely, in recent quarters, the behaviour of Spain's GDP, despite showing clear weakness, is expected to have been somewhat more favourable than that in the euro area as a whole (see Chart 1.7.1). In any event, a series of structural factors in the Spanish economy would suggest that the continuing gap between levels of activity in Spain and in other European economies will still take some time to close. These factors fundamentally include the greater weight in Spain of the sectors, companies and groups of workers most affected by the pandemic, i.e. social interaction sectors, small firms and temporary workers.

Chart 1.7

THE ECONOMIC IMPACT OF THE COVID-19 CRISIS HAS BEEN ON A SCALE UNPRECEDENTED IN PEACETIME

The outbreak of the pandemic in Spain in March 2020 and the setting of severe restrictions on personal mobility and on the activity of specific sectors saw Spanish GDP undergo an extraordinary decline, both in historical terms and on international comparisons, in the first two quarters of the year. Economic activity picked up sharply in Q3, but in the final stretch of last year the recovery came to a halt. In 2021 Q1, GDP was still 9.4% below its end-2019 level, a gap almost 4 pp higher than that observed in the euro area as a whole.



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SOURCES: Eurostat and INE.

The economic impact of the pandemic might have been even greater without the economic policy response (see Section 1.4). Notable among the range of measures at the domestic level are, in terms of their importance, the advantages offered to firms to launch furlough schemes (ERTE by their Spanish name) and the suspension of activity in the case of the self-employed, and the various credit facilities with ICO public guarantees that were created to foment lending to firms. These measures, along with those taken in the monetary policy and financial regulation spheres, have been instrumental in mitigating the impact of the pandemic on households' and firms' incomes and liquidity in the short term. Consequently, the macroeconomic effect of the crisis would have been significantly more adverse than has been the case since March 2020 had this package of economic policy measures not been activated.

Economic policy responses have been progressively adjusted as the crisis has evolved. Most of the measures in the fiscal, monetary, regulatory and prudential policy spheres adopted by other national and supranational authorities have had to be gradually adjusted to the course of the pandemic. Thus, for instance, as the health crisis has proven more persistent than initially envisaged, it has been necessary to extend and recalibrate the furlough schemes and ICO-backed credit facilities on several occasions. This is not only to avoid a premature withdrawal of these support measures, but also to ensure that these instruments are better attuned to the needs arising in a changing economic and health situation. Also part of this setting is the new package of extraordinary measures approved by the Government

Table 1.1
MAIN MACROMAGNITUDES OF THE SPANISH ECONOMY

Annual rate of change in volume terms and % of GDP

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
GDP	3.6	0.9	-3.8	0.2	-0.8	-3.0	-1.4	1.4	3.8	3.0	3.0	2.4	2.0	-10.8
Private consumption	3.4	-0.7	-3.6	0.4	-2.5	-3.3	-2.9	1.7	2.9	2.7	3.0	1.8	0.9	-12.1
Government consumption	6.2	6.0	4.2	1.5	0.0	-4.2	-2.1	-0.7	2.0	1.0	1.0	2.6	2.3	3.8
Gross fixed capital formation	3.9	-4.3	-17.3	-5.4	-7.6	-7.4	-3.8	4.1	4.9	2.4	6.8	6.1	2.7	-11.4
Investment in equipment, intangibles and other (a)	8.9	-1.0	-19.1	5.7	0.0	-3.4	1.3	5.2	8.2	3.1	6.9	3.1	3.7	-8.8
Investment in construction	1.7	-5.9	-16.3	-11.1	-12.3	-10.4	-8.2	3.0	1.5	1.6	6.7	9.3	1.6	-14.0
Exports of goods and services	7.6	-0.9	-10.8	9.1	8.2	0.9	4.4	4.5	4.3	5.4	5.5	2.3	2.3	-20.2
Imports of goods and services	8.2	-5.5	-18.3	6.2	-0.6	-5.8	-0.2	6.8	5.1	2.7	6.8	4.2	0.7	-15.8
National demand (b)	4.2	-0.6	-6.6	-0.4	-3.1	-5.0	-2.8	1.9	3.9	2.0	3.2	2.9	1.4	-8.8
Net external demand (b)	-0.6	1.5	2.8	0.6	2.3	2.0	1.4	-0.5	-0.1	1.0	-0.2	-0.5	0.6	-2.0
Nominal GDP	7.1	3.2	-3.6	0.3	-0.8	-3.1	-1.0	1.2	4.4	3.4	4.3	3.6	3.4	-9.9
GDP deflator	3.4	2.3	0.1	0.2	0.0	-0.1	0.4	-0.2	0.5	0.3	1.3	1.2	1.4	1.1
Harmonised index of consumer prices (HICP)	2.8	4.1	-0.2	2.0	3.1	2.4	1.5	-0.2	-0.6	-0.3	2.0	1.7	0.8	-0.3
HICP excluding energy and food	2.5	2.4	0.9	0.8	1.2	1.3	1.3	-0.1	0.3	0.7	1.2	1.0	1.1	0.5
Employment (hours)	2.5	0.6	-6.0	-2.3	-2.3	-4.8	-2.8	1.1	3.0	2.6	2.1	2.7	1.5	-10.4
Unemployment rate (% of labour force). Annual average	8.2	11.3	17.9	19.9	21.4	24.8	26.1	24.4	22.1	19.6	17.2	15.3	14.1	15.5
Household saving rate and NPISHs (c)	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
Net lending (+)/net borrowing (-) of the nation (% of GDP)	-9.1	-8.6	-3.7	-3.3	-2.4	0.6	2.6	2.1	2.7	3.4	3.0	2.4	2.5	1.1
General government net lending (+)/net borrowing (-) (% of GDP)	1.9	-4.6	-11.3	-9.5	-9.7	-10.7	-7.0	-5.9	-5.2	-4.3	-3.0	-2.5	-2.9	-11.0
General government debt (% of GDP)	35.8	39.7	53.3	60.5	69.9	86.3	95.8	100.7	99.3	99.2	98.6	97.4	95.5	120.0
Household debt ratio (% of GDP)	81.8	82.6	85.0	84.4	82.5	81.6	77.8	73.4	68.0	64.5	61.2	58.9	56.9	61.8
Non-financial corporations' debt ratio (% of GDP)	111.5	114.9	119.3	118.8	115.7	107.1	100.5	94.8	87.8	83.3	78.7	74.4	72.6	84.6

SOURCES: Banco de España and INE.

a Includes machinery, capital goods, weapons systems, cultivated biological resources and intellectual property products.
b Contribution to growth.
c As a percentage of gross disposable income.

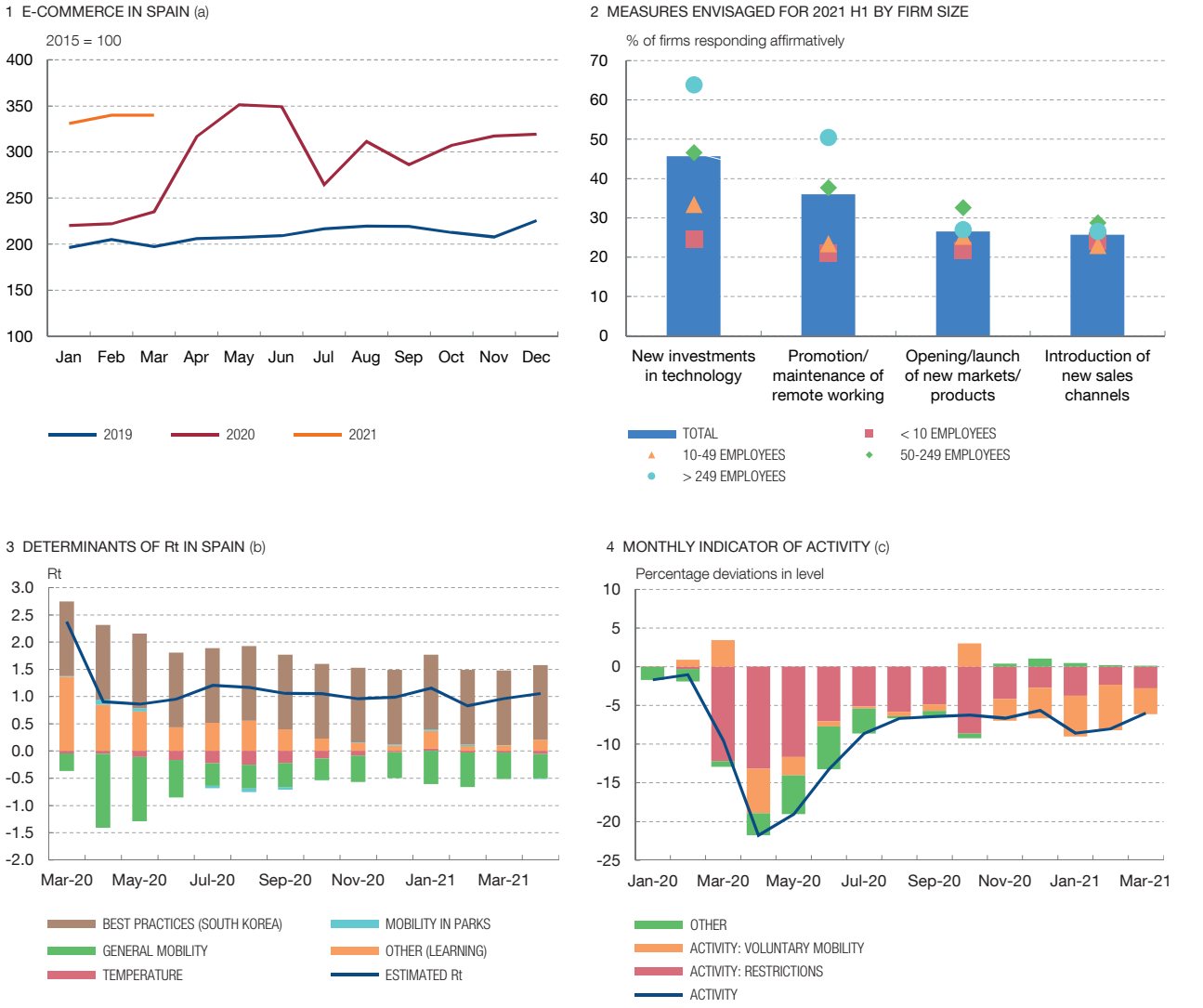
in March this year to support the viability and shore up the financial solvency of companies most affected by the crisis.

Economic agents' adaptability to the pandemic and its associated restrictions have also helped mitigate its adverse economic impact. Indeed, since the start of the pandemic there have been very significant changes in the behaviour of households and firms along lines that traditionally evolve relatively parsimoniously. Thus, for instance, in a setting in which the restrictions on mobility and consumer caution over

Chart 1.8

ECONOMIC AGENTS' NOTABLE ADAPTABILITY TO THE PANDEMIC IS ESTIMATED TO HAVE HELPED MITIGATE ITS ADVERSE ECONOMIC IMPACT

Since the start of the pandemic there have been very significant changes in the behaviour of households and firms in dimensions that traditionally move relatively parsimoniously. Thus, for example, households have notably increased their online purchases and firms have made substantial organisational changes, especially towards a greater digitalisation of activity and more remote working. This learning curve or adaptation by economic agents is estimated to have mitigated the adverse economic impact of the pandemic and to have infused activity with greater dynamism in recent quarters.



SOURCES: Banco de España and INE.

a Postal and internet retailing (INE).
b Ghirelli et al. (2021). The effective reproduction number (Rt) measures the number of infectious cases generated on average by each infected person.
c Ghirelli et al. (2021). The relationship between pandemic containment measures, mobility and economic activity. Occasional Paper no. 2109, Banco de España.

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contagion might have been expected to influence the volume of face-to-face sales most adversely, Spanish households' resort to e-commerce, especially in goods, has contributed to keeping private consumption relatively buoyant (see Chart 1.8.1). Also, a high proportion of Spanish firms have made substantial organisational changes in

response to the pandemic (particularly to increase the digitalisation of activity and to set greater store by working from home), which will have allowed them to cushion the adverse impact of the crisis on their levels of activity. Testifying to this is the Banco de España survey on business activity (EBAE). It points out, for example, that almost half of Spanish firms planned to undertake new investment in technology in the first half of this year and more than one-third of them would promote the use of working from home (see Chart 1.8.2). These percentages are higher for larger corporations, suggesting their greater capacity to adapt to the new economic conditions. This ongoing learning curve or adaptation by economic agents to the pandemic and to the various restrictions applied to contain it – which, in turn, have also evolved and become more targeted – will have been conducive to the greater dynamism of activity in recent quarters.

The evidence available highlights the importance of economic agents' gradual adaptation to the pandemic. A recent Banco de España study establishes a relationship between temperature, mobility and the path of the pandemic.[15] The findings of this analysis note how, over time, efforts to curb the pandemic in Spain have entailed reductions in mobility which, comparatively, have been increasingly less acute (see Chart 1.8.3). A second study analyses the relationship between restrictions, mobility and economic activity, and also finds evidence of some learning over the course of the year. This is because the impact of the restrictions on mobility (reflected in an increasingly smaller contribution of voluntary reductions in mobility, which are those not related to the level of restrictions in force at each point in time) and of mobility on economic activity progressively diminishes (see Chart 1.8.4).[16]

The impact of the pandemic on economic activity in Spain is proving very uneven across sectors, different types of firms and groups of workers, and also regionally. From a sectoral standpoint, the pandemic has influenced more negatively those productive sectors, especially in services, whose activity requires a relatively high degree of social interaction. These include most notably retail, hospitality and artistic activities. By type of firm, several studies by the Banco de España suggest that the current crisis has caused a bigger increase in the financial vulnerability of small and medium-sized firms (see Chapter 3 of this Report).[17, 18] Moreover, the fall in turnover and employment has been more marked in small, young and less productive firms, and in those located in urban areas (see Charts 1.9.1 and 1.9.2).[19] As analysed in depth in Chapter 2 of this Report, among employees, those on temporary contracts along with the youngest and low-income workers will have

15 See Guirelli et al. (2021).

16 See Guirelli et al. (2021).

17 See, for example, Blanco et al. (2020b); Blanco et al. (2020a); and R. Blanco, S. Mayordomo, Á. Menéndez and M. Mulino (2021). Documento Occasional, Banco de España, "El impacto de la crisis del COVID-19 sobre la vulnerabilidad financiera de las empresas españolas", forthcoming.

18 These findings are consistent with the information available for 2020 as a whole in the CBSO Quarterly Report. See Menéndez and Mulino (2021b).

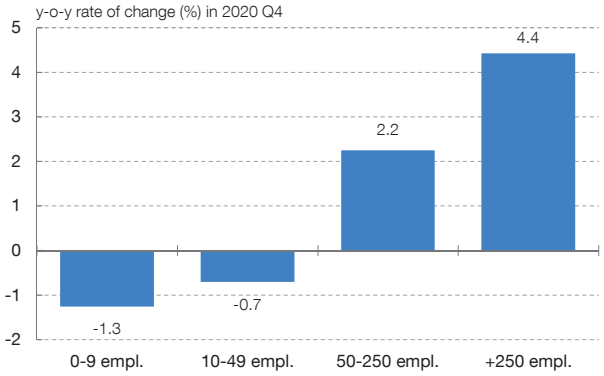
19 See Fernández-Cerezo et al. (2021).

Chart 1.9

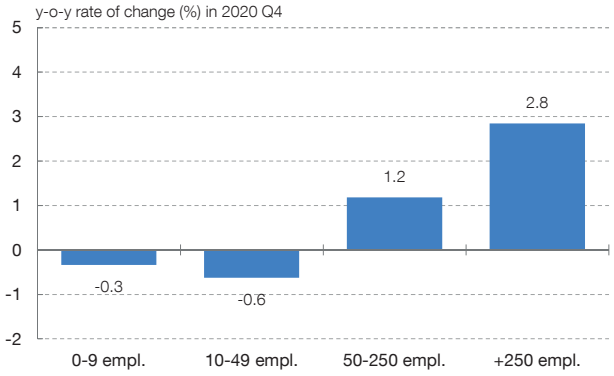
THE COVID-19 CRISIS IS HAVING A VERY UNEVEN EFFECT SECTORALLY AND REGIONALLY, AND ACROSS DIFFERENT TYPES OF FIRMS AND CATEGORIES OF WORKERS

The pandemic has more adversely influenced those productive sectors, essentially services, whose activity requires a relatively high degree of social interaction. The impact of the crisis has also been more marked on small firms and on temporary, younger and lower-income employees. Geographically speaking, GDP in 2020 is estimated to have worsened more acutely in the island and Mediterranean coast provinces.

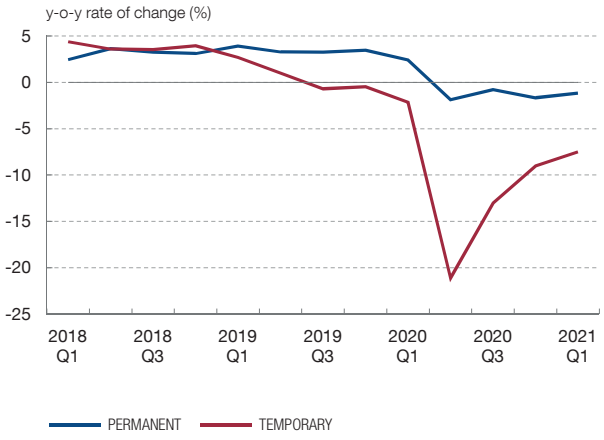
1 TURNOVER (DISCOUNTING THE AVERAGE FOR THE SECTOR) BY FIRM SIZE



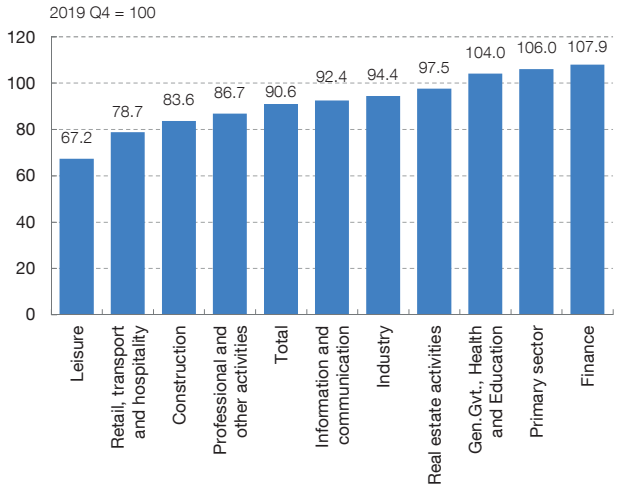
2 EMPLOYMENT (DISCOUNTING THE AVERAGE FOR TTHE SECTOR) BY FIRM SIZE



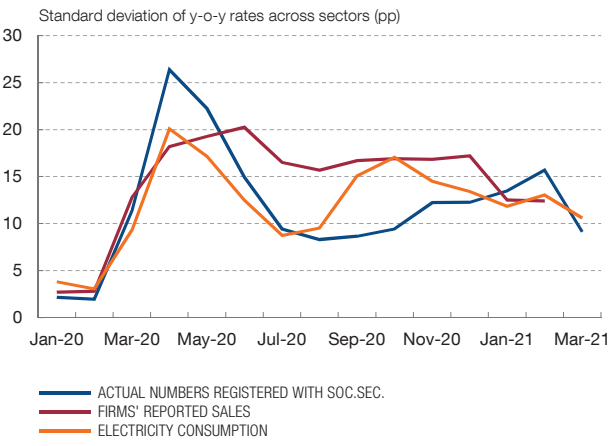
3 EMPLOYMENT BY TYPE OF CONTRACT



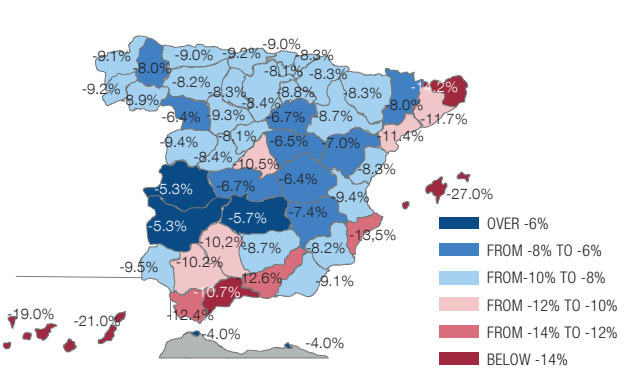
4 GVA IN 2021 Q1



5 SECTORAL DISPERSION



6 ESTIMATED DECLINE IN GDP IN 2020, BY PROVINCE



SOURCES: Banco de España, INE, Ministerio de Hacienda, Ministerio de Trabajo y Economía Social, and Red Eléctrica de España.

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been particularly affected by the labour market downturn prompted by the pandemic (see Chart 1.9.3).[20]

Gross value added in the retail, transport and hospitality, and artistic and recreational activities sectors still stood, in 2021 Q1, at 21.3% and 32.8% below their pre-crisis levels, respectively (see Chart 1.9.4). Set against these sectors – those most affected by the economic crisis caused by the pandemic – the levels of the primary sector, financial and insurance activities, and general government, health and education services have scarcely fallen back in recent quarters and, at the start of 2021, their gross value added was higher than at end-2019. As regards sectoral heterogeneity, it is worth highlighting two aspects. First, this disparity is evident not only in terms of gross value added, but also in the behaviour of employment, sales and electricity consumption, inter alia. Second, although the scale of sectoral asymmetry relative to the impact of the pandemic peaked in spring 2020, in the final stretch of last year and in early 2021 this heterogeneity increased again, in some cases significantly, further to the worsening of the health crisis and the tightening of the lockdown measures following the summer (see Chart 1.9.5). In this respect, the sectoral gap that has opened up as a result of this crisis will, foreseeably, gradually close in the coming quarters as the epidemiological situation improves and the vaccination roll-out in Spain progresses.

The impact of this crisis also evidences high regional heterogeneity. Cross-provincial GDP growth in the course of 2020 was deeply uneven, with the Canary and Balearic Islands and the Mediterranean coast those most affected by the crisis (see Chart 1.9.6).[21] Among the factors that would account for a more adverse economic impact of the pandemic are the greater share of tourism, foreign tourism especially, in provincial activity, the high proportion of temporary employment, the lower weight of the public sector and lower levels of personal mobility.[22]

Aside from GDP, the extraordinary adverse impact of the pandemic on activity can also be seen in employment and in the various macroeconomic variables. Broadly, since the start of the pandemic, employment in the Spanish economy has followed a very similar path to that of GDP. There was a marked downturn in the first half of 2020, a relatively sharp recovery in Q3 and a flattening out, with some decline, since then. This is highlighted by the various indicators of employment in effective terms, which consider the total number of hours worked and take into account the employment status of workers under furlough schemes and of the self-employed whose activity has been suspended (see Chart 1.10.1).

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20 See Banco de España (2020e) and Alvargónzalez, Pidkuyko and Villanueva (2020).

21 See Fernández-Cerezo (2021).

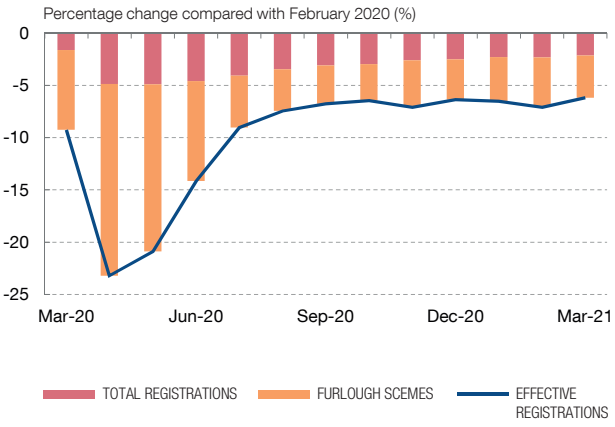
22 Once these factors are taken into account, the impact of the pandemic on death rates at the provincial level (see Chart 1.6.2) does not seem to be a relevant variable for explaining the heterogeneity observed across Spanish provinces as regards the path of GDP in 2020.

Chart 1.10

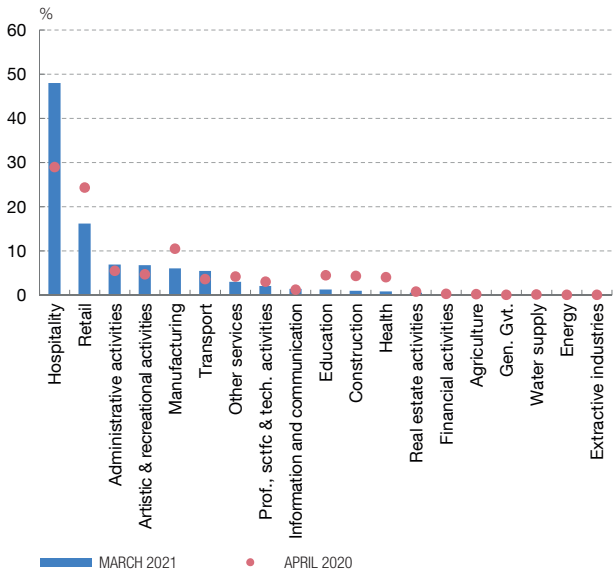
IMPACT OF THE COVID-19 CRISIS ON THE LABOUR MARKET

Since the start of the pandemic, employment in the Spanish economy has trended very similarly to GDP, with a marked deterioration in 2020 H1, a relatively sharp recovery in Q3 and a flattening out, even with some decline, thereafter. Throughout this period, the key factor in the behaviour of the labour market has been the extensive resort by firms to furlough schemes, which has helped significantly mitigate the increase in unemployment.

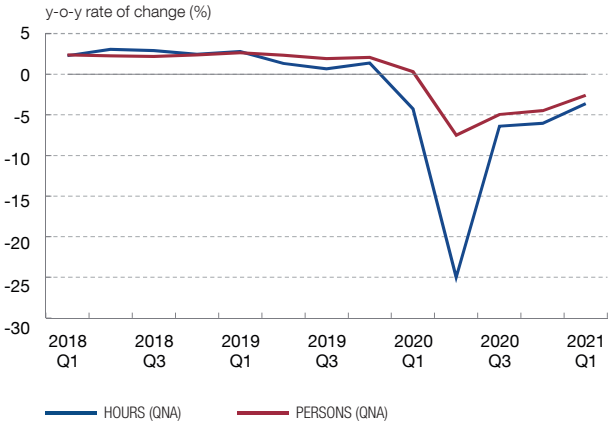
1 TOTAL REGISTRATIONS, FURLOUGHED WORKERS AND EFFECTIVE REGISTRATIONS



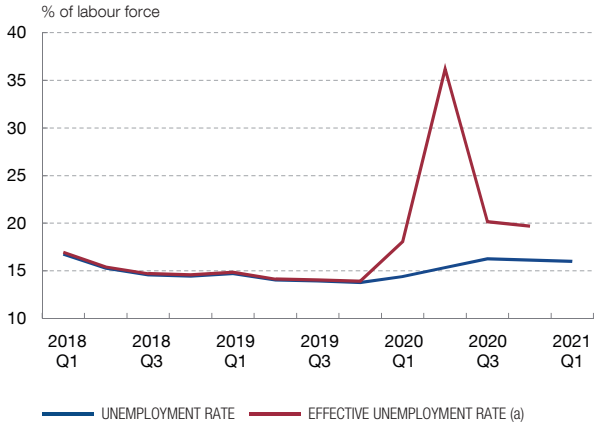
2 SECTORAL DISTRIBUTION OF FURLOUGHED WORKERS



3 EMPLOYMENT INDICATORS



4 UNEMPLOYMENT RATE



SOURCES: Banco de España, Quarterly National Accounts and Labour Force Survey (INE), and Ministerio de Trabajo y Economía Social.

a Effective rate of unemployment calculated as the unemployed plus furloughed employees plus the self-employed whose activity has been suspended divided by the labour force. As from 2021 Q1 it is not possible to calculate this rate because the EPA has ceased to provide information on furloughed (short-time work) workers.

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Firms' large-scale use of furlough schemes has been the most notable feature of the behaviour of the Spanish labour market since the COVID-19 crisis broke. Indeed, when employment was at its trough, in April 2020, more than 3.5 million workers had been furloughed in Spain (more than 20% of the total). Despite the path of recovery embarked upon since, in March 2021 slightly more than 740,000 workers were still furloughed, most of them in the hospitality sectors (see Chart 1.10.2). The resort to this temporary employment adjustment mechanism meant that, although

hours worked declined by 10.4% in 2020 as a whole (in line with the observed historical relationship between this measure of the labour factor and GDP), the employment adjustment in terms of numbers of people was much lower than had habitually been the case (a decline of 4.2%; see Chart 1.10.3). This helped alleviate the increase in the unemployment rate in 2020 which, in any event, rose to 16.1% of the labour force, 2.3 pp above its end-2019 level. In this respect, it should be noted that, when considering alternative measures of labour market slack that take into account furloughed workers and the self-employed whose activity has been suspended, the decline in effective labour activity in 2020 would be notably sharper – above 23% of the labour force for the year on average – than that denoted by the unemployment rate (see Chart 1.10.4).

All the domestic demand components, except government consumption, have declined strongly since the pandemic began. In 2020 as a whole, domestic demand subtracted 8.8 pp from the increase in output as a result of the deep declines in all its components, except government consumption. In fact, this latter variable behaved differently from the rest of the main domestic demand items and increased by 3.8% in 2020, its highest growth rate since 2009. This increase was essentially due to the higher general government spending needs in order to address the health area. On information provided by the Quarterly National Accounts flash estimate for 2021 Q1, this divergence between the path of government consumption and the other domestic demand components is expected to have held in place at the start of this year.

There was a 12.4% collapse in household consumption in 2020, with widely differing behaviour across the various spending items. The available indicators show that, over the course of 2020, household spending on leisure and hospitality declined most significantly – e.g. restaurants and accommodation services fell off by more than 40% and almost 65%, respectively – as a result, above all, of the pandemic-containment restrictions imposed (see Chart 1.11.1). Spending on personal appliances and new private car registrations also fell strongly, by more than 25% year-on-year. Conversely, food expenditure increased slightly, by 0.4% in real terms. Unlike in other recent recessionary bouts, the decline in spending on non-durable goods and services since the start of the pandemic has been somewhat sharper than that observed in spending on durable goods (see Chart 1.11.2). Partly accounting for this behaviour would be the increase in spending on goods related to remote working, such as PCs, furniture and fittings, and office supplies.[23]

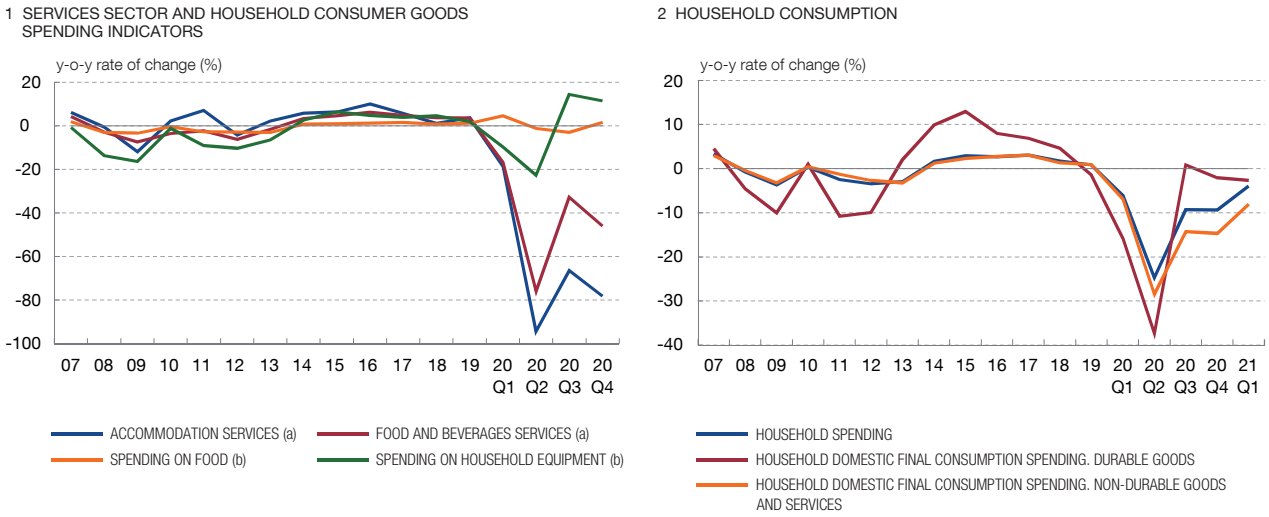
Residential investment declined by 16.6% in 2020, more sharply than other investment components, while there were some changes in the types of housing demanded. Housing starts and house sales declined sharply in the opening months

23 According to data from the INE Retail Trade Index, sales of household appliances (including PCs) fell by 2.8% in 2020 and those of other goods (under which office supplies and equipment, including furniture, are recorded) declined by 5.6%, compared with the 28% fall in sales of personal appliances.

Chart 1.11

THE IMPACT OF THE PANDEMIC ON HOUSEHOLD CONSUMPTION

Household consumption underwent an unprecedented fall in 2020, although there was considerable heterogeneity across the main expenditure components. In particular, the decline was particularly marked in the services items most affected by the restrictions to contain the pandemic (leisure and hospitality), while spending on food increased slightly. Unlike other recent recessionary episodes, the decline in spending on non-durable goods and services since the start of the pandemic has been somewhat sharper than that observed in spending on durable goods.



SOURCE: INE.

a Turnover of firms operating in this sector. Seasonally and calendar-adjusted time series.
b Real terms series.

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of the COVID-19 crisis, greatly influenced by the stringent restrictions on mobility and activity in that period. Thereafter, activity in this market moved onto a gradually recovering path, whereby building permits and registered sales stood, for 2020 as a whole, almost 20% down on 2019 levels. The latest available information would point, however, to more sluggish residential investment in early 2021, as suggested by the slight decline observed in the main indicators of activity in the sector. Notably, in recent months, there has been a greater relative preference for new, bigger, single-family homes outside large cities (see Box 2.1). These dynamics would partly reflect changes in household demand for housing induced by the pandemic, e.g. as a result of the search for larger spaces outside the major cities owing to more time spent at home in light of the restrictions on mobility and the increase in remote working. In the case of new housing, the fact that many of these transactions are the result of decisions formalised prior to the outbreak of the health crisis is significant.

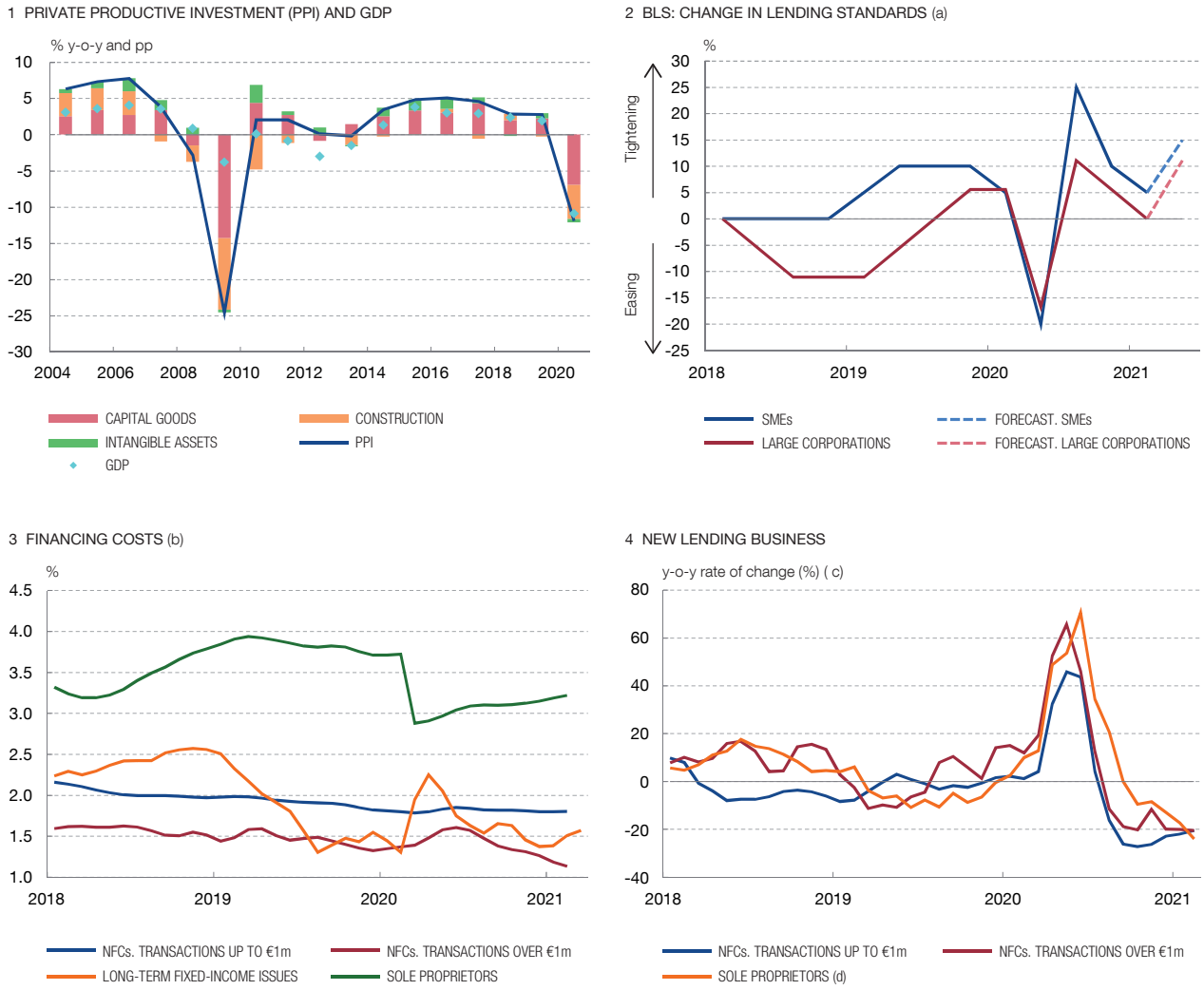
Despite contracting sharply, business investment in 2020 was not strongly procyclical as it had been in other, previous recessionary episodes (see Chart 1.12.1).[24] This behaviour might first be indicative of the fact that firms'

24 In 2009, for example, the decline in business investment was fivefold that in GDP. For greater details on the procyclicality of investment in Spain and in other European countries, see Álvarez, Gadea and Gómez-Loscos (2021).

Chart 1.12

THE DECLINE IN BUSINESS INVESTMENT HAS BEEN CUSHIONED BY THE MAINTENANCE OF RELATIVELY EASY FINANCING CONDITIONS

Business investment in 2020 was not as strongly procyclical as it had been in previous recessionary episodes. This was partly on account of the fact that, although lending standards have tightened in recent quarters, firms' financing conditions have remained relatively easy during this crisis. Contributing to these favourable developments were the various ICO-administered public guarantee facilities established by the Government in response to the pandemic and also the numerous measures deployed by the monetary, regulatory and prudential authorities to promote bank lending to the private sector and financial market stability.



SOURCES: INE, Thomson Reuters Datastream and Banco de España.

a BLS. Indicator = percentage of banks that have tightened their credit standards considerably × 1 + percentage of banks that have tightened their credit standards somewhat × 1/2 – percentage of banks that have eased their credit standards somewhat × 1/2 – percentage of banks that have eased their credit standards considerably × 1.
b The interest rates on bank loans are narrowly defined effective rates (NDER), i.e. they do not include related charges and fees, and are adjusted seasonally and for the irregular components.
c Cumulative three-month flow.
d Includes new business consisting of previous, renegotiated loan transactions.

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interpretation of the pandemic-associated shock was that it would be essentially temporary. Further, firms' need to adapt to the new circumstances arising from the COVID-19 crisis might have given momentum to business investment to move forward in digitalising activity, to boost remote working and to promote online

sales. The INE report on the Business Confidence Indicator ("Yearly module on the impact of COVID-19") spanning the second half of 2020 and the first half of 2021 is along these lines. It notes that these three formulas were those most used by Spanish firms to attempt to maintain or recover their pre-crisis level of activity.[25] In this same vein, too, it is investment in intangible assets – which partly comprises investment in the information and communication technologies needed to boost the digitalisation of productive activities – that has so far felt less sharply the effects of the pandemic.[26]

The fact that financing conditions for firms have not worsened significantly in this crisis is also expected to have contributed to cushioning the decline in business investment. Indeed, unlike what has traditionally occurred in previous contractionary phases, in the current crisis firms' financing conditions have continued to be relatively easy. Hence, although lending standards have tightened in recent quarters, they have done so relatively moderately and the cost of financing has remained low (see Charts 1.12.2-1.12.4). These favourable dynamics will have been assisted by the various ICO-administered public guarantee lines established by the Government in response to the pandemic, and also by the numerous measures deployed by the monetary, regulatory and supervisory authorities to promote bank lending to the private sector and the stability of financial markets.

The contribution of net external demand to GDP growth in 2020 was also negative (2.0 pp). This negative contribution is due to a sharper fall in exports (20.2%) than in imports (15.8%). The decline in exports reflected, first, the strong contraction in export markets in 2020. This was more markedly the case for Spain's markets than it was for trade worldwide, since the EU and Latin America, whose share in Spanish exports is very significant, were among the world regions where the incidence of the pandemic was higher (see Chart 1.13.1). Second, the sizeable share in the Spanish export structure of tourism, one of the sectors most affected by the pandemic-containment measures deployed internationally, was an additional drag on the buoyancy of Spanish sales abroad. As to imports, their performance in 2020 was against a background of substantial and across-the-board adjustment in final demand, which affected those components with a greater import content – such as automobiles, investment in equipment and exports – more adversely (see Chart 1.13.2 and 1.13.3). Conversely, the health crisis boosted purchases of drugs and medical products, which performed most dynamically.[27]

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25 See the INE press release, "Indicador de Confianza Empresarial, Módulo de Opinión sobre el Impacto de la COVID-19", published on 21 January 2021.

26 This greater resilience of investment in intangible assets might partly be the result of the uneven impact of the crisis on firms since, in general, companies that invest more in intangible assets tend to be bigger, more productive and more innovative. It is precisely these firms that would have been less affected by the economic crisis caused by the pandemic and, therefore, those that would have least had to scale back their investment plans. See European Investment Bank (2021).

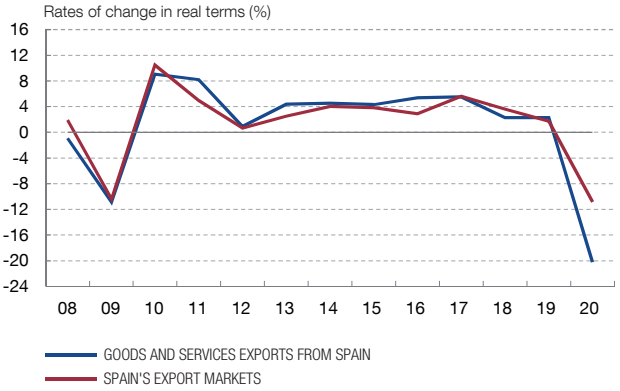
27 See García, Martín and Viani (2020).

Chart 1.13

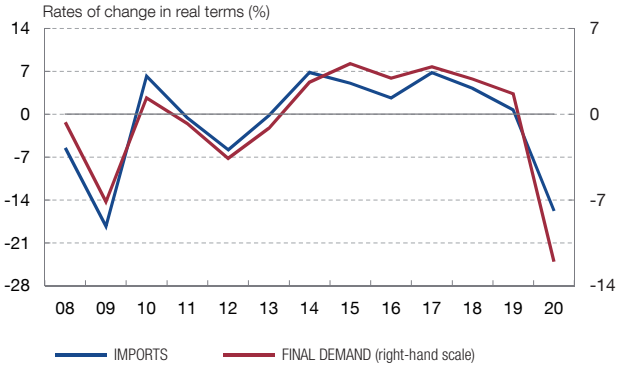
THE CONTRIBUTION OF NET EXTERNAL DEMAND TO GDP IN 2020 WAS NEGATIVE

This negative contribution is due to the sharp fall in Spanish exports, essentially as a result of the collapse in tourism exports, which exceeded the fall-off in imports, affected by the sluggishness of final demand. These dynamics partly contributed to the reduction in 2020 in the Spanish economy's financing capacity, against a background in which the net debtor position vis-à-vis the rest of the world remains at a high level.

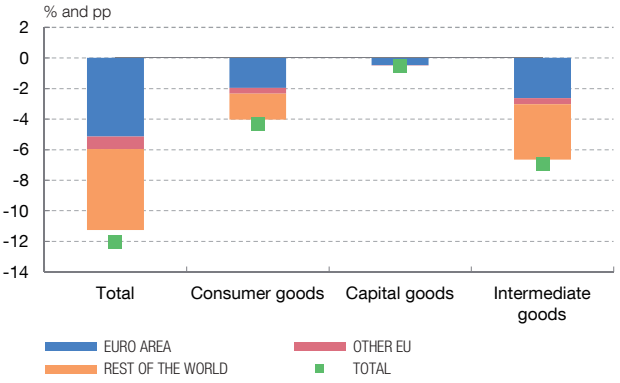
1 EXPORTS



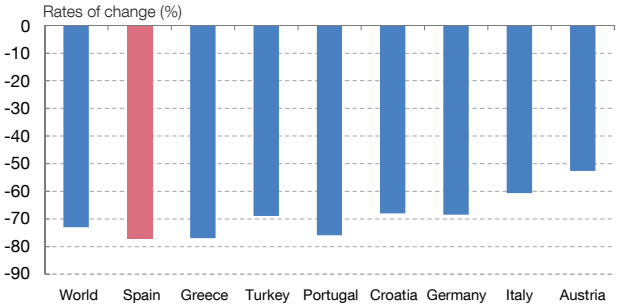
2 IMPORTS AND FINAL DEMAND



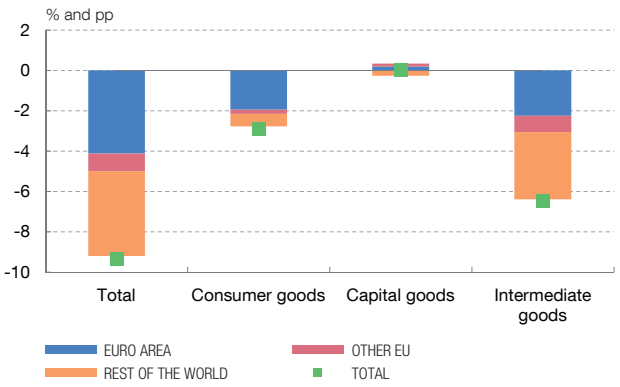
3 REAL GOODS IMPORTS. 2020



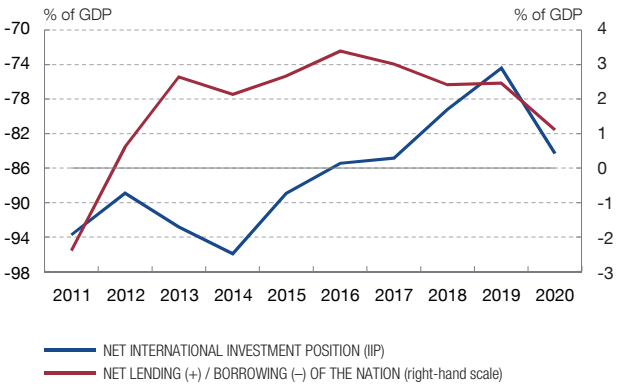
4 INTERNATIONAL TOURIST ARRIVALS. 2020



5 REAL GOODS EXPORTS. 2020



6 NET LENDING (+) / BORROWING (–) OF THE NATION AND NET IIP



SOURCES: ECB, Banco de España, Departamento de Aduanas, Ministerio de Asuntos Económicos y Transformación Digital, INE and UNWTO.

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Foreign tourism receipts fell by 75.9% in 2020 in real terms. Directly contributing to this slump were the restrictions on international travel (set by Spain and by the main countries of origin of foreign tourists visiting our country), and on the hospitality industry, which were in force for much of that year. Potential tourists' health concerns about travelling might further have borne down on the demand for tourist services. Thus, foreign tourist inflows and spending in Spain saw an unprecedented contraction – of around 80% – in 2020, and this dynamic has continued in 2021 to date. It should moreover be highlighted that the decline in tourist inflows into Spain last year was sharper than that seen globally and in the main European destinations (see Chart 1.13.4). This was the result, at least in part, of the more unfavourable epidemiological situation in Spain compared with our peer countries, and precisely during the summer season, which is the most important in terms of annual tourist activity.

Despite shrinking by 8.9% last year, goods exports have performed relatively better since the start of the pandemic. The lesser influence of the pandemic lockdown measures on global manufacturing activity, compared with their impact on services, is estimated to have mitigated the adverse effects of the COVID-19 crisis on international trade in goods. In any event, there was an appreciable decline in Spanish goods exports in 2020. By geographical region, the fall was across the board – although somewhat more acute in exports intended for non-Community markets – and particularly affected the goods most integrated into the global production chains (see Chart 1.13.5). In this respect, the decline in goods exports was particularly pronounced in intermediate industrial products and automobiles, while exports of capital goods (largely sustained by computer and medical-surgical equipment), food and, above all, drugs and medical products were more robust.

The outlook is for a gradual recovery in goods exports during the first half of 2021, following their decline at the start of the year. On the latest Customs data, real goods exports fell by 1.9% year-on-year in February (evidencing a generalised fall-off by type of good and by market), affected by the worsening of the health crisis in Europe. In the case of exports to the United Kingdom, which fell significantly, other temporary factors came into play. These included adapting to new customs procedures following Brexit, the strong rise in British imports in the final stretch of 2020 to avoid potential supply problems and the controls on hauliers crossing the English Channel to prevent the spread of the British COVID-19 strain. However, the latest indicators point to a recovery in Spanish goods exports in the coming months, more markedly so in non-Community markets. This is in line with the expansionary behaviour of new export orders in the Spanish manufacturing PMI, which improved appreciably in February and March, against the backdrop of the gradual recovery in global trade.

The Spanish economy's financing capacity has declined as a result of the crisis, in a setting in which the net debtor position vis-à-vis the rest of the world remains at a high level (84.3% of GDP at end-2020). In 2020, the Spanish

economy's financing capacity stood at 1.1% of GDP, 1.4 pp down on 2019 according to the National Accounts Rest of the World Account (see Chart 1.13.6). This reduction is mainly due to the decline in the tourism surplus, which shrank by 2.4 pp, to 0.7% of GDP. On a lesser scale was the 0.4 pp worsening in the other services surplus, taking it to 1.6% of GDP. This development was only partly offset thanks to the significant 1.3 pp reduction in the goods deficit, to 0.8% of GDP. The improvement in the goods balance was both in net energy imports (against the background of the reduction in the amount of imported oil and of its price in euro) and in the non-energy balance (which went into surplus owing to a more marked adjustment in goods imports than in exports). The aggregate deficit of the primary and secondary income balances fell by 0.4 pp to 0.4% of GDP, driven by transfers from the EU, while the capital account surplus fell slightly (by 0.2 pp to 0.2% of GDP).

The public finances worsened most significantly in 2020. In particular, the general government deficit rose to 11% of GDP, 8.1 pp up on 2019, and the public debt/GDP ratio ended the year at 120%, 24.5 pp up on its end-2019 level (see Charts 1.14.1 and 1.14.2). A proportion of the 2020 deficit (0.9 pp) can be accounted for by the reclassification of Sareb as part of general government.[28] Stripping out this effect, the increase in the budget deficit last year was in response, above all, to the strong growth in expenditure, which increased by 10.1%, although revenue also worsened appreciably and fell by 5% (see Chart 1.14.3). The increase in the public debt ratio was the outcome both of greater general government financing needs in 2020 and of the strong decline in nominal GDP. Moreover, the reclassification of Sareb involved the reconsideration of its debt (at 3% of GDP) as public debt. In any event, the public finances would have worsened more seriously and persistently in the medium term had the policies to sustain household and business incomes since the start of the pandemic not been set in place.

Around 85% of the increase in public spending recorded last year (excluding the effect of the reclassification of Sareb debt) is related to the pandemic. In particular, this spending is estimated to have taken the form of higher social benefits for employees and the self-employed, subsidised social security contributions for firms and higher social and health spending by general government. In terms of budgetary items, almost half the increase observed in public spending was due to social benefits, including most notably those for unemployment and the suspension of activity for the self-employed. These benefits rose from accounting for 1.5% of GDP in 2019 to 3.7% in 2020. General government consumption demand continued to be notably buoyant (although it grew at rates more similar to those for 2019), and

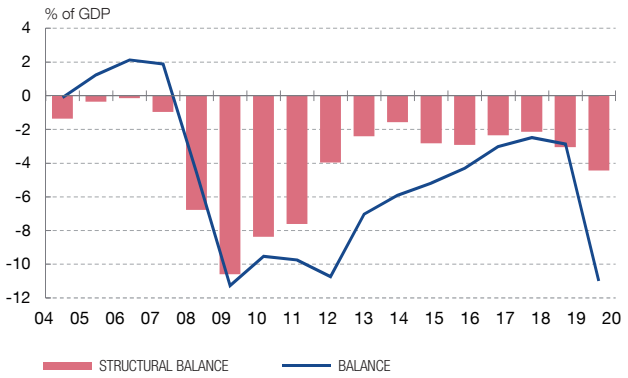
28 The negative performance of Sareb's financial accounts led Eurostat to decide on their inclusion as part of general government, which meant the absorption by the latter of Sareb's negative net value at end-2020. Accounting wise, this reclassification operation is recorded in two ways. On one hand, it is recorded as a capital transfer from general government to the other resident agents, which entails an increase in expenditure. On the other, it is assumed that the financial institution's debt is part of general government debt, which entails an increase in this latter debt.

Chart 1.14

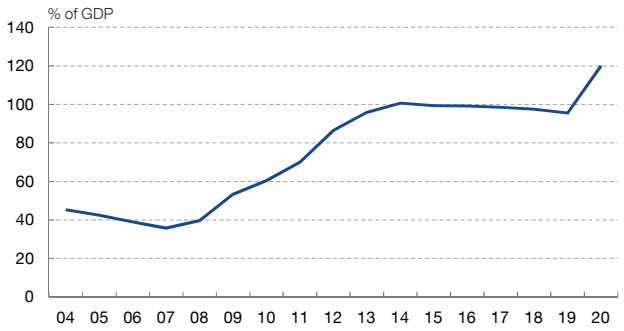
THE PUBLIC FINANCES WORSENED MOST SIGNIFICANTLY IN 2020

The general government deficit rose to 11% of GDP in 2020, 8.1 pp up on 2019, owing to the strong growth of expenditure, the reclassification of Sareb under general government and a less sharp but equally significant downturn in revenues. The public debt/GDP ratio ended the year at 120%, 24.5 pp above the end-2019 level. Looking ahead, that entails a considerable source of vulnerability for the Spanish economy.

1 GENERAL GOVERNMENT TOTAL AND STRUCTURAL BALANCE



2 PUBLIC DEBT



3 GENERAL GOVERNMENT REVENUE AND EXPENDITURE

Percentages of GDP	2019	2020	2020-2019	Year-on-year rate (%)
Revenue	39.2	41.3	2.1	-5.0
Indirect taxes	11.5	11.2	-0.2	-11.8
Direct taxes	10.4	11.2	0.8	-3.0
Social security contributions	12.9	14.4	1.5	0.8
Other revenue (a)	4.4	4.5	0.0	-9.0
Expenditure	42.1	52.3	10.2	12.0
Remuneration	10.8	12.5	1.7	4.5
Other final consumption expenditure	7.8	8.9	1.1	2.9
Social benefits	15.8	20.3	4.5	15.9
Effective interest paid	2.3	2.2	0.0	-11.1
Gross fixed capital formation (a)	2.1	2.5	0.4	8.4
Other (b)	3.2	5.7	2.5	58.9
Balance	-2.9	-11.0	-8.1	
Debt	95.5	120.0	24.5	

SOURCES: Banco de España, IGAE and Ministerio de Hacienda.

a In 2020 this includes €1.75 billion (0.16% of GDP) relating to the return to State management of several motorway concessions, with a zero impact on the balance.

b In 2020 this includes 0.7% of GDP in subsidies intended to cover social security contributions by firms and the self-employed, and 0.9% in capital transfers relating to the negative net value of Sareb. Stripping out this latter effect, expenditure grew by 10.1% year-on-year in 2020.

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public investment – adjusted for the extraordinary impact of several toll motorway concessions being returned to State management – grew moderately. Conversely, despite the highly significant increase observed in public debt, interest expenditure declined once more.

The decline in revenues was due mainly to indirect taxes, the take for which shrank by 11.8%, in line with the behaviour of activity. By contrast, direct tax

takings (down only 3%) and social security contributions (up 0.8%) proved resilient. These items were assisted by the positive effect on the bases that determine these revenues of some of the Government's measures to address the pandemic. Particular cases in point here were the increases in social benefits for – and the payment by general government of the social security contributions of – furloughed workers and the self-employed whose activity was suspended. As a result, the share of public revenue in GDP rose by 2.1 pp last year.

The impact of the pandemic on consumer prices has so far been clearly disinflationary. In 2020 as a whole, both overall inflation – measured as the rate of change of the harmonised index of consumer prices (HICP) – and core inflation – the HICP excluding energy and food – fell very sharply to -0.3% and 0.5%, respectively (1.1 pp and 0.6 pp below their rates in 2019). Although most items moved on a clearly slowing path from the start of the pandemic, the inflation performance in 2020 was essentially linked to the sharp decline in energy prices – of both oil and of electricity and gas – and the marked slowdown in services prices (see Chart 1.15.1). Conversely, food prices quickened in the first half of that year – due partly to increased household demand, but also to certain supply-side factors – and, thereafter, the pace of their year-on-year growth progressively eased, ultimately posting a rate similar to that seen before the pandemic.

Almost 80% of the HICP items were affected significantly as a result of the health crisis. On the latest Banco de España estimates for core inflation, 33% of the items reflecting the course of non-energy industrial goods prices and 46% of those doing so for services (whose weights account for 16% and 32% of the index, respectively) have seen their trajectory significantly disrupted since the start of the pandemic.[29] Most of these COVID-sensitive items are estimated to have contributed to the decline in core inflation last year (see Chart 1.15.2). Indeed, these items would account for a portion (0.8 pp) of the decline (1.2 pp) observed in core inflation from January to December 2020. Conversely, some of the items whose prices were distorted by the outbreak of the pandemic will, in recent months, have shown abnormally high price growth. This would be the case, for example, of the electronic equipment item.

There has been a notably sharp slowdown, and even decline, in the prices of tourist packages, accommodation services and air transport. The prices of these items contributed 1.3 pp to the reduction observed in the rate of change of the services aggregate in 2020. However, the measurement of some of these prices in the first state of alert in Spain posed evident complications (due essentially to the closure of most of the establishments providing these services), which required indirect estimates be made of such prices.[30] That entails further difficulty when

29 To identify these COVID-sensitive items, regressions are estimated for the year-on-year rates of the HICP item classes, with a dummy taking the value of 1 as from March 2020. COVID-sensitive classes are considered to be those for which the coefficient of this dummy is significantly different from zero at a 95% confidence level.

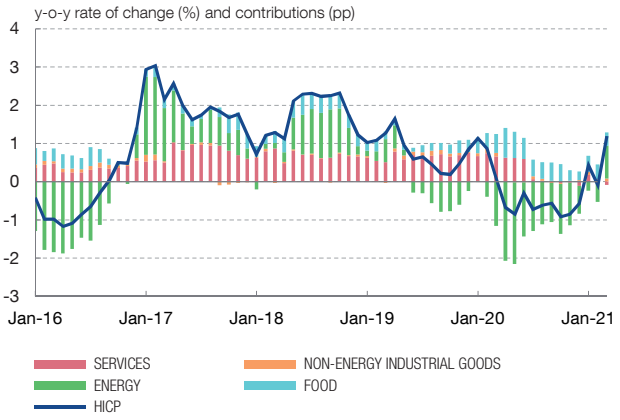
30 See Sánchez (2020).

Chart 1.15

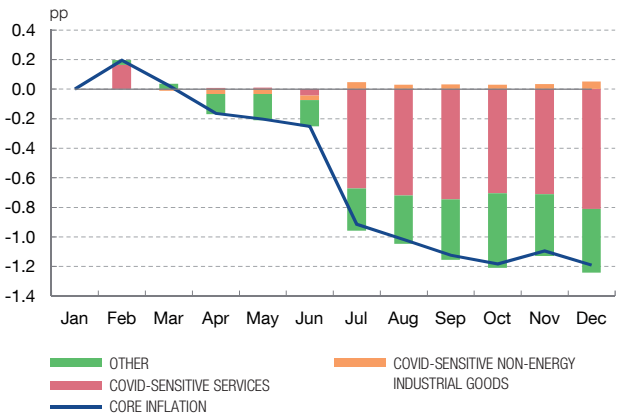
THE IMPACT OF THE PANDEMIC ON CONSUMER PRICES HAS SO FAR BEEN DISINFLATIONARY

Although most of the HICP items have moved on a clearly slowing path since the start of the pandemic, the behaviour of inflation in 2020 was essentially linked to the steep decline in energy prices, oil and electricity and gas alike, and to the marked slowdown in services prices. Of particular note was the sharp slowdown, and even decline, in tourist package prices, accommodation services and air transport. Inflation has shown considerable volatility in early 2021, though a very gradual rise in core inflation continues to be expected in the coming quarters, against a background in which the increase in wage costs will probably be limited.

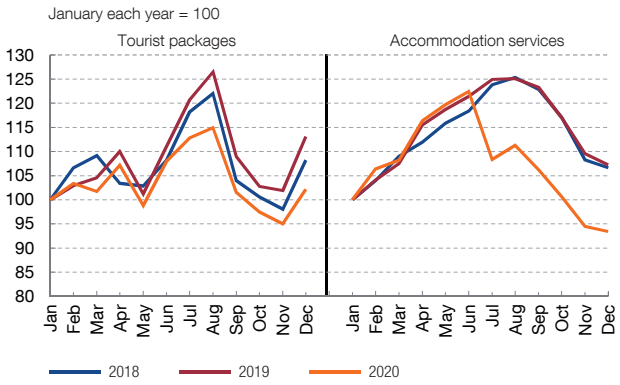
1 HICP



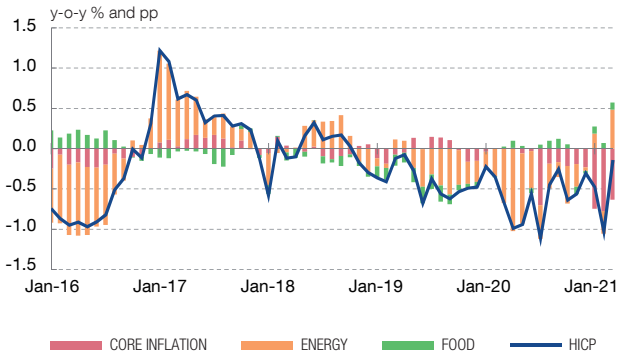
2 CONTRIBUTIONS TO THE CHANGE IN CORE INFLATION IN 2020



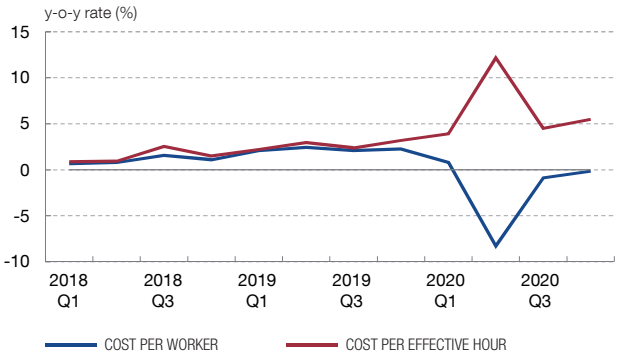
3 HICP SERVICES PRICE INDICES



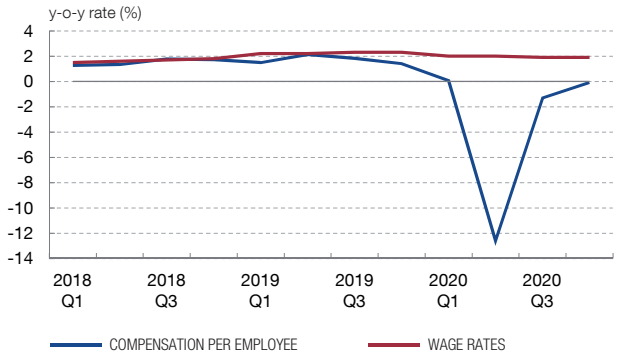
4 CONTRIBUTIONS TO THE INFLATION DIFFERENTIAL BETWEEN SPAIN AND THE EURO AREA



5 LABOUR COSTS PER WORKER AND HOUR



6 COMPENSATION PER EMPLOYEE AND WAGE RATES



SOURCES: Banco de España, Eurostat, INE and Ministerio de Trabajo y Economía Social.

a Items whose coefficient is significant at the 95% confidence level in the regressions of the year-on-year rates with a dummy that takes a value of 1 as from March 2020.

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assessing the anomalies observed in the monthly course of these prices (see Chart 1.15.3).

In 2020, the inflation differential between Spain and the euro area (-0.6 pp) was slightly wider than that of the previous year (-0.4 pp). Nonetheless, the slowdown in energy prices was somewhat sharper in Spain than in the euro area as a whole, whereas food prices grew at a swifter pace in our country in the second half of the year (see Chart 1.15.4). Core inflation trended similarly in both areas in the first half of the year and, subsequently, posted a steeper decline in Spain.

Inflation has been considerably volatile in early 2021, although a very gradual increase in core inflation in the medium term is still expected. The volatility of inflation in the opening months of this year has essentially been due to the oscillations in the year-on-year growth rates of energy prices – electricity in particular – and, to a lesser extent, of food and tourism-related items. In the absence of further shocks, the inflation rate can be expected in the coming months to increase to around 2%. This rise will initially be the outcome, first, of a bigger contribution of energy prices (75% of the increase in the year-on-year rate of the energy component from February to April would be due to base effects and the remaining 25% to the recent rise in prices), which turned positive in March; and further, as from the summer, of the correction of the base effects associated with the marked declines observed in the prices of many items over the course of 2020. The advancing vaccination campaign – in Spain and globally – and the foreseeable gradual recovery in aggregate demand will likewise contribute positively to the future behaviour of prices. In any event, it should be stressed that, technical aspects aside, short and medium-term inflationary pressures are proving relatively contained given the high degree of slack in the economy. In particular, the information available on recent wage cost trends in Spain, though they are partly distorted by the recording of furloughed workers and by the practical halt in collective bargaining since March 2020, would suggest wage increases in the coming months will be relatively muted (see Charts 1.15.5 and 1.15.6).

3.2 The main sources of uncertainty

Some risk factors conditioning the outlook for the Spanish economy have recently been mitigated. In recent months, confirmation of the effectiveness of vaccines against COVID-19 and the headway in the vaccination process are notably restricting the possibilities of highly adverse epidemiological scenarios materialising that may abruptly affect the behaviour of economic activity. Also, on the external front, the EU-UK withdrawal agreement reached in late 2020 and the US fiscal stimulus plans approved in December 2020 and in March 2021 have notably lessened the downside risks in place late last year to global economic activity in the short term.

Despite these developments, the Spanish economic outlook remains subject to much uncertainty. Among the different factors conditioning this outlook, the course of the pandemic and the speed of the vaccination campaign remain key, until a high degree of immunisation of the population against COVID-19 has been attained. However, health aspects aside, other more economic factors have recently taken on greater importance when it comes to determining the dynamism of the Spanish economy in the future. These factors include most notably: the degree of implementation and effectiveness of the NGEU programme in Spain (see Chapter 2); the adaptability of economic policies to the changing circumstances of the crisis (see Section 1.4); the scale of the scarring the pandemic may have left on the productive system and the Spanish labour market; and the speed at which certain crisis-induced changes in agents' behaviour (in particular, the sharp rise in the household saving rate and the steep decline in tourism exports) are reversed. This section addresses some of these sources of uncertainty (see Figure 1.1), while the rest are subject to more detailed analysis elsewhere in this Report.

Spanish households have built up a considerable reservoir of saving since the start of the pandemic. In 2020 as a whole, Spanish household saving was almost 6 pp of GDP higher than the average for the previous five years. In a setting in which household incomes have been sustained, in part, by the public aid granted to mitigate the effects of the health crisis, this accumulation of saving was mainly through two channels. First, saving will have been built up for precautionary reasons, given the highly uncertain health and economic situation. A second factor that will have boosted the increase in saving would be the difficulties faced by Spanish households in recent quarters in attaining their desired level of consumption of specific goods and services, owing to the pandemic lockdown measures. On Banco de España estimates, this forced saving would account for most of the total built up since the start of the COVID-19 crisis (see Chart 1.16.1).[31]

It is difficult to specify at what pace this reservoir of saving will be released in the future, which will be a key determinant of how private consumption evolves. In the coming months, as the epidemiological situation improves and uncertainty abates, it is to be expected that a portion of the reservoir of saving built up since the start of the pandemic – essentially in the form of bank deposits – will be earmarked for consumption, lending greater momentum to the recovery of this demand component. The intensity with which this channel will operate is, however, very uncertain. In particular, it will depend on the extent to which this crisis will entail a persistent increase in the precautionary component of household saving. It will also depend on how present and relevant the Ricardian channel will prove to be, whereunder households might maintain a relatively high level of saving in the short

31 See Cuenca, Martínez y del Río (2021).

Figure 1.1
MAIN FACTORS OF UNCERTAINTY OVER THE FORECASTING HORIZON

SOURCE: Banco de España.

term in anticipation of future tax rises. Further, the fact it is higher-income households, which tend to consume a lower proportion of their income, that have most contributed to this reservoir of forced saving also poses added uncertainty about the speed at which it might be released in the future.

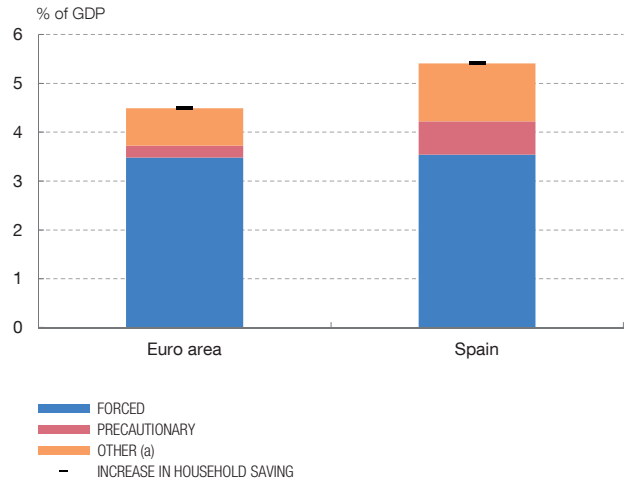
Household consumption will also be greatly influenced by the path of recovery of hours worked. As mentioned in the previous section, the number of hours worked in Spain fell very sharply in the first half of 2020 and has only recovered partly since. The gradient of this path of recovery in the coming quarters – which is conditional, in turn, upon the behaviour of furlough schemes – will undoubtedly influence how dynamic private consumption will be in the future. Indeed, estimates drawing on the Survey of Household Finances (EFF) and the Labour Force Survey (EPA) suggest that the pick-up in hours worked between Q2 and Q3 in 2020 would

Chart 1.16

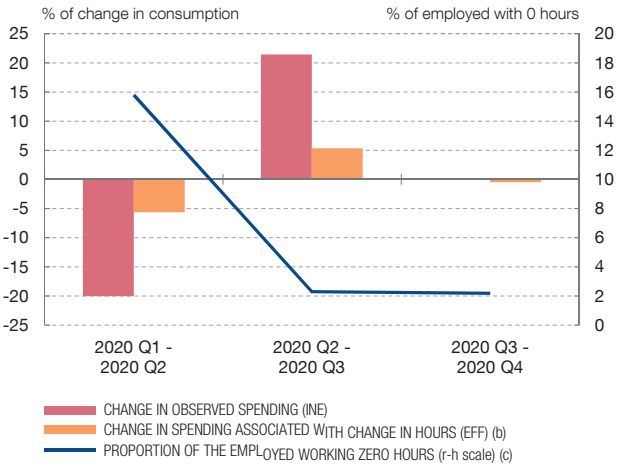
FACTORS THAT WILL CONDITION THE PATH OF RECOVERY OF HOUSEHOLD CONSUMPTION IN THE COMING QUARTERS

Spanish households have built up a significant reservoir of saving since the start of the crisis, largely as a result of the difficulties encountered in attaining their desired level of consumption of certain goods and services owing to the pandemic lockdown measures. Foreseeably, as the epidemiological situation improves and uncertainty abates, a portion of this reservoir of saving may be targeted on consumption, which will add greater momentum to the ongoing economic recovery. Household consumption will also be greatly influenced by the path of recovery hours worked may follow.

1 DETERMINANTS OF THE INCREASE IN HOUSEHOLD SAVING
Cumulative increase in 2020



2 CHANGE IN OBSERVED SPENDING ASSOCIATED WITH THE CHANGE IN THE DISTRIBUTION OF HOURS WORKED



SOURCES: Spanish Survey of Household Finances (EFF), INE, Cuenca, Martínez-Carrascal and Del Río (2021), and Alvargonzález, *et at.* (2021).

a Includes the contribution of the other determinants of consumption (inter alia, income, wealth and interrest rates).
b Spending reported in the 2017 EFF in a situation where the distribution of individuals working a limited number of hours would have been that observed in each quarter of 2020 in the Labour Force Survey (EPA).
c Relates to the last quarter considered. Thus, in 2020 Q1 and Q2 it is the proportion of the employed population working zero hours in 2020 Q2.

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account for 20% of the observed increase in spending in that same period (see Chart 1.16.2).[32]

High uncertainty prevails over the future course of business investment, which is affected by various factors. In this crisis business investment, despite having contracted significantly, has performed better than in other, previous recessionary episodes. It has also trended less negatively than other demand components. In the coming quarters, business investment, like the rest of aggregate demand, will foreseeably experience an improvement driven by the normalisation of the health situation and the reduction in uncertainty. Several factors suggest that the recovery of this investment component might be relatively robust. First, the launch – as from the second half of this year in particular – of investment

32 The impact of the reduction in working hours on consumption in 2020 Q2 can be approximated by analysing the spending of similar workers' households in the 2017 EFF. Hence, spending by employees or the self-employed working zero hours in 2020 is assimilated to that of workers in similar industries that had recently lost their job or business in 2017 (given that the unemployment subsidy accounts for 70% of labour income, a similar percentage to that replaced by furlough schemes). Likewise, spending by those who worked fewer hours in 2020 than normal can be assimilated to that of those who worked fewer hours in 2017. For further details, see Alvargonzález et al. (2021), mimeo.

projects linked to the NGEU programme should provide a significant boost to business investment. The effect could be both direct, through the financing of non-financial corporations' investment projects, and indirect, via the impulse stemming from the financing of public investment projects. Second, it is true that there has recently been some weakness in bank financing flows to firms and that banks have tightened their lending standards in this segment; but financing conditions for the business sector generally remain easy in historical terms, which should not pose an obstacle to the execution of new investment projects by firms. Lastly, as mentioned in the previous section, the COVID-19 crisis appears to have significantly and durably accelerated the ongoing digitalisation of economic activity, giving rise to new investment needs on the part of firms to adapt to this structural change.

The increase in firms' financial vulnerability and the reduction in the degree of capacity utilisation in some sectors might dent the robustness of the short-term recovery in business investment. Set against the arguments in the previous paragraph, other factors might adversely influence the future course of business investment in Spain. In particular, as set out in detail in Chapter 3 of this Report, the economic crisis caused by the pandemic has entailed an appreciable downturn in Spanish firms' financial position and an increase in their financial vulnerability, restricting their capacity to undertake new investment projects. Indeed, the crisis is already estimated to have caused a significant reduction in the number of firms and to have negatively affected their investment plans. Specifically, according to the figures on Social Security-registered firms, the number of active companies in Spain fell by almost 50,000 in the period from February 2020 to March 2021. That represents a fall of 3.7% (see Chart 1.17.1), although this decline is essentially due to fewer new firms entering the market and not to the increase in existing firms shutting down. Moreover, according to the annual European Investment Bank Investment Survey[33], the crisis will not only have adversely affected business investment levels in 2020, but also those planned for the future (see Charts 1.17.2 and 1.17.3). In particular, the number of companies without investment plans for the coming years is expected to have increased notably in Spain, more steeply than in other euro area economies, especially in the construction and services sectors, and in the case of SMEs. Lastly, the fact that the pandemic has entailed a significant reduction in capacity utilisation in most sectors of activity – above all in the services sector – might also bear down on the recovery of business investment in Spain in the coming quarters (see Chart 1.17.4).

The outlook for the Spanish economy also hinges on the path of recovery of international tourism, which is shrouded in considerable uncertainty. According to the INE Tourism Satellite Account, in 2019 the tourist sector accounted for 12.4% of GDP and 12.9% of employment in the Spanish economy. In turn, international

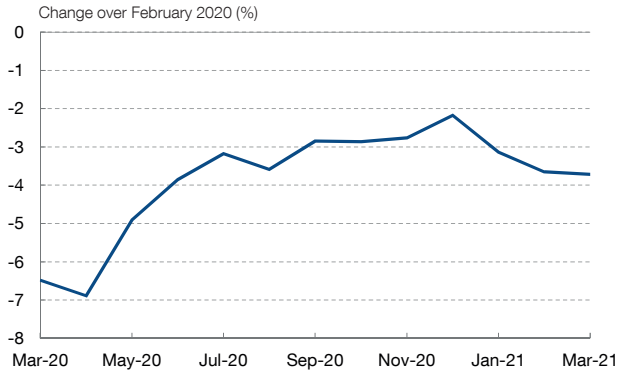
33 See European Investment Bank (2020).

Chart 1.17

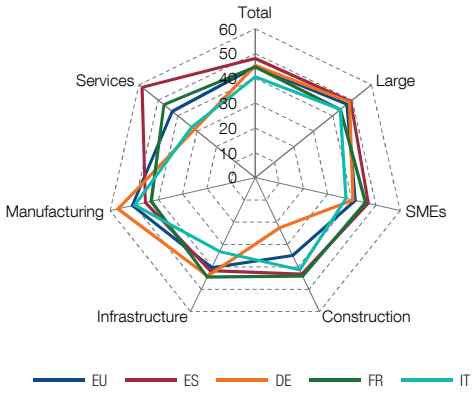
THE IMPACT OF THE CRISIS ON THE BUSINESS SECTOR AND SCANT CAPACITY UTILISATION MIGHT RESTRICT THE RECOVERY IN BUSINESS INVESTMENT IN THE SHORT AND MEDIUM TERM

The economic crisis caused by the COVID-19 pandemic has prompted a significant reduction in the number of active firms in Spain and has adversely affected their investment plans. These factors, along with the fact that capacity utilisation has fallen appreciably in most sectors of activity (especially in the services sector), might weigh down on the recovery of business investment in Spain in the coming quarters.

1 SOCIAL SECURITY-REGISTERED FIRMS

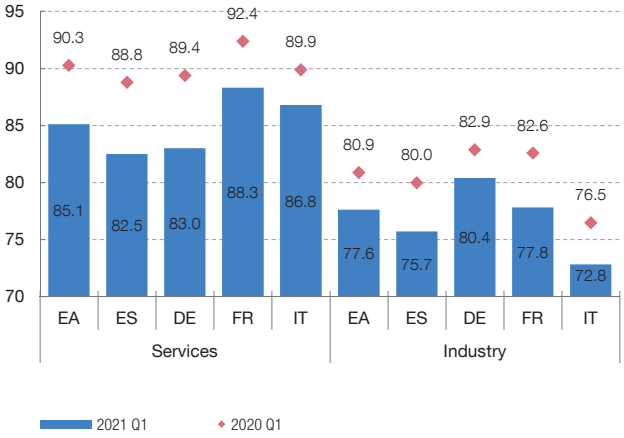


2 EIB INVESTMENT SURVEY. LOWER INVESTMENT THAN THAT PLANNED IN 2020 OWING TO COVID (a)
% of firms in each sector or type of firm



3 EIB INVESTMENT SURVEY. FIRMS WITH NO INVESTMENT PLANS FOR THE NEXT THREE YEARS
% of firms in each sector or type of firm

4 CAPACITY UTILISATION
% in each sector and country



SOURCES: EIB, European Commission and Ministerio de Trabajo y Economía Social.

a The results show the percentage of firms in each sector or type of firm that reported having scaled back investment from initial 2020 plans owing to COVID-19.

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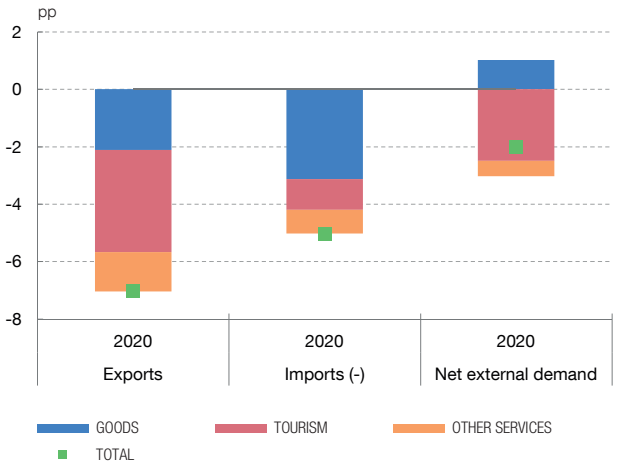
tourism represented 60.2% of total tourist spending in our country. Given the most sizeable share of the tourist sector in general, and of international tourism in particular, it is not surprising that the extraordinary collapse of this sector and international tourism flows since the start of the pandemic have contributed so notably to the decline in Spanish GDP. Indeed, a portion (3.5 pp) of the decline in Spanish GDP in 2020 is in response to the poor performance of tourism exports (see Chart 1.18.1).

Chart 1.18

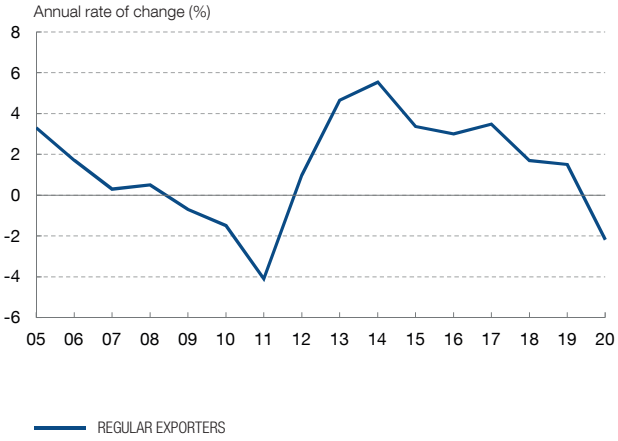
UNCERTAINTY OVER THE PATH OF RECOVERY OF INTERNATIONAL TOURISM AND THE EXPORT BASE

The collapse in international tourist flows since the start of the COVID-19 crisis has contributed most notably to the fall in Spain's GDP. How sharply these flows pick up in the coming quarters will depend not only on the course of the pandemic and the pace of progress in the vaccination process, but also on the scale of the persistent changes the crisis appears to have prompted in global tourism demand. The contribution of the external sector to Spanish economic growth in the future will be influenced by developments in the export base, which has fallen back in this crisis.

1 CONTRIBUTION OF THE EXTERNAL SECTOR TO THE CHANGE IN REAL GDP IN 2020



2 REGULAR EXPORTING FIRMS (a)



SOURCES: INE and Ministerio de Industria, Comercio y Turismo (ICEX).

a Exporters whose exports do not exceed €5,000 are excluded. Regular exporters are those that have exported in the year of reference and in each three immediately preceding years.

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Looking ahead, there is notable uncertainty over the speed at which the tourist sector might recover. This will depend not only on how the health crisis unfolds and on the pace of the vaccination process (both in Spain and globally), but also on the scale of the lasting changes the pandemic may have caused regarding the demand for these types of services among the population. The results of the latest World Tourism Organization (WTO) expert panel are consistent with this high uncertainty and show sizeable dispersion as regards the expectations of recovery in the sector.[34] Thus, whereas 51% of the experts consulted expect tourist flows in Europe to regain their pre-pandemic levels in 2022, a very significant percentage of them (35%) puts back that date to 2023. In Spain's case, tourist sector expectations predominantly place the recovery of pre-crisis levels beyond 2022, and according to Exceltur, 67% of managers in the sector opt for this possibility.[35] Conversely, the percentage of those bringing forward this recovery to 2021 is a minority view (5%), while 28% consider that the gap will close in 2022.

The contribution of the external sector to Spanish economic growth in the future will be conditional upon the performance of the export base. With

34 See UNWTO (2021).

35 See Exceltur (2021).

regard to the export base, the year 2020 saw the interruption of the ongoing intensification of the Spanish productive system's degree of exposure to international markets. Also, the number of stable exporting firms – which had grown by 1.5% in 2019 – fell by 2.2% (see Chart 1.18.2).[36] The information available indicates this contraction fell mainly on SMEs. In this respect, there is much uncertainty as to whether these firms will be able to resume their export activity in the coming quarters (given the costs this activity entails and the observed increase in these companies' financial vulnerability), even if the recovery in international trade takes root.

3.3 Outlook for the Spanish economy in the short and medium term

The last Banco de España projections exercise envisaged three alternative scenarios to describe the possible course of the Spanish economy in the 2021-2023 period. The considerable uncertainty still clouding the health and macrofinancial situation of the Spanish economy made it advisable – as in other forecasting exercises conducted since the outbreak of the pandemic – for the latest macroeconomic projections of the Banco de España, published on 23 March,[37] to consider several alternative scenarios. These scenarios – dubbed *mild, baseline* and *severe* – differed essentially in their assumptions as to how the pandemic and the vaccination process were unfolding in the short term, and as to the impact the pandemic might have in the medium term on the productive system and agents' behaviour.

Despite their differences, the various scenarios point to a relatively robust recovery in economic activity as from the second half of 2021 (see Table 1.2). This recovery, which would also run into 2022, would essentially be underpinned by the gradual normalisation of the health situation (albeit at different speeds according to the scenario), the maintenance of a very accommodative economic policy (both fiscal and monetary wise) and the beginning of the launch of the NGEU programme in Spain. The three scenarios also envisage a progressive pick-up in international tourist flows and a gradual release of the reservoir of saving built up by households in recent quarters. These latter processes are expected to be less intense, especially in the short run, under the *severe* scenario (see Charts 1.19.1 and 1.19.2).

In any event, the three scenarios coincide in signalling that the impact of the current health crisis on the level of GDP, employment and the public finances will be relatively persistent. Thus, for example, under the *baseline* scenario, Spanish GDP would not regain its end-2019 level until 2023 (see Chart 1.19.3). As to

36 A "stable exporting firm" is defined as one that exports for at least four consecutive years. Exporters with sales of less than €5,000 are excluded.

37 See Banco de España (2021b).

Table 1.2
PROJECTIONS FOR THE MAIN MACROECONOMIC AGGREGATES OF THE SPANISH ECONOMY (a)

Annual rate of change in volume terms and % of GDP

		March 2021 projections								
		Mild scenario			Baseline scenario			Severe scenario		
	2020	2021	2022	2023	2021	2022	2023	2021	2022	2023
GDP	-10.8	7.5	5.5	1.6	6.0	5.3	1.7	3.2	4.6	2.2
Harmonised index of consumer prices (HICP)	-0.3	1.4	0.9	1.3	1.4	0.8	1.2	1.3	0.6	1.0
Unemployment rate (% of labour force). Annual average	15.5	15.9	13.9	12.8	17.0	15.1	14.1	18.3	17.2	16.1
General government net lending (+)/net borrowing (-) (% of GDP)	-11.0	-6.8	-3.9	-3.4	-7.7	-4.8	-4.4	-9.1	-6.5	-5.8
General government debt (% of GDP)	120.0	115.4	112.7	112.8	117.9	116.4	117.6	122.6	123.6	125.5

SOURCES: Banco de España and INE.

a Projections cut-off date: 16 March 2021. As at the projections cut-off date the 2020 budget deficit, public debt and definitive GDP figures were not available. The projections are made on the basis of an 11% decline in GDP in 2020, a budget deficit of 10.5% of GDP and a public debt of 117.1% of GDP.

employment, the three scenarios expect a further increase in the unemployment rate in 2021 – after that observed in 2020 – and only under the *mild* scenario would this rate stand below pre-pandemic figures in 2022 (see Chart 1.19.4). As to the public finances, the general government deficit is expected to decline gradually over the course of the projection horizon. However, under all the scenarios considered, the budgetary imbalance in 2023 would still be higher than that observed in 2019.

The developments in recent weeks, since the publication date of this projections exercise, do not substantially alter its forecasts. According to the Quarterly National Accounts flash estimate for 2021 Q1, released after the publication date of the Banco de España's latest macroeconomic projections, the Spanish economy's GDP is estimated to have fallen by 0.5% quarter-on-quarter, a figure very close to that of 0.4% projected under the baseline scenario. Domestic demand made a negative contribution to growth of 0.9 pp, which was partly offset by the positive 0.4 pp contribution by the external sector.

4 Economic policies in the short term

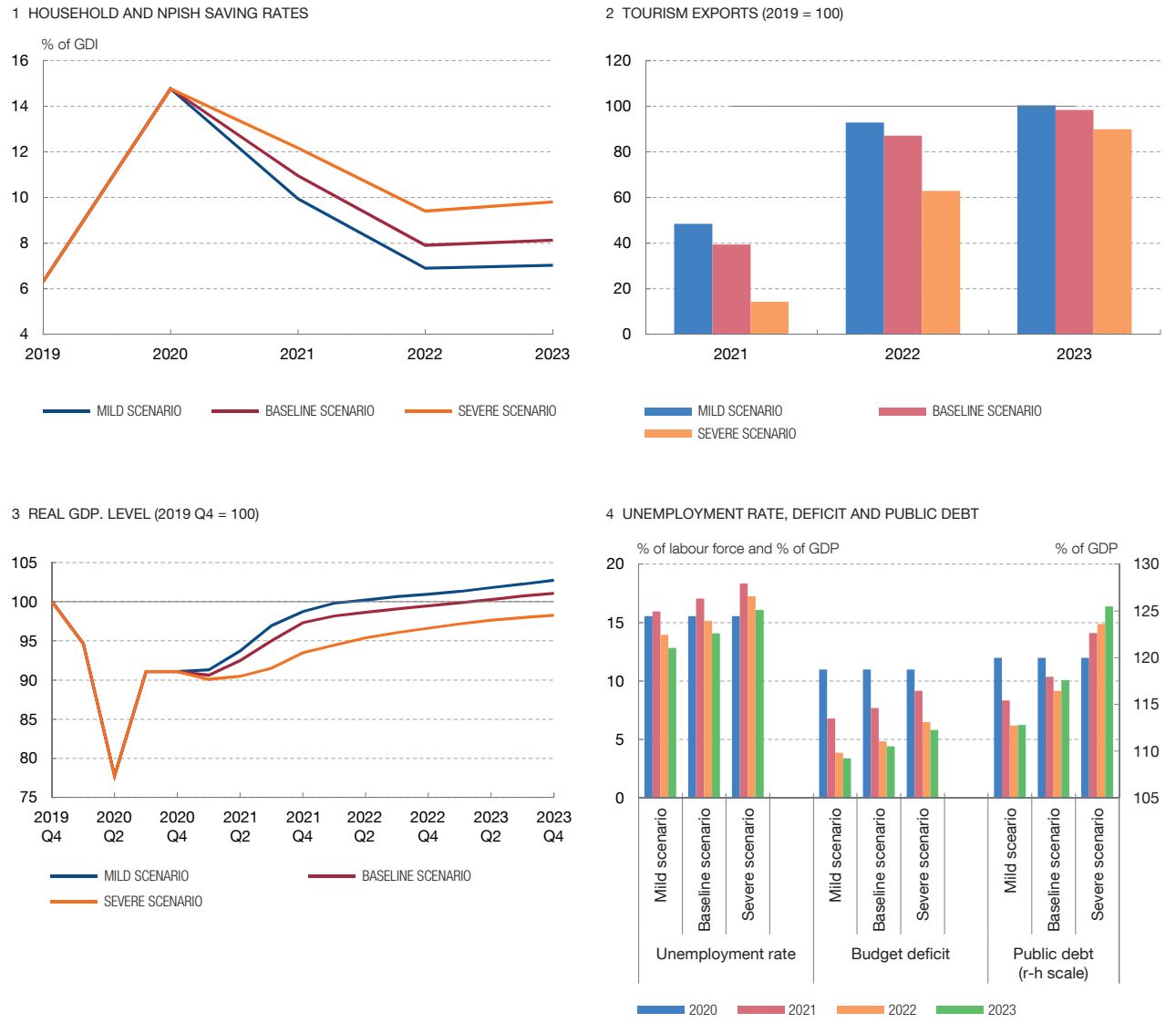
4.1 From a very resolute initial response to a more focused strategy

The swift response by economic policies worldwide has helped mitigate the strong adverse impact of the pandemic on economic activity. As noted in the

Chart 1.19

MACROECONOMIC SCENARIOS FOR THE SPANISH ECONOMY (2021-2023) (a)

The latest Banco de España projections exercise envisaged three alternative scenarios to describe the possible course of the Spanish economy in the 2021-2023 period. Among other aspects, these three scenarios differ in terms of the paths international tourism flows and the household saving rate might follow in the coming quarters. The three scenarios concur in indicating that the impact of the current crisis on the level of GDP, employment and the public finances will be relatively persistent. Under the baseline scenario, Spain's GDP would not recoup its end-2019 level until 2023.



SOURCES: Banco de España and INE.

a Banco de España March 2021 macroeconomic projections for the Spanish economy. Definitive data for 2020 are depicted, having been released after the projections cut-off date (except for the unemployment rate for that year, which was published beforehand).

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previous sections, the economic crisis caused by the COVID-19 pandemic may be considered extraordinary in many respects, including the nature of the shock at its origin and the scale and unevenness of its impact. Another facet characterising the current health crisis is the swift and resolute response of economic policies, globally, in attempting to tackle the adverse economic effects of this extraordinary shock. Indeed, since the start of the pandemic, the reaction of fiscal, monetary, regulatory

and prudential policies have been notably ambitious, from a historical perspective, and have evidenced a high degree of synchronisation at the international level.[38] In combination, they will have helped cushion, to some extent, the impact of the crisis on households' and firms' employment, incomes and liquidity, credit flows, and the stability of financial markets and institutions. In doing so, these policies will not only have headed off the materialisation of highly disruptive macrofinancial scenarios in the short term, but will also have limited the lasting damage this crisis might entail for the growth potential of economies in the medium and long term.

The persistence of the crisis is leading to the maintenance or extension of the economic measures initially deployed, thereby avoiding a premature withdrawal of support. While the COVID-19 pandemic may be considered an eminently transitory shock, it is proving more persistent than initially envisaged. This has meant that the vast majority of the (markedly temporary) economic policy initiatives deployed nationally and supranationally in the initial phases of the health crisis have had to be extended in time or broadened in recent quarters. Thus, for example, in the fiscal policy realm, new, highly significant stimulus packages were rolled out in the United States in late 2020 and early 2021.[39] Moreover, in recent quarters, international financial institutions have continued supporting the low-income countries through extending the official debt moratorium agreed by the G-20 and via the emergency aid granted by the IMF. Also notable in the case of the IMF has been its use of precautionary lending, especially in the Latin American countries. The IMF is also likely to shortly approve a new general allocation of Special Drawing Rights (SDRs) for an amount of around $650 billion, which will act as a supplement to all the member countries' international currency reserves. The persistence of the negative effects of the pandemic has also led to the maintenance, with some adjustments, of the regulatory measures approved in spring 2020.[40] Generally, the authorities have retained the recommendations on the use of capital and liquidity buffers,[41] while progressively adjusting the recommendations on the distribution of profits.[42] Likewise, in Europe, the European Banking Authority decided to extend the term of application of the guidelines governing the favourable prudential treatment of the moratoria on loan repayments, although it added safeguards and additional limitations.

However, as the recovery takes root, the approach of some of these policies is also being re-oriented, setting greater store by medium and long-term issues. In particular, in accordance with different national circumstances, the emphasis of

38 For a more detailed description of the specific measures deployed in these areas, see, for example, Cuadro et al. (2020) and Alonso et al. (2021).

39 See Párraga and Roth (2021).

40 See Anguren et al. (2020).

41 See BIS (2020).

42 In this connection, see the 15 December 2020 updates of the ECB Recommendation and the Federal Reserve Recommendation.

fiscal policy has gradually changed from widespread support to firms' liquidity and the preservation of employment towards measures more targeted on the productive sectors most affected by the crisis and more geared to backing firms' solvency and the financial situation of the most vulnerable households. Further, fiscal policy is increasingly focusing on certain long-term challenges, such as climate change and digital transformation. This re-orientation of fiscal policy is especially evident in the case of the EU and the United States.[43] In fact, in the EU, where national fiscal policies are being complemented by a broad range of supranational measures (see Box 1.2), the funds linked to the NGEU recovery programme – which is analysed in greater detail in Box 2.3 and in Section 2.3.3 of Chapter 2 – are essentially aimed at boosting European economies' ongoing digitalisation and ecological transition. In the United States, the American Jobs Plan, included in the current Administration's plans,[44] is playing a similar role. Overall, these programmes should contribute to the composition of public finances proving more conducive to long-term economic growth and to redressing the declining trend of public and private investment observed in recent decades in the advanced economies.[45]

The regulatory and supervisory authorities are also paying greater heed to the medium-term challenges in this area. The full implementation of Basel III remains a priority in the medium term to ensure sustainable recovery and the appropriate coverage of the risk measurement shortcomings identified in the wake of the 2008 crisis. Moreover, the regulatory focus is also shifting towards new risks, including those arising from the impact of digitalisation, climate change and the growth of non-bank financing. These are the main areas of concern and interest for the international financial authorities.

At the same time, some medium-term challenges associated with maintaining crisis lockdown policies for a prolonged period are becoming discernible. For example, as a result of the resolute fiscal policy response to this crisis, budget deficit and public debt levels have increased very significantly in practically all countries. In particular, in 2020, the budget deficit at the global level is estimated to have risen to 12.1% of GDP (2.9% in 2019), whereas public debt will have increased to around 100% of GDP, i.e. 14 pp up on 2019 (see Chart 1.20). These developments mean maintaining fiscal policy support to the recovery in the short term must be combined with restructuring plans in the medium and long term that allow room for manoeuvre to be restored ahead of potential new shocks in the future. From the regulatory and supervisory standpoint, it remains a priority to ensure that the measures adopted carry on offering continuity to the correct measurement and recognition of credit risk by banks, including appropriate classification of loans and of the level of provisions and capital. The supervisory and regulatory authorities are closely monitoring

43 On the fiscal policy response in the euro area and the United States, see also Guirola, Kataryniuk and Moreno (2020).

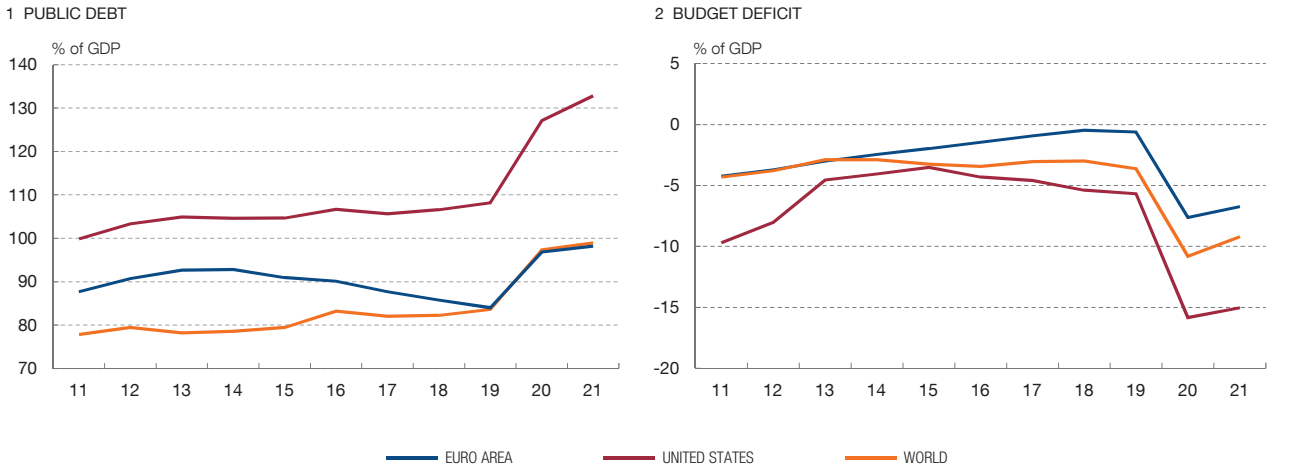
44 See Arce et al. (2020).

45 See Banco de España (2020c) and Delgado-Téllez et al. (2020).

Chart 1.20

THE GLOBAL ROLE OF FISCAL POLICY IN THE CRISIS AND IN THE RECOVERY IS PROVING CONSIDERABLE

The crisis has notably raised public debt and budget deficits in the euro area and in the United States. In the United States, the fiscal impulse has been particularly based on discretionary measures. In any event, the start-up of the NGEU programme will provide an additional fiscal boost in the EU.



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SOURCE: IMF (WEO, April 2021).

developments in this area and the possible effects of the withdrawal of the support measures, which might result in significant distortions were it withdrawn prematurely.

The crisis has also highlighted the need to continue strengthening economic governance in Europe. As mentioned, at the supranational level, the EU has managed to forge a common, swift and extensive response to the economic crisis generated by the pandemic. This decision-making capacity and joint action has contributed to boosting European integration and has played a key role in preventing any further financial fragmentation in the euro area,[46] thus complementing the work of the ECB's common monetary policy. Nonetheless, as set out in Box 1.2, it remains necessary to strengthen the European economic and financial architecture in different areas, including, for example, the reform of fiscal rules, the creation of a common and permanent fiscal capacity, the protection of the single market and the completion of the Banking Union.

4.2 The role of the European Central Bank's monetary policy

At the onset of the pandemic, the ECB deployed a package of measures, which were subsequently extended and reinforced. Notable among these measures were the targeted longer-term term refinancing operations (TLTROs) and

46 See Kataryniuk et al. (2021).

the pandemic emergency purchase programme (PEPP). Through the TLTROs, the ECB provides banks with financing under particularly advantageous conditions, provided they meet specific lending targets in respect of households and firms.[47] Through the PEPP, the ECB purchases sizeable volumes of public and private financial assets, and the purchases are distributed more flexibly over time and across issuers.

The ECB's response has been pivotal in maintaining favourable financing conditions in the euro area and preventing financial fragmentation in the region. Despite the recent tightening of bank lending standards in recent quarters, bank financing conditions have remained relatively easy and the cost of new lending has held at low levels in historical terms (see Chart 1.21 for the euro area as a whole and Chart 1.12 for Spain). The scope of the measures deployed by the ECB to mitigate the adverse effects of the health crisis on the supply of bank lending has also been highlighted in the Bank Lending Survey (BLS). This survey suggests that banks participating in TLTRO-III operations have already allocated a portion of the financing received to lending to households and firms.[48] The ECB's monetary policy response has also contributed to firms and euro area Governments being able currently to finance themselves under historically very favourable conditions on the capital markets (see Chart 1.3). In this respect, a detailed analysis of the behaviour of financial markets around the launch date of the PEPP highlights the fact that, in that period, this decision had a positive effect on the main euro area stock markets and prompted strong declines in sovereign debt yields (especially those of Italy and Spain). That duly checked capital market dynamics which, at the start of the crisis, had looked to be leading to growing financial fragmentation in the region.[49] Aside from these financial effects, Banco de España estimates indicate that the PEPP would also be having a significant positive impact on euro area GDP growth and inflation.[50]

The flexibility provided by the PEPP is a key factor in the effectiveness of the ECB's monetary policy in this crisis. As earlier mentioned, the PEPP is one of the main tools of the ECB's response to this health crisis. This is not only because of its capacity to act on governments' and corporate issuers' yield curves, but also because of the operational flexibility that distinguishes this asset purchase programme from that in place before the pandemic (the APP). This flexibility has enabled the ECB to concentrate asset purchases at those junctures in the pandemic crisis – in particular, between April and July 2020 – and in those jurisdictions when and in which financing conditions were tightest, thereby increasing the PEPP's

47 To increase banks' capacity to obtain funds in the Eurosystem's TLTROs and other refinancing operations, at the start of the pandemic the ECB also made its collateral framework more flexible (i.e. the rules governing the eligibility and valuation of the collateral used in these operations), through measures such as valuation haircuts and the increase in Eurosystem national central banks' additional credit claim (ACC) frameworks.

48 See Menéndez and Mulino (2020). For greater details on financing to households and firms against the background of the COVID-19 crisis, see Alves et al. (2020) and Alves et al. (2021).

49 See Banco de España (2020b).

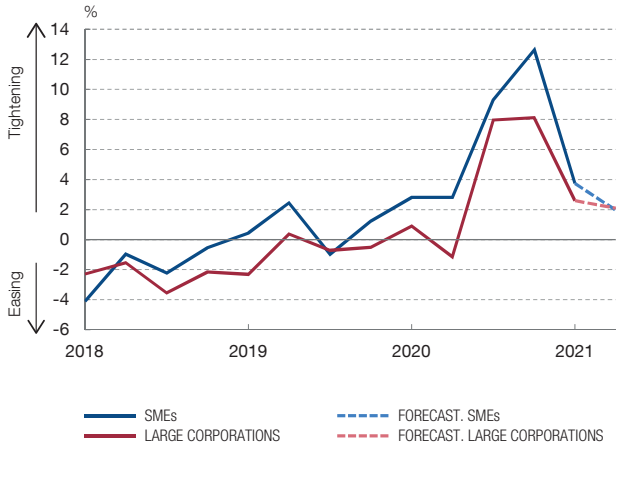
50 See Aguilar et al. (2020).

Chart 1.21

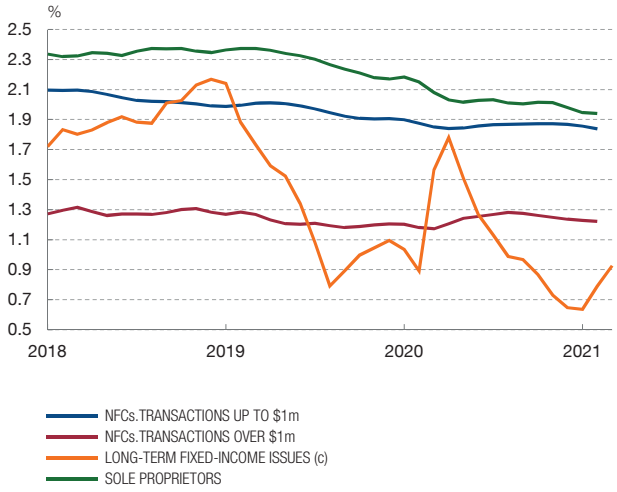
FIRMS' FINANCING CONDITIONS ARE HOLDING EASY IN THE EURO AREA, THOUGH THERE HAS BEEN A TIGHTENING OF LENDING STANDARDS

According to the BLS, lending standards have tightened recently. This trend might extend over 2021 Q2, both in the SMEs and large corporations segments. However, the financing costs of non-financial corporations in the euro area have held at low levels, assisted by the measures implemented by the ECB in response to the COVID-19 crisis.

1 BLS: CHANGE IN LENDING STANDARDS IN THE EURO AREA (a)



2 FINANCING COSTS IN THE EURO AREA (b)



SOURCES: ECB, Banco de España and Thomson Reuters Datastream.

a BLS. Indicator = percentage of institutions that have tightened credit standards considerably × 1 + percentage of institutions that have tightened credit standards somewhat × 1/2 – percentage of institutions that have eased credit standards somewhat × 1/2 – percentage of institutions that have eased credit standards considerably × 1.
b Bank lending rates are NDER (narrowly defined effective rate), i.e. excluding the related charges and fees, and are adjusted seasonally and for the irregular component.
c Issues with a maturity at over ten years.

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effectiveness. A recent Banco de España paper shows that the PEPP's flexibility was particularly telling when it came to reducing the financing costs of the countries most affected by the crisis, such as Italy and Spain, as it significantly reduced the term and risk premia on their government bonds (see Chart 1.22).[51]

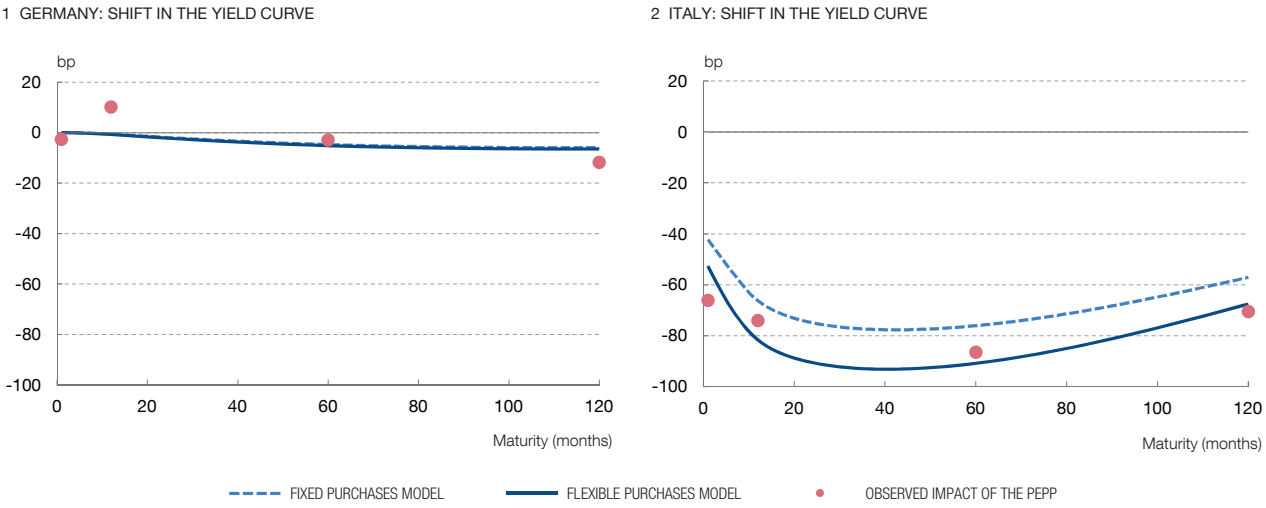
The PEPP has afforded fiscal authorities leeway to extend and maintain the measures supporting the economy. By way of illustration, net asset purchases under the PEPP in 2020 rose to an amount equivalent to over 90% of the euro area countries' net public financing needs that same year (and almost 30% of gross needs), on preliminary estimates. This is particularly significant in countries such as Spain, whose pre-crisis deficit and public debt levels were already high. Hence, the ECB's actions are preventing a potential significant increase in financing costs. Had such an increase arisen, it would have restricted national fiscal authorities' capacity to support the economy.

51 See Costain, Nuño and Thomas (2021) for a more detailed discussion of the effects of the purchase programmes on a heterogeneous monetary union.

Chart 1.22

IMPACT OF THE ANNOUNCEMENT OF THE PEPP IN MARCH 2020 (a)

The PEPP has enabled the financing costs of households, firms and governments to be substantially reduced. One of its key characteristics is that it allows asset purchases to be distributed flexibly over time, across asset classes and jurisdictions. Without this flexibility, the impact of the programme would have been lower, especially in the countries most affected by the crisis, such as Italy and Spain.



SOURCES: Banco de España and Bloomberg.

a Observed impact of the announcement of the PEPP (18-20 March 2020). The impact on the data is calculated as the difference between the zero-coupon yield curve as at the close on 20 March less as at the close on 18 March. The theoretical impact is calculated using the Costain, Nuño and Thomas (2021) model, assuming that, at the time of the announcement, investors know the volume and time-distribution of the purchases. Flexible purchases replicate observed ones, while fixed purchases analyse the counterfactual case of a distribution of the purchases across countries according to the capital key and uniformity over time.

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The fragility still characterising the ongoing economic recovery and price dynamics in the euro area advises maintaining a very accommodative monetary policy in the coming quarters. The ECB Governing Council has reiterated that it remains essential to maintain favourable financing conditions for households, firms and governments during the pandemic. In this connection, it announced last December that purchases under the PEPP programme would be made flexibly to prevent a tightening of financing conditions incompatible with the objective of countering the downward impact of the pandemic on the projected inflation path. Thus, in response to the increase in long-term interest rates observed since late 2020, the ECB announced in March that it expected a significant increase in the pace of PEPP purchases in the following quarter.

In any event, the euro area inflation outlook remains some distance off its medium-term objective. The latest ECB staff projections, published in March, place average inflation in 2023 at 1.4%, far removed from the objective of an inflation rate below, but close to, 2%. In this respect, the ECB has reiterated that it stands ready to adjust all its instruments to ensure inflation moves in a sustained fashion towards its objective.

4.3 The economic policy response in Spain

Domestically, the health crisis was also accompanied by a forceful economic policy response. The Spanish authorities adopted a wide range of measures, which have been analysed in various Banco de España reports.[52] Their main aims were to provide greater resources to the health system, to protect employment (especially through the advantages of using furlough schemes), to support the most vulnerable households (e.g. with different types of moratoria and increased benefits in some cases) and to provide liquidity to firms (essentially by activating various public guarantee lines to promote lending to non-financial corporations – see Box 1.3).

As in other countries, this initial response has since been adjusted to changing economic circumstances. In particular, many of the measures deployed at the onset of the pandemic, with a temporary lifespan or with relatively limited pre-set amounts, have been extended over time on several occasions as the health and economic crisis has run for longer than first forecast. In this process of adaptation, the specific details of these economic policy measures have been recalibrated in order to target the measures more closely on the groups most affected by the pandemic.

One of the main instruments to mitigate the economic effects of the pandemic on firms' liquidity has been the ICO-administered public guarantee programmes. Since the start of the crisis, these programmes have contributed decisively to financing the liquidity needs of sole proprietors and firms, especially smaller ones.[53] Up to 31 March 2021, new credit generated thanks to these programmes has totalled €124 billion, of which €87 billion has been for SMEs and sole proprietors. Moreover, these programmes have progressively adapted over time, among other aspects, regarding the lines available, the total amount the guarantees could involve and the conditions of the loans granted under these programmes.[54]

More recently, the main source of concern has shifted towards aspects linked to firms' over-indebtedness and solvency problems. The increase in indebtedness and the decline in firms' expected cash flows that has arisen as a result of the crisis have raised some companies' financial vulnerability, with potential adverse implications for economic recovery. Part of this changed setting is a new package of business support measures, for a total amount of €11 billion. The package was approved last March and has been revised in April so that the regional governments

52 See, for example, Banco de España (2020d) and Hernández de Cos (2020).

53 For an analysis of the impact of these business liquidity support measures, see Box 1 of Alves et al. (2021).

54 Thus, for example, Decree-Law 34/2020 extended the maximum maturity of loans to 8 years (from 5 initially), and the maximum grace period to 24 months (initially 12 months). Likewise, the term for the granting of guarantees has been extended to 30 June 2021, as opposed to 31 December 2020 previously.

may have more flexibility in its application.[55] This package includes a framework of direct aid to the firms most affected by the crisis. The allocation of funds from this programme is based on straightforward criteria, which should provide for their implementation in a setting of some urgency, although their design might lessen the effectiveness in meeting the objectives pursued, as analysed in detail in Chapter 3 of this Report. The ultimate effectiveness of these measures will depend, in any event, on their swift and effective application and on their adaptability, in terms of size and design, to the course of the pandemic in relation to firms' economic and financial position.

Furlough schemes have also been a fundamental mechanism for protecting labour income and mitigating the rise in the unemployment rate. As mentioned in Section 1.3, one of the differentiating aspects of this economic crisis has been the intensive use Spanish firms have made of furlough schemes as a temporary employment adjustment mechanism. At the trough of the downturn in activity, in 2020 Q2, furlough schemes covered more than 20% of employees in Spain compared with a percentage of less than 1% in the 2008 crisis. Since initially being established, the favourable conditions set for the treatment of furlough schemes, in force until late May 2021, have been subject to successive extensions and various amendments, in particular regarding arrangements for the exemption of social security contributions. These changes initially sought to encourage the resumption of work, in summer 2020, of furloughed workers. Subsequently, in the face of fresh waves of the pandemic, they sought to concentrate protection in those sectors and activities most affected.

Looking ahead, the design of furlough schemes must continue adapting to the changing economic and health situation. They must be increasingly targeted so as to provide for the necessary reallocation of employment to more productive firms and sectors. Given the uncertainty still marking the current epidemiological and economic setting, furlough schemes should necessarily continue acting in the coming months as a basic support of employee-employer relations in those sectors where the pandemic and the measures deployed to contain it are prompting a sharp downturn or a slower recovery. At the same time, the design of this mechanism should continue pursuing a twofold objective: first, to maintain a relatively generalised level of protection; and second, to foment the future reallocation of productive resources across sectors and firms further to potentially structural changes in the relative demand of different sectors as a result of the pandemic. It should be stressed here that there are significant differences in the productivity levels of the different types of firms and sectors availing themselves of furlough schemes, which in many cases were already present before the pandemic broke. Thus, for example, the sectors with higher levels of protection as from the October 2020 extension of furlough schemes are characterised, on the whole, by a negative wage premium of around 10% compared with the other sectors in the economy (see Chart

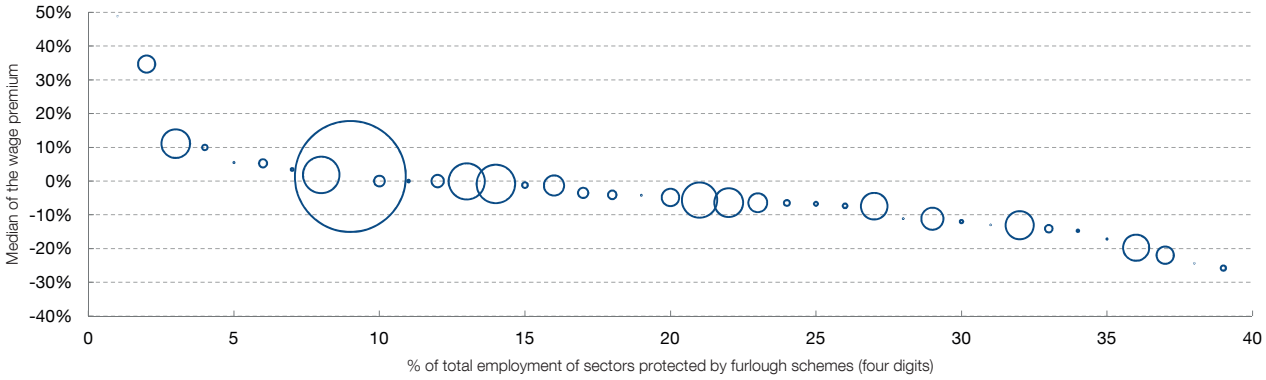
55 See RDL 5/2021.

Chart 1.23

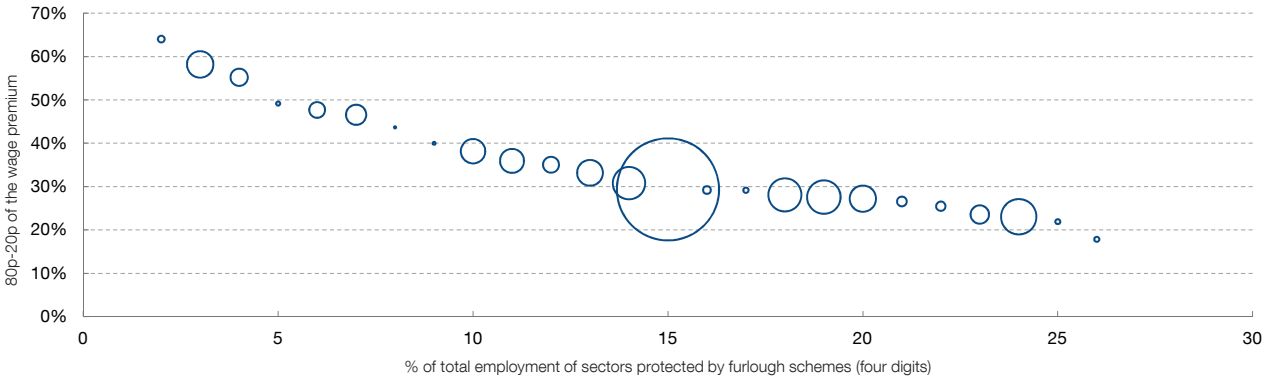
SIGNIFICANT PRODUCTIVITY DIFFERENCES AT FIRMS FROM SECTORS ESPECIALLY PROTECTED BY FURLOUGH SCHEMES

In some of the sectors with a higher level of protection under the current furlough scheme arrangements, a negative wage premium of over 15% can be seen. That would denote a negative productivity differential in these sectors of activity. High heterogeneity among the firms in these sectors can also be observed.

1 MEDIAN WAGE PREMIUM OF FIRMS IN SECTORS AFFECTED BY FURLOOUGH SCHEMES, ACCORDING TO THE SHARE OF EACH SECTOR IN THE TOTAL EMPLOYMENT OF FURLOUGH SCHEME-AFFECTED SECTORS (a)



2 DIFFERENCE BETWEEN 80th AND 20th PERCENTILES OF THE WAGE PREMIUM OF FIRMS IN FURLOUGH SCHEME-AFFECTED SECTORS, ACCORDING TO THE SHARE OF EACH SECTOR IN THE TOTAL EMPLOYMENT OF FURLOUGH SCHEME-AFFECTED SECTORS (a)



SOURCE: Social Security General Treasury (Firm and Employee Data Panel, 2013-2016).

a A firm's wage premium is equal to the fixed effect of that firm when a regression is estimated of the logarithm of the wage on firm fixed effects, worker fixed effects, age dummies and year dummies. A sample of workers with full-time contracts and aged 25-55 is used. See Abowd, Kramarz and Margolis (1999) and Carneiro, Guimarães and Portugal (2012).

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1.23). The heterogeneity within these sectors is also very high, and wage differences of over 40% between firms are observed.[56] Under normal conditions, these productivity differences should give rise to natural processes of cross-sectoral and cross-firm resource reallocation, resulting in aggregate efficiency improvements. Hence, in the current circumstances, given the high heterogeneity of the impact of

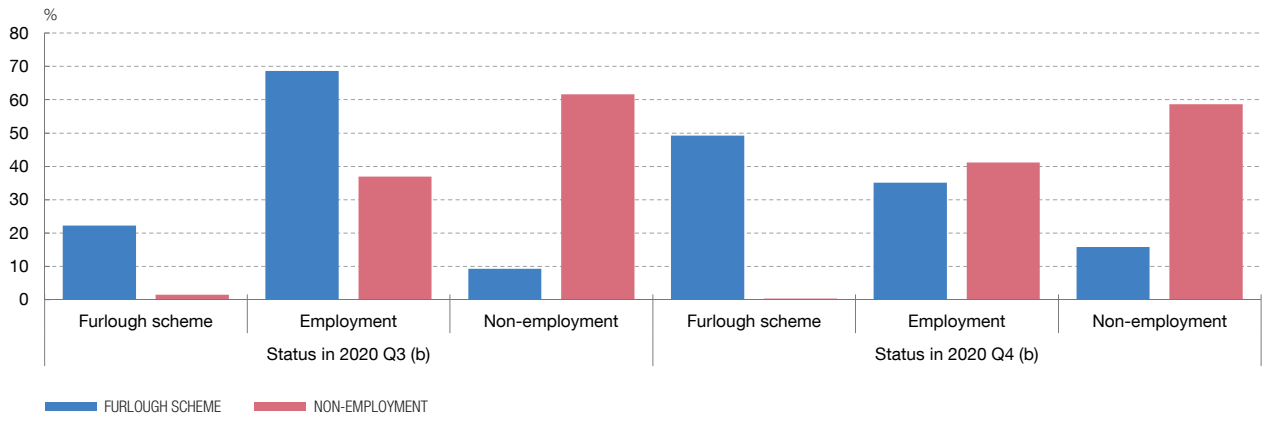
56 Drawing on what is observed in the ratio of the 80th percentile to the 20th percentile of firms according to their average wage within each sector.

Chart 1.24

LABOUR FLOWS IN 2020 FOLLOWING A QUARTER WITHOUT WORKING OWING TO BEING FURLOUGHED, UNEMPLOYED OR INACTIVE

In 2020 Q3, the return to work of furloughed workers during the previous quarter was much greater than that observed among those who lost their jobs in that same period and became unemployed or inactive. However, this gap narrowed considerably in the final stretch of the year.

EMPLOYMENT STATUS AFTER HAVING SPENT A QUARTER BEING FURLOUGHED (SUSPENSION OF ACTIVITY) OR WITHOUT EMPLOYMENT (a)



SOURCES: Banco de España, drawing on EPA flows microdata.

a Individuals who did not work in 2020 Q2 or Q3, either because they were furloughed or their activity had been suspended, or because they are unemployed or inactive (but not furloughed).
b Individuals subject to short-time work schemes are classified as furloughed, and only those who have returned to work on normal working hours are considered as being employed.

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the crisis, it is important that the various labour flexibility mechanisms, including those approved in response to the previous crisis, play a key role. They should provide for the adaptation of the productive system to the scenario generated by the pandemic and accommodate those reallocation processes that are structural in nature.

Given that the return to work by some groups of employees is hampered, it would be advisable to complement furlough schemes with other measures as the crisis stretches out. Between 2020 Q2 and Q3, furlough schemes proved to be an effective instrument for smoothing workers' re-incorporation into the labour market. In fact, almost 70% of furloughed workers in 2020 Q2 resumed effective employment in Q3, a percentage that was 30 pp higher than that observed for workers who lost their jobs in the same quarter and were not furloughed (see Chart 1.24).[57] However, the pace of affected workers returning to work falls appreciably when analysing the employment flows of those furloughed in Q3 or the employment status at end-2020 of those workers who had been furloughed for a longer time. For these workers, the probability of returning to work was closer to that observed among those not furloughed. In light of this evidence, it might be appropriate to complement this mechanism with other measures and review some of the aspects of its design. In particular, the exemptions from social security contributions applied

57 See Izquierdo, Puente and Regil (2021).

to firms might best be more closely linked to the participation of furloughed workers in training programmes that mitigate the human capital losses associated with long periods of inactivity and, potentially, allow for reallocation to other jobs. In this respect, as the crisis stretches out, it would be worth assessing whether the restrictions on dismissal for economic causes and the commitment to maintain employment in the six months following the return to work by furloughed employees might bear down negatively on the viability of some firms resuming their activity or hinder the aforementioned resource reallocation process. As detailed in Chapter 2 of this Report, the resort to furlough schemes will need to be accompanied by a review of active employment policies so as to reduce possible increases in the structural component of unemployment.

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Box 1.1

GLOBAL EPIDEMIOLOGICAL DEVELOPMENTS

The COVID-19 pandemic has entailed a world health emergency, without precedent in the past century, that has already cost more than three million lives.[1] This box briefly describes how the disease has developed since its beginnings, the international differences observed in its incidence and the outlook for its future course.

The origin of the disease is still uncertain, but the first cases were documented in the Chinese city of Wuhan in mid-December 2019. During the first two months of 2020, when China was already tackling a first-order health crisis, the virus spread progressively through the rest of the northern hemisphere. Infections having surpassed 100,000 in more than 100 countries, the World Health Organisation declared the disease a pandemic on 11 March 2020 (see Chart 1.1).

In March and April, its rapid spread posed a huge challenge to highly saturated health systems, leading to the introduction of stringent containment measures, practically unprecedented in peacetime, such as home confinement (see Chart 1.2).[2] As a consequence, the spread of the virus slowed progressively, leading to a gradual easing of restrictions in most advanced economies from the second half of the second quarter. Meanwhile, the virus was spreading through the emerging economies, with particular virulence in Latin America.

In the summer, the incidence of the pandemic was relatively limited in the northern hemisphere, but infections and deaths rose progressively from September with much greater geographical heterogeneity than in the first wave. At global level, this new wave, which has cost many more lives than the first one, peaked in February 2021 (see Chart 1.3). Since then, the pandemic containment measures, which had been strengthened again during the autumn, have been intermittently eased, as progress has been made with vaccination. In recent weeks there has been a rise in fatalities in the emerging economies, especially in India, where vaccination is lagging.

Against a background of notably heterogeneous containment measures, the incidence of the pandemic across geographical areas, as regards its timing, magnitude and persistence, has been very uneven, as can be seen, for example, in deaths per capita (see Chart 2). In the first few months, given the initial experience of China,[3] the most widespread approach in the advanced economies was to impose general lockdowns and severe restrictions on personal mobility and on activity in certain sectors.[4] However, some countries, such as South Korea, decided to focus their efforts on mass testing and thorough contact tracing.[5] Subsequently, other countries (such as Japan, New Zealand and Australia) have followed a similar strategy and, with very strict controls on spread in the community, have managed to recover some degree of normal social activity. By contrast, certain other economies (such as Sweden, the United States and Brazil) opted for less restrictive containment measures from a normative perspective.[6]

Generally speaking, after the experience of the first wave, a broader range of measures was used to address the health crisis, and these tended to be more focused on specific areas or activities to try to minimise social and economic disruption. In any event, even in the most extreme episodes, the tightening of the pandemic containment measures during the second wave did not reach the level of stringency seen in the first phase. At the same time, regardless of the reaction of the authorities, there was also notable adaptation by households and firms. Indeed, the general public have been adapting their habits; for example, there has been a voluntary reduction

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1 The number of deaths in other recent respiratory disease epidemics, such as SARS (2002-2004) and MERS (2012), did not reach even 0.1% of those caused by COVID-19 as at the cut-off date of this report.

2 See N. Haug, L. Geyrhofer, A. Londei, E.Dervic, A. Desvars-Larrive, V. Loreto, B. Pinior, S. Thurner and P. Klimekg (2020), "Ranking the effectiveness of worldwide COVID-19 government interventions", *Nature Human Behaviour;* and J. Dehning, J. Zierenberg, P. Spitzner, M. Wibral, J. Pinheiro, M. Wilczek and V. Priesemann (2020), "Inferring change points in the spread of COVID-19 reveals the effectiveness of interventions", *Science,* vol. 10. The Oxford Stringency Index, shown in the chart, has certain limitations. For example, the way that provincial and municipal measures are included in the index means that they have a considerable effect on its level, causing very marked rises that may not reflect the situation at national level.

3 China applied stringent localised lockdowns, which, at their peak, affected 10% of the population. See A. Buesa (2020), "China: Impact of the pandemic and economic recovery", Analytical Articles, *Economic Bulletin,* 4/2020, Banco de España.

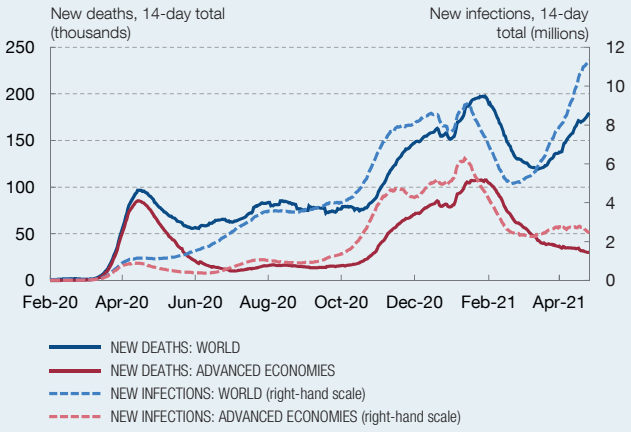
4 See S. Flaxman, S. Mishra, A. Gandy, H. Juliette T. Unwin, T. A. Mellan, H. Coupland, C. Whittaker, H. Zhu, T. Berah, J. W. Eaton, M. Monod, A.C. Ghani, C. A. Donnelly, S. Riley, M. A. C. Vollmer, N. M. Ferguson, L. C. Okell and S. Bhatt (2020), "Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe", *Nature,* 257-261.

5 See B. Égert, Y. Guillemette, F. Murtin and D. Turner (2020), *Walking the tightrope: avoiding a lockdown while containing the virus*, OECD Economics Department Working Papers, No 1633.

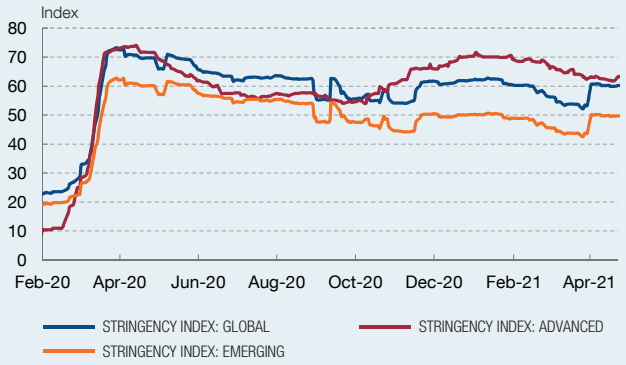
6 See I. A. Moosa (2020), "The effectiveness of social distancing in containing Covid-19", *Applied Economics,* 52:58, pp. 6292-6305.

Chart 1
COURSE OF COVID-19, VACCINATION AND EPIDEMIOLOGICAL PROSPECTS

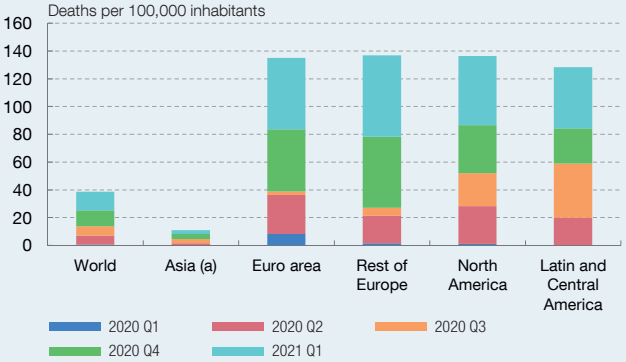
1 DEATHS AND INFECTIONS SINCE THE START OF THE PANDEMIC



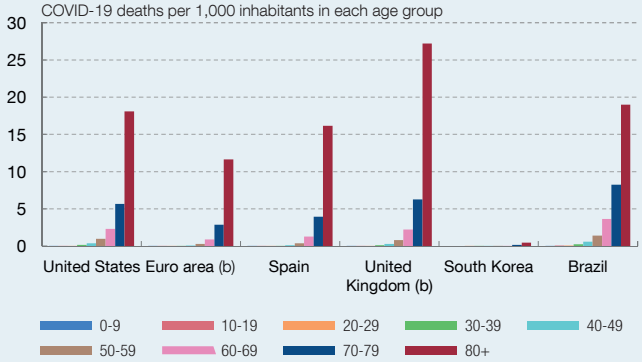
2 STRINGENCY OF CONTAINMENT MEASURES



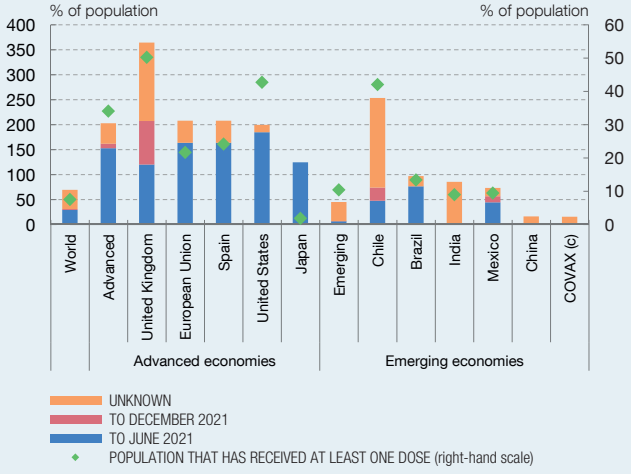
3 DEATHS IN THE DIFFERENT WAVES



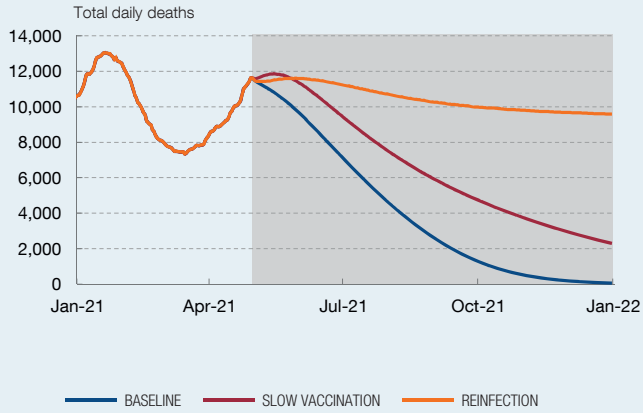
4 DEATH RATE FOR INFECTED, BY AGE GROUP



5 VACCINES ORDERED FROM PHARMACEUTICAL COMPANIES AND VACCINES ADMINISTERED



6 PANDEMIC DEVELOPMENT SCENARIOS (d)



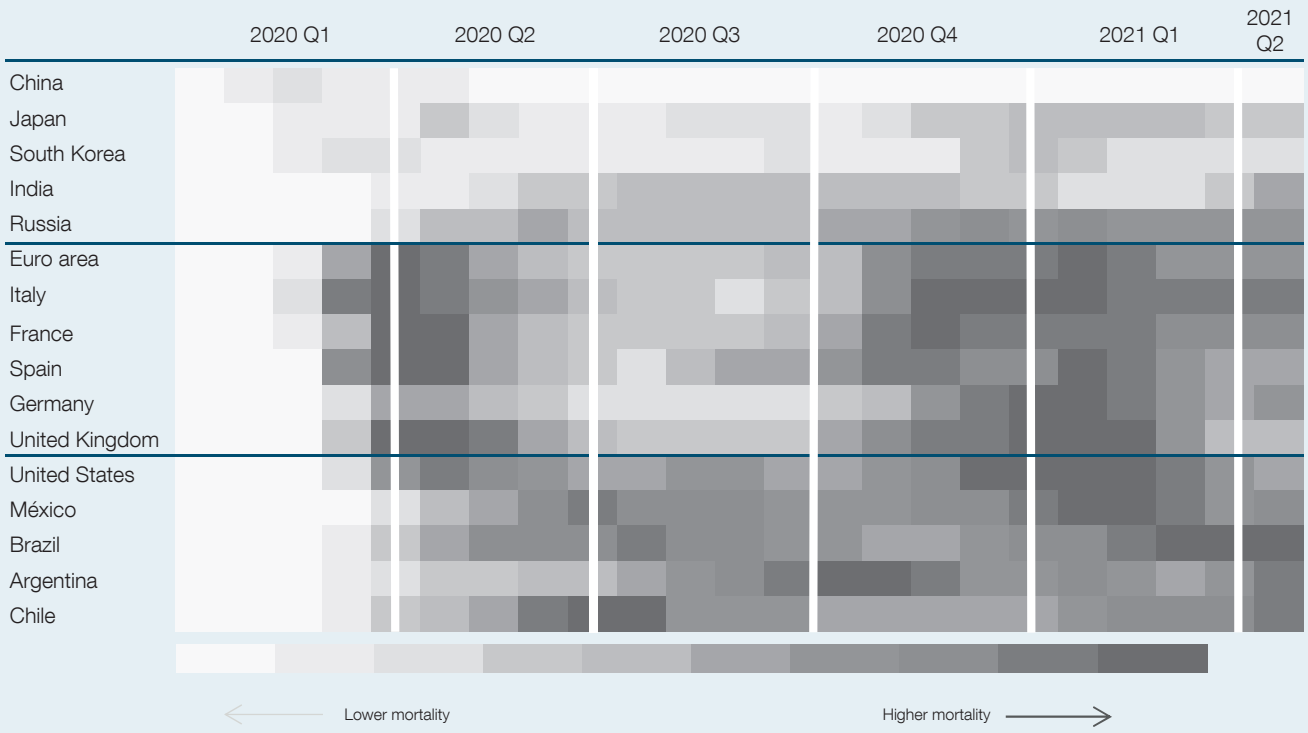
SOURCES: World Bank, Bloomberg, Duke Global Health Innovation Center, Johns Hopkins University - Coronavirus Resource Center, Our World in Data, COVID-19 INED, COVerAGE-DB, Reuters, Oxford COVID-19 Government Response Tracker and Rungcharoenkitkul (2021).

a Asia includes Russia.
b The United Kingdom data are for England and Wales; the euro area data are for Germany, Spain, France and Italy.
c Vaccines acquired under the COVAX initiative as a percentage of the population of emerging countries.
d Scenarios considered by Rungcharoenkitkul (2021). The "baseline" scenario assumes linear progress in the rate of vaccination until all the doses ordered have been exhausted at the end of 2021. Under the "slow vaccination" scenario vaccination proceeds at a third of the rate under the "baseline"scenario. The "reinfection" scenario assumes that people lose their immunity 60 days after infection or vaccination.

in social interaction and mobility,[7] in some economies with the support of firms, through their expansion of teleworking, digitalisation and e-commerce.

The determinants of the heterogeneity in the incidence of the virus and mortality across countries and geographical areas remain uncertain. The literature points to a set of factors that may partly account for it. For example, some studies associate greater spread of the disease with certain structural characteristics linked to personal interaction patterns, climate,[8] population concentration and the productive system (the latter on account of the different importance of the activities that can benefit from teleworking and of those that involve a high degree of human contact). Other possible reasons for the asymmetric impact of the pandemic by country include the demographic structure of the population, given the higher mortality in older age groups (see Chart 1.4), the quality of health systems[9] and the proportion of the population that has acquired immunity having recovered from the illness or been vaccinated. A second group of factors is more related to sociological characteristics. For example, societies with customs involving more physical contact can be expected to have greater difficulty containing the spread of the virus, while those with prior experience of this type of disease should be better prepared.[10] As already mentioned, the selection of the health strategy in each country may also have affected the heterogeneity observed in the incidence of the pandemic.

Chart 2
DEATHS PER CAPITA, BY COUNTRY (a)



SOURCE: WHO.

a Each shaded area corresponds to a 21-day interval.

7 See W. Maloney and T. Taskin (2020), "Determinants of Social Distancing and Economic Activity during COVID-19: A Global View", Policy Research Working Paper Series 9242, World Bank.

8 See C. Ghirelli, A. González, J. L. Herrera, and S. Hurtado (2021), *Weather, mobility and the evolution of the Covid-19 pandemic,* Working Papers, No 2109, Banco de España.

9 See Sussman (2020), "Time for Bed(s): Hospital Capacity and Mortality from COVID-19", *Covid Economics,* 11.

10 See A. Buesa, J. J. Pérez and D. Santabárbara (2021), "Awareness of pandemics and the impact of COVID-19", *Economics Letters,* forthcoming and Working Papers, Banco de España, forthcoming.

Box 1.1
GLOBAL EPIDEMIOLOGICAL DEVELOPMENTS (cont'd)

The availability of various effective vaccines for COVID-19, within months of the pandemic emerging, is considered a medical milestone and key to overcoming the health crisis.[11] In particular, gradual immunisation of the population is expected to be accompanied by a reduction in mortality, the lifting of containment measures and a gradual return to normal of social and economic activity. The worldwide vaccination campaign was launched in December 2020 and, so far, 2% of the global population has been immunised. In addition, there are those who have some natural immunity as a result of having had the disease. Also, medical treatments have been developed that are reducing mortality and the after effects of the disease. Countries have already acquired sufficient vaccines to vaccinate more than 60% of the world population, which could be compatible with control over the disease this year, as long as they do not lose their effectiveness.[12] However, access to vaccines in advanced economies is much greater than in other countries despite the initiatives taken to boost the supplies to developing countries[13] (see Chart 1.5). Vaccine roll-out at global level is highly uneven across countries, owing to the supply contracts with pharmaceutical companies, the logistical challenges of the different types of vaccines acquired and the capacity of health systems to administer them to the most vulnerable groups.

This baseline scenario, under which the disease is controlled this year, is uncertain, however, and a global medical solution may be delayed (see Chart 1.6). Thus, on one hand, it is possible that the vaccination plans are optimistic and may not be fulfilled. On the other hand, of particular concern is a possible loss of immunity due to the emergence of new variants of the virus – some of which may be more contagious or lethal – that reduce the effectiveness of the current vaccines and naturally acquired immunity. In this respect, virus mutations that result in a loss of immunity may be encouraged by excessively cautious vaccination strategies that delay complete immunity or that cover only part of the world population.[14] This scenario of heightened persistence of the pandemic may entail the need for intermittent containment measures.[15] Finally, when the pandemic is over, the disease could become seasonal, requiring regular prevention and vaccination drives.

Against this background, it is crucial that the authorities continue to strengthen health systems, in particular their preventive and rapid response capabilities, as well as the supply of vaccines and other medical equipment. In a global setting, for personal mobility to return to normal, international cooperation is also required, to ensure universal access to vaccines and the medical treatments available.

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11 Several effective COVID-19 vaccines have been developed and clinically tested in record time (less than a year). This rapidity, facilitated by the financing available and the speeding up of approval processes, has also been a consequence of past experience in the development of vaccines against other recent diseases (e.g. SARS and MERS). For further information, see S. Su, L. Du and S. Jiang (2020), "Learning from the past: development of safe and effective COVID-19 vaccines", *Nature Reviews Microbiology,* 19, 211–219.

12 See Rungcharoenkitkul (2021), "Macroeconomic consequences of pandexit", Working Papers, No 932, BIS.

13 Notably, the *COVAX (Covid-19 Vaccines Global Access)* initiative, which aims for fair access to vaccines through a joint purchase mechanism for distribution among the emerging countries.

14 See O. J. Wouters, K. C. Shadlen, M. Salcher-Konrad, A. J. Pollard, H. J. Larson, Y. Teerawattananon and M. Jit (2021), "Challenges in ensuring global access to COVID-19 vaccines: production, affordability, allocation, and deployment", *The Lancet.*

15 Experience with other diseases suggests there is a risk it will become chronic. See D. Morens and A. Fauci (2020), "Emerging Pandemic Diseases: How We Got to COVID-19", *Cell* 182(5).

Box 1.2

THE EU RESPONSE TO THE COVID-19 ECONOMIC CRISIS AND ITS NEW GOVERNANCE CHALLENGES

The European Union (EU) has forged consensus around a common response to the economic crisis caused by the COVID-19 pandemic (see Figure 1).[1] This response has significantly complemented the likewise resolute reaction of monetary policy. Particularly notable among the various initiatives approved is the creation of the *Next Generation EU* (NGEU) recovery tool, set out in greater detail in Chapter 2 of this Report. Though temporary, this programme is an unquestionable milestone in the Union's integration project, as it contains unprecedented elements of pooled solidarity and accountability.[2]

This ambitious response – reflecting partly the lessons learned in previous crises – has evidenced the EU's capacity for resolve and joint action. But it has also highlighted the need to continue strengthening its economic governance. This box sets out some of the main courses of future action needed to reinforce the European economic and financial architecture.

One such area for action of particular significance is the reform of European fiscal rules. In February 2020, the European Commission (EC) launched a review of fiscal governance, which was interrupted by the COVID-19 crisis and by the activation of the General Escape Clause (GEC).[3] Adding to the reasons then identified for this review[4] – among which were the excessive complexity of fiscal rules, which has led to a lack of transparency and predictability, and their inability to prevent fiscal policy procyclicality – is the strong worsening of national public finances as a result of the pandemic and the need to safeguard public investment.[5] According to the EC's proposal, and in order to preserve the fiscal impulse needed to entrench the recovery from the current crisis, the GEC will not be deactivated until the EU attains its pre-pandemic level of economic activity.[6] However, the review of the fiscal rules should be resumed as soon as possible.

Another key component of the reform agenda is the creation of a common and permanent fiscal capacity in the euro area to address serious adverse shocks. That would prevent the European economic policy response in these episodes from having to depend essentially on ad hoc political agreements.[7] This macroeconomic stabilisation mechanism would allow a common response to both systemic and idiosyncratic shocks, ensuring fiscal policy countercyclicality.[8] This fiscal capacity might consist of an investment support instrument (which would contribute to raising the region's potential growth), the funding of common European projects (e.g. in the environmental and digital realm) or European unemployment insurance.[9] Undoubtedly, with a view to establishing a permanent instrument of this type, at least for the euro area, it will be crucial to take in and draw inspiration from the lessons that may be learned from the design and implementation of the temporary programmes NGEU and SURE (Support to mitigate Unemployment Risks in an Emergency).

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1 For a more detailed description of the various elements of the EU response to the pandemic, see, for example, Banco de España (2020), Chapter 3, *Annual Report 2019* and L. Guirola, I. Kataryniuk and C. Moreno (2020), "Fiscal policy response to the crisis in the euro area and the United States", Box 2, *Economic Bulletin,* 4/2020, Banco de España.

2 Chapter 2 of this Report analyses in depth the characteristics and implications of this programme. In addition, see Banco de España (2020), "Next Generation EU: main characteristics and impact of its announcement on financial conditions", and J. J. Pérez (2020), Thoughts on the design of a European Recovery Fund, Occasional Paper, no. 2014, Banco de España.

3 See European Commission (2020), "Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions. Economic governance review", COM(2020) 55 final and "Communication from the Commission to the Council on the activation of the general escape clause of the Stability and Growth Pact", COM(2020) 123 final.

4 See Box 4 "The reform of the fiscal surveillance framework in Europe", *Economic Bulletin,* 1/2020, Banco de España.

5 See Box 3.4 "The importance of an internationally coordinated fiscal policy response and its interaction with monetary policy", *Annual Report 2019,* Banco de España, and M. Delgado-Téllez, E. Gordo, I. Kataryniuk and J.J. Pérez (2020), *The decline in public investment: «social dominance»' or too-rigid fiscal rules?,* Working Paper no. 2025, Banco de España.

6 On current forecasts, this criterion would entail the deactivation of the GEC in 2023. However, once the GEC is deactivated, it may be necessary to resort to flexibility in the application of the Stability and Growth Pact (SGP) in those Member States that have not yet recovered the pre-crisis level of economic activity. See European Commission (2021), "Communication from the Commission to the Council. One year since the outbreak of COVID-19: fiscal policy response", COM(2021)105 final.

7 See European Fiscal Board (2020), *Annual Report 2020.*

8 For an analysis of the stabilisation capacity of a centralised fiscal capacity, see P. Burriel, P. Chronis, M. Freier, S. Hauptmeier, L. Reiss, D. Stegarescu and S. Van Parys (2020) *A fiscal capacity for the euro area, lessons from existing fiscal-federal systems*, Occasional Paper no. 2009, Banco de España

9 For an analysis of the macroeconomic consequences of these instruments, see Chapter 4, "Fiscal policy in the euro area", *Annual Report 2016,* Banco de España.

Figure 1
THE EUROPEAN RESPONSE TO THE COVID-19 CRISIS. REGULATORY AND FISCAL MEASURES APPROVED BY THE EU

Rapid or SHORT-TERM measures

Temporary added flexibility to common regulatory frameworks in different areas

- Easing of fiscal rules via activation of SGP escape clause (March 2020)
- Temporary framework of State aid (March 2020 and successive updates)
- Anti-crisis banking package (April 2020) and quick fix (CRR amendment) in June 2020

Triple safety net: support to employment and workers, firms and EU Governments
€540 billion

SURE (a)
€100 billion

Offers temporary support to mitigate unemployment risks in an emergency

Financial aid of €90.3 billion approved for 19 MSs.

€62.5 billion disbursed to 16 MSs as at 16 March 2021

EIB Group
€200 billion

Creation of pan-European guarantee fund for loans to firms

Loans of up to €200 billion for firms, especially SMEs, throughout the EU

Initial set of projects approved for €40.3 billion as at 28 February 2021

ESM
€240 billion

Creation of specific credit line of aid for MSs

Aid of 2% of GDP of each MS in 2019

Not yet used

EU Budget Amendments for 2020
Added funds to finance medical equipment and vaccine purchases worth €9.3 billion, and reorientation of cohesion funds to help MSs finance pandemic spending of €65.8 billion

MEDIUM-TERM measures

NEXT Generation EU
€750 billion

Recovery and Resilience Facility (RRF)
€672.5 billion

Regulation adopted by the Council on 11 February 2021

Support instrument for reforms and investment undertaken by EU countries in the form of

- Grants: €312.5 billion
- Loans: €360 billion

Other Programmes
€77.5 billion

Grants

REACT EU: €47.5 billion; Horizon Europe: €5 billion; InvestEU: €5.6 billion; Rural Development: €7.5 billion; Just Transition Fund: €10 billion, and RescEU: €1.9 billion

Multiannual Financial Framework (MFF) for 2021-2027
The MFF, worth €1.07 trillion and agreed by the European Council along with the NGEU Recovery Fund, will support invetment in the digital and ecological transitions, and economic resilience, via various programmes under the following headings:

- Single market, innovation and digital sector **€132.8 billion**
- Cohesion, resilience and values **€377.8 billion**
- Natural resources and environment **€356.4 billion**

SOURCE: Banco de España, based on EU.

a SURE stands for *Support to mitigate Unemployment Risks in an Emergency,* and MSs for "Member States".

Fiscal matters aside, the financing of the NGEU and SURE programmes will involve the issuance of a very significant volume of euro-denominated pan-European bonds.[10] These issues mark a major step on the road towards a European safe asset, although additional measures will be required in the coming years for its full development and consolidation. In this respect, a European safe asset would play a decisive role in weakening the link between bank and sovereign risk, promoting the international role of the euro[11] and fomenting the Capital Markets Union.[12][13] Indeed, the latter is a fundamental project – all the more so following the United Kingdom's withdrawal from the EU – for increasing the integration of European capital markets and promoting private risk-sharing channels.

Along with the need to further financial integration in the EU is that of preserving its most valuable economic integration mechanism, namely the single market. During the COVID-19 crisis, the flexibility of its regulatory framework was used to ensure the support of the Member States to their economies, e.g. through State aid. However, any such national measures must be prevented from potentially fragmenting the internal market or undermining the level playing field.[13] Looking ahead, the internal market must adapt to the changing circumstances of international competition, so as to preserve its external openness, but also to eliminate vulnerabilities. The design of an open strategic autonomy strategy seeks to strike this balance between the commitment to multilateralism and openness, and the goal of making European value chains more sustainable and resilient. To prevent certain aspects of this strategy from hampering convergence among the Member States and distorting the workings of the single market, these measures should be accompanied by mutual insurance mechanisms guaranteeing the necessary internal cohesion.[14]

The euro area's financial architecture and crisis-management framework must also be strengthened. To complete the Banking Union requires setting in place a European Deposit Insurance Scheme (EDIS) with a risk-pooling component that is as extensive as possible. A credible political commitment here would represent a decisive contribution to ensuring financial stability in the euro area in the short and medium term.[15]

As regards the crisis-management and bank resolution framework, the approved amendment to the Treaty establishing the European Stability Mechanism (ESM) is a positive achievement in itself as it will be conducive, inter alia, to this mechanism becoming the financial backstop to the Single Resolution Fund in the resolution of significant institutions. However, outstanding issues remain, such as the provision of liquidity to institutions in resolution, a common regulatory framework for resolution in the face of systemic crises and a common European procedure for the administrative winding up of credit institutions.

Finally, in the current circumstances, inter-governmental responses (as in the case of the ESM), which require unanimity for their approval, have been relegated in favour of responses firmly anchored in the EU framework.[16] It might be appropriate here to move forward with the EC proposal, backed by the ECB in 2018, to integrate the ESM as an EU body, so as to strengthen and cement its role in the management of future crises.[17]

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10 See M. Delgado-Téllez, I. Kataryniuk, F. López-Vicente, and J.J. Pérez (2020), *Supranational debt and financing needs in the European Union*, Occasional Paper no. 2021, Banco de España.

11 See P. Hernández de Cos (2019), "The EMU at 20: from divergence to resilience", opening remarks at the Banco de España *Third Annual Research Conference.*

12 See Box 4, "The Capital Markets Union: New developments", *Economic Bulletin,* 3/2020, Banco de España.

13 To achieve a sound and resilient recovery in the EU economy calls for a fully operational and more integrated single market that can redress the weaknesses identified during the crisis. See the Conclusions of the Council of the European Union (2020), "A deepened Single Market for a strong recovery and a competitive, sustainable Europe", 11 September.

14 See P. L'Hotellerie, M. Manrique and A. Millaruelo (2021), "Open strategic autonomy in the EU", Box 5, *Economic Bulletin,* 1/2021, Banco de España.

15 See P. Hernández de Cos (2020), *The European response to the COVID-19 crisis,* opening address at the Fundación Internacional Olof Palme Conference.

16 See A. Westerhof (2021), *Reform of the European Stability Mechanism signed: a landmark achievement fully respectful of EU constitutional and institutional limits,* EULawLive, Weekend Edition no 50.

17 See European Central Bank (2018), *Opinion CON/2018/20,* general observations.

Box 1.3

ECONOMIC POLICIES DEPLOYED TO MITIGATE THE LIQUIDITY RISKS OF FIRMS AND SOLE PROPRIETORS IN SPAIN AND THEIR INTERNATIONAL COMPARISON

The containment measures adopted in response to the health crisis have had a major impact on business activity, as reflected in a significant increase in firms' and sole proprietors' liquidity needs. At the same time, the increase in lenders perception of risk in debt markets prompted expectations of a tightening of financing conditions. In order to mitigate these liquidity risks, policymakers rapidly deployed economic policies in various areas, at both national and supranational level, the main features of which are described in this box.

In the area of fiscal policy in Spain, mention should be made of the public guarantee schemes managed through the ICO. The first guarantee scheme, for up to €100 billion, was aimed at financing the liquidity needs of firms and the self-employed. The second scheme, for up to €40 billion, was mainly targeted at financing fixed-asset investment, although its aims also include coverage of liquidity needs. Under these guarantee schemes, the government covers up to 80% of the potential losses on loans granted by financial institutions, thus supporting the supply of credit.[1] As at 31 March 2021, these two schemes had jointly provided loan guarantees for a total amount of €93.9 billion, representing total lending of €123.6 billon.[2] Furthermore, €4 billion of the envelope of the first scheme were used as a guarantee for commercial paper issued in the alternative fixed-income market (MARF by its Spanish abbreviation), €600 million of which have been taken up, and €500 million to back the counter-guarantees granted by Compañía Española de Reafianzamiento (CERSA). These amounts were reinforced through the second guarantee scheme.[3]

Furthermore, compared with other forms of bank lending, loans under the guarantee scheme are granted under favourable conditions in terms of both interest rate and maturity.[4] Following approval of the resolution of the Council of Ministers of 24 November 2020, the maximum term of loans granted was extended to eight years (from the initial five years in the guarantees provided under the first facility).[5] In addition, pursuant to Royal Decree-Law 5/2021, the deadline for granting of guarantees was extended to 31 December 2021. This Royal Decree-Law also extended to year-end the insolvency moratorium, which had been previously extended to 14 March 2021,[6] with the aim of preventing firms that continue to experience temporary, pandemic-related financial difficulties from having to file for insolvency and being eventually wound up.

In the other large European economies, public guarantee schemes for business loans were widespread and a high volume of funds was used, although with notable differences in terms of their specific features and take-up.[7] Among the largest euro area countries, France, Italy and Spain granted guarantees for a significant share of their GDP in early 2021, whereas Germany used these schemes to a lesser extent (see Chart 1). In particular, funds taken up in Spain reached 8.4% of GDP in 2020, 2.4 pp less than in Italy, but 6.5 pp more than in Germany. However, the take-up of guarantee schemes decreased in all these countries in the last few months of 2020 and at the beginning of 2021.

In the fiscal policy area, the various income support policies deployed have contributed to alleviating the financial position of firms. Noteworthy in this connection are furlough schemes (ERTE, by their Spanish abbreviation), under which companies whose business activity was affected by the COVID-19 crisis were allowed

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1 These guarantees generally cover up to 80% of potential losses on bank loans to the self-employed and to SMEs, and up to 70% on bank loans to companies that do not meet the European Commission's definition of SME.

2 Of the total amount guaranteed, €90.1 billion relate to the facility approved by Royal Decree-Law 8/2020 of 17 March 2020, and €3.8 billion to the facility approved by Royal Decree-Law 25/2020 of 3 July 2020.

3 At the cut-off date of this Report, €50 million of the second ICO guarantee facility had been used to secure commercial paper issued on the MARF by firms under arrangement with creditors, €250 million to secure commercial paper issued on the MARF by companies which could not benefit from the tranche of the first facility since they were in the roll-over phase of their commercial paper programme, and €500 million to reinforce the counter-guarantees provided by CERSA.

4 For further details, see Banco de España (2020), "Developments in bank finance for productive activities in the context of the COVID-19 crisis", Box 4.3, Annual Report 2019.

5 For transactions arranged prior to 18 November 2020, Royal Decree-Law 34/2020 made it possible to request from banks an extension of up to three years of the maturity of loans guaranteed under Royal Decree-Law 8/2020, and an additional extension of up to12 months of the grace period of loans granted pursuant to Royal Decree-Law 8/2020 and Royal Decree-Law 25/2020, with respect to initially agreed maturities and grace periods.

6 Royal Decree-Law 34/2020 of 17 November 2020.

7 For further details on the policies applied in other countries, see Cuadro Sáez, L., F. López Vicente, S. Párraga Rodríguez and F. Viani (2020), *Fiscal policy measures in response to the health crisis in the main euro area economies, the United States and the United Kingdom*, Occasional Papers, No. 2019, Banco de España.

to suspend employment contracts for a specific period of time, thus reducing their staff costs, while maintaining the labour relationship with their workers (see Chart 2). In particular, in Spain the number of workers covered by these schemes, which exceeded 3.5 million in April last year, was around 740,000 at end-March 2021. This instrument, which, as at the cut-off date of this Report, had been extended to 31 May 2021,[8] also partly exempts companies from social security contributions according to their size and situation. In addition, an extraordinary discontinuation of activity benefit was established for the self-employed affected by the health crisis. Altogether, these income support measures amounted to 2.5% of GDP in 2020.

Like Spain, France and Italy strengthened their partial and temporary unemployment regimes. Additionally, Germany made its existing short-time work compensation mechanism more flexible, whereas the United Kingdom and the United States opted to support employee retention through loans and grants. Furthermore, since the onset of the crisis, European countries also resorted to tax deferrals, tax exemptions or direct transfers. In view of the persistence of the pandemic, many of the measures adopted in the main euro area economies have been extended since their initial implementation and will be in force at least until the end of 2021.

To protect the business sector, liquidity support measures were also implemented in Spain through the deferral of loan instalments, of tax payments and of other charges. These measures allowed companies and sole proprietors to apply for a moratorium or deferral of social security contributions, and individuals to benefit from moratoria on mortgage and non-mortgage loans. Furthermore, moratoria were established for mortgage loans on property used for business activities in the tourism sector, and for payments under agreements to lend, lease or rent vehicles in the public transport of goods and the charter bus sector.[9] Based on the information available to end-March, the outstanding amount of loan payments suspended under these two types of moratoria for the tourism and transport sectors exceeded €2,495 million. Further measures were approved, such as the possibility

Chart 1
TAKE-UP OF PUBLIC GUARANTEE SCHEMES IN THE EURO AREA
Cumulative data from March 2020

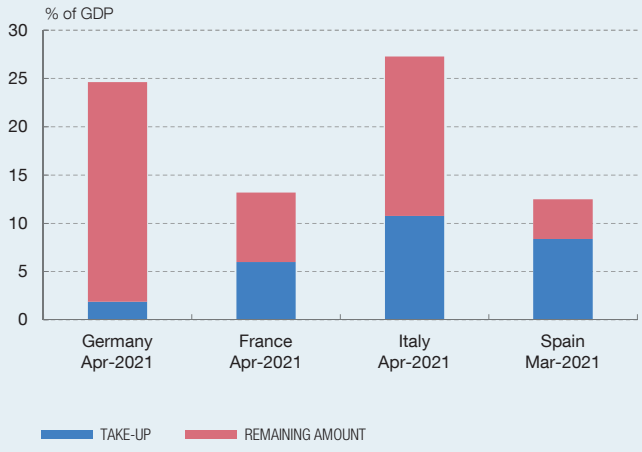
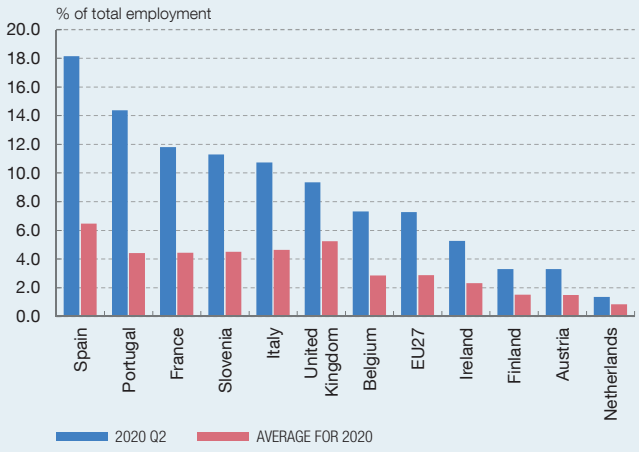


Chart 2
FURLOUGHED WORKERS



SOURCES: Banco de España, Bruegel, Eurostat, ICO, INE, KfW, Ministère de l'Économie, des Finances et de la Relance and Sace Simest.

8 Royal Decree-Law 2/2021 of 26 January 2021.

9 By Royal Decree-Law 3/2021 of 2 February 2021, which extended the deadline for application for these moratoria and adapted their maximum term, and under legislative and banking sector moratoria applicable to individuals, in accordance with the European Banking Authority guidelines in this connection.

of applying for moratoria on rental payments or for tax deferrals,[10] as well as measures adapting the calculation of taxes payable to the exceptional economic situation.

Since the outbreak of the pandemic, several industrialisation support measures were also implemented, some of which were subsequently reinforced. In Spain, the deadlines for repayment of the public loans managed by the General Secretariat for Industry and SMEs and the suspension of interest and principal payments on Emprendetur loans in the tourism sector were extended in March 2021. Moreover, international firms, or firms in the process of internationalisation, benefited, among other things, from expense refunds and grants as a result of the cancellation of international trade promotion activities, and from liquidity support for export companies through CESCE (the Spanish export credit agency).

In the monetary policy area, the ECB adopted several measures to support lending to the non-financial private sector by providing funding to banks on very favourable conditions.[11] In particular, the ECB introduced new longer-term refinancing operations (LTROs), improved conditions for targeted longer-term refinancing operations (TLTRO III operations, specifically designed to encourage lending to businesses and households) and eased its collateral framework to increase the amount of funds that banks can borrow in these operations.

Furthermore, the ECB introduced the Pandemic Emergency Purchase Programme (PEPP) to ease financing conditions in the euro area and to address the emerging financial fragmentation across jurisdictions. The maximum purchase amount is currently €1.85 trillion.[12] The design of the PEPP allows for great flexibility in the distribution of asset purchases over time and across jurisdictions to achieve its objectives more effectively.

Finally, financial policies have also played a role in supporting bank lending to businesses. Specifically, both macroprudential and microprudential capital and liquidity requirements for European banks were eased. In addition, European regulations on capital requirements were amended by modifying rules affecting sovereign exposures, impairments on non-defaulted exposures, SME support factors and software development deductions, among other elements of bank capital calculation. In general, these regulatory amendments involve an increase in capital ratios, leaving banks with larger buffers to absorb potential losses on their loan portfolios and to increase their capacity to provide new lending.

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10 Royal Decree-Law 5/2021 of 12 March 2021 extended to four months the period in which no late-payment interest is accrued on tax payment deferrals that had already been established in Royal Decree-Law 35/2020 of 22 December 2020.

11 For further details on the monetary policies implemented, see Aguilar, P., Ó. Arce, S. Hurtado, J. Martínez-Martín, G. Nuño and C. Thomas (2020), *The ECB monetary policy response to the COVID-19 crisis,* Occasional Papers, No 2026, Banco de España.

12 For more details on the impact of this measure on the financial conditions in the euro area, see Banco de España (2020), Box 3.3, *Annual Report* 2019.

2

THE SPANISH ECONOMY POST-COVID-19: STRUCTURAL CHALLENGES AND POLICIES TO ADDRESS THEM

THE SPANISH ECONOMY POST-COVID-19: STRUCTURAL CHALLENGES AND POLICIES TO ADDRESS THEM

1 Introduction

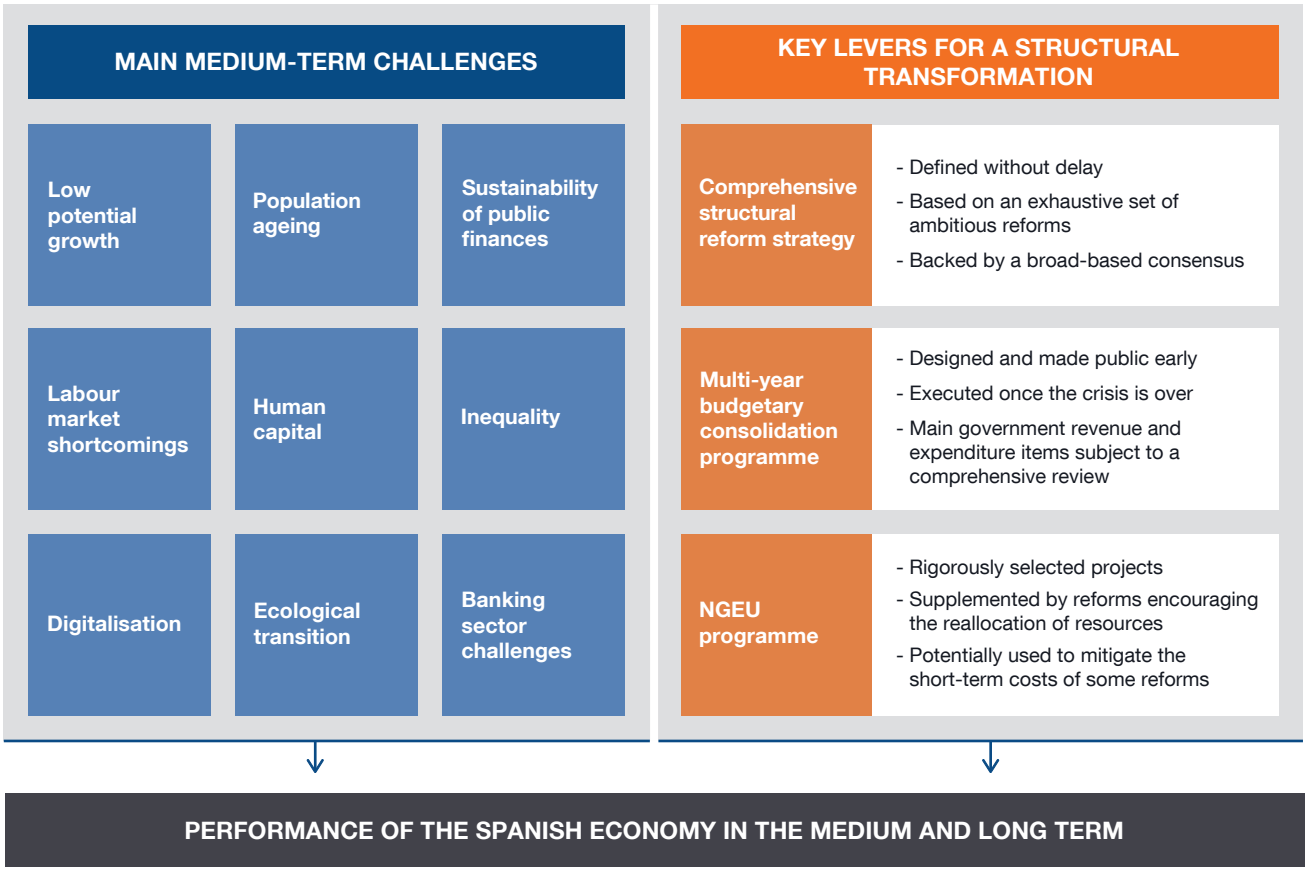
The medium and long-term outlook for the Spanish economy hinges not only on overcoming the present health crisis but also on addressing a series of key structural challenges. Chapter 1 of this Report describes the different dimensions of the profound impact of the COVID-19 pandemic on the Spanish economy, and suggests various factors that may shape Spanish and global economic momentum in the coming quarters. However, on a broader time scale, the future performance of the Spanish economy will depend essentially on the way in which Spain addresses, in the coming years, a series of structural challenges that are of enormous relevance for economic momentum.

Many of the challenges that the Spanish economy will have to face in the coming years existed before the outbreak of the pandemic. As analysed in depth in the Banco de España's 2019 Annual Report, before the present health crisis began, the Spanish economy already faced the need to increase growth potential, correct dysfunctions in several goods and factor markets (including the labour market), enhance the sustainability of public finances and address important challenges linked to population ageing, inequality and climate change.

However, the pandemic has magnified some of these challenges and has also posed some new ones (see Section 2). In particular, the present crisis has led to a further substantial deterioration in public finances, it has highlighted again some of the main shortcomings of the Spanish labour market, it has had an adverse impact on the already fragile outlook for the banking sector and, although it is still early to offer a precise assessment, it will probably also adversely affect economic growth potential and inequality. At the same time, the pandemic has posed new challenges, the most obvious of which relate to the major changes in the behaviour patterns of households and firms brought about, in a very short space of time, by the health crisis. Some of these changes, for example those linked to greater digitalisation of economic activity, could have important structural consequences, and swift and efficient adaptation will be essential. In addition, certain international trade disruptions in the early stages of the pandemic, although apparently only temporary, could give rise to a series of profound changes in the trade globalisation process.

The Spanish economy has three main levers with which to address these challenges (see Section 3 and Figure 2.1). The scale and complexity of the challenges that will shape the future of the Spanish economy in the medium and long-term demand a profound structural transformation in the coming years. Broadly speaking,

Figure 2.1
THE MAIN MEDIUM-TERM CHALLENGES FACING THE SPANISH ECONOMY AND THE KEY LEVERS FOR ADDRESSING THEM



SOURCE: Banco de España.

the Spanish economy has three essential and closely interconnected tools to undertake this transformation: the design and approval of an ambitious structural reform agenda, the definition and execution of a multi-year budgetary consolidation programme once the present crisis is over, and the implementation of various public investment programmes and initiatives linked to the Next Generation EU (NGEU) European recovery programme.

It is essential that an ambitious, comprehensive structural reform strategy be defined and implemented without delay, backed by a broad-based consensus to ensure that it is a strategy designed to last (see Section 3.1). Within this overall growth strategy certain essential lines of action stand out. In particular, to boost productivity, policies should be rolled out that encourage both business growth and human and technological capital accumulation. The structural shortcomings of the Spanish labour market must be corrected, reducing the high duality between workers with temporary and permanent employment contracts and undertaking an in-depth review of active labour market policies. In addition, the numerous economic implications of population ageing should be addressed with decisive action in

various spheres, for example, promoting longer working lives for older workers and analysing the reasons for Spain's low fertility rate. The financial sustainability of the public pension system must also be reinforced, based on a rigorous debate that includes an assessment of the level of benefits to be provided by the system and the resources committed to fund them. Moreover, to mitigate the adverse effects of high levels of inequality, public policy measures across a wide range of areas must be rolled out and continuously assessed. These include income policies, regulatory reform of the labour market and measures to encourage a sustained increase in the supply of rental housing. Also, moving towards a more sustainable growth model and mitigating the effects of climate change will require a profound economic and technological transformation. In this respect, it is essential that the numerous implications of each economic policy initiative adopted be rigorously assessed and that the highest possible level of international coordination be sought.

Once the ongoing recovery takes hold, a rigorous process of restructuring public finances is needed, to rebuild fiscal space and reduce the financial and macroeconomic vulnerability stemming from persistently high levels of government indebtedness (see Section 3.2). To enhance the credibility of this process, early definition and communication of its main characteristics would be desirable, along with the active participation of all tiers of general government with budgetary powers, accompanied by the implementation of an exhaustive set of structural reforms. The consolidation process must also be based on a comprehensive review of all budget items, including an assessment of the efficiency of expenditure outturn and public revenue-raising, and a detailed analysis of the different possible implications of any budgetary intervention, both in terms of economic growth and redistribution.

In view of its scale and structural approach, the NGEU programme is a unique opportunity to drive the transformation of the Spanish economy, for the medium and long term, especially in the digital and environmental fields (see Section 3.3). To maximise the positive effects of this programme, the reforms contemplated in the Recovery, Transformation and Resilience Plan approved by the Spanish government on 27 April – many of which have implications in the areas mentioned above – will have to be properly defined and decisively implemented, and the different expenditure projects within the ten major areas of action established in the Plan carefully selected. In this respect, three aspects are particularly important. First, the projects should be selected under an appropriate public procurement framework and according to an appropriate design of methodologies for assessment of the different initiatives. Second, insofar as the funds from the NGEU programme should give rise to a far-reaching structural change in the economy, which will probably require a reallocation of resources among firms and among sectors, it should be ensured that there are no obstacles in the Spanish institutional framework that will hinder that process. This could require, in particular, making it easier for firms to enter and leave the market, and for established firms to grow, redesigning the incentives to encourage investment in R&D&I, and reformulating active labour market policies so as to facilitate the

transition of workers from firms and economic sectors in decline to other more dynamic sectors. Third, to encourage the introduction of certain structural reforms, it would be desirable to consider using part of the funds of the NGEU programme to ease the costs that these reforms, although beneficial in the medium and long term, may have for certain groups in the short term.

2 Some effects of the pandemic with potentially lasting implications

2.1 Impact on households

2.1.1 Changes in households' daily activity patterns: mobility, remote working and consumption habits

Since the start of the pandemic, the Spanish population's mobility patterns have changed in accordance with the different lockdown measures imposed at the national and regional level (see Figure 2.2). Google search data, according to mobile phone location data, show a sharp increase in persons remaining in their home and a lower level of travel to workplaces, retail outlets or transport hubs during the lockdown imposed in mid-March 2020. With the subsequent easing of the restrictions and the start of the return to normal, mobility was resumed and was virtually fully restored in the summer months. However, after the summer, mobility decreased again, especially after various measures were introduced by the different authorities to curb the second wave of the pandemic and the second state of alert was announced at the end of October. The indicators underline that the third wave, which occurred after the Christmas period, led to a further significant fall in the mobility indicator.[1]

The increase in remote working has contributed to the lower level of mobility during the working day. According to the Spanish Labour Force Survey (EPA), in 2020 Q2 16% of the population was working from home for more than half their working hours, compared with 4.5% in 2019. However, when the most stringent lockdown measures were eased, remote working declined again, to steady at around 11% of the population (11.2% in 2021 Q1), still distant from its potential level, which has been estimated at slightly over 30% of all workers.[2] By region, the growth in remote working in 2021 Q1 compared with the 2019 average was widespread, albeit significantly higher in Madrid and Catalonia (16 pp and 11 pp higher, respectively), while in all the other regions the increases were below 5 pp.[3] By sociodemographic group (see Chart 2.1), the increase in remote working among workers with a university education is notable. Lastly, in early 2021, only 6.7% of younger workers, between the age of 16 and 24, were working from home.

1 See Ghirelli et al. (2021), forthcoming.
2 See Anghel et al. (2020).
3 See Anghel and Lacuesta (2021).

Figure 2.2
SOME EFFECTS OF THE PANDEMIC WITH POSSIBLE LASTING IMPLICATIONS

SOURCE: Banco de España.

In any event, Spain's relatively small cities, small firm size, high ratio of temporary employment and low intangible investment are all elements that could limit the growth of remote working in Spain. According to the Banco de España Business Activity Survey (EBAE), within the same economic sector remote working is most common in urban areas, in large corporations that have few workers on temporary contracts and a higher proportion of intangible investment.[4]

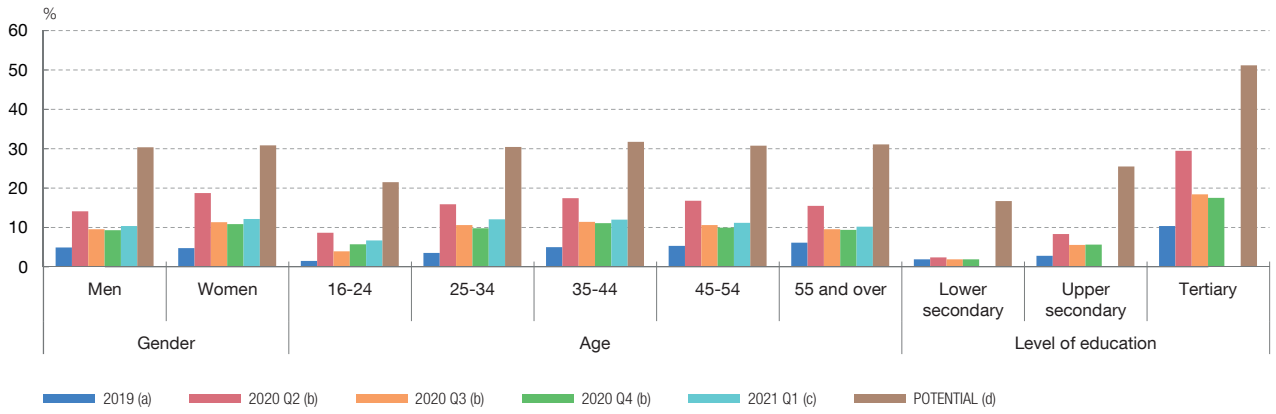
4 See Fernández-Cerezo et al. (2021).

Chart 2.1

REMOTE WORKING IS STILL FAR FROM REACHING ITS POTENTIAL

Spain's relatively small cities, small firm size, high ratio of temporary employment and low intangible investment are all elements that could limit the growth of remote working in Spain. Albeit limited, these changes could affect the recovery in demand for certain products, especially in the big cities.

PROPORTION OF PEOPLE WORKING REMOTELY AT LEAST HALF OF THE WORKING WEEK, BY SOCIODEMOGRAPHIC GROUP



SOURCE: INE (EPA, microdata from the 2019 annual sub-sample and the 2020 living conditions module).

a Using the EPA definition of remote working, based on the question "Did you work from home in the last four weeks (possibility envisaged in your employment contract)?". Possible responses are: "More than half the days I worked"; "Occasionally"; and "No". The chart includes the figures for workers who answer "More than half the days I worked".
b Using data from the working conditions module that has included an identical question to (a) in the EPA since 2020 Q2.
c Education-level data not publicly available provided by the INE bilaterally to 2020 Q4.
d Using the method in Dingel and Neiman (2020). The application of this method to Spain can be found in Anghel et al. (2020).

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These changes in remote working, albeit limited, could affect the recovery in demand for certain products, especially in the big cities. Drawing on data from metropolitan areas in the United States, it has been estimated that working from home could reduce spending in city centres by between 5% and 10%.[5] In the case of Spain (see Box 2.1), certain changes are already being observed in the real estate market as a result of these behaviour patterns. In particular, in terms of house purchases, demand is shifting from the big cities to less densely populated municipalities with lower housing prices. This trend had already been observed before the pandemic but it has quickened with the crisis. In the commercial real estate market demand has declined across the board, most notably in the office sub-segment and in the major city centres.

As people have spent more time in the home, e-commerce has surged, and it will continue to grow in the future as digital skills become more widespread. According to the INE's survey on ITC equipment and its use in households, conducted between March and September 2020, 53.8% of the population between the ages of 16 and 74 had made online purchases for personal reasons in the last three months, compared with 46.9% in the survey conducted between February and May 2019.

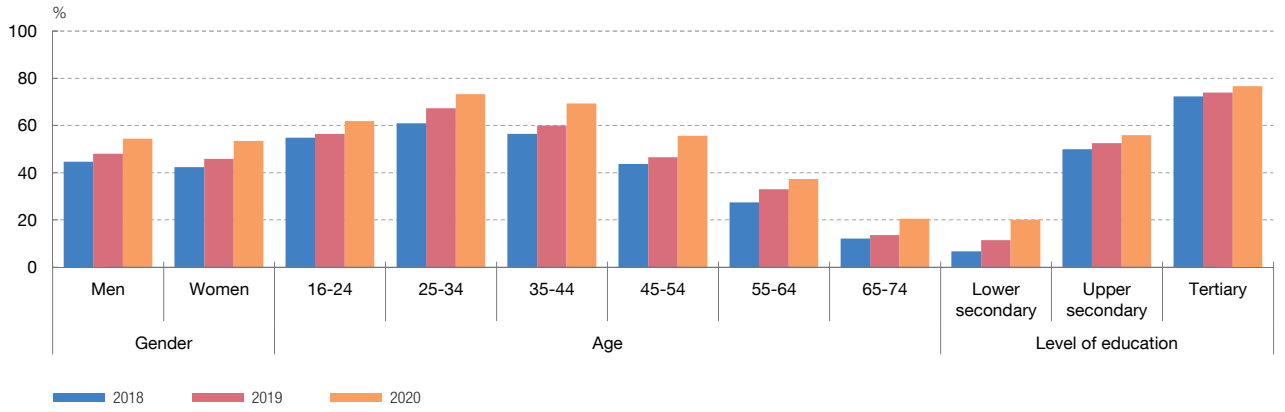
5 See Barrero et al. (2020).

Chart 2.2

E-COMMERCE WILL CONTINUE TO GROW IN THE FUTURE AS THE POPULATION'S DIGITAL SKILLS IMPROVE

The relatively lower use by young people was because they had no card for online payment, whereas in the case of the older population and those with a lower level of education it was on account of a lack of skills and knowledge. The greater use of e-commerce should encourage competition among firms and reduce demand for the products of less competitive firms.

PERCENTAGE OF THE POPULATION THAT HAS MADE AN ONLINE PURCHASE IN THE LAST THREE MONTHS, BY SOCIODEMOGRAPHIC CHARACTERISTICS



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SOURCE: INE (Survey on ITC equipment and its use in households, 2018-2020).

The survey also shows an – albeit more moderate – increase in the average number of purchases in the last three months (4.9 in 2020 compared with 4.4 in 2019) and in the estimated average expenditure per purchaser (€273.8, up 3% on the previous year's survey). There are significant demographic differences in the use of e-commerce by age and level of education (see Chart 2.2). In particular, the level of use is lower among those under 24 and, especially, among those over 55, and also among groups that have less than upper secondary education. According to a question included in the INE's 2019 survey, the relatively lower use by young people was because they had no card for online payment, whereas in the case of the older population and those with a lower level of education it was on account of a lack of skills and knowledge. In 2020, the highest rate of growth was recorded among those groups who had previously made less use of e-commerce, thus narrowing the gap between the different population groups. This dynamism may be expected to continue in the future, on account of the generational change and increasing knowledge of new technologies.

The greater use of e-commerce should encourage competition among firms and reduce demand for the products of less competitive firms. The EBAE also provides information on the type of outlets that are selling their products online. In this case, the use of e-commerce among firms in the same economic sector is similar, once productivity is taken into account. In fact, this is the most determinant factor in the differences observed in the extent to which firms use e-commerce. In the future, this may lead to a shift of sales from less competitive

to more competitive firms, with the consequent benefit for consumers in terms of lower product prices.[6]

Electricity consumption permits analysis not only of mobility during the working day, but also of changes in households' behaviour as regards recreational activities and also sleep patterns. [7] Up to the end of the summer (see Charts 2.3.1 and 2.3.2), Spanish households' electricity consumption between 07:00 and 09:00 was lower, partly because schools were closed and fewer people were travelling to work. However, when schools reopened in September, this lower than usual electricity consumption in the early morning disappeared (see Charts 2.3.3 and 2.3.4). In the summer, electricity consumption between 21:00 and 23:00 was very similar to the pre-pandemic pattern, despite the low levels of both domestic and international travel (see Chart 2.3.2). Yet during the second and third waves of the pandemic, household electricity consumption was abnormally high between 21:00 and 23:00. This would appear to denote more time spent in the home and, therefore, less time spent on recreational activities outside the home in this time band (see Charts 2.3.3 and 2.3.4). The increase in electricity consumption in the evenings was particularly acute in the latter part of October, when some regional governments had ordered the closure of bars and restaurants and following the imposition of a nationwide curfew at 23:00. But this increase in consumption was already noticeable in September and early October, when these restrictions were not yet in force.[8] This voluntary behaviour could be due to a greater awareness of the risks of mobility as from the second wave, by contrast to the behaviour observed in the summer. If this pattern continues, when the restrictions on hospitality and recreational services are withdrawn the consumption recovery could be slower if by that time Spain has not achieved widespread population immunity.[9]

2.1.2 Employment

The adverse impact of the pandemic on employment is being felt most acutely by the most vulnerable workers. As described in Section 3.1 of Chapter 1, at the

6 See Goldmanis et al. (2010) for different examples in the United States from three industries: travel agencies, bookstores and new car dealers. In the case of Spain, Lacuesta et al. (2020) present aggregate-level evidence on the effect that the use of e-commerce has had on mark-ups and profit that is consistent with this assumption.

7 Drawing on Bover et al. (2020). The following analysis draws on information on the hourly electricity consumption of households that pay the regulated rate for small consumers published on the website of Red Eléctrica de España (REE, the Spanish electricity grid operator). At present, around 40% of all Spanish households pay this rate. However, it could be assumed that the behaviour of these households is representative of the sector overall, since in accordance with Fabra et al. (2021), households' characteristics are similar, whether they pay this rate or the free-market rate. In addition, according to the National Commission on Markets and Competition (CNMC) (2019), 80% of consumers are not aware of the differences between this rate and a free-market rate.

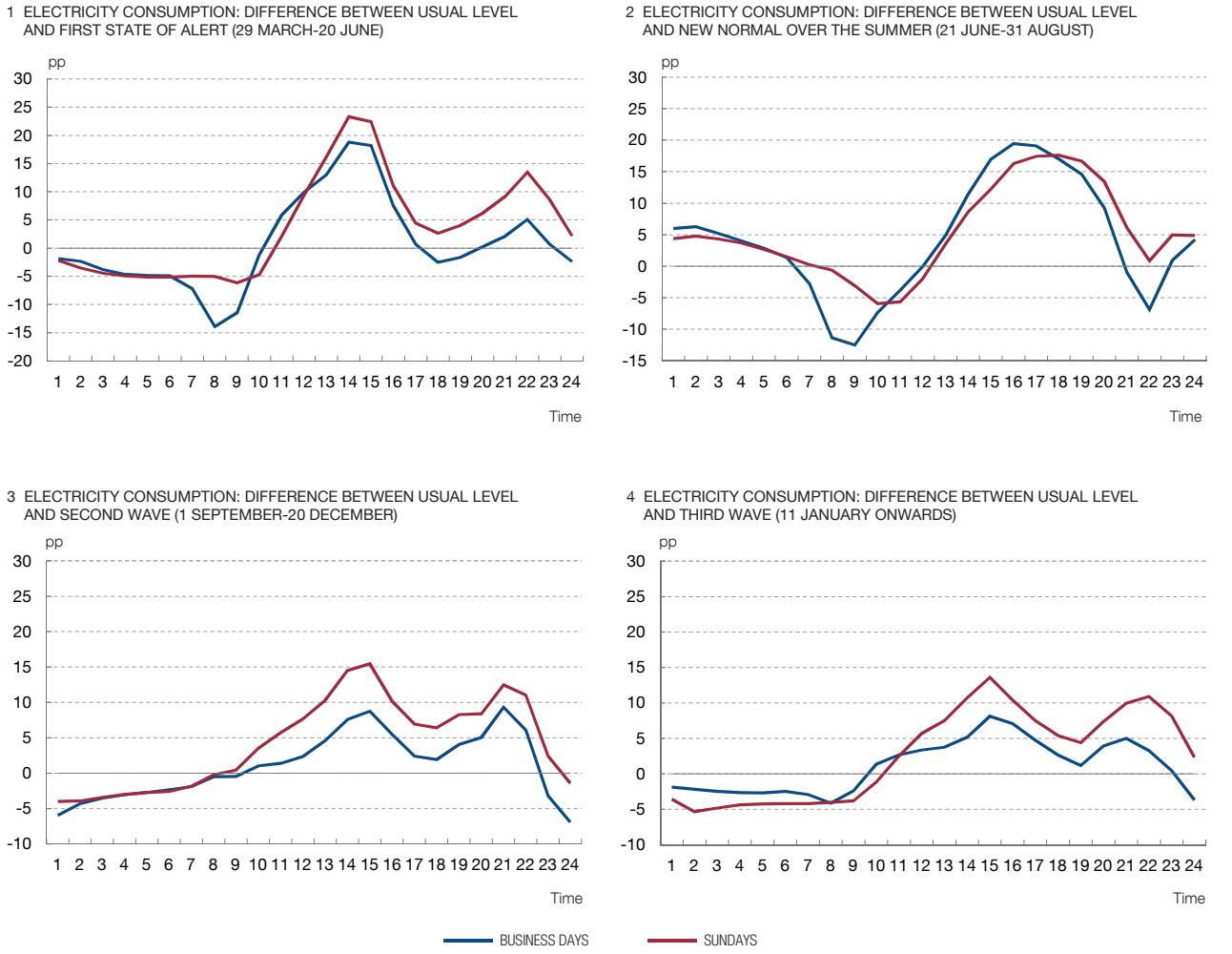
8 See Goolsbe and Syverson (2020) and Gupta et al. (2020).

9 Different articles suggest, using different identification strategies based on regional variations, that a large part of the decrease in mobility was voluntary. See Carvalho et al. (2020) for Spain, Baker et al. (2020) and Cavallo (2020) for the United States, Andersen et al. (2020) for Denmark, Bounie et al. (2020) for France and Seiler (2020) for Switzerland.

Chart 2.3

THE PANDEMIC HAS RESULTED IN FEWER RECREATIONAL ACTIVITIES OUTSIDE THE HOME AND CHANGES IN SLEEP PATTERNS (a)

The increase in electricity consumption in the evenings as from the second wave could be due to a greater awareness of the risks of mobility. Should this pattern continue in the future, when the restrictions on hospitality and recreational services are withdrawn, the recovery in consumption of these services could be slower if by that time Spain has not achieved widespread population immunity.



SOURCE: Banco de España calculations, drawing on REE data.

a See Bover et al. (2020) for details on the methodology. The first step is to extrapolate the electricity consumption of all households from REE data on consumers that pay the regulated rate for small consumers. The usual consumption between 2015 and 2019 is then calculated for each hour of each day of the week (Monday, Tuesday, etc.) as the residual of a regression of the log electricity consumption on dummy month, year, public holiday, temperature and temperature squared variables. For each period and hour, the charts show the average difference between the electricity consumption of all households and its usual value factoring in the day of the week.

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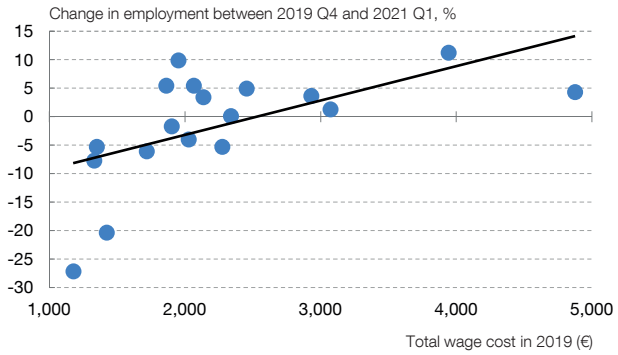
start of the health crisis there was a sharp slump in the Spanish labour market which has reversed only partially in recent quarters. Apart from the scale of this aggregate impact, the fact that it is the most vulnerable groups of workers who have again, as in previous downturns, been the most affected by this crisis stands out. In particular, comparing the EPA data for 2021 Q1 with the pre-pandemic data (2019 Q4), it can be seen that the health crisis has had most impact on employment in those areas of activity that employ a larger proportion of workers who command lower wages (see Chart 2.4.1). In addition, over this period, labour market deterioration was especially

Chart 2.4

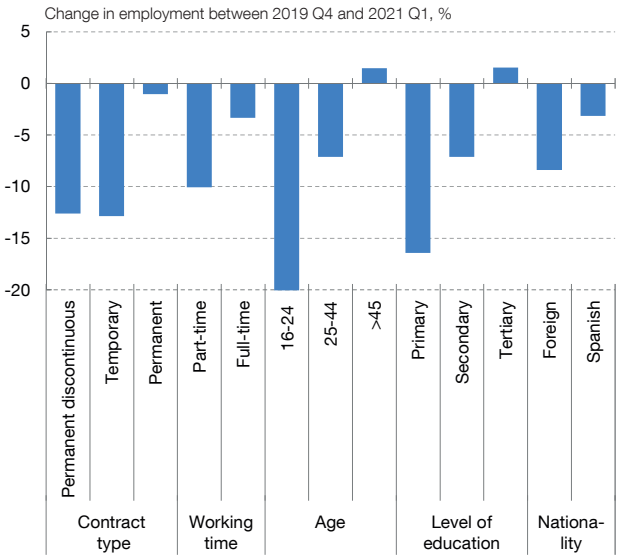
THE PANDEMIC HAS HAD A GREATER IMPACT ON THE EMPLOYMENT OF THE MOST VULNERABLE GROUPS OF WORKERS

Apart from the marked adverse impact that the COVID-19 pandemic is having on aggregate employment, the most vulnerable groups of workers are, as in previous recessions, the hardest hit in this crisis. Specifically, employment has worsened significantly more in low-wage sectors and, by group of workers, for employees with temporary or part-time contracts, the youngest workers and those with a lower level of education. Should these labour market dynamics persist, they could heighten inequality in Spain and hamper the economy's growth potential.

1 CHANGE IN EMPLOYMENT AND WAGE LEVEL, BY SECTOR



2 IMPACT OF THE CRISIS, BY GROUP OF WORKERS



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SOURCE: INE (EPA and quarterly labour costs survey).

acute for employees with temporary contracts – for whom employment fell by 12.9%, much higher than the drop of 1.1% for employees with permanent contracts – and for those who work fewer hours, either with part-time or permanent discontinuous contracts (for whom employment fell by 10.1% and 12.6%, respectively) (see Chart 2.4.2). The decline in employment was also concentrated among younger workers, with a fall of 20% for those in the 16 to 24 age group, and among those with a lower level of education and foreign workers (for whom employment fell by 8.4% during the period analysed, compared with the decline of 3.2% for Spanish nationals).

Overall, these groups of workers predominate in the economic sectors that require a high degree of social interaction and whose future recovery prospects are more uncertain. In this respect, if these labour market dynamics were to persist, they could heighten inequality in Spain and hamper economic growth potential, insofar as there could be a persistent adverse impact on the future employability of these more vulnerable workers.

The pandemic may quicken the process of automation of certain occupations and the need to reallocate workers to other tasks. The fact that a more intensive

use of new technologies has reduced the risk of spread of the virus would seem conducive to this kind of investment. This could accelerate the phasing-out of certain jobs that are mainly devoted to performing automatable tasks.[10] This would be in addition to the lower rate of creation of employment in routine tasks that has been observed at the global level in expansionary periods over the last 30 years.[11] In any event, automation of certain tasks does not necessarily imply a fall in the aggregate employment rate, but rather an increased need for certain groups of workers to change the type of tasks they perform. In consequence, certain innovations may give rise to high productivity growth or even to the creation of new tasks which, in short, would boost employment demand.[12]

This reallocation of tasks could be significant in Spain, especially in occupations that are currently primarily held by women and by workers with a low level of education. Although it is not easy to measure either the risk of automation or the risk of infection at work, various studies point to Spain as one of the OECD countries where both risks could affect a higher proportion of the population.[13] Considering the demographic characteristics of the workers who would be most affected by both risks, it seems this process would have a particularly harsh impact on occupations that are currently primarily held by women and by workers with a low level of education.[14]

2.1.3 Education

The pandemic has posed a fresh challenge for human capital among the new generations, whose level of education is still distant from the levels observed in other European countries. The real estate boom of 1995-2007 drove up the expected relative wages of young adults in work that required little education. As a result, many of the members of the generations born between 1976 and 1990 were early school leavers.[15] Accordingly, even though the education of the following generations was extended on account of the financial crisis that began in 2008, the percentage of young Spanish adults in the 25 to 29 age group who had not completed any post-compulsory education in 2019 was 32% for men and 23% for women, very far from the euro area average (17% and 14%, respectively).

Against this backdrop, the closure of schools and universities during the last term of the 2019/2020 academic year replaced face-to-face teaching with digital online home learning. When the state of alert was declared on 14 March

10 See Caselli et al. (2020).
11 See Jaimovich and Siu (2020).
12 See Acemoglu and Restrepo (2018) and Bessen (2020).
13 See Chernoff and Warman (2020) and OECD (2019).
14 See Chernoff and Warman (2020) and Blanas et al. (2020).
15 See Abramitzky and Lavy (2014), Aparicio-Fenoll (2016) and Lacuesta et al. (2020).

2020, all schools and universities in Spain were temporarily closed. In consequence, pupils and students alike had to complete their last academic term from home and schools and families had to adapt to online education. Access to digital educational resources soared across the country. However, when these data are matched with municipal-level tax data, it seems that although the increase in the use of online tools was widespread, it was higher in lower income per capita municipalities.[16] This could reflect the effort made by schools in rural areas to adjust, bringing them into line with the more habitual use of these tools in schools in urban areas.

This change in teaching methods in 2020 Q2 may have had an adverse impact on academic achievement in the short term, especially among the most disadvantaged groups. There is a host of literature which shows that fewer school days, as a result of legislative changes, length of summer holidays, extreme weather or strikes, negatively affect academic achievement.[17] The extent to which the use of digital resources at home may offset part of this loss must be analysed. To date, the post-pandemic evidence is not very encouraging. For example, in the United States it has been observed that, in schools with a higher proportion of low-income pupils, at the end of the year academic achievement in the digital math program Zearn had fallen by 50%.[18] Also, in the Flemish schools in Belgium, in 2020 pupils in the last year of primary school obtained significantly worse results in mathematics and language in the standardised tests conducted every year in June.[19]

To date there are no analytical studies on this issue for Spain, but as yet it seems that the pandemic has not accelerated early school leaving. Both the central government and the regional governments approved measures aimed at ensuring that the impact of the change in the education system would be minimal. Specifically, the central government adapted the criteria for assessment, moving up grades and qualifications in schools owing to the pandemic. In addition, the regional governments approved various measures that could improve achievement for pupils and students. In particular, they undertook to take on 38,525 new teachers, which will considerably boost the teacher/pupil ratio. For the 2020/2021 academic year, these measures should ease the adverse effects of the pandemic, provided that pupils remain in school. In addition, as was the case in the last financial crisis, the economic crisis has helped keep young people in formal education in view of the fewer economic opportunities available (see Charts 2.5.1 and 2.5.2). In any event, analysis is required of whether this longer time in the classroom is widespread and whether it includes lower income per capita areas. It is also too soon to know whether it will be reflected in higher skills being acquired and a higher probability of pupils obtaining better grades.

16 See Sanz et al. (2021).

17 Regarding each of these factors, see, for example, Pishke (2007), McEachin and Atteberry (2017), Goodman (2014) and Baker (2013), respectively.

18 See Chetty et al. (2020).

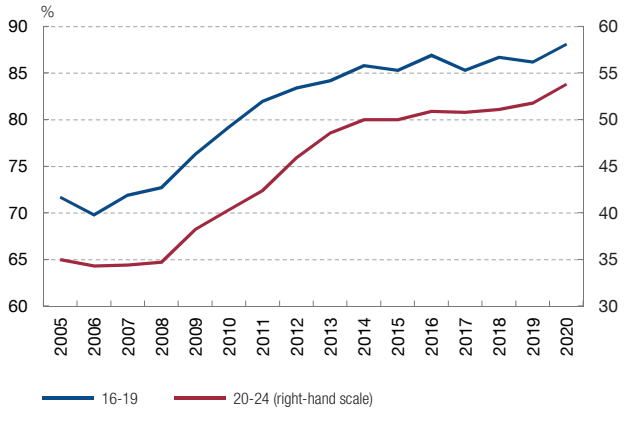
19 See Maldonado and de Witte (2020).

Chart 2.5

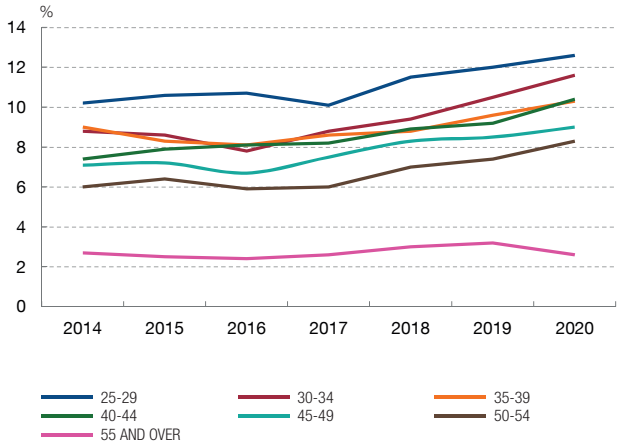
THE PANDEMIC HAS NOT ACCELERATED EARLY SCHOOL LEAVING

Despite the change in teaching methods, young people have remained in formal education in view of the fewer economic opportunities available. The over-55s reduced their participation in non-formal training, possibly because they prefer the face-to-face format.

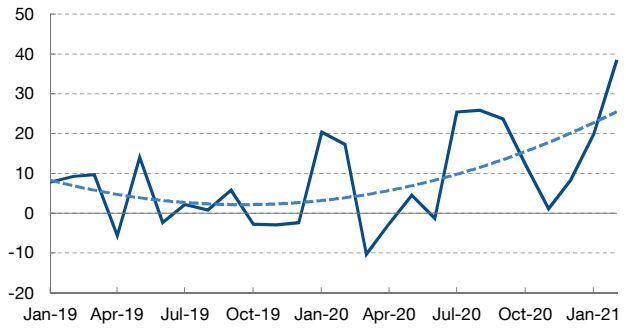
1 PROPORTION OF POPULATION IN FORMAL EDUCATION, BY AGE GROUP (a)



2 PROPORTION OF POPULATION IN NON-FORMAL TRAINING, BY AGE GROUP (a)



3 INTEREST IN VOCATIONAL TRAINING OVER TIME (b)



4 PROPORTION OF DAILY SEARCHES FOR FACE-TO-FACE COURSES (c)

SOURCES: INE (EPA), Google and Observatorio Educaedu.

a Fourth quarter data for each year.
b Weekly data, from Google Trends, on interest in web searches for "vocational training", in the education and employment field, in Spain over the last five years. The interest is measured as an index from 0 to 100, where 0 denotes very few searches and 100 is the most popular search in the specific region and period. The chart depicts the result of a regression of the most interest in each month compared with the same month in other years between 2016 and 2018.
c Requests for information on online or face-to-face courses on the Educaedu portals.

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In the case of non-formal training, the pandemic seems to have had no impact on the slight upward trend observed among the over-25s. On EPA data, participation in non-formal training courses increased among all groups between 25 and 55 years of age, in keeping with the pattern observed in recent years. Only the over-55s reduced their participation in this type of training course. However, in terms of demand, a slight pick-up in interest in Google searches for "vocational training" was observed, especially after the summer of 2020. This interest increased in the opening months of 2021. According to Observatorio Educaedu, a large number of the searches for non-formal training courses are for face-to-face courses, and

this may have caused a certain lag between the search for the information and the decision to take the course, especially among older age groups. In any event, apart from a specific change during lockdown, there appears to have been no permanent increase in the desire to take online courses (see Charts 2.5.3 and 2.5.4). A further point to consider is that the economic transformation associated with the pandemic may have increased doubts as to which course subject to choose.[20]

2.1.4 Health

The distribution of the effects of the pandemic on people's health depends on their previous health status. The COVID-19 pandemic has triggered an unprecedented health crisis, with major implications for people's health, which is in turn an essential determinant of their well-being. Individuals' pre-pandemic health status is crucial, since the risk of mortality or severe illness associated with COVID-19 is related to age and to the presence of pre-existing health problems.[21]

The incidence of health problems among the older population varies considerably across European countries. It is useful to compare the health status of the European population, especially for the age ranges with the highest incidence of health problems. Various indicators show that the proportion of the older population who are in poor health in Spain is higher than in other countries.[22] For example, in 2015 some 33% of the over-70s in Spain had at least two chronic diseases and one in two had limited mobility[23] (see Chart 2.6). As a point of reference, the incidence of chronic diseases in Spain is higher than that observed in countries such as Denmark, Sweden and Switzerland (between 15% and 25%) and lower than that observed in eastern European countries such as the Czech Republic and Poland (40%). Similar patterns are observed, in general, for the 70-84 and the 60-70 age groups.

Limitations in daily living activities, limited mobility and depression are more prevalent among women and among those with a lower level of education. In general, health problems are more prevalent among women than among men.[24] For

20 See Observatorio Educaedu (2020).

21 For instance, evidence for China, Italy, Spain and other countries (Ma et al. (2020), World Health Organization (2020), Istituto Superiore di Sanità (2020), Rodríguez-González et al. (2021)) shows that the risk of severe illness is associated with the existence of chronic diseases such as hypertension, cardiovascular or respiratory disease and diabetes, among others.

22 Mackenbach et al. (2005)

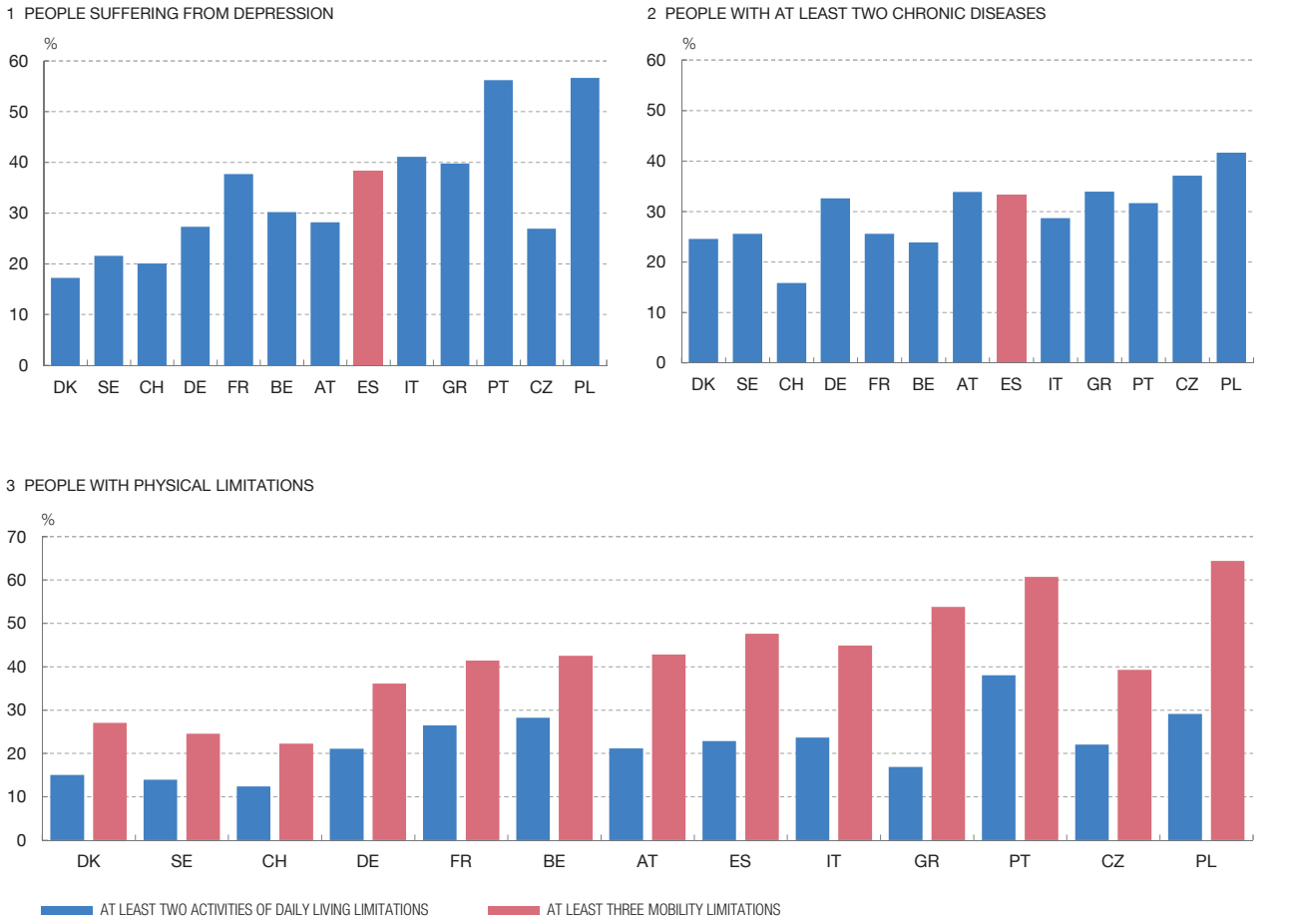
23 Chronic diseases refer to hypertension, diabetes, dementia, cancer and cardiovascular, respiratory and neurological diseases. Limited mobility refers to people who have problems walking 100 metres, sitting in a chair for more than two hours, getting up from a chair after being seated for a long time, climbing stairs, kneeling, raising their arms or lifting heavy objects. See Börsch-Supan (2020a) and here for a more complete reference to the Survey of Health, Ageing and Retirement in Europe (SHARE).

24 Conversely, men are more prone to other potentially fatal diseases such as heart or respiratory disease or diabetes; see Lahelma et al. (1999), Avendano et al. (2005).

Chart 2.6

THE INCIDENCE OF HEALTH PROBLEMS AMONG THE OLDER POPULATION VARIES SIGNIFICANTLY ACROSS EUROPEAN COUNTRIES (a)

Various health indicators show that the proportion of the older population who are in poor health in Spain is higher than in other European countries. A person's previous health status is crucial, since the risk of mortality or severe illness associated with COVID-19 is related to age and to the presence of pre-existing health problems.



SOURCE: SHARE wave 6 (2015).

a Older population means those who are 70 or over.

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example, among the Spanish population over 50, a higher proportion of women have limitations in their daily living activities and, especially, limited mobility (see Chart 2.7).[25] The incidence of depression increases with age for both men and women, but it is substantially higher for women in all age ranges.[26] In addition to the differences by gender, there is a positive correlation between a person's health status and their

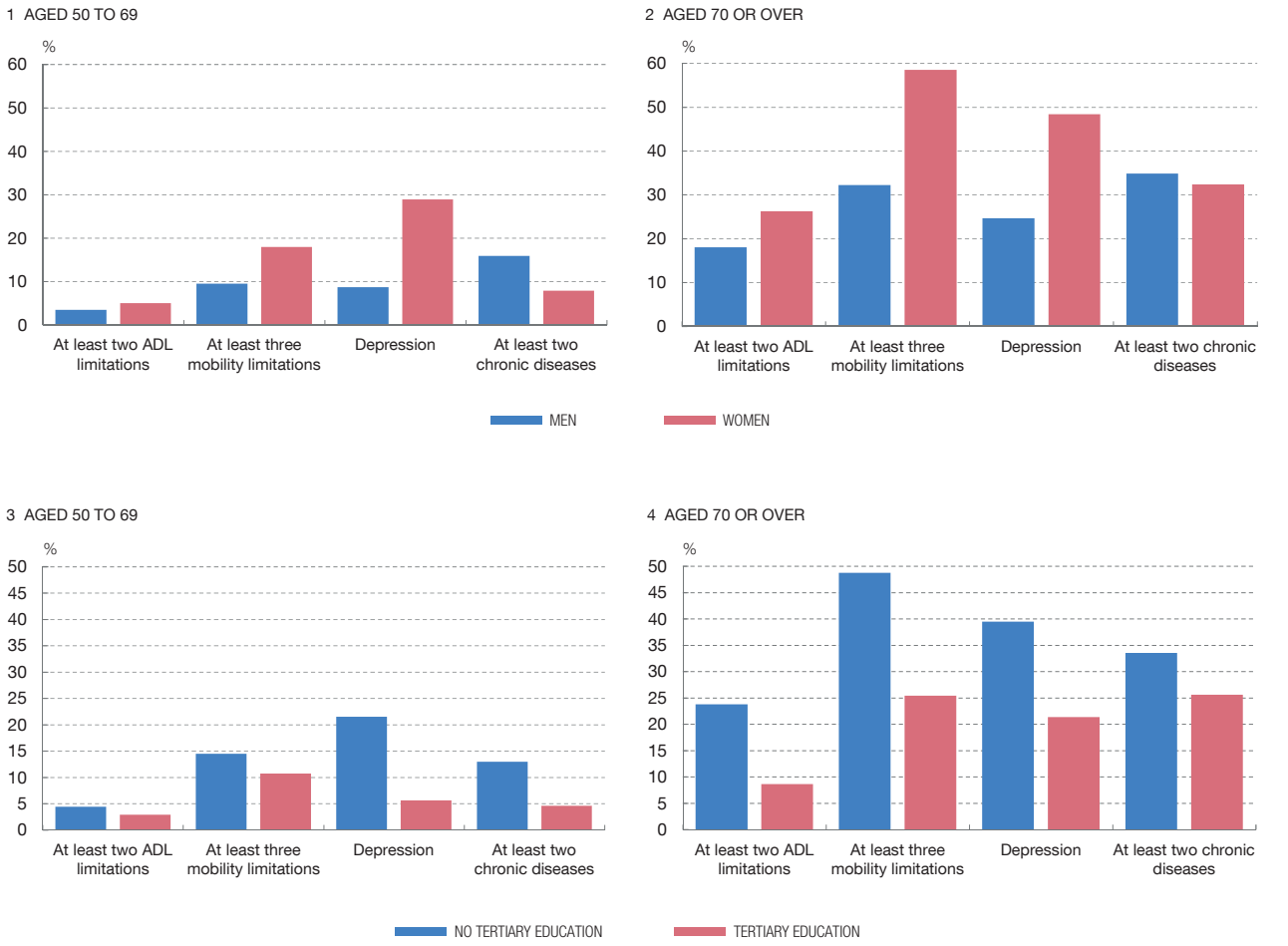
25 The "2+ADLs" (activities of daily living) indicator measures whether the person has limitations with two or more daily living activities, such as dressing, walking, showering, eating, putting themselves to bed or going to the toilet. The "3+mobility limitations" indicator refers to persons with three or more mobility limitations.

26 Depression is defined as having a score of more than 3 on the EURO-D scale. This scale is based on a list of 12 questions that detect the presence of a range of problems – such as depression, pessimism, suicidal feelings, guilt, sleeping problems, lack of interest, irritability, loss of appetite, fatigue, lack of concentration, lack of enjoyment and tearfulness – in the last month before the interview.

Chart 2.7

PERCENTAGE OF OVER-50s WITH HEALTH PROBLEMS, BY GENDER AND EDUCATION LEVEL

Activities of daily living (ADL) limitations, mobility problems and depression are all health problems that are more prevalent among women than among men. In addition, there is a positive correlation – which increases with age – between a person's health status and their education level.



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SOURCE: SHARE wave 6 (2015).

income or education level.[27] Thus, at any age, the incidence of all the health problems considered is higher among those who do not have tertiary education. Moreover, for most of these conditions, these differences increase with age.

Higher excess mortality and greater health deterioration during the pandemic are observed among the older population with poorer health at the outset. Given the different pre-pandemic health status of the different population groups, the pandemic can be expected to have had more impact on the groups whose previous health status was worse. Thus, excess mortality[28] is highest among the

27 See Avendano et al. (2005).

28 Excess mortality has been calculated as the difference between the number of deaths occurring in a specific period in 2020 and the deaths occurring in the same period in 2019, drawing on data from the INE's EDeS project.

oldest population groups; this was especially the case in the first wave of the pandemic. Also, according to the SHARE-COVID19 study,[29] in Spain around 17% of men and women over 50 whose health was poor before the pandemic report that it has worsened during the pandemic. These percentages fall to 3% (men) and 5% (women) among those whose previous health was good.

The incidence of mental health problems, such as depression, anxiety and social isolation, has increased for all population groups, but especially among women. Many of the events of 2020 – fall in income, loss of employment, loss of loved ones, difficulties accessing care or health care, limited personal contact – are generally associated with mental health problems such as depression, stress and social isolation.[30] These problems have worsened for all population groups, although the incidence has been higher among women and persons with chronic diseases or psychiatric problems.[31] In addition, the duration and severity of these adverse circumstances may mean that this deterioration in mental health will persist, which could in turn have long-lasting consequences in other dimensions, such as physical health, mortality, emotional satisfaction or well-being, the ability to work or study, or personal income.[32] Thus, for the over-50s and in all the European countries participating in the SHARE-COVID19 study considered, the probability of suffering anxiety and depression in the early months of the pandemic was higher among women, with the highest rates recorded in countries such as Spain, Italy and Portugal. Specifically, in Spain, 47% of women had experienced anxiety in the month previous to the survey and 38% had experienced greater anxiety than before the onset of the pandemic. These percentages are some 22 pp and 17 pp lower, respectively, for men. The results are qualitatively similar for depression and loneliness: 40% of women over 50 felt depressed and 30% felt lonely. These percentages are almost double those for men. In addition, the incidence of all three mental problems, especially loneliness, increases with age.

Most of the people whose emotional well-being had suffered during the pandemic reported "uncertainty about the future" as the main reason. Taking the Spanish population overall, substantial deterioration is detected[33] in the level of emotional well-being compared with the pre-pandemic level for all population groups, but especially among women and among those aged 35 to 54. Moreover, this deterioration has increased over time (see Charts 2.8.1 and 2.8.2). Between May 2020 and January 2021, 80% of persons whose emotional well-being had declined

29 See Börsch-Supan (2020b).

30 See Panchal et al. (2021).

31 See Leung et al. (2020).

32 See Banks et al. (2020), Fergusson et al. (2002), Janke et al. (2020), Kivimäki et al. (2018), Layard (2013), Peng et al. (2013), Shankar et al. (2011) and Steptoe et al. (2013).

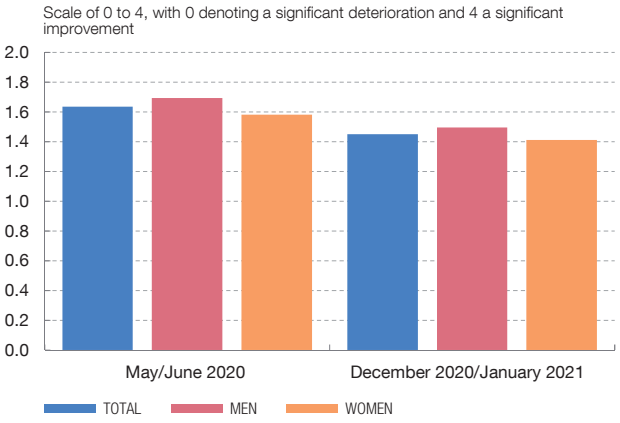
33 Data from the online survey conducted by Martinez-Bravo and Sanz (2021) in June 2020 and January 2021 on a representative sample of individuals by gender, age, region and education level for Spain. The survey contains extensive and detailed information on demographic characteristics, political orientation and values, employment, income and incidence and possible consequences of COVID-19.

Chart 2.8

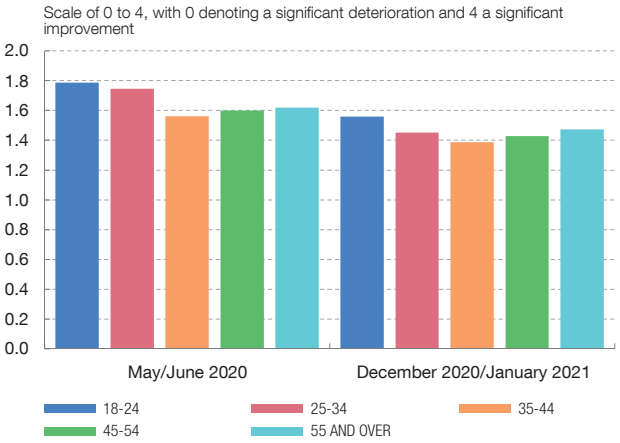
EMOTIONAL WELL-BEING HAS DETERIORATED COMPARED WITH PRE-PANDEMIC LEVELS

Particularly significant declines are reported among women and persons aged 35 to 54. Moreover, the deterioration has worsened over time. Between May 2020 and January 2021, 80% of persons whose emotional well-being had declined compared with their pre-pandemic level reported "uncertainty about the future" as the main reason.

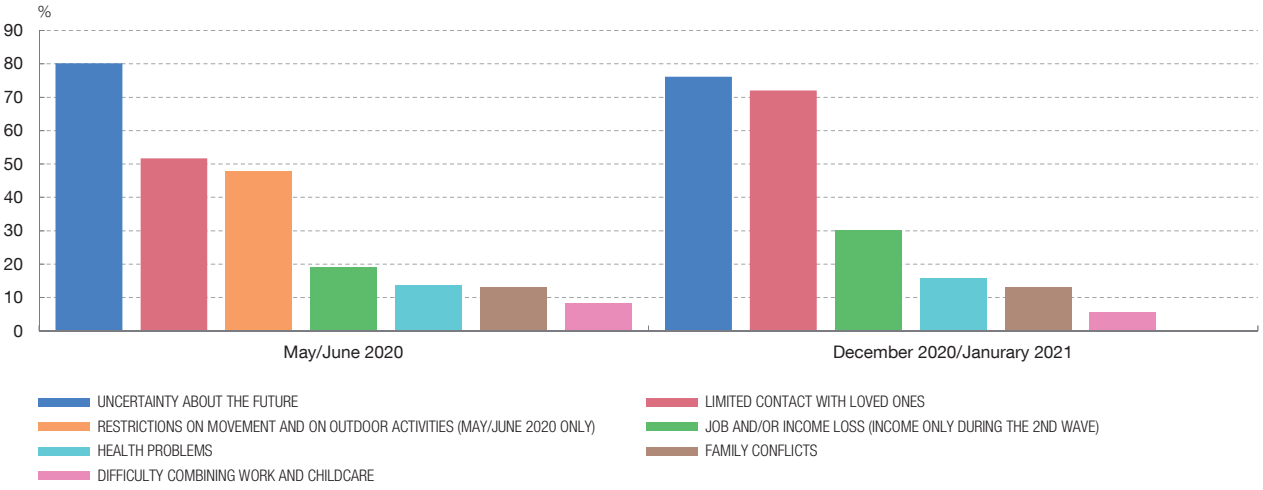
1 BY GENDER: "HOW MUCH HAS YOUR EMOTIONAL WELL-BEING CHANGED SINCE 14 MARCH?"



2 BY AGE GROUP: "HOW MUCH HAS YOUR EMOTIONAL WELL-BEING CHANGED SINCE 14 MARCH?"



3 MAIN REASON FOR DETERIORATION IN EMOTIONAL WELL-BEING (FOR THE ENTIRE POPULATION)



SOURCE: "*Encuesta sobre los efectos económicos y políticos de la COVID-19 en España*", Martinez-Bravo and Sanz (2021).

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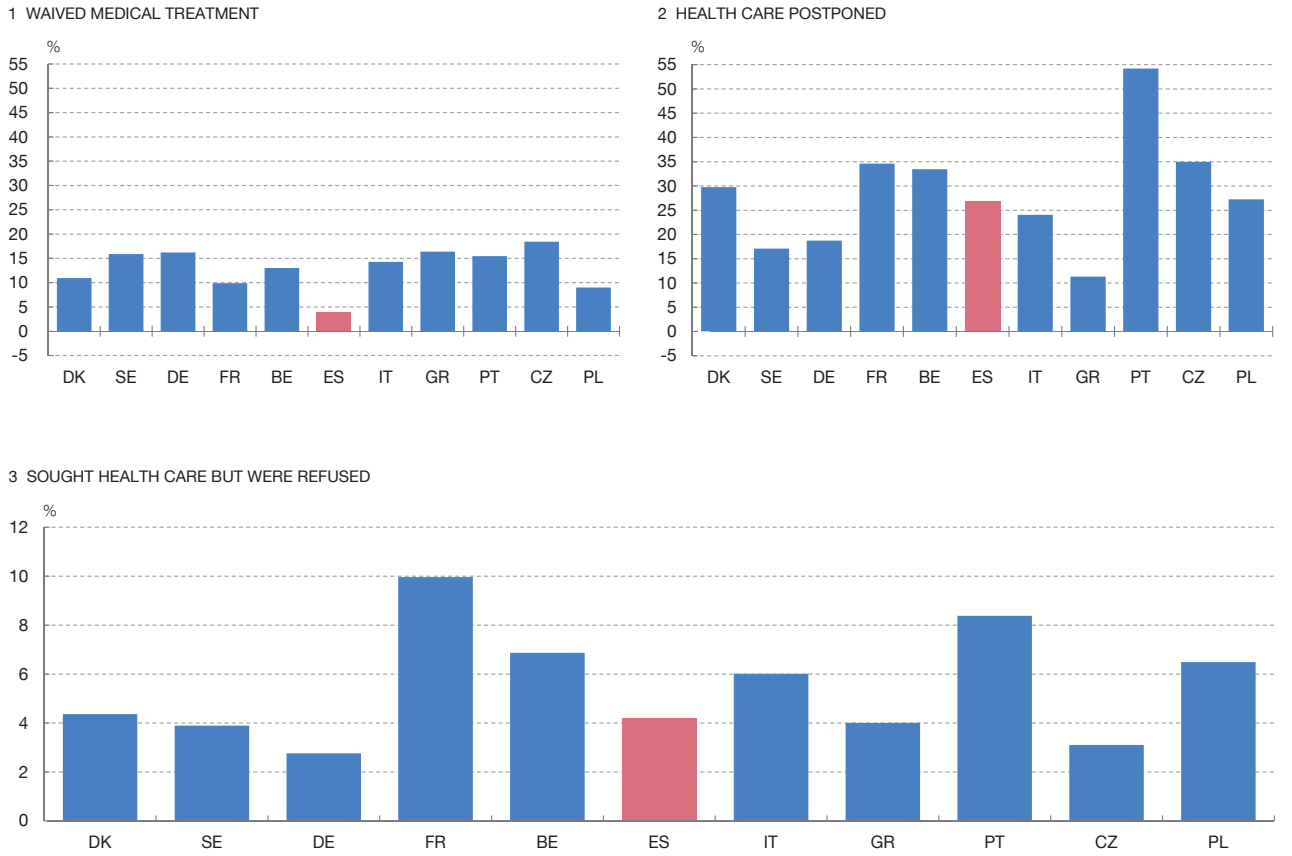
reported "uncertainty about the future" as the main reason. Also, while in May 2020, one out of two persons interviewed indicated that "limited contact with loved ones" was a reason for their emotional deterioration, in January 2021 almost three out of four respondents (72%) mentioned this reason (see Chart 2.8.3). Lastly, around 30% of those interviewed in January 2021 reported that unsteady earnings or income was a reason for their emotional deterioration (40% among the self-employed and workers with temporary employment contracts).

Chart 2.9

RESTRICTIONS ON AND DELAYED ACCESS TO HEALTH CARE MAY HAVE LONG-TERM HEALTH CONSEQUENCES

Considerable percentages of the over-50s in various European countries report having suffered delays in certain types of health care owing to the COVID-19 crisis. In addition, in most countries approximately 10% of people have voluntarily waived health care.



SOURCE: SHARE-COVID-19.

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In some European countries there have been considerable restrictions on and delays in access to health care; this may have long-term consequences for the health of the population. Lastly, restrictions on access to health care have also contributed to a decline in the health of the population and may have long-term consequences. In several European countries where data are available, between 25% and 45% of the over-50s report having suffered delays in certain types of health care owing to the COVID-19 crisis (in Denmark, France, Belgium, Spain, Italy, Portugal and Poland; see Chart 2.9). In Spain, of the 27% who report having had some type of health care postponed in the early months of the pandemic, 73% refer to delays in appointments with specialists and 34% to delays in appointments with their general practitioner. In addition, in most countries approximately 10% of people have voluntarily waived health care; in Spain the figure is under 5%. Regarding care

for the elderly, 24% of persons aged 70 or over who received care at home before the pandemic report that they had more difficulties receiving the amount of care they needed during the early months, mainly because their carers were not able to make home visits.

In late 2020 and early 2021, a very significant decline in the number of births was observed. The short-term effect of the harshest months of the pandemic in the spring of 2020 has been a sharp decrease in the year-on-year rate of births in recent months, with falls of 20% and 21.3% in December 2020 and January 2021, respectively, according to the INE's provisional estimates.[34] This is also being observed in other European countries (-14% in France and -6.4% in Sweden in January 2021 and -21.6% in Italy in December 2020)[35] and could be reflecting the heightened uncertainty in different areas, including medical care during pregnancy, due to the pandemic. Subsequently, a smaller decline was observed in February (-7.7%), which could indicate a slight recovery of the birth rate following the abrupt drop of the previous two months. In any event, it is still too early to infer what the long-term effects of the pandemic may be on Spain's birth rate, which was already low compared to other European countries.

2.1.5 Inequality

Concern about increased income inequality in many OECD countries was recently reflected in the research priorities of various national authorities and international organisations.[36] Apart from other important social considerations, inequality can affect economic growth through various channels. Some wage differentiation between workers with different productivity levels is needed to generate incentives for investment in human capital and, therefore, for economic growth.[37] Yet a high level of inequality can also affect social cohesion and foment social conflict, reducing the level of investment security[38] and also the incentive to work for certain groups.[39]

Spain's relative position internationally varies according to the inequality dimension considered.[40] In terms of the different dimensions of monetary inequality, Spain's position may be summarised as follows:

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34 See Monthly estimates of births, INE.

35 See Financial Times, 10 March 2021.

36 See, for example, Banco de España (2019b).

37 See Welch (1999) and Mueller et al. (2017).

38 See Grossman (1991) and Dijkstra et al. (2020).

39 See Persson and Tabellini (1994) and Alesina and Rodrik (1994).

40 See Anghel et al. (2018). This study covers the time period up to 2014. The time period of the analysis is currently being extended, in the framework of the IFS Deaton Review of Inequalities. See About the review for more details.

— Hourly wage dispersion in Spain is similar to the average of the EU countries.

— When hours and days worked are taken into account, labour income inequality increases in Spain compared with other countries, since groups with lower wages tend to work fewer hours per day and fewer days per year.

— Compared with other European countries, per capita income inequality is high in Spain, associated with the high unemployment rate. The larger average household size and high public pension replacement rates tend to reduce total income inequality.

— Direct taxes reduce income inequality between households, although less so than in other EU countries.

— Although wealth inequality is higher than income inequality, the high proportion of home ownership means that wealth inequality is lower in Spain than in other European countries.

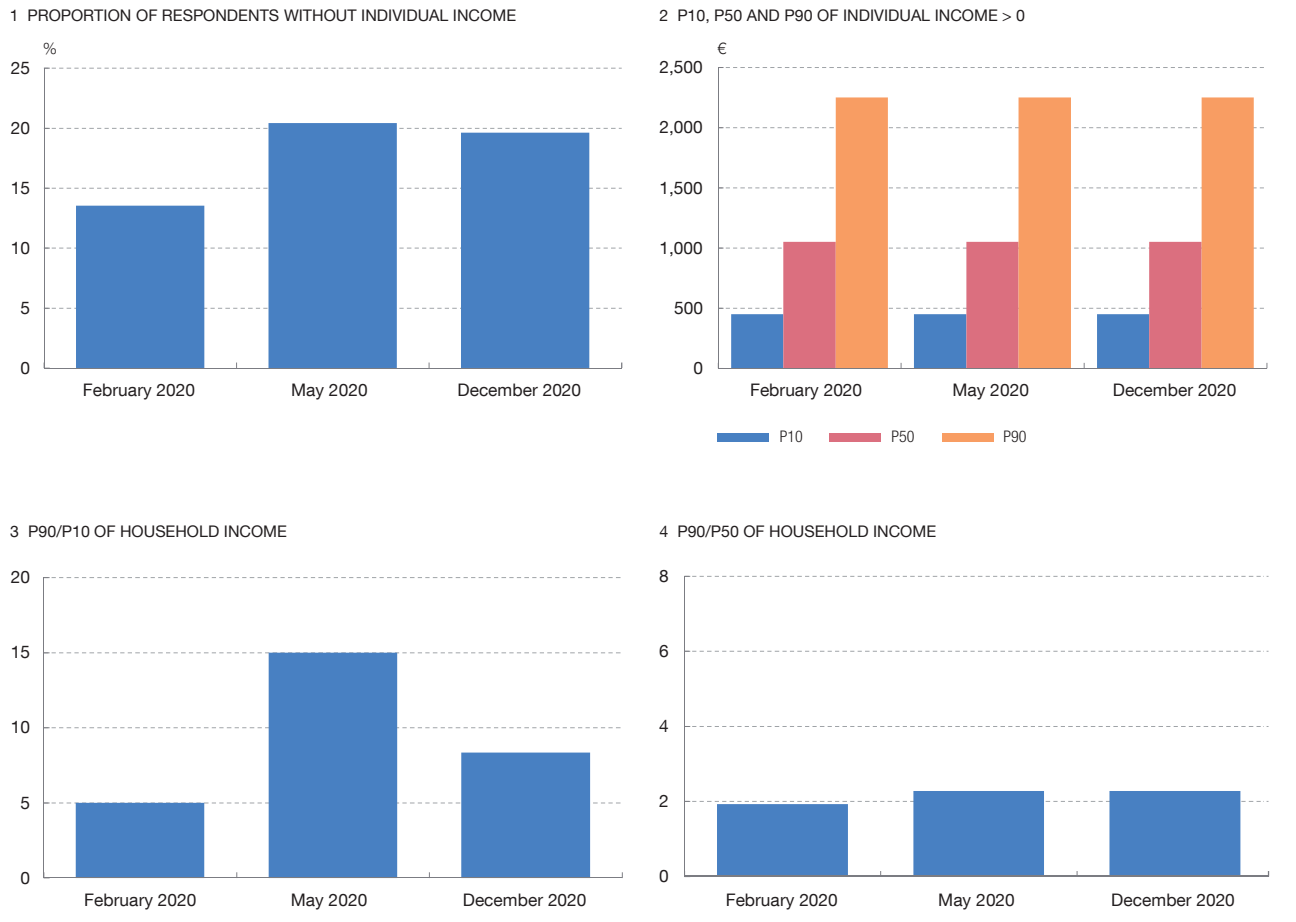
After several years of declining labour income inequality, owing to the favourable employment performance in the last upturn, the pandemic has reversed the path of the indicators once again. A survey on the economic and political impact of COVID-19 in Spain *(Encuesta sobre los efectos económicos y políticos de la COVID-19 en España)* offers a first approximation to these changes.[41] The study calculates net monthly income at the individual and household level at three different points of time in 2020: before the onset of the pandemic (February), in the early weeks of the state of alert (May) and at year-end. In the case of individual income, the biggest change was in the percentage of respondents who ceased to receive income; the changes in income distribution for those who continued to receive income are negligible (see Charts 2.10.1 and 2.10.2). In the case of household income, the ratio of household income in the top 10% of the distribution to household income in the bottom 10% (P90/P10) rose considerably during the first weeks of the state of alert, from 5 to 15 times (see Chart 2.10.3), reflecting an increase from 2.6 to 6.6 times in the ratio of median household income to that of the 10% of households with the lowest income (see Charts 2.10.3 and 2.10.4). At year-end, household income inequality was lower than in May (down from 15 to 8.3 times), but it was still above the pre-pandemic level.

41 See Martinez-Bravo and Sanz (2021). The study collects data, in income brackets, on individuals' and households' average net monthly income in 2019, the change in this income during the early weeks of the state of alert (15 March to 31 May 2020), and the change in income between pre-pandemic and current levels (December 2020/January 2021 compared with February 2020). The questions refer to all types of income, not just labour income.

Chart 2.10

THE PANDEMIC APPEARS TO HAVE INCREASED THE LEVEL OF INCOME INEQUALITY

The biggest change arose in the percentage of respondents who ceased to receive income, since the changes in individual income distribution for those who continued to receive it are negligible. The ratio of household income in the top 10% of the distribution to household income in the bottom 10% (P90/P10) rose during the first weeks of the state of alert. It was lower in December 2020 than in May, but remained above the pre-pandemic level.



SOURCE: "*Encuesta sobre los efectos económicos y políticos de la COVID-19 en España*", Martinez-Bravo and Sanz (2021).

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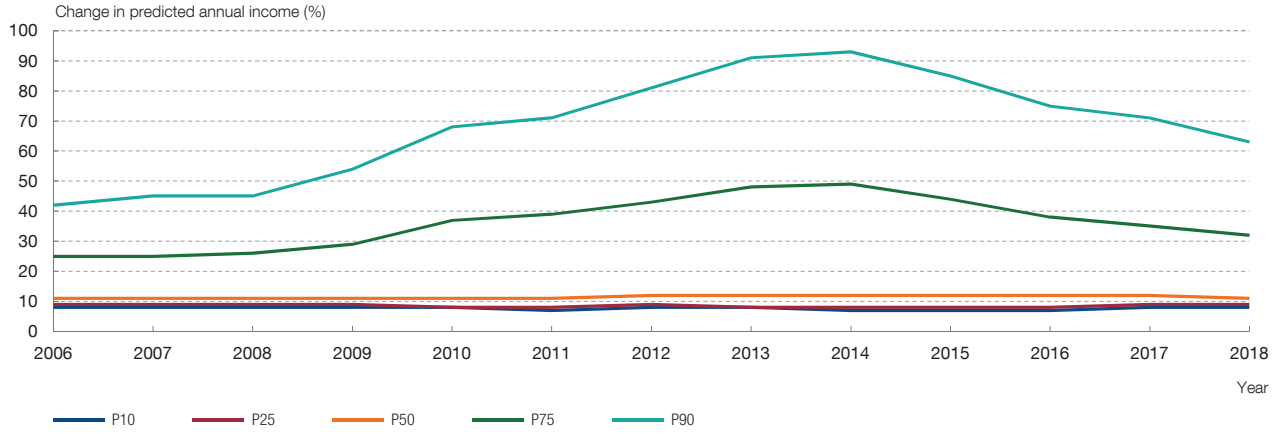
Another relevant dimension to changes in labour income inequality is inequality in uncertainty about future income. This dimension of monetary inequality is interesting because a secure income flow usually provides more well-being than an uncertain income flow, even if the income flows are expected to be similar. Thus, an increase in income risk inequality may per se generate asymmetrical losses in well-being between different individuals. In addition, it may either mitigate or exacerbate income inequality, according to its level by income segment. It is also interesting to see how income risk inequality varies over the economic cycle. There is a well-known close correlation between

Chart 2.11

INCOME UNCERTAINTY COULD HAVE INCREASED SIGNIFICANTLY SINCE THE ONSET OF THE PANDEMIC (a)

For the period 2005-2018 it is estimated that less than half of 25- to 54-year-olds had an almost perfect level of certainty regarding their following year's income. For the remainder, the level of uncertainty is exacerbated during downturns. By population group, uncertainty levels are higher among young adults (the under-35s), workers with temporary employment contracts and persons whose income lies in the lower quartile of the distribution.



SOURCE: Arellano et al. (2021).

a The chart depicts the change over time in the percentiles of the distribution of the coefficients of variation (CVs) which measure the following: persons with expected income of €50,000 and a CV of 10% would expect a deviation from their average income of ±€5,000 in the following year, while a CV of 50% would denote an expected deviation from their average income of ±€25,000 in the following year.

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employment and labour income inequality,[42] but its correlation with income security inequality is less well known.

In Spain, income risk inequality amplifies income inequality, increases in downturns and has most impact on the younger population. Specifically, drawing on data from the period 2005-2018, it is estimated that less than half of 25- to 54-year-olds have a very high level of certainty regarding their future income over a one-year horizon, compared with the remainder who face considerable uncertainty.[43] By income level, uncertainty is higher for lower income groups; moreover, this higher uncertainty accentuates during downturns, while for those for whom uncertainty is not very relevant there is very little change. In consequence, inequality in uncertainty about future income is countercyclical (see Chart 2.11), increasing in downturns and decreasing in growth periods. By population group, the health crisis is expected to have increased uncertainty about future income, especially among young adults (the under-35s), workers with temporary employment contracts and persons whose income lies in the lower quartile of the distribution.

42 See Bonhomme and Hospido (2016).

43 See Arellano et al. (2021).

2.2 Impact on potential economic growth

Assessing the effects of the crisis on potential output presents notable challenges, not only in terms of their quantification, but also their sign. The problems that usually arise when measuring potential output, owing to its status as an unobservable variable, are exacerbated in such a highly uncertain situation as the present one. Moreover, only a very imperfect prediction can be made of the numerous channels through which potential output could be affected in the medium and long term during a crisis such as the present one.

The economic literature has sought to determine the extent to which the long-term effects of a shock hinge on its nature, but the evidence is not conclusive. Specifically, part of the literature argues that the impact on potential output is more pronounced in endogenous crises, such as those triggered by the build-up of imbalances or other previous vulnerabilities, especially if their origin is financial.[44] However, the exogenous shocks of the two oil price rises in the 1970s also had a very long-lasting impact on GDP growth rates.[45] In the specific case of a pandemic (exogenous shock), the historical evidence tends to support the effects being fundamentally transitory.[46] Yet extreme events of this kind have also had persistent effects.[47]

Ultimately, the scale and persistence of the effects on potential output will crucially depend on the duration of the shock. Protracted and sharp recessions have historically had an adverse impact on the trend component of activity, giving rise to what are known as hysteresis episodes.[48] A large part of this effect is channelled through the labour market, insofar as the duration of an episode of unemployment tends to feed back into itself. One possible channel for this is through the loss of workers' human capital as the period of unemployment persists, posing ever-greater obstacles to the emergence of job opportunities.[49] In addition, enduring unemployment can have a discouragement effect, reducing the incentive to seek work. Thus, persistently high long-term unemployment rates can have adverse effects on potential growth. Similarly, the longer a crisis lasts, the greater the impact on total factor productivity and, consequently, on potential growth, as a result of the lower R&D expenditure that is typically associated with recessions.[50]

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44 Martín-Fuentes and Moder (2020) find that the main source of the adverse effects of financial crises on potential growth stems from the persistent effects on the capital stock, while the impacts on the labour input and on total factor productivity, although also significant, are more transitory.

45 See Bodnár et al. (2020) and Blinder and Rudd (2013).

46 The evidence in Bodnár et al. (2020) and Barro et al. (2020) points in this direction.

47 Jordá et al. (2020) analyse 15 major pandemics since the Middle Ages and identify severe long-run consequences.

48 See Cerra et al. (2020).

49 The initial contribution to this literature is Blanchard and Summers (1986). Fatás and Summers (2017) provide evidence for episodes of fiscal consolidation that are maintained over time.

50 See Anzoategui et al. (2019).

The nature of the jobs lost as a result of the crisis suggests it could have an adverse effect on the labour input contribution to potential output by pushing up structural unemployment. The distinctive characteristics of this crisis may have specific effects on the accumulation of the two factors of production (labour and capital) in the long term. In the case of the labour input, its contribution to potential growth once the health crisis has ended will depend on the characteristics of the individuals who have lost their jobs and on the possibility of permanent, pandemic-induced changes in the relative demand for different goods and services that, in turn, would call for a transformation of the productive system. In particular, if the crisis were to prompt a permanent reduction in demand for the sectors that have been hit hardest to date, reallocating workers to other activities could be complex, because those who have lost their jobs have relatively lower skill levels and, therefore, may also be less employable. In addition, the COVID-19 crisis is driving digitalisation and task automation processes. These require higher skilled jobs and, consequently, represent an additional source of potential mismatch between workers' skills and those sought by employers. This reaffirms the desirability of shoring up the income protection and employment safeguard elements of the short-time work schemes (ERTEs) with active policies that broaden the skills of the workers concerned.

The crisis could also affect the labour input contribution to potential output through other additional channels. Immigrant labour accounts for a relatively higher share in the services most affected by the containment measures than in the overall economy. Consequently, any permanent decrease in the demand for such services would tend to have a negative impact on immigrant flows, thereby dampening growth of the working-age population.[51] By age group, younger workers have been particularly hit by job losses. Given that it is relatively unlikely these workers will leave the labour market, this age composition of job losses is less harmful to the labour supply than if older workers had been the most affected cohort, as the likelihood of their leaving the labour market is higher.

The idiosyncratic effects of the pandemic on capital stock in the long term are likely to be predominantly negative, although some public policies will help preserve and modernise the Spanish economy's productive capital. First, as analysed in detail in Chapter 3 of this Report, the crisis has severely affected the liquidity of a high proportion of firms, particularly those operating in the hardest hit sectors. Although liquidity needs have been partly alleviated by the public measures adopted, these firms will emerge from the crisis with notably higher debt levels than before the pandemic. This will undermine their investment capacity for some time and, in some cases, may even jeopardise their viability.[52,53] The suspension of activity

51 Obviously, the sign of the flows would also depend on the economic situation in the countries of origin.

52 See Chapter 3 of this Report and Blanco et al. (2020).

53 To address this problem, Royal Decree-Law 5/2021 of 12 March 2021 on extraordinary measures to support business solvency in response to the COVID-19 pandemic sets up a €1 billion recapitalisation fund for firms affected by the pandemic, a direct assistance facility totalling €7 billion for firms and the self-employed to reduce

in some sectors owing to the containment measures also appears to have contributed to extending the useful life of certain productive assets, which would reduce future investment needs.[54] By contrast, the public measures to support firms' survival is helping preserve existing capital stock. Lastly, as analysed below, the NGEU programme will contribute to expanding the physical capital stock, on account of the increase in public investment and its spillover effect on investment by non-financial corporations.

The channels through which the crisis could affect total factor productivity are numerous, although the net impact is uncertain. One significant channel is business demography. Since the crisis began, it has been accompanied by significant changes in the patterns of business births and deaths. The evidence from various sources suggests that, since the onset of the pandemic, there has been a marked decline in the number of firms in Spain, associated with a simultaneous decrease in business births and deaths. These features have been more severe in the sectors hardest hit by the measures taken to contain the pandemic.[55] The reduction in business deaths – which, a priori, is opposite to what might be expected in a recession – reflects the impact of the package of measures rolled out by the authorities to mitigate the effects of the crisis on firms' liquidity flows and also that of the insolvency moratoria, exempting debtors from the obligation to apply for insolvency proceedings and rejecting the filings initiated by creditors.

In the future, it is essential that public policies foster an appropriate balance between ensuring the survival of viable firms with solvency problems and facilitating the efficient exit of non-viable firms from the market. An inefficiently high level of corporate liquidations would undermine economic growth possibilities in the medium and long term. While some of the factors of production released could be used in other firms or sectors, the consequences for the economy's productivity are likely to be negative, especially in the short and medium term. This would be attributable to the disappearance of specific high-value worker-firm matches, the loss of customer-supplier relationships, and the impairment of intangible assets during the liquidation process.[56] Conversely, public policies should not hamper the liquidation of non-viable firms in sectors that face a permanent decrease in demand, especially if the subsequent reallocation of activity entails a shift from low-productivity firms to more efficient ones. Reallocating resources to more productive firms would have positive effects on aggregate productivity, owing to a composition effect similar to that observed in the wake of the financial crisis.[57] In this context, maintaining

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debt arranged from March 2020, and another facility of €3 billion for restructuring State-backed financial debt for these groups.

54 See Bodnár et al. (2020).

55 See Izquierdo (2021b).

56 See Di Mauro and Syverson (2020).

57 See Banco de España (2015). Also, based on data from the Decision Maker Panel survey of UK firms, Bloom et al. (2021) consider that the reallocation of resources from firms in low-productivity sectors and, in particular, from

favourable financial conditions will be a prerequisite for fostering momentum in business births after the pandemic, particularly as regards more innovative firms.[58]

The pandemic appears to have accelerated the take-up of new technologies. The containment measures have accelerated transformations that were already being observed in how work is organised and in product distribution channels. Once firms have incurred the fixed costs to adopt such changes, they are likely to be maintained, at least in part, in the future, which should result in productivity gains in the medium term. This is reflected in the two waves of the EBAE conducted to date, which show that investment in new technologies, adaptation to e-commerce and the adoption of remote working are the activities that the highest proportion of Spanish firms report they intend to step up in the future.[59] This evidence therefore appears to support the existence of a potential positive effect on intra-firm productivity, compared with the greater uncertainty as regards the impact on productivity of the reallocation of resources among firms.[60]

In the euro area, the projects associated with the NGEU programme should also generate productivity gains. Some advanced economies have announced public investment plans (such as the American Jobs Plan in the United States) aimed at strengthening potential growth. In the European Union, this role is to be fulfilled by the NGEU. As further described in Section 3.3 and Box 2.3, this programme should focus on projects that foster the economy's structural transformation towards sectors whose weight will increase after the crisis. Depending on the projects financed, these funds have the ability to give a significant boost to the economy's potential output, not only through productivity gains but also, as indicated, through an increase in productive capital.

In the opposite direction, a hypothetical brake on world trade could adversely affect total factor productivity. It has been suggested that the crisis could lead to a shortening of global value chains, using fewer inputs from other geographical areas, thus reversing part of the productivity gains from globalisation. However, to date, there is scant evidence of this (see Section 2.5).

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the least productive firms within these sectors to higher-productivity sectors will increase the economy's total factor productivity by 1%.

58 Albert et al. (2020) also find that the sharp decline in entries of new innovative firms owing to a modest worsening of financial conditions could have very severe long-run consequences in terms of employment. This evidence suggests the importance of developing specific policies aimed at promoting the creation of new firms and supporting them while they are young. Benedetti-Fasil et al. (2020) find that the adverse effect of the exit of innovative young firms on employment is particularly high in the services sector.

59 See Izquierdo (2021a), Fernández-Cerezo et al. (2021) and Riom and Valero (2020). The latter sets out the findings of a survey in the United Kingdom indicating that businesses in that country have rapidly adopted new technologies and new ways of working in response to the pandemic. The respondents reported that they even intend to step up these processes after the pandemic.

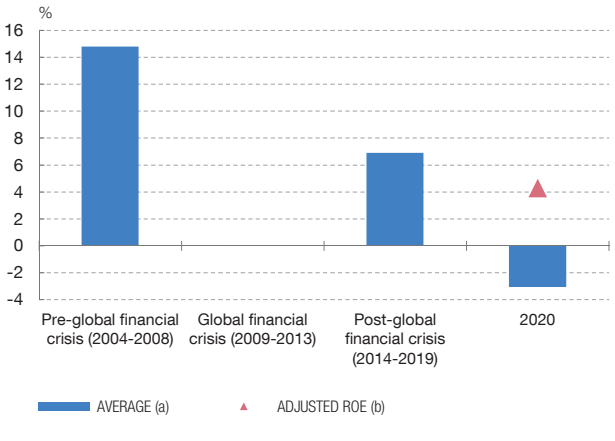
60 Bloom et al (2021) consider that, based on the Decision Maker Panel survey, the pandemic has led to a significant decline in 'within firm' total factor productivity in the United Kingdom, attributable to the increase in the cost of inputs prompted by the containment measures. However, this effect would be largely restricted to the duration of the health crisis, disappearing practically in full once it is over.

Chart 2.12

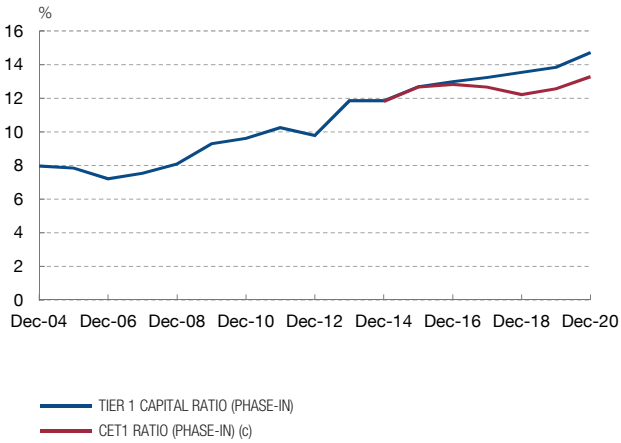
THE PROFITABILITY OF THE SPANISH BANKING SYSTEM WAS NEGATIVE IN 2020, OWING IN PART TO EXTRAORDINARY ADJUSTMENTS

Prior to the outbreak of the COVID-19 pandemic, the return on equity (ROE) of the Spanish banking system stood at around 7%, still far below pre-global financial crisis levels. In 2020 the health crisis and some extraordinary adjustments – for instance, to goodwill of some foreign subsidiaries – drove ROE into negative territory. Even so, capital ratios continued to rise, helped in part by some of the measures adopted by the authorities in response to the pandemic.

1 PROFITABILITY (ROE) OF THE SPANISH BANKING SYSTEM PRE- AND POST-PANDEMIC



2 TIER 1 CAPITAL RATIOS



SOURCE: Banco de España.

a Average ROE of the Spanish banking system for each period.
b ROE of the Spanish banking system in 2020, stripping out extraordinary negative adjustments (goodwill, DTAs and impairment of a bank due to a valuation adjustment) and positive adjustments (business sales).
c The CET1 time series starts in 2014 because this is when the prudential solvency standards commonly known as "Basel III", which include CET1 as a more stringent measurement of capital, were first applied.

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2.3 Banking sector

The economic crisis triggered by the COVID-19 pandemic and certain extraordinary adjustments drove the profitability of the Spanish banking system into negative territory in 2020. Specifically, return on assets (ROA) stood at -0.21% and return on equity (ROE) at -3.1% in 2020, down 0.72 pp and 10 pp, respectively, on 2019 (see Chart 2.12.1). Part of this decrease was due to non-recurring adjustments in the accounts of three significant institutions: in two cases owing to a decrease in goodwill and, in the third, to a correction of fair value, in accordance with the accounting standards, as a consequence of its participation in a merger. Stripping out these extraordinary items, the profitability of the Spanish banking system would have been positive in 2020 (ROA of 0.3% and ROE of 4.3%), albeit slightly less so than in 2019. The decline in profitability that was not linked to extraordinary items was a result of the decrease in net interest income and, especially, of the increase in provisions for financial asset impairment. The lower operating expenses and the gains on financial transactions were not sufficient to fully offset this impact. In addition, the appreciation of the euro against other currencies over the year shaped the income and expenses of business abroad, reducing their equivalent value in euro.

However, banks' average CET1 solvency ratio rose by 71 basis points (bp) to 13.3% (see Chart 2.12.2). The extraordinary factors that shaped banks' average negative profitability in 2020 affect balance sheet items that are not included in the calculation of prudential capital and, therefore, had no impact on the performance of this variable. Rather, solvency ratios benefited from some of the measures adopted by the authorities in response to the pandemic, which aimed to ensure that the banking sector continued to provide funding to the private sector. In this respect, in the case of the numerator of these capital ratios, the recommendation not to distribute dividend, together with the European Union's "quick fix" amending prudential regulations (in particular, the exemption from deduction of investment in software), led to an increase in banks' capital levels. In addition, regarding the denominator of these capital ratios, risk-weighted assets fell, among other reasons as a consequence of the State-backed loan guarantee schemes and the "quick fix" package (for example, the SME support factor).

Overall, the prudential and accounting measures adopted by the various financial authorities helped sustain the momentum of the flow of credit to the private sector throughout 2020. The empirical evidence available shows that banks with higher solvency levels are able to provide more funding to the private sector – especially, as in the current crisis, amid very high uncertainty – and also to participate more extensively in State-backed credit support programmes.[61] In any event, even though solvency ratios rose in 2020 and are above prudential requirements, in this respect the Spanish banking system still lags behind the average of the rest of the European banking sector.

Bank credit to the Spanish non-financial private sector picked up again in 2020. After more than a decade of gradual deleveraging, bank lending to households and non-financial corporations rose by 3.5% in 2020. However, while bank lending to business quickened significantly, growing by 8.9%, lending to households fell again, albeit only moderately (-0.5%). These lending patterns would probably have been very different had the authorities not introduced a broad set of measures to mitigate the adverse effects of the pandemic on the income and liquidity of households and firms. Specifically, the public guarantee scheme to encourage lending to business accounted for 34% of new credit drawn in 2020, and allowed some firms operating in the sectors hardest hit by the crisis to meet a significant part of their liquidity needs. In addition, the loan moratoria schemes for individuals, which in December 2020 accounted for some 3% of credit to the non-financial private sector, have temporarily released households particularly affected by the crisis from part of their financial obligations. This will probably have prevented these agents from having to make even greater adjustments to their current expenditure.

61 See Martínez-Miera and Vegas (2021).

Credit risk is one of the major challenges for the banking system in the coming years. Considering the fall in GDP in 2020, the fact that NPL ratios not only did not increase but fell in 2020 could be considered an anomaly in historical terms. Among other factors, this aggregate behaviour could be explained, at least in part, by the nature of the shock that triggered the – eminently temporary – present crisis, the absence of previous financial imbalances and the effectiveness of the economic policy measures adopted to ease the impact of the pandemic. In any event, at a more disaggregated level, some increases in NPLs have been observed in certain portfolios, such as consumer loans, and in certain economic sectors that were hardest hit by the crisis in the last stretch of the year. Loans with a significant increase in credit risk since initial recognition have also grown and could be seen as a forward indicator of potential deterioration in the credit quality of loans. In this respect, it is noteworthy that the signs of credit impairment in the guaranteed loan and moratoria portfolios are significantly higher than in the other portfolios, as is to be expected given the especially vulnerable situation of the groups targeted by these measures. Looking ahead, although at the cut-off date for this Report the rate of credit risk provisioning appears to be appropriate at the aggregate level – albeit rather heterogeneous across banks – this provisioning effort will probably have to be maintained in the coming years, or even increased if the economic recovery proves to be slower than expected.

On a broader time horizon, the low interest rate environment, climate change and the digitalisation of the economy are key challenges for the banking sector. The present low interest rate environment places a constraint on the banking sector's ability to increase its net interest income and also incentivises risk-taking. As regards climate change, it is essential that banks correctly include climate change-related risks in their decision-taking processes. In the case of the process of digitalisation of the economy, not only does it require higher investment in technology in the banking sector, but it also poses major new challenges for the sector, such as those related to cybersecurity and the growing competition from BigTechs.

The banking sector has very low greenhouse gas emissions, but it may be significantly affected by climate change-related risks through their impact on the creditworthiness of households and firms. Climate change poses physical risks, stemming from the associated environmental imbalances, and also transition risks, linked to the impact on activity of the economic policies rolled out to mitigate its effects. Insofar as these risks may affect the creditworthiness of households and firms, they could also have a significant impact on expected profitability and on the credit risk the banking sector assumes in its lending to these agents. These aspects must be correctly included in banking sector risk management, so that credit institutions can contribute, briskly and efficiently, to the far-reaching process of reallocation of resources between economic sectors and firms that the transition towards a more sustainable economy requires. Indeed, bank lending policy could

have a decisive influence on the speed of this transition, for example, to the extent that it facilitates the green investments needed in the different sectors of activity.

Deposit institutions, together with regulatory and supervisory authorities, need to identify the direct and indirect channels through which they are exposed to climate change-related risks and the transition towards a more sustainable economy. This analysis is not straightforward. First, owing to the inherent complexity of defining climate change-related risks, which have long-term horizons and are subject to a high degree of uncertainty. This task is also hindered by the current lack of information available and, despite recent progress, by the lack of consolidated international standards in this field.[62] Deposit institutions will have to exploit and expand their databases to include these new elements in their risk management. To allow them to correctly assess climate change-related risks and include them in their portfolio management, supervisors can play a complementary role, by developing appropriate supervisory databases and reporting requirements and by including these risks in financial stability analyses, for example, in the form of environmental stress tests that are currently being developed by the Banco de España and the central banks of other European economies.[63] In this respect, it should be noted that the draft Climate Change and Energy Transition bill envisages that the Banco de España, the National Securities Market Commission and the Directorate General of Insurance and Pension Funds must jointly draw up, every two years, a report assessing the risk for the Spanish financial system derived from climate change and the policies to combat it.

The challenges associated with cybersecurity and the growing competition from BigTechs makes it even more important for the banking sector to increase its efficiency, particularly through greater digitalisation. Competition from BigTechs exerts further downward pressure on banking sector profitability, which as indicated above has been weakened by the pandemic and which also faced certain challenges – such as excess capacity, despite the significant reduction in recent years – before the onset of the health crisis. BigTechs have a huge volume of data on their customers and they use these data efficiently to meet their needs. Accordingly, in sectors where they have gained a presence in recent years, BigTechs have taken over the most profitable business segments, in many cases driving out the traditional operators. To address the – potentially highly disruptive – challenge that BigTechs pose for the banking sector, it is essential that banks continue to enhance efficiency, cut costs and step up their use of new technologies. To achieve these goals, they need to make significant investment in digitalisation and to incorporate new data processing technologies that will allow them to alter their business model while, at the same time, controlling their risk profile.

62 See, for example, European Commission (2020a), Deschryver and de Mariz (2020) and Task Force on Climate-related Financial Disclosures (2020).

63 See Hernández de Cos (2021c).

The growing digitalisation of economic activity entails both risks and opportunities for the banking sector. According to whether opportunities or risks predominate, the banking sector's ability to provide credit to non-financial agents could be either enhanced or marred. If the latter were the case, it is difficult to foresee whether the new financial sector entrants could fully make up for an eventual reduction in the bank lending supply. For example, the new entrants might focus only on certain segments of the financial business, such as payment services, but this would impair the overall profitability of the traditional banking sector and could thus hinder investment in new technologies in other economic sectors. Against this backdrop, it is key to ensure that the banking sector strengthens its technological renovation efforts, and that appropriate financial regulation is uniformly applied to comparable financial services, thus avoiding regulatory arbitrage.

2.4 Public finances

Before the onset of the COVID-19 pandemic, the Spanish economy had managed to recover only part of its fiscal space, which had deteriorated sharply following the global financial crisis and the European sovereign debt crisis. Despite the relatively robust growth path followed since 2014, at end-2019, before the onset of the health crisis, the Spanish economy still had a budget deficit equivalent to 2.9% of GDP, the second-highest budgetary imbalance in the euro area behind France, and a public debt-to-GDP ratio of 95.5%, just 5.2 pp below the previous all-time high recorded in 2014 and well above the debt-to-GDP ratio recorded before the 2008-2013 recession (35.8%). Indeed, stripping out the economic cycle effect, in 2019 Spain's structural public finance deficit still stood around 3% of GDP, with no decrease since 2015.

Since the start of the health crisis, fiscal policy has remained clearly expansionary. As described in Chapter 1, in Spain and in most European countries, the scale of the economic contraction caused by the COVID-19 pandemic made it necessary to roll out a swift and ambitious fiscal policy response. The aim of this response was to mitigate, in the short term, the adverse impact of the crisis on the most vulnerable households and firms, and to avoid, in the medium and long term, persistent damage to economic growth capacity. This fiscal policy stance was endorsed and facilitated in March 2020 when the Council of the European Union activated the Stability and Growth Pact's escape clause, temporarily suspending the deficit and debt requirements envisaged in European fiscal rules, and temporarily relaxed State aid restrictions.

The impact of the measures approved in 2020 on the budget balance is estimated at around 4.5 pp of GDP. Most of this impact is related to the roll-out of measures primarily aimed at addressing the health, social and economic consequences of the pandemic. These measures included, in particular: higher

Table 2.1
MAIN FISCAL POLICY MEASURES ADOPTED IN SPAIN (a)

% of GDP	Impact in 2020			Impact in 2021		
	Temporary	Permanent	Total	Temporary	Permanent	Total
Revenue items (b)	-0.1	—	-0.1	-0.04	0.2	0.2
Reduction of VAT on healthcare products (c)	-0.04	—	-0.04	-0.04	—	-0.04
Changes in the prepayments system (VAT and personal and corporate income tax)	-0.03	—	-0.03	—	—	—
New taxes on financial transactions and digital services	—	—	—	—	0.1	0.1
Tax changes in the State budget for 2021	—	—	—	—	0.1	0.1
Expenditure items	4.0	0.4	4.5	2.1	0.6	2.7
Benefits for furloughed workers	1.4	—	1.4	0.4	—	0.4
Benefits for the self-employed obliged to suspend their activity	0.4	—	0.4	0.2	—	0.2
Subsidies to firms and the self-employed relating to exempted social security contributions	0.7	—	0.7	0.1	—	0.1
Social and healthcare expenditure related to COVID-19 (d)	1.1	—	1.1	0.5	—	0.5
Extraordinary benefit for temporary inability to work owing to COVID-19 (d)	0.2	—	0.2	0.1	—	0.1
Business solvency support measures	0.2	—	0.2	0.8	—	0.8
Minimum income scheme	—	0.04	0.0	—	0.2	0.2
Increase in public sector wages (e)	—	0.2	0.2	—	0.2	0.2
Increase in pensions (e)	—	0.2	0.2	—	0.1	0.1
Net balance			-4.5			-2.5
Contingent risks (f)			7.8			0.6
Public guarantees for bank lending to business			7.8			0.6
Capital injections in businesses			0.04			0.04
Measures without a budgetary impact			2.2			0.1
Legislative moratoria bank loans (g)			2.2			0.1
Deferral of rentals and utilities payments			NA			NA

SOURCES: Agencia Tributaria, ICO, IGAE, Ministerio de Hacienda and Banco de España.

a Impact estimated by the Banco de España, drawing on available information.
b Excluding deferrals of tax and social security liabilities falling due in the same year. According to the tax authorities, for the taxes collected by them during 2020, the deferred balance totalled a maximum of 0.4% of GDP in May and has gradually fallen since then. In 2021 tax liabilities falling due in April may once again be deferred for up to six months.
c Including the reduction of VAT on protective masks.
d Estimate of actual expenditure in 2020, drawing on data published by the IGAE, and that forecast for 2021.
e Measured by comparison with an increase identical to that in the CPI.
f Amounts granted in 2020 and in 2021 up to the cut-off date for this Report.
g Outstanding amount of the loans subject to moratoria up to the cut-off date for this Report.

budget allocations to meet the increase in health expenditure; employment and labour income support measures (making the short-time work schemes more flexible and providing benefits for self-employed persons obliged to suspend their activity); increased social protection measures for the most disadvantaged groups; and measures taken to provide liquidity to firms against the backdrop of a sharp drop in their income (see Table 2.1). In addition, other measures not directly related to the health crisis were also approved in 2020, such as the increase in public pensions and public sector wages and the launch of the minimum income scheme. Also

noteworthy, although they entail no immediate increase in expenditure, are the State-backed guarantees granted through the ICO guarantee facilities – established in 2020 to encourage bank lending to business – and which, as at March 2021, constitute a contingent risk for general government equivalent to 8.4% of GDP. This is more than the volume of exposure assumed in the euro area on average through similar schemes (around 4% of GDP).

In 2021, the fiscal policy stance will remain expansionary and this will help shore up the still fragile recovery of the Spanish economy. Although many of the measures approved in 2020 to mitigate the adverse effects of the pandemic will be maintained during much of 2021, their impact on public finances is expected to be more limited than in 2020 (see Table 2.1). This is partly due to the recovery in economic activity expected in the coming quarters. In any event, in accordance with the primary structural balance,[64] the fiscal policy stance will continue to be expansionary in 2021 since the lower weight of the above-mentioned measures should be offset by the fiscal impulse stemming from the funds received under the NGEU programme (see Section 3.3).

In any event, as a consequence of the crisis, public finances have become more vulnerable and future fiscal space has decreased, so a budgetary consolidation process will be essential once the recovery takes hold. As is explained in detail in Section 3.1 of Chapter 1 of this Report, in 2020 the functioning of the automatic stabilisers and the budgetary impact of the various measures taken to mitigate the effects of the pandemic prompted an acute deterioration in public finances, which could have been even worse, and possibly more persistent, had the economic policy response been less decisive. In particular, the general government deficit rose to 11% of GDP in 2020, 8.1 pp more than in 2019, and the public debt-to-GDP ratio closed the year at 120%, 24.5 pp above its end-2019 level.[65] Also in this period, the structural public finance deficit, which was already very large before the onset of the pandemic, grew by some 1.5 pp. As a result, the general government budgetary imbalance is expected to remain relatively high in the coming years (see Section 3.3 of Chapter 1 of this Report). So far this deterioration in public finances has not translated into a worsening of the conditions on which the public sector and the domestic corporate sector access external financing on the international capital markets. This is largely due to the decisive monetary policy measures rolled out by the ECB in response to the pandemic. However, persistently high government indebtedness is a major source of macro-financial vulnerability for the economy overall and should be addressed, from a medium-term perspective, by means of a credible, ambitious and comprehensive process of restructuring of public finances (see Section 3.2).

64 In accordance with Eurosystem methodology, the calculation of the primary structural balance excludes flows with the EU, including the funds to be received through the NGEU programme, as they are not residents' income.

65 The reclassification of Sareb as part of the general government sector in 2020 contributed 0.9 pp of GDP to the increase in the deficit in that year, and 3 pp of GDP to the increase in the public debt-to-GDP ratio.

2.5 Global impact

The disruptions in world trade caused by the pandemic could amplify some previous patterns (see Box 2.2). At the start of the crisis, there was some level of disruption in global trade chains and a number of countries adopted protectionist measures on trade in medical goods.[66] Today, the recovery could be hindered at the global level by certain measures that are affecting free trade and the distribution of vaccines.[67] Yet these measures may be set within a broader process that was already under way before the onset of the pandemic, in which growing importance is given to national considerations in the solution of multilateral problems and there is some questioning of the international framework based on WTO rules. Certain recent landmarks in this respect are the US-China trade rivalry and Brexit. Although none of these have given rise to higher tariff barriers worldwide, they have increased trade uncertainty,[68] with adverse effects on global trade flows, and have prompted trade diversion in the short term. In addition, national and regional preferences for certain global public goods, such as environmental concerns, employment standards or food safety, are increasingly resulting in higher non-tariff trade barriers between countries.

A global framework of shared multilateral rules is essential to address the long-term challenges facing national economies. Recent experience shows that trade integration and diversification have helped address the impact of the global health crisis and are essential for the recovery. In this setting, strengthening the multilateral dialogue will shore up the economic recovery, speed up the distribution of vaccines worldwide[69] and address some of the new emerging challenges, such as the fight against climate change, technological competence or data processing by multinationals.

In the case of Europe, some of these initiatives are included among the policies set out in the European Union's Open Strategic Autonomy. This initiative is designed as a framework for coordination of a broad set of policies to propel the external projection of the European Union, advocating trade openness and multilateralism and, at the same time, strengthening the region's economic and financial resilience.[70] To this end, the focus is on elements of industrial policy that seek to make European production chains more robust, reduce the reliance on third countries in certain strategic areas, boost investment in sensitive and high value-

66 See García et al. (2020).

67 Including preferential supply agreements in the producer country (especially in the United States and the United Kingdom in the first six months of the vaccination processes), provisions that allow supply to the domestic market to be prioritised in emergency situations, or restrictions on the export of vaccines (for example in India, which is a leading vaccine manufacturer worldwide).

68 See Albrizio et al. (2021), forthcoming.

69 As in the case of the COVAX initiative, which seeks to purchase and distribute vaccines equitably among lower income countries.

70 See L'Hotellerie-Fallois et al. (2021).

added sectors, fostering economies of scale and positive network effects, and, in short, increase the influence of the European Union worldwide. In any event, the achievement of these goals must be combined with the strengthening of the European governance framework, with permanent mutual assurance tools – such as a central fiscal capacity, unemployment insurance or a common safe asset – to mitigate asymmetries and reinforced cohesion policies to avoid real divergences among Member States that could distort the functioning of the single market. In addition, these processes must be focused on providing the private sector with the appropriate incentives and legal frameworks, avoiding policies that may distort efficient allocation and the consequent capacity for innovation.

In any event, greater resilience in the critical goods production process must be underpinned by efficiency criteria. The measures designed to strengthen global value chains must not only protect economic incentives, respecting internationally integrated production processes, but also identify critical points in these processes, so as to ensure correct risk diversification. The global health crisis has shown that firms whose production is more integrated in global value chains are more resilient to crises and experience less production disruption. In addition, the available evidence indicates that these firms are better placed to recover after a shock and that, although they are more exposed to supply shocks in their suppliers' countries, they are more resilient to domestic ones.[71]

3 Tools available to the Spanish economy to undertake its structural transformation

3.1 Structural reforms

The challenges the Spanish economy will have to face in the coming years are substantial and closely interrelated; tackling them requires a comprehensive strategy of ambitious and lasting structural reforms (see Figure 2.3). Some of the main challenges that the Spanish economy will have to face in the coming years are: raising the economy's potential growth, correcting the persistent shortcomings of the Spanish labour market, reinforcing the sustainability of public finances and addressing the far-reaching economic implications of population ageing, high inequality, climate change and economic digitalisation. These challenges are characterised by their close interlinkages, their vast complexity and scope, and their structural nature. The economic policy response should therefore involve a comprehensive growth and employment strategy based on the implementation of an ambitious set of structural reforms. Furthermore, it should be underpinned by broad consensus among the different political, social and economic agents in Spain to

71 See Box 2.2.

Figure 2.3
COMPREHENSIVE STRUCTURAL REFORM STRATEGY

SOURCE: Banco de España.

ensure it is a strategy designed to last.[72] The rest of this section presents the main courses of action that should comprise this global growth and employment strategy, some of which are also analysed in depth in Section 3.3, given their special relevance for the projects under the European NGEU programme.

72 See, for example, Hernández de Cos (2020) and Banco de España (2020).

Spain needs to step up its productivity growth. The Spanish economy's potential growth, which was already relatively low before this crisis, could be eroded for some time as a result of it (see Section 2.2). Against this background, it is particularly important to step up the pace of productivity growth, as this is the main determinant of the Spanish economy's modest potential growth capacity. Over the last two decades, Spain's productivity growth rate has been very low (0.2% on average per year) and has lagged significantly behind that of some of the main advanced economies, such as Germany (0.8%) and the United States (0.9%). This weaker relative productivity performance is seen across almost all industries (see Chart 2.13.1).

For productivity to gather momentum, various types of actions are required including measures to encourage business growth. The demographic structure of the Spanish productive system, characterised by a very high relative weight of smaller-sized firms,[73] is one of the main factors behind Spain's low aggregate productivity. This is not only because productivity tends to increase with firm size, both in Spain and in other European countries, but also because it is precisely in smaller Spanish firms where there is a wider negative productivity gap in relation to their European counterparts (see Chart 2.13.2), even allowing for the different sectoral composition of these economies. Therefore, it is necessary to delve into the various reasons why the Spanish business sector is so skewed towards small low-productivity firms and mitigate their effects. In particular, it would be advisable to promote access by smaller-sized firms to a wider range of sources of external financing in more favourable conditions and review the extent to which the institutional framework – as defined, for example, by the regulations governing product and factor markets – could be limiting firms' development and productivity.[74] In this context, it would also be important to enhance the efficiency of the judicial system, which may require providing it with more resources, stepping up its digitalisation and developing alternative dispute resolution mechanisms. In this respect, it should be noted that the swift and efficient functioning of debt restructuring and corporate insolvency and liquidation procedures is essential, not only to allow for an adequate reallocation of productive resources in the economy, but also to incentivise entrepreneurship and business start-ups (see Box 3.3).

It is essential to promote the accumulation of human and technological capital. Two additional factors behind the low relative productivity of the Spanish economy are the human capital shortfall that it still has compared to other European countries and the limited significance of activities linked to innovation. Indeed, despite the progress made in recent decades, the educational attainment level of employees, entrepreneurs and the self-employed in Spain is considerably lower than in the euro

73 See Banco de España (2016).

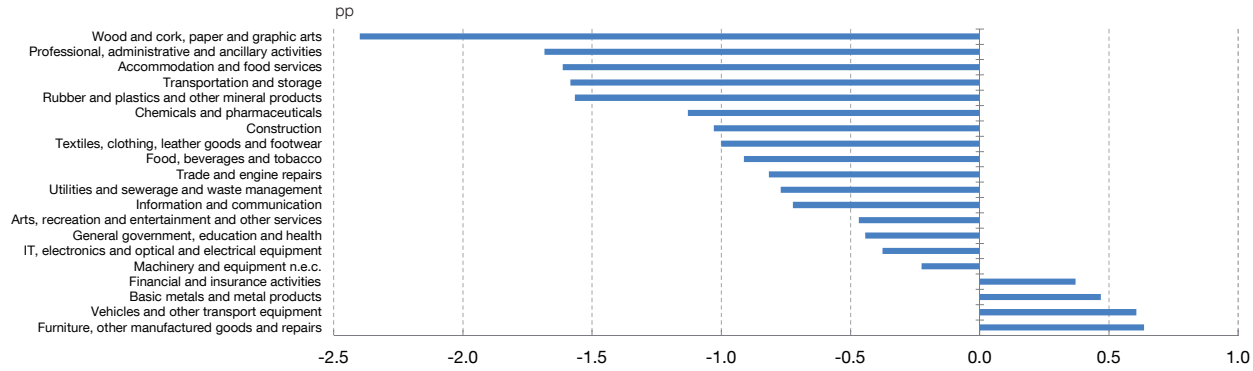
74 See, for example, Dejuán and Mora-Sanguinetti (2019), Mora-Sanguinetti and Pérez-Valls (2020) and De Lucio and Mora-Sanguinetti (2021).

Chart 2.13

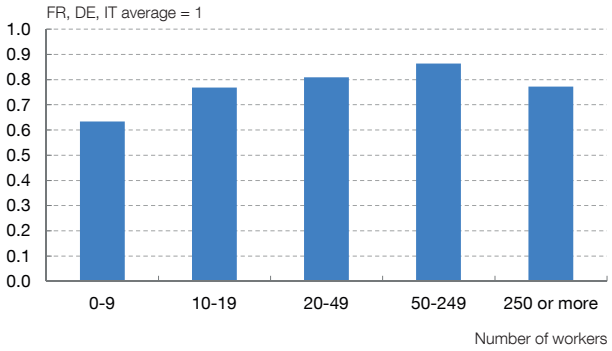
A COMPREHENSIVE STRUCTURAL REFORM STRATEGY IS NEEDED TO ADDRESS THE MEDIUM-TERM CHALLENGES FACING THE SPANISH ECONOMY

Spain needs to step up its productivity growth. Compared with other European countries, weaker relative productivity performance is seen across almost all industries. The productivity differential is worse precisely in the case of smaller-sized firms, which account for a very high relative weight of the Spanish productive system. Correcting Spain's structural labour market shortcomings is also crucial. These shortcomings are largely responsible for Spain having far higher rates of unemployment and temporary employment than those recorded in other advanced economies. In the coming years, the Spanish economy must also address the far-reaching implications of population ageing, high inequality, the ecological transition and digitalisation.

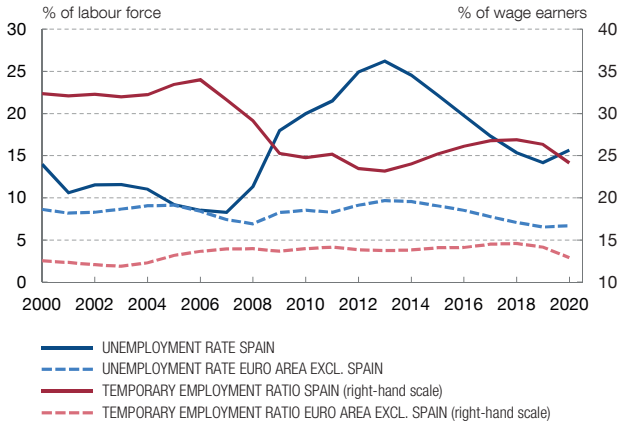
1 ANNUAL GROWTH DIFFERENTIAL IN TOTAL FACTOR PRODUCTIVITY (TFP) BETWEEN SPAIN AND EU-12 (2000-2016) (a)



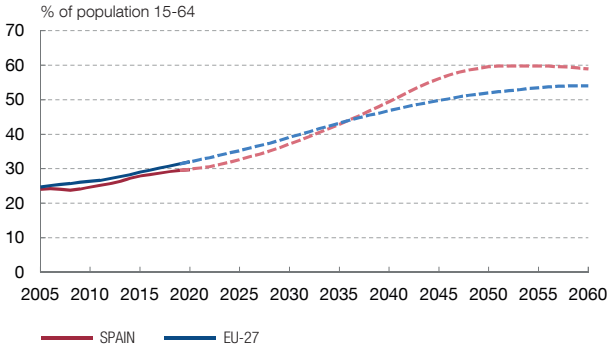
2 RELATIVE PRODUCTIVITY OF SPANISH FIRMS BY FIRM SIZE IN 2018



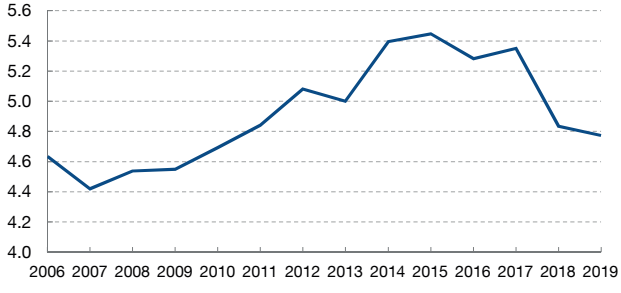
3 UNEMPLOYMENT RATE AND TEMPORARY EMPLOYMENT RATIO



4 DEPENDENCY RATIO, RECENT CHANGE AND PROJECTIONS (population +65 / population 15-64) (b)



5 P90/P10 OF NET HOUSEHOLD INCOME PER CAPITA (c)



SOURCES: EU KLEMS, Eurostat, INE and Banco de España.

a See Cuadrado et al. (2020). EU-12: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Italy, Netherlands, Spain, Sweden and United Kingdom.
b EUROPOP2019 projections.
c Living Conditions Survey (ECV). Net household income per capita is OECD equivalence scale adjusted net household income.

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area as a whole.[75] The weight of public and private investment in R&D in Spanish GDP is also very low, accounting for 0.5% and 0.7%, respectively, in 2018, below the ratios for the EU average (0.7% and 1.5%). In addition, very few firms actively innovate (36.9% of the total, compared with 57.7% in Germany and 63.7% in France,[76] for example). This latter aspect could be linked, at least in part, to a business demography in which smaller, less innovative firms are predominant, in relative terms. With a view to bridging these human and technological capital gaps, it would be advisable, first, to consider an extensive overhaul of the Spanish educational system (both compulsory education and university and vocational training), including reviewing curriculum content, adopting new learning strategies, promoting excellence and incorporating some of the best international practices in these areas.[77] Additionally, it seems essential to reinforce innovation support mechanisms, in terms of management (for instance, by fostering synergies between the different public and private institutions involved in innovation) and financing (specifically, by thoroughly revising R&D tax incentives and strengthening the role that venture capital firms can play) (see Section 3.3).

The Spanish labour market is characterised by showing persistently high rates of unemployment and temporary employment, which have an adverse effect on many economic and social aspects. Specifically, taking the last two decades as reference, the rates of unemployment and temporary employment in Spain stood, on average, at 16% and 28.1%, respectively, far above the percentages for the euro area as a whole (9.4% and 15.3%, respectively) (see Chart 2.13.3). This extraordinarily distinct behaviour of the Spanish labour market, which persists in both economic upswings and downturns and which cannot be explained by the particular sectoral composition of the Spanish economy, has far-reaching negative implications. Thus, for instance, high levels of unemployment often entail higher rates of long-term unemployment. This implies more adverse economic and social effects. Moreover, in a setting in which there is a very significant gap in the level of employment protection between workers on temporary contracts and those with permanent contracts, the former have disproportionately borne the brunt of job destruction flows in the Spanish economy in recent decades, a pattern that is also being observed in the current crisis. Since particularly vulnerable groups – such as young people and workers with a lower level of education – are predominant among temporary workers, these Spanish labour market dynamics impinge very negatively,

75 In Spain, in particular, 38.9% of the self-employed, 35.9% of employers and 31.1% of employees had a lower educational level in 2019, according to Eurostat. These percentages are far higher than those for the euro area as a whole (22.2%, 19.0% and 18.8%, respectively).

76 See Community Innovation Survey 2016.

77 In this respect, the Organic Law amending the Organic Law on Education (LOMLOE by its Spanish abbreviation) was approved in December 2020 and the Plan for Modernising Vocational Training was presented in July 2020. Various aspects of these regulations are yet to be defined. In any case, ensuring a broad political consensus would be particularly important to provide them with the greatest possible stability (see Gortázar (2020)). Firm progress must also be made in the approval of a new Law on the Organisation of the University System (LOSU, by its Spanish abbreviation), to introduce changes in the selection systems for teaching and research staff and reinforce the linking of the system's funding to meeting excellence goals.

and structurally in many cases, on areas as diverse as inequality, uncertainty surrounding future labour income, the rate of new household formation and the process of human capital accumulation.

Correcting Spain's labour market shortcomings requires reducing the high duality between temporary and permanent workers and strengthening active labour market policies. Mechanisms need to be explored to reconcile a certain flexibility in hiring with a more equitable distribution of employment protection for workers according to their type of contract at any given time. In particular, among the different options that could be considered in this regard are contracts with growing firing costs or, as analysed in detail in Section 3.3 and in Box 2.4, a mixed system that combines a reform of firing costs in Spain – with a view to promoting a more equitable distribution among the different types of contracts – with the establishment of a capitalisation fund to which firms make a periodical contribution on behalf of each of their workers. Employees could recover these contributions in the event of involuntary loss of employment or, if they have not done so before, upon retirement. Moreover, as also analysed in Section 3.3, it is imperative to strengthen active labour market policies, not only to avoid permanent impairment of the human capital of those who have lost their jobs, but also to adapt this human capital to the new demands of a society and economic activity subject to a continuous and intense process of technological change, against the backdrop of a gradually ageing workforce. This would increase the employability of the unemployed and pave the way for the consequent reallocation of productive resources among sectors and firms.

Population ageing has substantial implications for many aspects of economic activity. The Spanish population is undergoing intense demographic changes that will lead to a very considerable increase in Spain's dependency ratio in the coming decades. In particular, according to Eurostat projections, in Spain this rate – which measures the ratio of the population aged over 65 to the population aged between 15 and 64 – will increase by more than 25 pp over the next 25 years, to 56.1% in 2045. This marked process of population ageing, which will foreseeably be more acute in Spain than in other European countries (see Chart 2.13.4), poses a wide range of challenges in various areas of economic activity.[78] Thus, for instance, these demographic dynamics will have far-reaching implications for public finances, since they will significantly increase spending needs in healthcare, long-term care and pensions. They will also affect the level and composition of tax revenue, as households' consumption, saving and investment decisions vary significantly over the life cycle of individuals. Population ageing will also have a bearing on economic growth capacity through its impact on the labour market (as the labour force participation rate tends to fall around retirement age) and on worker productivity (as people's physical and cognitive skills deteriorate over time).[79]

78 See Banco de España (2019a).

79 See Anghel and Lacuesta (2020).

Addressing the many challenges posed by demographic change calls for resolute action on multiple fronts. In particular, it would be advisable to analyse the reasons for Spain's low fertility rate, both compared with other European countries and with respect to the *desired* fertility rate of Spanish women of childbearing age. The available evidence suggests that some of these reasons could be linked to work-life balance-related difficulties. This would warrant strengthening support for families and increasing labour market opportunities for young women with children, since it is they who are frequently most affected, from an economic and employment standpoint, by the decision to have children.[80] It would also be desirable to adapt migration policy in Spain to the changing needs of the labour market. Furthermore, measures are needed that will promote longer working lives for older workers. To this end, it is essential to mitigate impaired employability of workers as they age, through both active labour market policies and lifelong learning, and to promote more flexible working conditions that allow for a better match between older workers' skills and needs and labour market demands.

The challenge that population ageing poses for the public pension system needs to be addressed. Although the demographic dynamics of Spanish society alone already imply a significant increase in social security spending in the coming years, the return to a system of pension revaluation indexed to inflation and the suspension of application of the sustainability factor place considerable additional upward pressure on this expenditure.[81] At a time when the public pension system has already been running large deficits in recent years, these developments make it imperative to introduce additional measures to strengthen the financial sustainability of the system. In this respect, it should be noted that some of the latest recommendations of the Toledo Pact Committee and the Spanish Independent Authority for Fiscal Responsibility (AIReF) – which propose shifting several expenditure items from Social Security to the State and transferring to Social Security part of the social security contributions earmarked for the National Public Employment Service – would allow part of the social security deficit to be reduced. However, this would be at the expense of increasing the State deficit. Therefore, in principle, these recommendations would have no effects on the general government budgetary balance. Moreover, through these measures alone it would not be possible to address the increase in social security expenditure that will occur in the coming years as a result of the demographic changes. Thus, for instance, in a scenario in which pension benefit revaluation is indexed to the CPI and the sustainability factor is maintained, the AIReF estimates that, given Spain's demographic dynamics, social security expenditure will increase by around 3.3 pp of GDP in 2050. This increase would be 0.9 pp higher in a scenario in which the sustainability factor is permanently eliminated. For all these reasons, in a setting in which all tiers of general government must undertake a fiscal consolidation process following the crisis,

80 See De Quinto et al. (2020).

81 See, for example, Hernández de Cos (2021b) and AIReF (2020a).

ensuring the greatest possible political and social consensus continues to be imperative to tackle this challenge.

A possible reform of the pension system should strengthen the link between contributions made and benefits received (while ensuring a level of sufficiency for more vulnerable households), increase the system's transparency and predictability, and bear in mind intergenerational fairness issues. In general, the redistributional effects of the pension system depend, among other factors, on the pension calculation formulae, and the existence of welfare benefits and floors and ceilings on contributions and benefits. Moreover, financing the pension system through intergenerational transfers or through taxation has very different and important implications in terms of inter- and intra-generational fairness. Against this backdrop, it would be desirable to strengthen the link between contributions made and benefits received, while ensuring in all cases a level of sufficiency for less well-off households. With regard to intergenerational fairness, it should be noted that making a large part of any adjustment to the pension system fall on the retired population could imply disproportionately reducing their levels of income and well-being, as this group made their saving and labour supply decisions on the basis of certain expectations of benefits and currently has a very limited capacity for adjustment. Likewise, making the whole weight of a possible reform of the system fall on future generations of workers, by significantly increasing intergenerational income transfers, would also have a considerable impact on these generations' income and well-being levels. In any case, it is crucial that any reform of the system should result in a greater degree of transparency and predictability. To this end, it could be advisable to consider the introduction of automatic adjustment mechanisms to adapt certain parameters of the system to changes in demographic and economic dynamics, in order to provide citizens with certainty and foster prudent decision-making regarding savings, work and retirement.

Inequality in Spanish society, which was already high, is expected to rise as a result of the pandemic. As mentioned in Section 2.1, the COVID-19 pandemic is having a markedly negative impact on certain particularly vulnerable groups of workers: those with temporary contracts and younger and low-income workers. In this respect, as some evidence is beginning to suggest, it seems likely that the current economic crisis will ultimately raise inequality in Spanish society, despite the measures deployed by the authorities to mitigate the adverse effects of the pandemic on household income and liquidity. These developments are particularly relevant for two reasons. First, because despite the period of vigorous and continuous growth enjoyed by the Spanish economy between 2014 and 2019, inequality levels in Spain before the onset of the health crisis were still above those recorded before the global financial crisis (see Chart 2.13.5). Second, because there is ample empirical evidence indicating 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 and the accumulation of human capital.[82]

The economic policy response to the challenges posed by high levels of inequality must include actions in multiple dimensions. Reducing inequality requires, among other things, addressing the structural shortcomings of the Spanish labour market which, as mentioned above, are responsible for very high unemployment and temporary employment rates, which are particularly detrimental to young people. It is also vital to increase the employability and productivity of the most vulnerable groups, for which raising their level of training is key. In this regard, it is important to ensure that the necessary conditions are in place to support equal opportunities and diminish the role that some household factors, such as household income, play in explaining the heterogeneity observed in academic performance.

A rigorous analysis of the efficiency of the different redistribution schemes in Spain needs to be conducted. This analysis should cover the different social transfer policies in force in various areas of general government – including those that take place through health and education – and the functioning of the Spanish tax system. The aim would be to assess whether, collectively, these instruments enable the degree of resource redistribution that society demands to be achieved and whether their implementation is sufficiently efficient.[83] To this end, it may be useful to compare the scope and progressivity of social transfers and the tax system in Spain with those in other European countries, although this comparison is not without certain difficulties. For example, each country has a wide range of social transfers, both monetary and in kind, making it very difficult to perform a uniform international comparison. Likewise, the design of the tax system involves many parameters – including ceilings and floors and tax relief – that can result in very significant differences between each country's official rates and the effective tax burden, both at the aggregate level and for different groups of taxpayers. Despite these difficulties, some studies using uniform data tools by country estimate that the degree of redistribution achieved by the Spanish public system is lower than the EU average.[84] It is advisable, therefore, to conduct a detailed and comprehensive analysis of this difference, studying the contribution of each of the different components of the Spanish welfare system, from both the transfer and the taxation side.

The approval of the minimum income scheme in May 2020 marked the introduction of a redistribution mechanism that could significantly help to alleviate extreme poverty in Spain.[85] In particular, according to estimates drawing on the INE's Living Conditions Survey, this instrument could reduce the rate of

82 See Grossman (1991), Persson and Tabellini (1994) and Alesina and Rodrick (1994).

83 See, for example, Ayala and Cantó (2020).

84 See Avram et al. (2014) and Fuest et al. (2010).

85 See Navas Román and Villazán Pellejero (2020).

extreme poverty in Spain from 5.7% to 1.5% of households.[86] In any event, it is important to ensure that the minimum income scheme (IMV by its Spanish abbreviation) meets this goal without distorting the labour-market participation decisions of its beneficiaries. Two points should be mentioned in this regard. First, the regulation establishing the IMV stipulated that the functioning of this instrument had to be regularly assessed by the AIReF. In principle, this would allow potential shortcomings in its implementation to be identified. Second, in the design of the IMV it was envisaged that this benefit would be compatible with employment for one year after the beneficiary had found work. However, as the way in which the benefit is to be adjusted has not yet been established by regulation, the effectiveness of this clause cannot be accurately assessed. Moreover, it could be appropriate to contemplate a possible extension of the IMV to some groups who, according to its initial design, are not eligible, but who would also be at risk of extreme poverty. This could affect, for example, certain low-income households who do not meet the IMV wealth requirement – mainly because they possess low-value real estate assets – and some households with more than two adults.[87]

Mitigating the adverse effects of inequality also requires promoting a stable increase in the supply of rental housing. Beyond income policies, it would also be desirable to take action to reduce the adverse effects of inequality in the area of housing affordability, which has tightened in recent years, in the case of both home ownership and renting.[88] Again, these dynamics appear to have had a greater negative impact on younger households. In this area, priority should be given to those public policies aimed at promoting a sustained increase in the supply of rental housing, especially housing for groups with the greatest affordability problems. Overall, these initiatives would help to avoid an excessive increase in rents. Specifically, a combination of tax incentives and regulatory improvements to increase legal certainty for landlords, and a greater public policy emphasis on the provision of public rental housing, could be considered.[89]

Moving towards a more sustainable growth model and mitigating the effects of climate change will require a profound economic, social and technological transformation, both in Spain and worldwide. In recent years, the European Union has played a leading role internationally to bolster the ecological transition of the economy and strive to honour the commitments made in the Paris Agreement. In keeping with this European position, Spain's draft Climate Change and Energy Transition Law, which is currently in the final stages of its passage through Parliament, sets ambitious goals for the coming decades in terms of reducing greenhouse gas

86 The extreme poverty rate is calculated as the percentage of households with total annual income per unit of consumption below 30% of the median.

87 According to the 2018 Spanish Survey of Household Finances, almost 190,000 households in Spain would be living in extreme poverty, as defined by the European Commission, but would not be eligible for the IMV.

88 See Directorate General Economics, Statistics and Research (2020) and López-Rodríguez y Matea (2019).

89 See López-Rodríguez and Matea (2020) and Mora-Sanguinetti (2012).

emissions, developing renewable energy sources and increasing energy efficiency.[90] To achieve these goals and help the Spanish economy adapt to the impact of climate change, both this draft law and the National Energy and Climate Plan (NECP), the 2050 Long-Term Decarbonisation Strategy and the National Plan for Adapting to Climate Change (PNACC by its Spanish abbreviation) lay down some of the main courses of action and tools that will need to be deployed in the coming years.[91] Although it is not yet possible to assess with sufficient accuracy the effects of each of these possible actions, it seems clear that, in order to achieve their objectives, they will have to drive a profound economic, social and technological transformation of Spain. In particular, it seems unlikely that the commitments undertaken can be honoured without very significant changes to patterns of behaviour and the current growth model. In this respect, by way of illustration, it should be noted that, although in 2020 both the Spanish and the global economy suffered an unprecedented contraction and the activity of some of the most polluting sectors, such as transport, declined very significantly, CO_2 emissions fell by barely 13.1% in Spain and 4% globally, essentially on a temporary basis.[92]

It is vital that the multiple implications of any economic policy initiative adopted in this regard be carefully assessed and that the highest possible degree of international coordination be pursued. Economic policy is the best instrument for all agents to internalise the environmental externality generated by their decisions and to promote the transition towards a more sustainable growth model. However, although in recent years significant progress has been made in analysing the many different economic implications of climate change and the ecological transition, broadly speaking, no consensus has yet been reached on the most appropriate combination of specific public policies – or their exact calibration – to achieve certain environmental goals in the most efficient way possible. Against this particularly uncertain backdrop, it is imperative that the implementation of any economic policy initiative be accompanied by a comprehensive analysis assessing, both ex ante and ex post, all its implications for economic activity. In this respect, the creation of the committee of experts on climate change and energy transition envisaged in the Spanish draft Law on Climate Change and Energy Transition should be viewed favourably. This committee will be responsible for assessing and making recommendations on energy and climate change policies and measures. Furthermore, as this is a global challenge, a high degree of international coordination would be

90 In particular, this draft legislation sets minimum targets, which may only be revised upwards in future updates of the regulation. These would entail, by 2030, a reduction in greenhouse gas emissions in the overall Spanish economy of 23% (compared with 1990), an increase in the share of renewable energies in final energy consumption and in electricity generation to at least 42% and 74%, respectively, and an energy efficiency improvement of 39.5% (compared with the target laid down in EU law), so that, by 2050 or in the shortest possible time, Spain achieves climate neutrality.

91 For example, in terms of mobility, it is established, inter alia, that initiatives will be adopted for all cars and light commercial vehicles to achieve zero direct CO2 emissions by 2050. In addition, all municipalities with a population of more than 50,000 and Spain's islands will have to adopt sustainable urban mobility plans by 2023 at the latest.

92 See Carbon Monitor.

desirable in the economic policy deployed to address climate change, for example in the areas of taxation or financial regulation. Thus, competitive distortions would be prevented and the risk of offshoring of activity would be minimised.

Economic policy must recognise that the impact of climate change and the transition towards a more sustainable economy will be asymmetric across sectors, firms, regions and households. Clearly, achieving the above-mentioned climate goals will require very different efforts for the various industries. It is also clear that adaptability to a new more sustainable growth model will be highly uneven among the various types of firms – for instance, depending on their size or innovation capacity – and households – for instance, depending on their level of income or education – especially in the short term. At the same time, the degree of exposure to climate change and the ecological transition is also asymmetric at the regional level, owing to significant differences between regions in terms of both their geographical characteristics and their productive system. In this setting, it is vital for economic policy to properly identify those groups that could be most affected, in relative terms, by these processes of structural change and to envisage effective measures to mitigate their vulnerability in the short term. In this regard, it is noteworthy that 82% of Spanish respondents in the European Investment Bank's 2020-2021 Climate Survey considered that, in order to succeed, any economic policy measures that may be rolled out in Spain to address climate change must take into account income gaps between population groups and social inequality.[93]

Fiscal policy is a key tool for combating climate change and fostering a more sustainable growth model. Among the various facets of economic policy, fiscal policy is, in principle, the one with the most appropriate instruments to promote the ecological transition of the economy. First, in the area of taxation, properly calibrating the different types of taxes and subsidies is the most efficient way to regulate both the direction and the pace of this structural change. Accordingly, environmental taxes – which currently have a lower revenue-raising capacity in Spain than in other European economies – must play a pre-eminent role in the coming years, both to discourage less environmentally sustainable activities and encourage green initiatives, with the revenue raised being used to offset the costs that the ecological transition may entail in the short term for some vulnerable groups. In addition, within fiscal policy, public investment also has the capacity to act as a powerful catalyst for developing new, more efficient and cleaner technologies.

The European NGEU programme should be another essential lever to accelerate the ecological transformation of the economy. As set out in Section 3.3, this programme could ultimately mobilise a very substantial volume of funds both for the European Union as a whole and for Spain, and should contribute to the recovery in the short term. Above all, however, from a medium and long-term

93 See 2020-2021 EIB Climate Survey.

standpoint, it should contribute to the structural transformation of the European economies, especially in the digital and environmental arenas. In this respect, the approach of the NGEU programme seems to be very much aligned with the views of the European and Spanish citizens who participated in the 2020-2021 EIB Climate Survey, of whom 57% and 64%, respectively, considered that, in the context of the current health crisis, the priority of national governments should be to reorient the economy so that the economic recovery clearly takes into account environmental needs.

In keeping with the design of the NGEU programme at the European level, in the coming years the Spanish government expects to use a very significant proportion (around 40%) of the funds under this mechanism to bolster the ecological transition in Spain. In fact, this is one of the four cross-cutting priorities – together with digital transformation, gender equality and social and territorial cohesion – around which the Spanish Government's Recovery, Transformation and Resilience Plan is structured. In step with the courses of action set out in the NECP, the different projects defined in this Plan include, for instance, large-scale deployment of renewable energy generation, a fair energy transition strategy, plans for investment in green infrastructure, a housing rehabilitation plan focused on energy efficiency, and a sustainable mobility emergency action plan. Most of these possible measures have not yet been defined with sufficient detail to allow an accurate assessment of their potential favourable effects on activity in the short and long term. However, as indicated by several recent papers, under certain circumstances, the multiplier effect on economic activity of investments in clean energy and biodiversity preservation could be significantly higher and more persistent than that of other less sustainable investments from an environmental standpoint.[94]

The financial sector also has a key role to play in the transition towards a more sustainable economy. Undertaking this profound structural transformation of the economy will require mobilising a very significant volume of funds, in both the public and the private sector. To enable these funds to be channelled as smoothly and efficiently as possible, it is essential that all financial market players – including banks, the different types of institutional investors and financial supervisors and regulators – incorporate into their analytical decision-making frameworks all risks related to climate change and to the economy's environmental transition process, and have the proper information, institutional framework and financial instruments to put their decisions into practice. It will also be crucial to determine the extent to which the transition towards a more sustainable economy may affect central banks' ability to fulfil their mandates and, where appropriate, how this should be reflected in the design, calibration and implementation of their different economic policy instruments.[95]

94 See, for example, Batini et al. (2021).

95 See, for example, Dikau and Volz (2021).

3.2 Budgetary consolidation strategy

The much-needed expansionary fiscal policy stance during the current crisis should give way, once the recovery takes hold, to a restructuring of public finances that enables the rebuilding of fiscal space for future crises. As mentioned in Chapter 1 of this Report, the extraordinary severity of the economic crisis brought about by the COVID-19 pandemic called for a very decisive economic policy response, particularly in terms of fiscal policy, to mitigate the considerable adverse effects in the short term and prevent this essentially temporary shock from causing persistent damage to economic growth capacity in the medium term. However, the crisis has entailed a sharp deterioration in Spain's public finances, which, prior to the pandemic, still bore the scars of the global financial crisis and European sovereign debt crisis of the past decade. The high level of public debt with which the Spanish economy will emerge from the pandemic may generate various macro-financial risks and reduce the available fiscal space in the event of new adverse shocks in the future. Therefore, once the crisis is over, an ambitious plan to correct the budgetary imbalances will be needed to substantially reduce the general government deficit and debt.

Correcting the structural imbalance of public finances will require a firm commitment and a sustained effort over time. According to Banco de España estimates, in 2020 the structural deficit of Spanish public finances would have increased by approximately 1.5 pp to around 4.5% of GDP, taking it back to the levels observed in 2012.[96] Reducing this high structural deficit, which has proved extraordinarily persistent in recent years, is an enormous challenge that can only be tackled gradually and under a multi-year fiscal consolidation programme. For example, if, once the current economic crisis is over, a plan for the restructuring of public finances were implemented involving a reduction in the structural deficit of 0.5 pp of GDP per year (the pace set by the currently suspended European fiscal rules[97]) until budgetary equilibrium is reached, it would take the Spanish economy just over a decade to return to its pre-pandemic levels of public debt, under a series of plausible scenarios (see Chart 2.14).

It would be desirable for the main details of the fiscal consolidation process to be defined and made public early to reinforce its credibility. The rest of this subsection details the most relevant aspects that should be envisaged in or along with this budgetary rebalancing plan.[98] In particular, it would be advisable for the

96 It should be highlighted that these estimates are subject to much uncertainty, given that, for the time being, the effect of the current crisis on the potential output of the economy can only be measured extremely inaccurately.

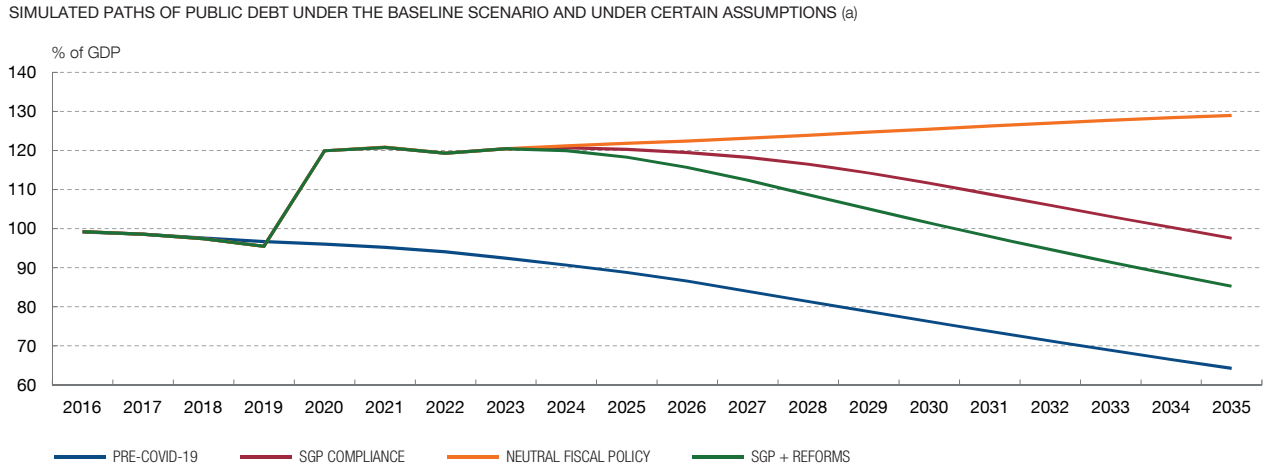
97 Also, the debt rule requires that the debt-to-GDP ratio be reduced annually at a rate of one-twentieth of the differential against the reference level of 60%. Since the Spanish public debt ratio reached 120% of GDP in 2020, this differential would amount to 60 pp. Hence, under this European rule, the debt ratio would have to be reduced by some 3 pp per year, on average.

98 See Banco de España (2020), Hernández de Cos (2020) and Hernández de Cos (2021a).

Chart 2.14

SIMULATED PATHS OF PUBLIC DEBT UNDER THE BASELINE SCENARIO AND UNDER CERTAIN ASSUMPTIONS (a)

Once the current economic crisis is over, were a fiscal consolidation plan to be implemented involving a reduction of 0.5 pp of GDP per year in the structural deficit until budgetary equilibrium is achieved, it would take the Spanish economy, under a series of plausible assumptions, just over a decade to return to its pre-pandemic public debt levels. This process of rebalancing the public finances would quicken were the fiscal consolidation plan to be accompanied by the implementation of a raft of structural reforms that increase the economy's growth potential.



SOURCE: Banco de España, drawing on INE and IGAE data.

a See "Macroeconomic projections for the Spanish economy (2021-2023)", Box 1, "Quarterly report on the Spanish economy", *Economic Bulletin,* 1/2021, Banco de España, adjusted for the impact of Sareb in 2020.

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main details of the plan to be defined and made public early on, even if the start of its implementation is delayed until the economic recovery under way has taken hold. The budget targets to be achieved and their deadlines should be established without delay, along with the main measures needed to attain them and the instruments envisaged to correct potential deviations. All of this would help reinforce the credibility of Spain's economic policies and would boost the expansionary effects of the current fiscal policy actions.

The effectiveness and credibility of the budgetary rebalancing plan would also be enhanced if it were accompanied by the implementation of an ambitious structural reform package and involved all tiers of general government. To mitigate the possible adverse effects that the fiscal consolidation programme could have on the economy's growth trajectory, it would be desirable for this programme to be accompanied by the implementation of a broad package of structural reforms, such as those described in the previous section and in Section 3.3. These reforms would not only raise economic growth potential, but would also accelerate the rebalancing of public finances by increasing the size of the main tax bases (see Chart 2.14). Moreover, given the high degree of decentralisation of Spanish general government (where territorial – regional and local – governments are responsible for more than 40% of government expenditure), it is imperative that

any credible budgetary consolidation strategy involve all tiers of government with fiscal powers.

The decision on how to distribute the fiscal adjustment among the different budget items should be based on a comprehensive review of all public expenditure and revenue items and a rigorous analysis of the implications of any fiscal policy action in terms of economic efficiency and fairness. The way in which the fiscal adjustment that Spain will need to implement in the coming years is to be distributed among the different income and expenditure items should be decided in the political realm. It is there that the preferences of the whole of Spanish society regarding the structure of public finances in general and, in particular, the balance that fiscal policy must strike between economic efficiency and fairness, can be properly weighed up. In any event, deciding on the specific breakdown of this adjustment in public finances requires all budget items to be thoroughly reviewed beforehand to rigorously assess to what extent the objectives proposed for each of them are being met, identify deficiencies or areas for improvement in relation to the quality of public finances (for which purpose it might be appropriate to use international best practice as reference) and analyse in depth the different implications of any fiscal intervention in terms of both economic growth and redistribution.

On the expenditure side, priorities need to be set in the use of public resources and efficiency increased. As mentioned above, in the coming years some expenditure items, such as those related to health, long-term care, pensions and public investment in human and technological capital, will require larger budget allocations. In this setting, the necessary rebalancing of public finances in the medium term will require being very selective when committing to any permanent increase in spending, identifying which expenditure policies are a priority, assessing their effectiveness in meeting their goals and analysing whether there is room for improvement to increase expenditure efficiency. In this respect, studies by the AIReF in recent years have shown that it is possible to improve efficiency in some major spending items, such as pharmaceutical expenditure, subsidies and active labour market policies. It would be desirable for these recommendations to be taken into account in the comprehensive review of public finances.[99]

On the revenue side, it would be advisable to undertake a comprehensive review of the Spanish tax system to ensure that tax revenue is sufficient to finance the desired level of spending. The adjustments required by the Spanish tax system to increase its revenue-raising capacity, whether through changes to several existing taxes or the introduction of new ones, need to be undertaken as part of a comprehensive reform of the tax system. Only thus is it possible to maximise the efficiency of tax collection and minimise the distortions that this generates in economic activity. In this respect, the Ministry of Finance recently

99 See the various papers that comprise the AIReF's Spending Review.

created a committee of experts to carry out an in-depth analysis of the Spanish tax system.

Ahead of a possible reform of the tax system, the reasons for Spain's lower tax take compared with other European countries need to be analysed. According to Eurostat data, in 2019 tax revenue in Spain totalled 34.8% of GDP, 2 pp less than the simple average of the euro area countries. The bulk of this lower revenue (1.8 pp) was due to Spain's smaller indirect tax burden. Particularly notable within this group of taxes was the lower VAT revenue, which stood 1 pp below the arithmetic mean for the euro area countries. As for direct taxes, corporate income tax receipts were also lower in Spain than in the euro area (0.9 pp less), while personal income tax revenue and social security contributions were higher than the euro area average. It is also essential to analyse the importance of tax fraud in these differences and to study its causes and the measures aimed at mitigating its adverse effects on tax revenue and the requisite tax fairness.

A detailed review of the many forms of tax relief provided for in the Spanish tax system will also be essential. As the AIReF recently pointed out,[100] there is plenty of room for improvement in this area. In particular, this tax relief is not only a very significant drain on government receipts – on average in the period 2016-2019 it accounted for annual tax expenditure of around 5% of GDP – but, in some cases, it is not even properly fulfilling the objectives for which it was designed. In this respect, the AIReF recommends, among other measures, reviewing the reduced VAT rates, reformulating tax reductions for residential rental income and revisiting the reduced rates of excise duties on diesel fuel.

In some specific areas, taxation in Spain needs to seek strong international coordination.[101] It would be desirable for the design and calibration of the new, recently introduced taxes on financial transactions and digital services[102] in Spain to be established in a coordinated manner internationally, to maximise their revenue-raising capacity and prevent competitive distortions or the relocation of tax bases.[103] This international coordination effort is desirable in all cases in the area of capital and corporate income taxation where, in the absence of such coordination, significant tax base relocation problems may occur. It will also be particularly necessary in the area of environmental taxation. As analysed in the previous section, in the future this fiscal policy instrument will play a key role to bolster the transition of the economy towards a more sustainable growth model. It would be advisable to avoid significant asymmetries in its use at the international level that could hinder this process.

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100 See AIReF (2020b).

101 Notable in this connection is the OECD BEPS project. See OECD (2013).

102 See Law 5/2020 of 15 October 2020 on the Tax on Financial Transactions and Law 4/2020 of 15 October 2020 on the Tax on Certain Digital Services.

103 See in this respect European Council (2021).

3.3 The challenge of making the best possible use of the NGEU programme

3.3.1 The characteristics of Spain's programme

In order to receive funds from the Recovery and Resilience Facility (RRF), the central plank of the NGEU programme, each Member State is required to submit an investment and reform plan to be implemented before 2026. The NGEU programme, with an envelope of €750 billion, is the temporary instrument launched by the European Union to boost the recovery of the Member States after the pandemic. As explained in Box 2.3, this instrument will temporarily help to make up for the lack of a common automatic fiscal stabilisation capacity and will contribute to reducing the relative scarcity of euro-denominated safe assets. The European Commission (EC) will assess the content and implementation of the national plans every six months. This assessment will take into account, among other factors, the alignment of plans with the Union's common priorities and their contribution to compliance with the EC's country-specific recommendations over the previous two years.

The Recovery, Transformation and Resilience Plan (RTRP), approved on 27 April, groups together the NGEU lines of action in Spain into ten major areas called "levers". The RTRP envisages NGEU-funded public investment, in the period 2021-2026, of up to €140 billion, the sum of the total funds that the programme makes available to Spain through its grant and loan components. Under the Commission's conditions, grants will be mobilised in the first half of this six-year period. Of the ten levers, the bulk of the RRF funds will be earmarked for green investment and digitalisation (39% and 29% of the total, respectively, proportions that exceed the minimum levels stipulated at European level in both cases) (see Chart 2.15). Notable among the planned projects are those known as "Strategic Projects for Economic Recovery and Transformation", which are intended to foster strategic actions with significant potential to impact the rest of the economy, requiring private initiative to be supplemented by the collaboration of government and research centres.

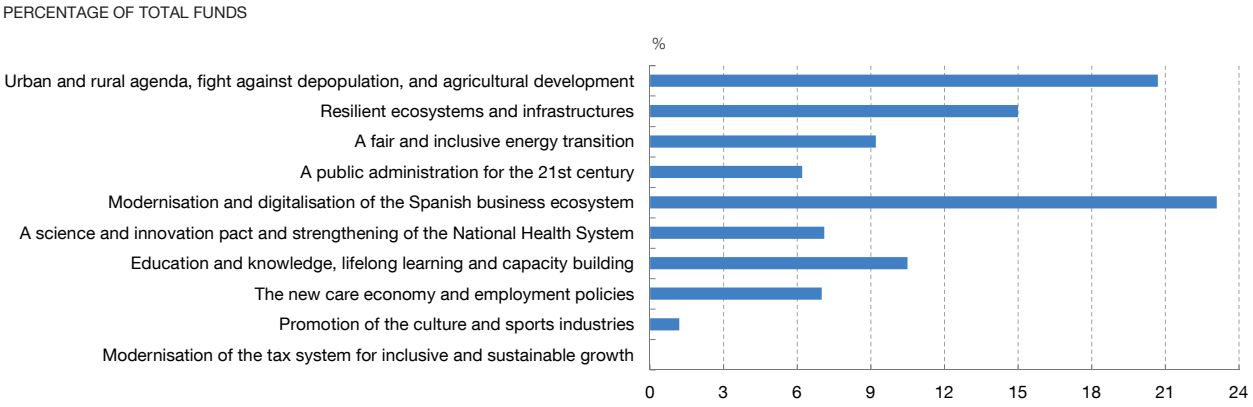
The 2021 State budget included €26,634 million of investments charged to European funds. Of this total, €24,198 million correspond to the RRF and €2,436 million will be used, within the framework of Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU), for health spending, specifically for the acquisition of vaccines, the strengthening of primary care and the renewal of medical technologies.[104] Considering the RRF and REACT-EU together, the budget items that will receive the largest proportions of the total funds are industry and energy (21.1%), R&D&I and digitalisation (17.8%), resilient ecosystems and infrastructure (17.6%) and health (11.1%). Finally, as regards the authorities responsible for spending, it should be noted that part of the funds will be transferred to the regional and local governments, which will administer them indirectly (€7,070 million and €1,233 million, respectively).

104 Ministerio de Hacienda (available in Spanish only) (2020).

Chart 2.15

NGEU LINES OF ACTION IN SPAIN, BY MAJOR AREA

Among the ten levers, the bulk of the RRF funds will be earmarked for green investment and digitalisation (39% and 29% of the total, respectively). These proportions exceed the minimum levels stipulated at European level (especially the latter).



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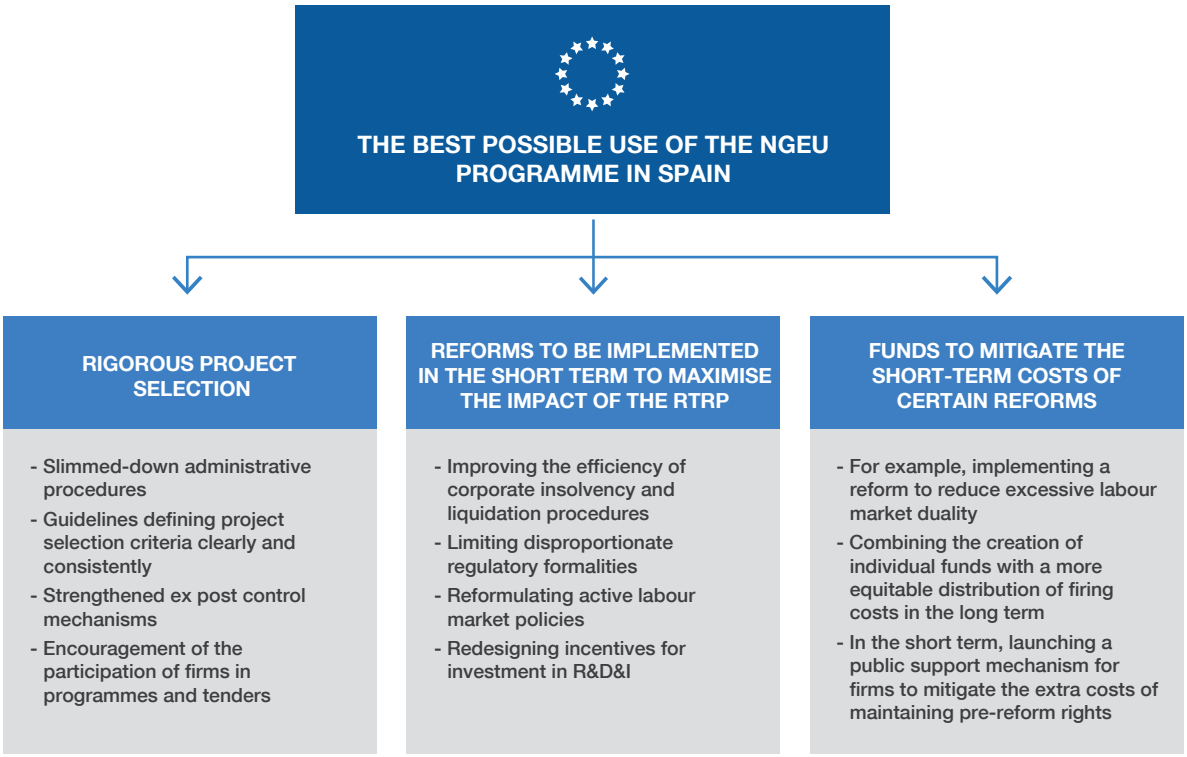
SOURCE: Government of Spain.

The RTRP outlines the structural reforms to be undertaken in the coming years, including notably, given their importance, labour market, pension system and tax system reforms. In the labour market, the main objective is to reduce duality, although promoting employment stability and modernising active policies, vocational training and the national employment system are also specified as objectives. In relation to the pension system, the RTRP includes the main recommendations made by the Toledo Pact Committee last October and certain measures whose impact is difficult to assess, given the lack of details. With respect to the design of the tax system, the RTRP includes setting up a committee of experts to submit proposals for a comprehensive reform which, ideally, should not be constrained by certain short-term tax measures posed in the RTRP. As regards the environment, the RTRP incorporates Climate Change Law reforms, the Green Strategy and the regulatory framework for the energy sector. Finally, other significant actions relate to the new housing policy, modernisation of the judicial system and reform and digitalisation of public administration.

3.3.2. Certain conditions that need to be met for the favourable effects of the RTRP spending programmes to be maximised

First, to fully harness the potential of the NGEU spending programmes to transform the Spanish economy, the investment and reform projects need to be rigorously selected. The NGEU has great potential to boost the dynamism of the Spanish economy, but full realisation of this potential depends crucially on certain conditions being met (see Figure 2.4). A pre-condition for boosting the effects

Figure 2.4
THE BEST POSSIBLE USE OF THE NGEU PROGRAMME IN SPAIN



SOURCE: Banco de España.

of the spending programmes is that the projects carried out are carefully selected. Admittedly, rapid design and early execution of the projects would help to bring forward the recovery after the crisis. However, it may be appropriate to allow some time for the various initiatives to be defined and selected as precisely and rigorously as possible so that their permanent positive effects on employment and activity can be maximised. An analysis of the impact on activity of regional spending funded by the European Regional Development Fund (ERDF) between 2000 and 2018 confirms that it may be desirable to postpone some spending if the extra time is used to select more productive projects.[105]

The role of private initiative is crucial for the investment side of the RTRP. Non-financial firms must be involved in drawing up projects and mobilising their own capabilities in terms of financial and human resources, which may require the launch of training programmes for their employees. Also, the financial system must play an important role in financing private investment.

Maximising the transformative capacity of the NGEU requires that the RTRP structural reforms be implemented at the same time as the spending

105 See Albrizio and Geli (2021) and Forte-Campos and Rojas (2021), both forthcoming.

programmes. Recent studies suggest that if reforms reducing the rigidity of labour and product markets are carried out simultaneously, the medium-term spending multipliers would increase significantly. This is because a more efficient regulatory framework would facilitate the inter-firm reallocation of capital and employment required for execution of the projects.[106]

The range of possible reforms that would boost the impact of spending programmes is relatively broad. First, the project selection requires an appropriate framework for public procurement procedures and suitably designed methodologies to assess the various initiatives, as well as appropriately trained staff to apply them. Second, in order for the RTRP to promote the economy's adaptation to the structural changes under way, public policies should support the necessary resource reallocation. This in turn requires action in various areas, including: establishing an institutional environment conducive to the orderly exit of firms from the market and the entry of new competitors and that eliminates the fetters on the expansion of existing competitors; reformulating active labour market policies (ALMPs) to allow workers to move freely from industries whose weight in the economy is falling to those whose weight is growing; and redesigning the incentives for investment in R&D&I. Third, the NGEU funds may be used to pay the costs caused to some agents in the short term by certain reforms that enhance collective well-being. The rest of this subsection expands upon the possible actions in these areas directly focused on maximising the capacity of NGEU-funded spending programmes to raise potential output.

Possible improvements to the design of public tenders

A suitable design for this public-resource-allocation tool could include slimmed-down administrative procedures and the specification of homogeneous project selection criteria inspired by best international practice. With the explicit aim of increasing the speed with which projects financed with European funds are launched, on 31 December 2020 a package of urgent measures was approved to modernise government and implement the RTRP (RDL 36/2020). These measures are designed to simplify administrative processes and increase the speed of execution of RTRP projects. This is desirable in the case of Spain, one of the European economies in which public tendering takes the longest (see Chart 2.16.1). In any event, if the full benefits of more flexible formal requirements are to be obtained, tendering processes need to be kept as rigorous as possible.[107] In this respect, it is crucial to ensure a level playing field for all participants in public tenders, an aspect on which Spain traditionally scores somewhat below the European average

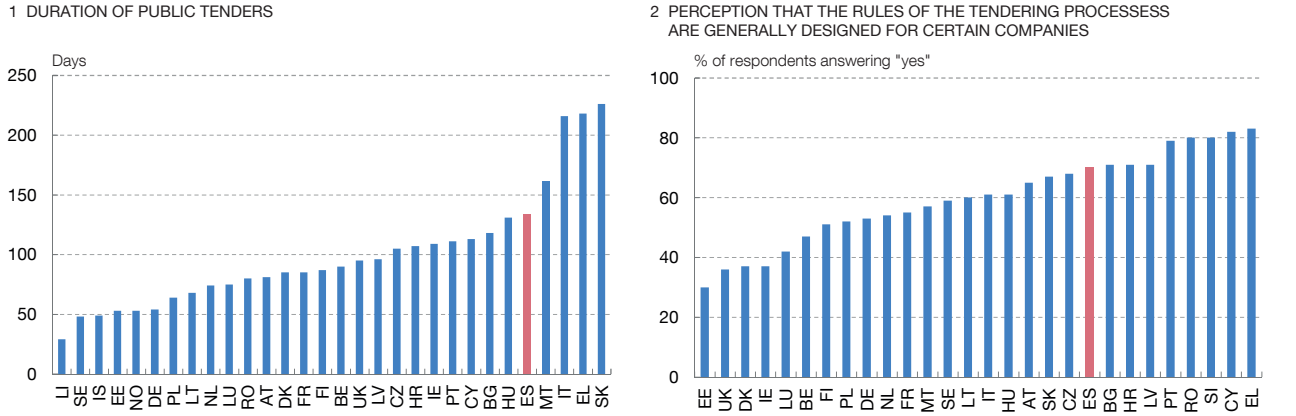
106 See Albrizio and Geli (2021), forthcoming.

107 See Bosio et al. (2020).

Chart 2.16

POSSIBLE IMPROVEMENTS TO THE DESIGN OF PUBLIC TENDERS

A suitable design for this public-resource-allocation tool could include the following three ingredients: slimmed-down administrative procedures, the specification of consistent project selection criteria inspired by best international practice, and strengthened ex post control mechanisms.



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SOURCE: European Commission (Single Market Scoreboard and Eurobarometer).

(see Chart 2.16.2).[108] One means of improvement, which could be particularly important in a context in which a large number of public authorities are responsible for administering tenders, could be the compilation of State guidelines on the criteria and weights that should be used to assess the merits of bids.[109]

Also, it seems appropriate to supplement this design with strengthened ex post control mechanisms to closely monitor the performance of contracts. To supplement the audit role performed by the National Audit Office (IGAE) and the Spanish and European Court of Auditors, a public space with homogeneous, transparent data could be established. This space would contain information on the Strategic Projects for Economic Recovery and Transformation, public tenders, agreements and RTRP-related government subsidies. The example of the Public Tender Register may be a good starting point, although there is room for improvement, since it is not currently comprehensive and the information provided has certain limitations to be able to rigorously analyse fund allocation. In this respect, it would be worth systematically compiling up-to-date information, with a standard set of data for every project, including the object of the funding, the selection criteria, data on the firms receiving funding, as well as on their competitors.

108 Flash Eurobarometer (2019).

109 Some of the prescriptions would be difficult to apply in practice, insofar as they could be interpreted as favouring some bidders over others. However, the economic literature offers some guidance on the design of these common guidelines. For example, in the case of two solvent firms with similar productivity levels, it may be preferable to finance the investment project of the firm that has greater difficulty accessing external financing, since according to some recent studies this would generate a larger multiplier (see Di Giovanni et al. (2021), forthcoming).

In order to foster competition, tender information should be widely disseminated to promote, in particular, access to tenders by SMEs. The launch of a highly ambitious process like the NGEU is extremely complex. For many firms, in particular, smaller firms, it may be very costly to locate all the information swiftly. Nor is it easy for government to ensure that all the information is readily accessible. To date, various ministries have launched calls for expressions of provisional interest by firms in presenting projects that may be eligible for NGEU funding. In this respect, a single portal, as proposed in RDL 36/2020, would be a useful tool to facilitate access to information and avoid excessive dispersion of sources.

Against this background, it would also be useful to explore further ways of increasing access to tenders. It is likely that some investment projects will require co-financing, which seems appropriate, as this entails private firms being jointly responsible for the execution of projects and allows all their capabilities to be harnessed. However, the possibility that requiring a high minimum percentage of co-financing may reduce tender competition merits special analysis. This consideration is particularly important in a setting in which the increase in debt as a result of the pandemic may discourage the participation of some firms, given the possible difficulty of accessing additional financing. Lastly, tender participation may be boosted if the terms of the tender are formulated as precisely as possible, in order to dispel any uncertainty regarding the specific requirements.

Encouraging adaptation of the business sector to structural changes

The pandemic may increase the number of non-viable firms, whose continued presence in the market for a lengthy period may hamper the reallocation of credit to businesses with better prospects. The activity of non-viable firms (defined as those whose going concern value is less than their liquidation value) may be artificially prolonged by successive rollovers of their credit financing, which would be inefficient from the aggregate standpoint. In the economic literature (where these firms are known as "zombie firms") there is extensive evidence that this phenomenon discourages the entry of new companies with viable business projects, as well as the growth of existing ones. Accordingly, the efficient allocation of productive resources is obstructed, leading to productivity losses and lower investment and job creation.[110]

More efficient insolvency procedures would help to reduce the number of non-viable firms in a rapid and orderly fashion. The orderly liquidation of such firms, allowing credit and productive resources to be reallocated to profitable investment projects, would maximise the favourable effects of the NGEU programme. Hence the importance of improving the efficiency of insolvency procedures to facilitate the departure from the market of non-viable firms.[111]

110 See Caballero et al. (2008), McGowan et al. (2018), Acharya et al. (2019) and Acharya et al. (2020).

111 See Andrews and Petroulakis (2019) and McGowan et al. (2017).

In Spain, there is room to improve insolvency procedures. Areas of improvement include the relief of congestion in the commercial courts, the elimination of public debt discharge and shortening the duration of insolvent debtors' repayment plans. During the global financial crisis, the Insolvency Law was reformed on a number of occasions in Spain.[112] However, the use of insolvency proceedings and pre-insolvency arrangements has remained limited, which is evidence of their lack of attraction for most firms (see Box 3.3 in Chapter 3 of this Report). The use of these procedures is particularly infrequent among microfirms and sole proprietors, which make up the bulk of Spain's productive system. This is mainly attributable to two factors: first the slowness of insolvency proceedings, caused, at least partly, by congestion in the commercial courts; and second the difficulty that individuals have obtaining substantial debt discharge in these proceedings, largely because public debts (tax and social security debts) cannot be discharged and usually make up a significant proportion of the total liabilities of microfirms and sole proprietors.[113] Also, to obtain partial discharge of other unpaid debts, the debtor must comply with a repayment plan, the duration of which (five years) may be excessive. That said, this problem will be resolved when the EU Insolvency Directive, which reduces the repayment plan to a maximum of three years, is transposed into Spanish law.[114]

The regulatory formalities required to pursue a business activity in Spain are numerous. According to the INE's Module on the Business Environment, economic regulation is, out of a list of 12 factors, the third one that, according to firms, most affected their ability to grow in 2019. The first two factors were the demand for their products and the macroeconomic environment, while economic regulation was ahead of tax, labour market efficiency and defaults. Also, Spain's position in various international regulatory burden rankings is very unfavourable. For example, in terms of the competitiveness indicator in the Global Competitiveness Report, Spain is ranked 114 out of 141 countries.[115] This largely reflects the growing number of regulations at State and regional level and their high degree of complexity according to various indicators used in the literature. [116]

The Law on Market Unity, which seeks to enhance the regulation of numerous goods and services markets, has so far had relatively limited effects. A recent Constitutional Court judgment declared null and void the principle of effectiveness throughout national territory of regional administrative actions. Despite this, the law has continued to provide a framework that broadly favours appropriate administrative regulation. To do this it uses the principles of necessity and proportionality (in relation to the definition of an imperative reason of general interest) and a guarantee against excessive regulation. However, the mechanisms provided to file complaints

112 For a description of these reforms, see García-Posada and Vegas (2018).

113 See García-Posada (2020).

114 See Directive (EU) 2019/1023 of the European Parliament and of the Council, 20 June 2019.

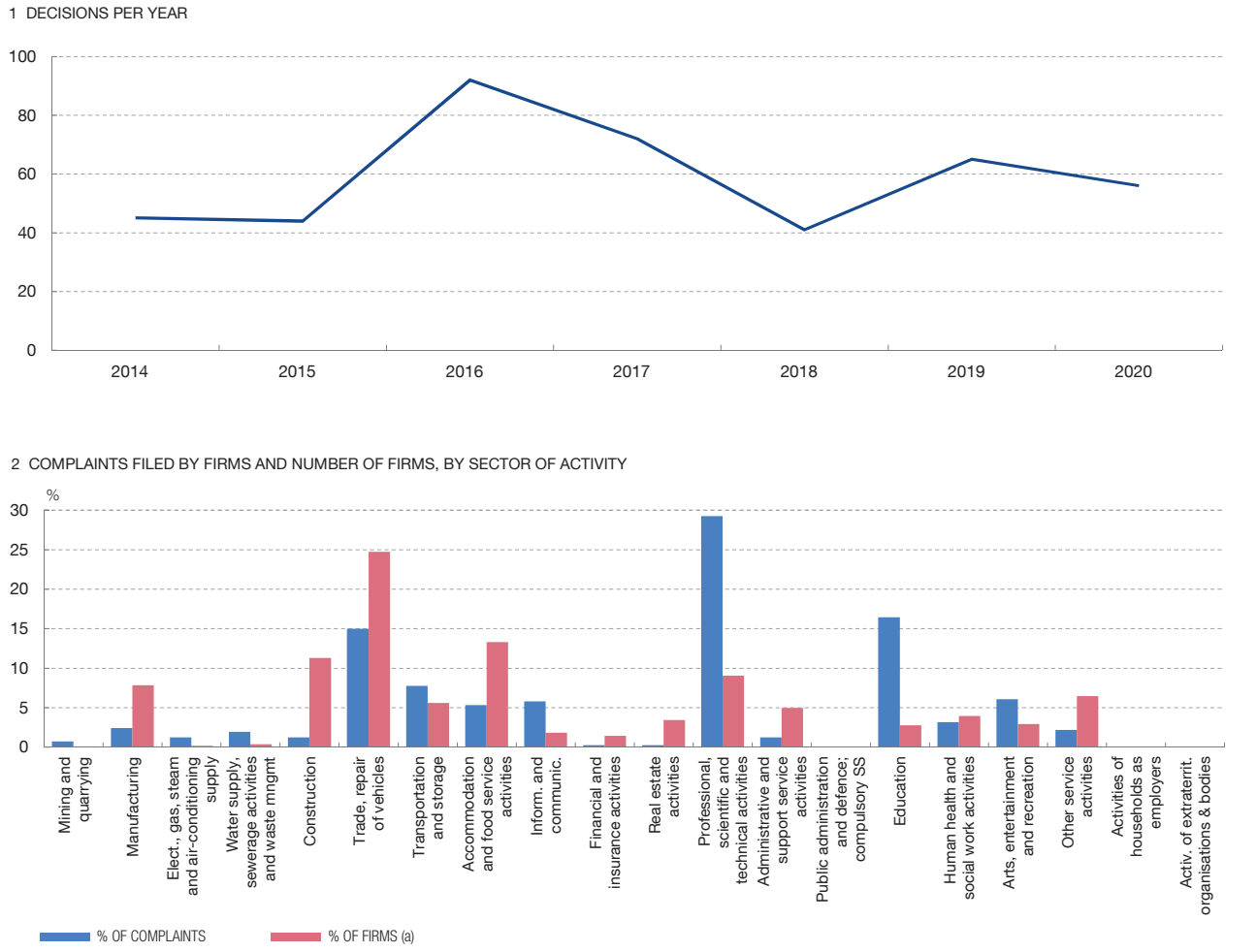
115 World Economic Forum (2019).

116 See De Lucio and Mora-Sanguinetti (2021).

Chart 2.17

THE LAW ON MARKET UNITY, WHICH SEEKS TO ENHANCE THE REGULATION OF NUMEROUS MARKETS, HAS SO FAR HAD LIMITED EFFECTS

The mechanisms provided to file complaints in respect of the principles of necessity and proportionality, to protect economic operators, have barely been used to date. It would be useful to reinforce the action of the sectoral committees by creating independent consultative bodies with expertise in the area and to reflect the agreements in the legislation using the harmonisation law mechanism.



SOURCES: Ministerio de Asuntos Económicos y Transformación Digital and INE (DIRCE).

a All active firms with at least 1 worker as at 1 January 2020.

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in respect of these principles, to protect economic operators, have barely been used to date.[117] In particular, in seven years 418 decisions have been adopted (see Chart 2.17.1), concentrated in certain professional, educational and trade activities (see Chart 2.17.2).

Cooperation between different levels of government can be coordinated within the so-called sectoral committees. These structures, set up for the purpose of ensuring cooperation and exchange of information between central

117 See Ministerio de Asuntos Económicos y Transformación Digital (available in Spanish only), resolved cases.

government and regional governments in various specific spheres of action, may be the appropriate vehicle for the consensus-based adoption of good practices. For these purposes, it would be useful to strengthen the action of the sectoral committees, creating independent consultative bodies with expertise in the area in question to help identify these best practices and build consensus. Subsequently, these agreements could be reflected in legislation, for which purpose the harmonisation law mechanism envisaged in Article 150(3) of the Constitution, which requires the approval of both houses of parliament, could be used.

The reformulation of active labour market policies

The effectiveness of ALMPs depends largely on their design and the composition of the resources used. ALMPs should play an important role in the response to possible mismatches between labour supply and demand caused by the pandemic and the resulting structural changes. In this respect, it is important to remember that the composition of spending on ALMPs varies significantly across countries. Some, such as Germany and France, prioritise training for the unemployed and strengthening the role of public employment services to match job offerors and jobseekers, while others, such as Spain, place the emphasis on incentives for hiring and self-employment. In Spain, these incentives mostly take the form of deductions from social security contributions, the effectiveness of which, according to the available evidence, is limited, because the subsidy is passed through to wages with barely any effect on employment.[118] This was confirmed to be the case by the AIReF Spending Review.[119]

One way of improving the effectiveness of ALMPs is to differentiate between categories of workers. The basis for this differentiation is the combination, in differing degrees, of the three ingredients mentioned above: subsidies for new hires, help with job searches and training for the unemployed. Some studies have shown that the only population groups for which hiring incentives are effective are young people and persons with wages close to the legal minimum.[120] However, in the case of workers with limited training, schemes to assist jobseekers usually have greater positive effects. At the same time, training schemes appear to be particularly beneficial for the long-term unemployed.[121] Finally, for the population close to retirement age, the experience of other European countries suggests that partial retirement schemes, combined with on-the-job training, help to prolong employment, even beyond the statutory retirement age.[122] Using data processing techniques, it

118 See, for example, Gruber (1997), Anderson and Meyer (2000), Cruces et al. (2010) or Korkeamäki and Uusitalo (2009).

119 AIReF (available in Spanish only) (2019).

120 See Saez et al. (2019) and Kramarz and Philippon (2001).

121 These two latter points are referred to in Card et al. (2018).

122 See Picchio and Van Ours (2013).

would be possible to go a step further: statistical profiles could be defined to enable individualised assistance and training to be given to each unemployed person.

There are certain barriers to the supply of non-formal training which need to be reviewed. Among the complaints filed under the Law on Market Unity, mentioned in the previous section, those relating to excessive requirements for job training centres to be able to pursue their activity are notable, in particular the obligations to register in the relevant regional register or to open offices in the territory in question. These requirements may amount to barriers to the development of online training, which are undesirable in the current circumstances, since this form of delivery lends itself well to meeting possible increases in the demand for this type of training and better accommodates the timing flexibility demanded by trainees.

The design of R&D&I policies

The design of policies that encourage investment in R&D&I is a very important factor to improve well-being in the medium and long run. As explained in Section 2.2, sustained increases in output per capita are normally underpinned by improvements in economies' productivity levels. Also, following the pandemic, it is conceivable that the increase in the weight of activities with high technological content in the economy that was already under way will intensify. These arguments justify the importance attached by the RTRP to actions aiming to boost investment in R&D&I, for which 18% of all NGEU funds are earmarked.

The effectiveness of the diverse instruments to support R&D&I spending varies. The tools to encourage R&D&I investment include tax incentives, direct grants and public guarantees for the financing received by firms. This diversity means that decisions should be based on a rigorous analysis of the various options. In this respect, the AIReF Spending Review provides a good starting point.[123]

Especially useful in this area is the study of the best international practices and of the viability of transferring them to the institutional mechanisms and, in particular, the tax system in Spain. Among the OECD countries, the design of these policies varies notably (see Chart 2.18.1), although one very widespread feature is that, over the last decade, there has been a trend for the share of direct grants to agents performing innovative activity to fall, in favour of tax incentives. These changes have been accompanied by adjustments to tax incentives to improve their effectiveness.[124]

The design of tax incentives for R&D&I should avoid disproportionately favouring large consolidated firms with high profits. These incentives usually

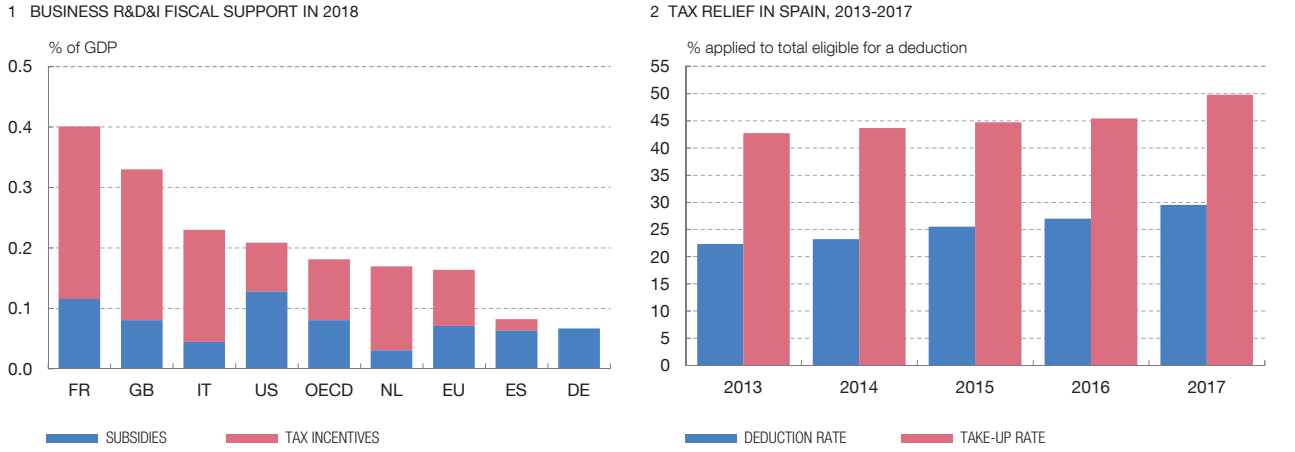
123 See AIReF (available in Spanish only) (2020c).

124 See OECD (2020).

Chart 2.18

IMPROVEMENTS TO THE DESIGN OF POLICIES THAT ENCOURAGE INVESTMENT IN R&D&I

Some features of R&D&I tax incentives in Spain could be improved. With the help of venture capital firms, direct grants should be channelled to the most efficient basic and applied research projects carried out by start-ups and young firms that have difficulty accessing external financing.



SOURCES: OECD, R&D Tax Incentive Database, Agencia Tributaria, and Almunia and López-Rodríguez (2021).

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take the form of reductions in the tax base or deductions from the amount of corporate income tax payable, so that only firms with a positive tax liability and/or tax base can benefit from them. Small newly created innovative firms frequently do not fulfil this condition and therefore have no access to the incentives, although their need may be greater, as such firms usually have difficulty accessing external financing. Moreover, it is normally firms of this kind that have innovative projects which, although riskier, give rise to more radical changes, with the potential to generate a larger social return. In contrast, the innovation of larger, more established firms tends to be incremental in nature.[125]

Some of the features of R&D&I tax incentives in Spain could be improved. In the case of corporate income tax, the current design of these incentives partly suffers from the problem just described: for firms with no tax liability, the subsidies are only partially applicable. Moreover, the administrative requirements that must be met to access these incentives, as currently configured, are stringent. Lastly, certain types of R&D&I spending are not eligible for this type of incentives. Specifically, according to the INE's Innovation in Companies Survey, only one third of Spanish firms' spending under these headings would be eligible (see Chart 2.18.2).[126]

The returns on direct grants are greater when they are used either for basic research projects or for applied research projects carried out by start-ups

125 See Akcigit et al. (2019).

126 See Almunia and Lopez-Rodriguez (2021).

and young firms that have difficulty accessing external financing. The literature shows the high returns on direct public support, in the form of grants, for basic research activities to acquire new scientific knowledge, without any intention of finding an immediate commercial application.[127] This means that, in the absence of public support, the amount of this type of research activity would be less than desirable. At the same time, the available evidence shows that the impact of direct subsidies for innovative applied research projects, which do seek to market their results in the short term, is greater when the recipient firms are newly created and small, and also financially constrained owing to the risk profile of their projects.[128]

To decide which projects are worth supporting, governments may take advantage of the particular skills of certain private agents. The main problem facing the authorities when designing a direct grant scheme for innovative activities is defining the selection criteria, given the limited information available on the business projects that make up the whole set of possible beneficiaries. International experience shows that venture capital companies may be in a better position to efficiently allocate funds to innovative firms in their initial stages. In recognition of this, venture capital companies already receive favourable tax treatment in Spain, and also public funding from the ICO.[129] However, it would be worth exploring the possibility of exploiting this channel to a greater extent, given the externalities generated by innovative projects financed by venture capital companies.

The use of the NGEU to finance structural reforms

NGEU funds may be used to facilitate the approval of structural reforms that entail costs for certain agents in the short term. The chances of gaining approval for certain legislative changes, when the benefits only become tangible after some time, may be increased if the groups that lose out temporarily are compensated.

The setting up of a capitalisation fund for each employee to finance part of their severance pay in the event of dismissal is an example of a reform that is desirable for the economy as a whole, but costly for certain agents in the short run. The sizeable difference in Spain between the costs of terminating permanent and temporary employment contracts – which are much higher in the first case, and more so the longer the job tenure – means that job losses fall disproportionately on temporary workers. To mitigate this problem of excessive duality in the degree of protection of different workers, according to their type of contract, the 2010 labour reform proposed setting up an individual capitalisation fund to be endowed with an amount equivalent to a certain number of days' wages

127 See Akcigit et al. (2019).

128 See Howell (2017), González et al. (2005) and Bronzini and Lachini (2014).

129 See OECD (2015), Akcigit and Stantcheva (2020) and OECD (2021).

for each year of service. This amount would be deducted from the severance pay that employers are required to pay in the event of dismissal.[130] Workers would recover the amount accumulated in the fund not only in the event of dismissal, but also when moving to a new job in another geographical area, to pay for training or else upon retirement. Furthermore, if workers were to move to another firm in the same geographical area, they would take the balance of the fund with them. Notable among the merits of this scheme are a better alignment between firms' dismissal decisions and the individual productivity of each employee, since it reduces the differences in the amount of compensation paid by the firm at the time of dismissal according to the worker's type of contract or job tenure.[131]

The NGEU programme funds could be used to mitigate some of the extra costs for firms during the transition to the new scheme, given that the compensation rights in current contracts would remain valid. If the new scheme is financed out of firms' social security contributions, companies would have extra costs during the initial years of the scheme, since they would have to pay, simultaneously, the new contributions and the severance pay accumulated prior to the introduction of this mechanism. By way of example, Box 2.4 suggests a formula for these transition costs, whereby the aggregate amount received by the whole population of workers in the long term does not change with respect to the current system. To this end, it is envisaged that, during the initial years following the introduction of the new scheme, the different levels of government could subsidise a declining proportion of the transition costs. The use of part of the NGEU funds would allow the mechanism to be endowed with the necessary resources for its initial launch. Moreover, this use would be in line with the conditions laid down in the Commission Regulation, which states that to be eligible for NGEU funds, reforms must help to boost growth or improve economic or environmental sustainability. This Regulation refers specifically to pension system and labour market reforms as examples of reforms eligible for NGEU funds.[132]

130 Eleventh additional provision of RDL 35/2010.

131 As explained in Box 2.4, firms may be more willing to hire new workers if they know beforehand that, in a crisis situation, dismissals would not entail such a large expense, at a time of particular economic or financial difficulty, since the payments would already have been made. From the workers' standpoint, given that they do not lose their accumulated rights when they leave the firm to take up a new job or for training, the current disincentives to labour mobility are eliminated.

132 See European Commission (2020b).

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Box 2.1

DEVELOPMENTS IN THE REAL ESTATE MARKET SINCE THE START OF THE PANDEMIC

Prior to the COVID-19 crisis, the Spanish real estate market was losing momentum, both in terms of transaction numbers and prices, albeit at differing speeds in the residential and commercial segments. This box describes the key changes observed in prices and transaction volumes in both market segments since the start of the pandemic.[1]

In the residential real estate market, housing sales fell abruptly in 2020 Q2, hit by the stringent restrictions on mobility and economic activity in that period, which made it extremely difficult to complete sales (see Chart 1). Since then, the number of transactions has gradually picked up, but it has still not returned to the pre-crisis level. This is partly due to the uncertainty surrounding the course of the pandemic and its impact on the economic outlook for agents in the housing market. In particular, total transactions in 2020 overall were 18% below the 2019 figure.

To date, house prices have been more resilient than transaction numbers. Prices were already slowing before the pandemic and have continued to lose momentum, but with no widespread year-on-year declines (see Chart 2). Notably, both in terms of transaction numbers and prices, new housing has shown greater resilience than second-hand housing. This partly reflects purchase commitments made prior to the pandemic, and possibly also a greater supply shortage of new housing.

In any event, the impact of the pandemic on the residential housing market is highly uneven across the regions. In particular, the Mediterranean coast and the Balearic and Canary Islands post the largest loss of impetus. These are important tourism areas where foreign buyers have traditionally accounted for a large share of house purchases and where, therefore, the restrictions on international travel have had the most impact.

The pandemic has also triggered some marked changes in the type of housing demanded, on account of households' new requirements following the lockdown and the surge in remote working, among other factors. Indeed, in recent months there has been an increased preference for single-family homes and new housing, and for a larger average size of homes of almost all types[2] (see Chart 3). The present crisis has also quickened some existing trends, such as a certain demand shift away from the big cities and towards less densely populated municipalities (see Chart 4). This has been encouraged by the greater structural supply shortage of new housing in the big cities – and hence a generally higher average price of housing in those areas – and by the search for more space outside the cities, in the wake of the restrictive measures adopted to contain the pandemic and the increase in time spent in the home.

In the case of residential rentals, drawing on information obtained from the main real estate portals to March 2021, rental prices appear to be falling in Catalonia, the Madrid region and the Balearic and Canary Islands, while in all other regions they seem be gradually slowing or steadying. In general, the loss of momentum in rental prices observed in recent months is linked to the deterioration in the labour market since the start of the pandemic, particularly among young people and those on temporary employment contracts, which are the groups that most demand rental housing. In some big cities, where rental prices have been hit hardest by the crisis, other factors may also have played a part. These include the lower demand for student rentals, owing to the restrictions on mobility and the increase in distance learning, and the shift in households' preferences towards less densely populated areas with lower prices. Lastly, in cities that are tourist destinations, another important explanatory factor could be the increase in the supply of residential rental housing at the expense of other more short-term rental options, such as holiday rentals, which have been affected by the sharp drop in tourism flows.

To date, the effects of the COVID-19 crisis have been more pronounced in the commercial real estate market than in the residential market, possibly because the commercial segment is traditionally more sensitive to changes in the economic situation. Thus, while the demand for retail outlets essentially hinges on the general economic outlook, other factors, such as demographics, are also key to understanding housing market developments.

Commercial real estate transactions declined significantly in 2020, especially in the first half of the year when transaction numbers were down 44% on a year earlier (see Chart 5). Retail outlets in prime locations, i.e. in big

1 For more details on the effects of the pandemic on the residential real estate segment, see P. Alves and L. San Juan (2021), "El impacto de la crisis sanitaria del COVID-19 sobre el mercado de la vivienda en España", Analytical Articles, Banco de España (English version forthcoming).

2 Possibly partially as a result of a shift, on account of the pandemic, in the composition of home-buyers towards somewhat older buyers with a slightly higher socio-economic position.

Box 2.1

DEVELOPMENTS IN THE REAL ESTATE MARKET SINCE THE START OF THE PANDEMIC (cont'd)

Chart 1
HOUSING, REGISTERED SALES: TOTAL, NEW AND SECOND-HAND

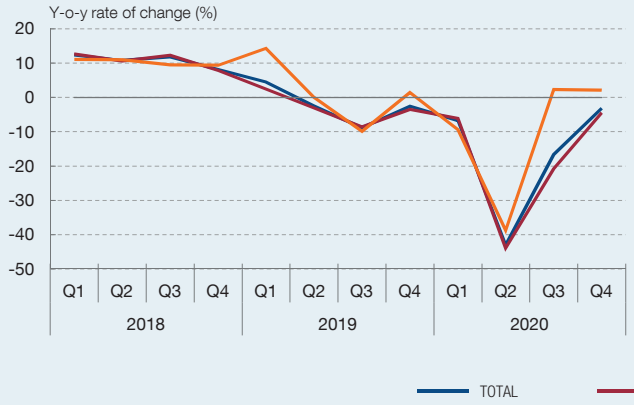


Chart 2
HOUSING, PRICES: TOTAL, NEW AND SECOND-HAND

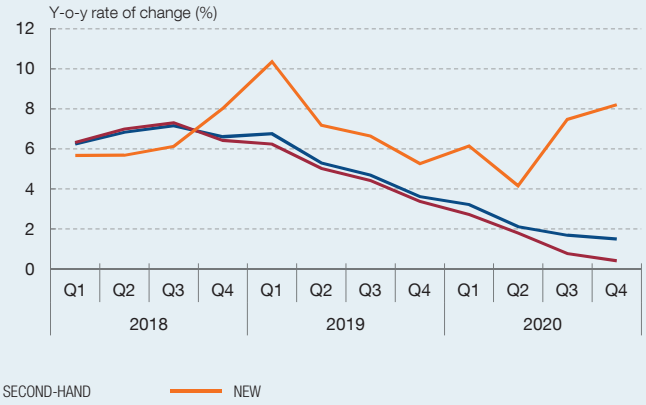


Chart 3
HOUSING, NOTARIAL SALES: SINGLE-FAMILY HOMES AND NEW OPEN-MARKET APARTMENTS

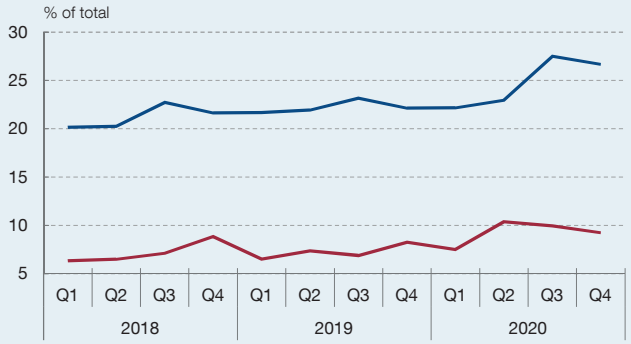


Chart 4
HOUSING, PROVINCIAL CAPITAL SALES: CHANGE IN WEIGHT IN PROVINCE TOTAL

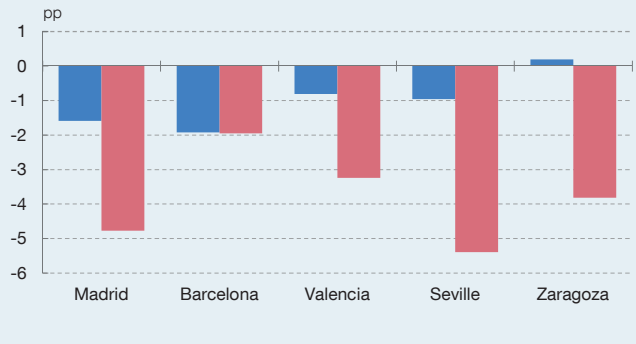


Chart 5
COMMERCIAL REAL ESTATE, NEW TRANSACTIONS (a) (b)

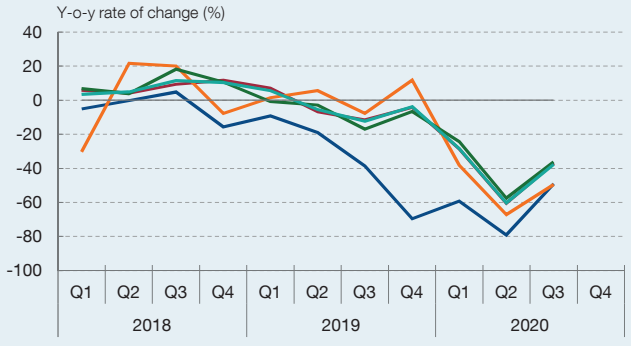
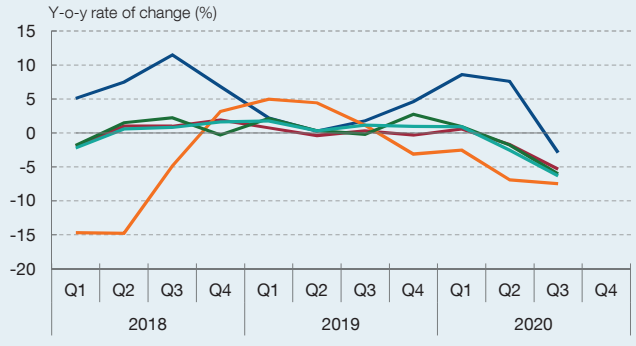


Chart 6
COMMERCIAL REAL ESTATE, PRICE PER M² (b) (c)



SOURCES: Centro de Información Estadística del Notariado, Colegio de Registradores, INE and Ministerio de Transportes, Movilidad y Agenda Urbana.

a Number of transactions calculated as the four-period moving average of the transactions registered each quarter in each segment.
b Prime: commercial premises in the prime retail districts of Madrid, Barcelona, Bilbao, Palma, Valencia and Malaga.
c Commercial real estate price indices calculated drawing on the four-period moving average of the median transaction price for retail outlets in each quarter.

city centres, performed especially poorly, although transactions were under pressure in those areas before the pandemic. By asset type, sales fell most markedly in the office sub-segment and somewhat less so in industrial premises, in the latter case possibly as a result of certain structural changes that have become more pronounced during the crisis. For instance, the growth in e-commerce, which requires large, well-situated logistics hubs, could have cushioned the decline in demand for industrial premises. In turn, office purchases could have been more affected since the start of the pandemic as a consequence of the increase in remote working.

Prices in the commercial real estate segment have fallen across the board since March 2020, but less so than transaction numbers. Specifically, commercial real estate prices fell by 8.9% year-on-year in 2020 Q4 (expressed as a four-quarter moving average), with a very marked drop in the case of offices (see Chart 6). The fact that prices have been more stable than transaction numbers could indicate that sellers have delayed sales decisions in recent months, to avoid or postpone having to assume sharp price falls. In this respect it is noteworthy that prices in prime areas, unlike transaction numbers, have performed somewhat more favourably than the commercial segment overall.

Box 2.2

GLOBAL TRADE FLOWS AGAINST THE BACKGROUND OF THE PANDEMIC

The COVID-19 pandemic has caused some international trade distortions, most of which were temporary.[1] Thus, although the global closure of borders in the early months of the COVID-19 crisis prompted a severe decline in world trade, there was a turnaround towards end-2020. As a result, international trade flows had by then recovered their pre-pandemic levels (see Section 1.2 of Chapter 1 of this Report).

An example of the temporary nature of some of the distortions arising as a consequence of the pandemic were the protectionist measures many countries temporarily adopted in respect of trade in medical products, in light of the supply problems that were particularly prominent in March and April last year[2] (see Chart 1.1.). More recently, some restrictions have been placed on the distribution of vaccines against COVID-19. Although these will foreseeably be lifted once the pandemic is under control, their presence might hamper the effective distribution of vaccines globally.

Notwithstanding, several geopolitically geared initiatives launched recently might indeed have a lasting effect on the relocation of activity and the reorganisation of global value chains (GVCs). For example, countries such as the United States, Japan and South Korea have announced incentives in recent months for the renationalisation of productive processes by means of subsidies and tax credits. Within the EU, some countries, such as France, have also approved budget funds to support the return of companies. The EU itself has undertaken several initiatives under the so-called "open strategic autonomy" strategy, which seeks to increase the robustness of European production chains and to lessen the dependence on third countries in some strategic areas.[3]

However, when assessing these developments, it is important to bear in mind that, in the current crisis, those firms whose production is more integrated into GVCs are precisely those that have performed better and which have experienced least disruption in their output. The evidence available, moreover, suggest that these companies have a greater capacity to recover following an adverse shock.[4] Conversely, resorting to a higher amount of national inputs usually increases the volatility of GDP because it reduces the degree of risk diversification.[5] Indeed, there has been proof[6] in this crisis that, although those sectors of the EU countries, Japan and the United States most integrated into the GVCs bore the brunt of the initial external shock originating in China, when the pandemic also hit domestic markets, it was these firms that performed comparatively better (see Chart 2.1).

To interpret the recent measures, it should be borne in mind that these developments are part of a larger-scale pre-pandemic process that partly called into question the WTO rules-based multilateral framework. Notable milestones in this process have been the escalation of US-China trade rivalry in recent years (see Chart 1.2) and Brexit. While globally these episodes have not led to a generalised increase in tariff barriers, they have actually caused a notable rise in trade uncertainty,[7] adversely affecting global trade, and they have prompted trade flow diversions. Specifically, the United Kingdom's withdrawal from the EU will increase non-tariff barriers between the two areas and will necessitate numerous bilateral agreements between the United Kingdom and third countries[8] (see Chart 1.4). In Spain's case, it has also been apparent since the June 2016 Brexit referendum how Spanish firms (in particular those with greater trade exposure) have reduced their purchases from and sales to the United Kingdom and have increased trade with the EU. That has entailed a 14% decline in Spain-UK bilateral trade in goods in January 2021, compared with the same

1 For a fuller discussion on long-term trends in world trade, see I. Kataryniuk, J.J. Pérez and F. Viani (2021), *(De-) globalization of trade and regionalization: a survey of facts and arguments,* Occasional Paper, Banco de España, forthcoming.

2 See C. García, C. Martín and F. Viani (2020). "International trade in medical products during the COVID-19 pandemic", Box 4, Economic Bulletin, 4/2020, Banco de España.

3 See P. L'Hotellerie-Fallois, M. Manrique and A. Millaruelo (2021), "Open strategic autonomy in the EU", Box 5, *Economic Bulletin,* 1/2021, Banco de España.

4 See S. Miroudot (2020), "Resilience versus robustness in global value chains: Some policy implications", in *COVID-19 and trade policy: Why turning inward won't work,* pp. 117-130.

5 See OECD (2020), *Shocks, risks and global value chains: insights from the OECD METRO model,* 29 June.

6 See A. Espitia, A. Mattoo, N. Rocha, M. Ruta and D. Winkler (2021), *Pandemic Trade: COVID-19, Remote Work and Global Value Chains,* Policy Research Working Papers, no 9508, World Bank.

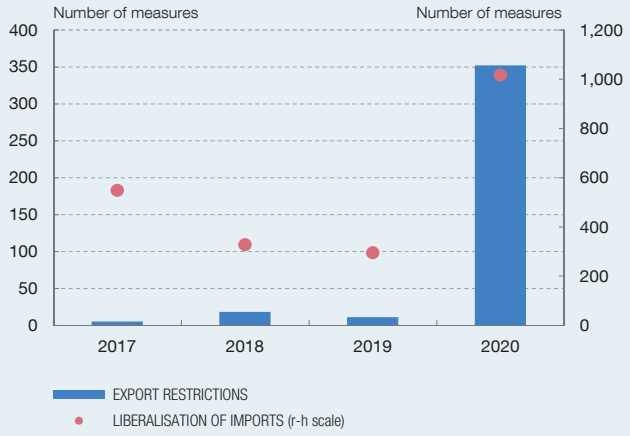
7 See S. Albrizio, A. Buesa, M. Roth and F. Viani, *The real effects of trade uncertainty,* Working Paper, Banco de España, forthcoming.

8 See A. Buesa, I. Kataryniuk, P. L'Hotellerie-Fallois and S. Moreno, "The EU-UK Trade and Cooperation Agreement", Analytical Articles , *Economic Bulletin,* 1/2021, Banco de España.

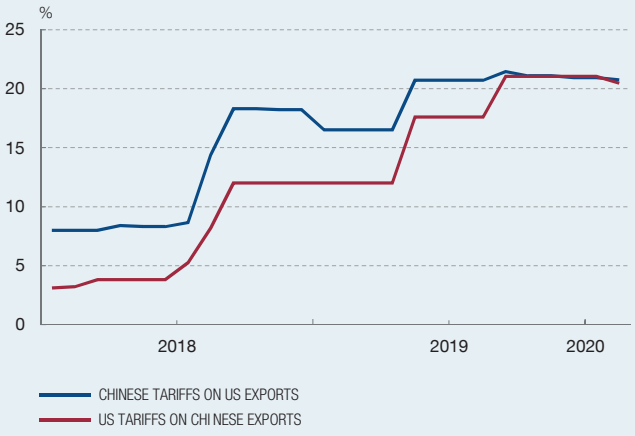
month a year earlier.[9] Apart from this case, in recent years the increase in non-tariff barriers[10] has been global in scope (see Chart 1.3), largely reflecting the generalisation of higher environmental, social and labour market standards in respect of production processes for tradable goods and services.[11]

Chart 1
TRADE BARRIERS AND BILATERAL AGREEMENTS

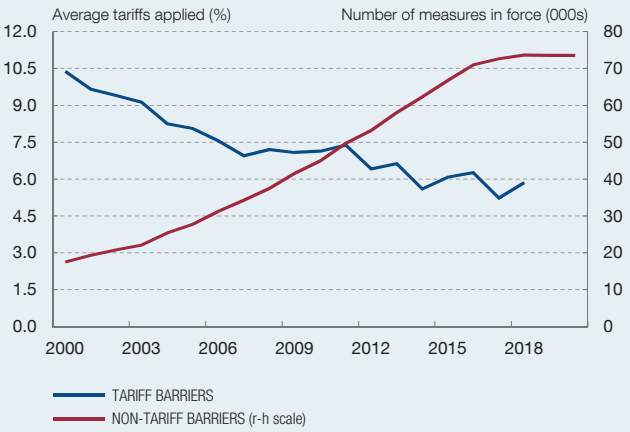
1 TRADE POLICY MEASURES AFFECTING TRADE IN MEDICAL PRODUCTS (a)



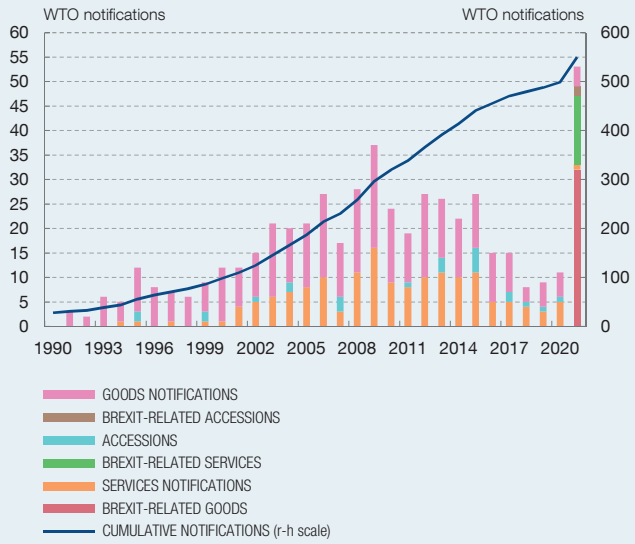
2 US/CHINA BILATERAL TARIFFS



3 TARIFF AND NON-TARIFF BARRIERS (b)



4 BILATERAL TRADE AGREEMENTS



SOURCES: Global Trade Alert, OMC, Bown (2019), UNCTAD and own data.

a Number of measures per HS4 code, according to the WTO classification of medical products.
b Effective tariffs applied refers to the lower of preferential tariffs and Most Favoured Nation tariffs.

9 E. Gutiérrez, A. Lacuesta and C. Martín, "Brexit: Trade diversion due to trade policy uncertainty", Working Paper, Banco de España, forthcoming.

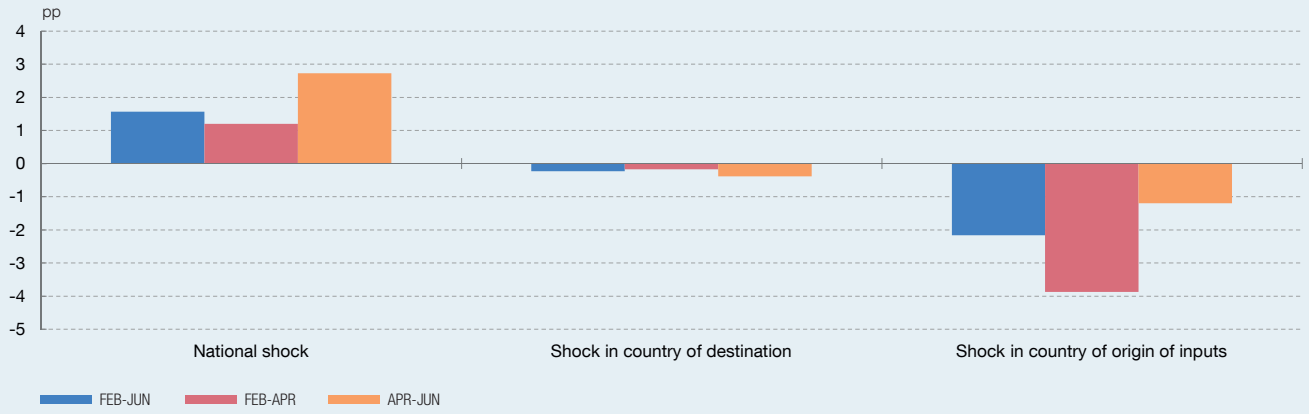
10 Effective tariff barriers are defined as the lower of preferential tariffs and the Most Favoured Nation tariffs applied under the WTO framework. The series does not include the tariff measures applied by the United States to imports from China and from other countries as from 2018 against the background of the trade dispute.

11 See F. Lopez, J. Timini and N. Cortinovis (2020), *Do trade agreements with labor provisions matter for emerging and developing economies' exports?,* Working Paper, no 2017, Banco de España, and Timini, J. and M. Conesa (2019), "Chinese exports and non-tariff measures", *Journal of Economic Integration,* 34(2), pp. 327-345.

Another process under way prior to the outbreak of the pandemic was the slowdown in international trade in goods. Various factors are estimated to have contributed here. In particular, the lower weight of international trade in goods as a percentage of global GDP in recent years (see Chart 2.2) would partly be the result of: the transition in China to a growth model based to a lesser extent on external trade;[12] a tailing off of the dividends arising from the trade liberalisation measures adopted across the board in the decades prior to the financial crisis; and the slowdown in the scope for fragmentation of GVCs, which had already attained very high levels of complexity. Yet it should be mentioned that this slowdown in world trade in goods is proving compatible with an increase in regional

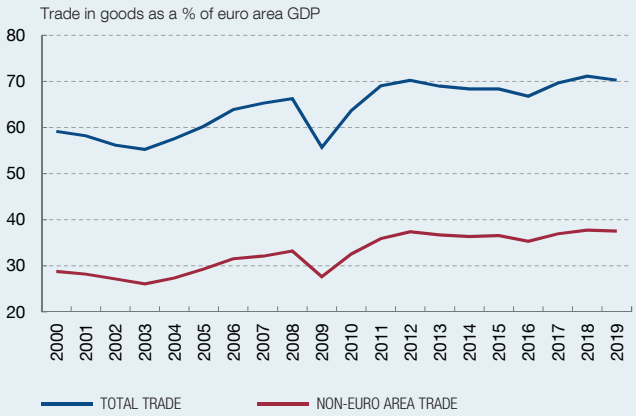
Chart 2
TRADE OPENNESS AND GLOBAL VALUE CHAINS

1 RELATIVE IMPACT OF THE PANDEMIC ON BILATERAL EXPORTS (a)



2 TRADE OPENNESS

3 TRADE OPENNESS OF THE EURO AREA



SOURCES: World Bank, Comtrade, Eurostat, OECD, IMF, ASEANStatPortal and Espitia et al. (2021).

a The bars show the differential effect on bilateral exports of a share in global chains of a value of 1 percentage point higher, in the face of different shocks. The chart thus shows the results of the estimate of the effect on exports of a supply-side shock in the country of origin of the exports (left), a demand-side shock in the country of destination (centre) and a supply-side shock in the countries from which the inputs used come (right), at different times in the pandemic: February-April, when the input-supplying countries, such as China, were more affected; April-June, when the pandemic spread, and the aggregate. For more information see Espitia et al. (2021).

12 See, for example, M. Roth, D. Santabárbara and B. Xu (2019), "Global impact of a slowdown in China", *Economic Bulletin,* 4/2019, Banco de España; and Timini, J. (2017), "China's economic imbalances and the role of the financial sector". *Economic Bulletin,* 4/2017, Banco de España.

trade, against a background in which trade ties among member countries of a single region have strengthened in many areas, in particular in North America and in the EU (see Chart 2.3).[13]

The counterpoint to the slowdown in trade in goods is a rising trend in global trade in services, which might be reinforced as a result of the pandemic. Indeed, services have become progressively more tradable in recent years – owing mainly to technological progress and digitalisation – and their weight in the productive processes for certain manufactures has increased.[14] Recent experience might strengthen this rising trend, by highlighting how digitalisation can make certain services tradable when they were previously not deemed to be so. This is the case, for instance, of so-called "tele-migrants"[15] who, through digital technologies, can live in one country and provide services in others.

In conclusion, there is clear evidence that sustaining a global framework of shared multilateral rules contributes to increasing the robustness and resilience of national economies. In particular, diversification and trade integration have helped tackle the impact of the current crisis and they will be a fundamental factor in driving the recovery. The pandemic has not affected the main factors stemming from the benefits derived from international trade, such as labour specialisation and the organisation of production. These have allowed the income of the world population to expand in recent decades. Moreover, some of the new emerging challenges – such as combating climate change and how the major digital corporations operate – are on a global scale, and should be addressed from a multilateral perspective.

However, recent experience might indeed strengthen certain previous trends, with a geopolitical backdrop, that may lead to a greater geographical fragmentation of the movement of goods, services, capital and people. On the one hand, growing geopolitical competition, which is particularly visible in the technological realm, might heighten insofar as the digitalisation of activity increases dependence on specific technologies provided by major global players based chiefly in the United States and in China. On the other, the advanced economies' diminished relative economic weight and rising inequality in these countries, which might fuel political and social polarisation processes, could prompt changes in agents' preferences with respect to globalisation.

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13 Trade ties in the Asia-Pacific region will also be strengthened by the RCEP, a trade agreement reached by a group of 15 economies belonging to this area, including China, South Korea and Japan.

14 Known as the "servicification" of manufactures. See M Lodefalk (2017), "Servicification of firms and trade policy implications". World Trade Rev., 16, pp. 59-83.

15 Baldwin, R. (2019). "EAEA16 Keynote Address: The Future of Globalization", Asian Economic Journal, 33(1), pp. 3-12.

Box 2.3

NGEU: AN INITIATIVE BOLSTERING THE EU PROJECT

Next Generation EU (NGEU) is the temporary instrument put in place by the European Union to boost, through investment and reform financing, the recovery of Member States' economies in the wake of the pandemic.[1] Its aims are not limited to offsetting in the near term the fall in demand resulting from the crisis and supporting Member States' emergency programmes through the mobilisation of additional resources under current cohesion funds. More importantly, NGEU also aims to increase the European economy's growth potential in the medium and long term, by boosting reforms and reallocating productive resources to areas such as digitalisation and combating climate change. An additional feature of this programme is that the allocation of its total funds among countries will not be proportional to their respective economic weights, but will favour Member States more severely affected by the pandemic. The reason is it seeks uniform recovery, thus avoiding any economic fragmentation in the EU as a result of the crisis. NGEU was adopted simultaneously with the multiannual EU budget for the period 2021-2027, under which spending has also been reoriented to foster the structural transformation of the European economy.

NGEU, with a total envelope of €750 billon, comprises several instruments. The Recovery and Resilience Facility (RRF) is the centrepiece, with an envelope of €672.5 billion, of which €312.5 billion will take the form of grants and €360 billion the form of loans.[2] The RRF is supplemented with many additional smaller instruments, totalling €77.5 billion, some of which were already in place before the outbreak of the pandemic. The total volume of funds under NGEU amounts to slightly over 5% of EU GDP, but, as discussed above, since the allocation among countries is not proportional to their respective weights in the EU as a whole, this instrument might mobilise funds accounting for almost 20% of some countries' annual GDP in cumulative terms over the duration of the programme (see Chart 1).

NGEU is thus helping to make up for the lack of a common automatic fiscal stabilisation capacity, one of the main shortcomings in the EU's institutional architecture. In the current circumstances, a permanent macroeconomic stabilisation mechanism enabling the heterogeneous effects across countries arising from the materialisation of a risk to be more evenly distributed among them would have been particularly useful. The lack of this common mechanism is, specifically, a significant constraint on the smooth functioning of EMU. Furthermore, strengthening the euro area capacity to address economic shocks also requires completing initiatives such as the banking union and the capital markets union (see Box 1.3).

NGEU financing through large-scale supranational debt issuance represents an unprecedented step that will contribute to reducing the relative scarcity of euro-denominated safe assets. The EU will borrow funds by issuing debt instruments for a volume of up to €750 billion — i.e. the programme envelope —, with different maturities from 2027 to 2058. Under the assumption that this borrowing capacity will be used in full, the pan-European debt stock would double, thus expanding the range of choices available to international investors for the inclusion of euro-denominated assets in their safe asset portfolio, with the additional incentive of yielding a higher return than other euro-denominated assets (see Charts 2 and 3).[3]

Despite its temporary nature, the implementation of NGEU represents a significant step forward in the construction of the European institutional framework. The evidence available shows that the confirmation of news reflecting progress in this connection, insofar as they are perceived as strengthening European construction, has historically led to a reduction in euro area countries' sovereign bond yields.[4] The adoption of NGEU, which was not an exception in this respect, was accompanied by an easing of financing conditions for sovereigns and by rises in stock market indices in the euro area.[5]

In order to receive funds from the RRF, each Member State is required to submit a Recovery and Resilience Plan (RRP) setting out the investments and reforms to which the funds will be allocated. The projects to be financed, which should be structured around six priority

1 See O. Arce, I. Kataryniuk, P. Marín and J.J. Pérez (2020), *Thoughts on the design of a European Recovery Fund*. Occasional Papers, No. 2014, Banco de España.

2 These amounts are expressed in 2018 prices and, therefore, will be larger in practice after accounting for cumulative inflation since then.

3 See M. Delgado-Téllez, I. Kataryniuk, F. López-Vicente, and J.J. Pérez (2020), *Supranational debt and financing needs in the European Union*, Occasional Papers, No. 2021, Banco de España.

4 See I. Kataryniuk, V. Mora-Bajén and J.J. Pérez (2021), *EMU deepening and sovereign debt spreads: using political space to achieve policy space*, Working Papers, No. 2103, Banco de España.

5 See Box 5, "Next Generation EU: Main characteristics and impact of its announcement on financial conditions", *Economic Bulletin,* 3/2020, Banco de España.

pillars common to all countries, are to be implemented by 2026. The European Commission (EC) will assess the implementation of each RRP every six months based on a set of criteria, including, among others, alignment with these common priorities, contribution to compliance with the European Commission's country-specific recommendations,[6] implementation by the relevant Member State of the European social rights pillar and allocation of certain minimum percentages of the total funds to the green and digital transitions (37% and 20%, respectively). The criteria to be considered will also include an assessment of the efficiency of the measures adopted, in terms of fulfilment of the milestones and targets proposed by each Member State (see Table 1). In 2022 Member States shall review compliance with their RRPs to ensure that grants have been fully allocated by

NGEU is contributing to make up for the lack of a common automatic fiscal stabilisation capacity. The amount of top-notch credit rating EU bond stocks as a percentage of GDP is more than three times lower than that of US bond stocks.

Chart 1
NGEU GRANTS AND LOANS PER COUNTRY

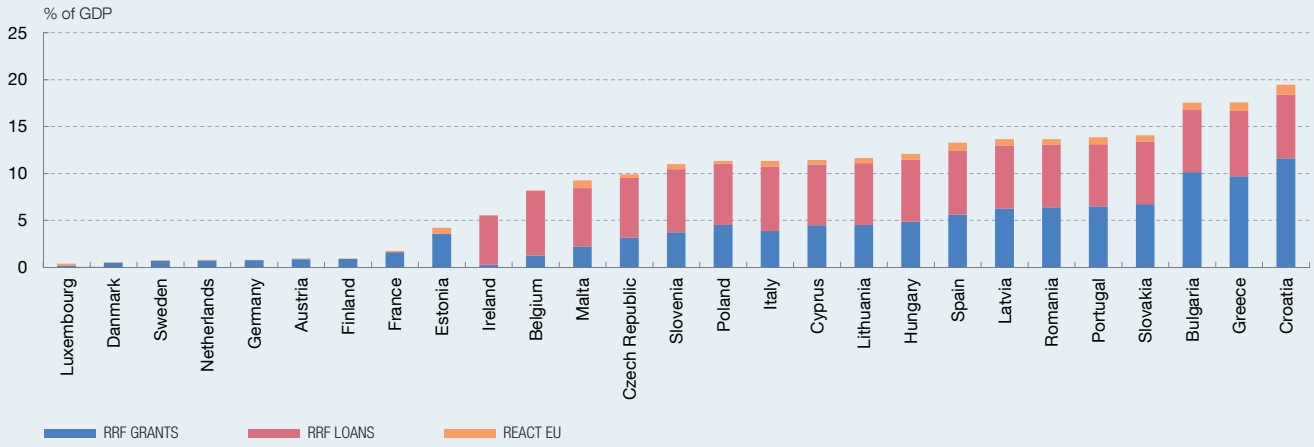


Chart 2
STOCK OF SAFE ASSETS (2019) (a)

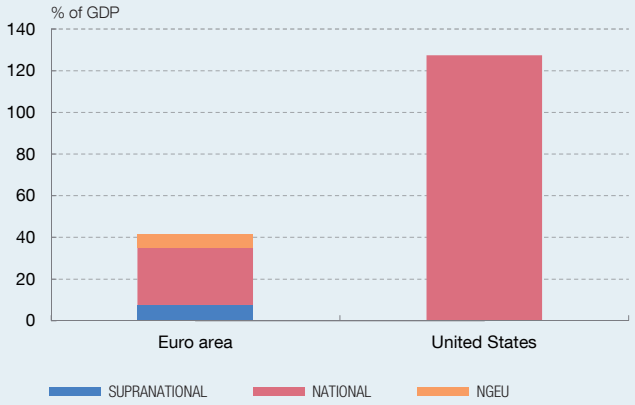
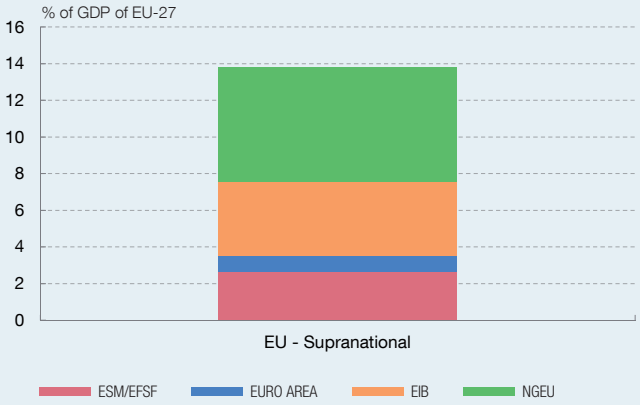


Chart 3
STOCK OF PANEUROPEAN SAFE ASSETS (2019)



SOURCES: European Commission, Eurostat and national statistics.

a Long-term public debt. Rated AAA/AA+ by S&P. National in the euro area includes Germany, Austria, Finland, Luxembourg and the Netherlands.

6 P. García-Perea, A. Millaruelo de la Fuente, A., V.M. Mora Bajén and C. Sánchez Carretero, (2020), *The 2020 European Semester and the specific recommendations for Spain,* Economic Notes, *Economic Bulletin,* 3/2020, Banco de España, elaborate on the specific recommendations relevant to this assessment.

the end of 2023. In addition, prior to that date, each country will be allowed to modify its RRP at any time as a result of the submission of additional investment or reform projects, where these projects are proposed to be financed with loans.

To date, only the first draft RRPs of most Member States, containing a preliminary overview of their projected public investments, are known. The priority areas include the reduction of climate change-inducing emissions, for which projects improving energy efficiency of buildings or promoting electric mobility, for example, through the installation of electric vehicle charging stations, have been proposed.[7] Several countries plan to undertake large-scale transport infrastructure projects, partially financed with Cohesion Funds. The proposed reforms

Table 1
RECOVERY AND RESILIENCE PLAN ASSESSMENT CRITERIA (a)

Criteria	Description	Required rating
Response to the economic and social situation	The RRP contributes in a comprehensive and adequately balanced manner to all six pillars, taking into account the specific challenges, the financial contribution and the requested loan support of the Member State concerned	Majority of As
Adressing country-specific recommendations	The RRP effectively addresses all or a significant subset of challenges identified in the relevant country-specific recommendations, or challenges identified in other relevant documents officially adopted by the Commission in the context of the European Semester, and the RRP represents an adequate response to the economic and social situation of the Member State concerned	A
Smart, sustainable and integrating growth	The RRP strengthens the growth potential, job creation, and economic, social and institutional resilience of the Member State, contributing to the implementation of the European pillar of social rights, including through the promotion of policies for children and youth, and mitigates the economic and social impact of the COVID-19 crisis, thereby enhancing the economic, social and territorial cohesion and convergence within the Union	A
No environmental harm	No measure does significant harm to environmental objectives	Majority of As
Green transition	The RRP contains measures that effectively contribute to the green transition, including biodiversity, or to addressing the challenges resulting therefrom, and that account for an amount which represents at least 37% of the RRP's total allocation	A
Digital transition	The RRP contains measures that effectively contribute to the digital transition or to addressing the challenges resulting therefrom, and that account for an amount which represents at least 20% of the RRP's total allocation	A
Structural reforms	The RRP has a lasting impact on the Member State concerned	Majority of As
Monitoring and implementation	Arrangements ensure effective monitoring and implementation of the RRP, including the envisaged timetable, milestones and targets, and the related indicators	Majority of As
Reasonable and plausible costs	The justification provided by the Member State on the amount of the estimated total costs of the RRP is reasonable and plausible and is in line with the principle of cost efficiency and is commensurate to the expected national economic and social impact	Majority of As
Prevention of corruption, fraud and conflicts of interests	The proposed arrangements prevent, detect and correct corruption, fraud and conflicts of interests when using the funds provided under the RRF, including the arrangements that aim to avoid double funding from the RRF and other Union programmes	Majority of As
Coherent actions	The RRP contains measures for the implementation of reforms and public investment projects that represent coherent actions	Majority of As

SOURCE: Devised by authors based on the European Commission.

a The European Commission assesses the criteria by giving ratings from A (highest) to C (lowest). Countries are required to have an A for the criteria in rows 2,3, 5 and 6 and a majority of As for the other criteria.

7 See M. Lopriore and M. Vlachodimitropoulou (2021), *Recovery and resilience plans for the next generation EU: a unique opportunity that must be taken quickly, and carefully,* EIPA Paper, European Institute of Public Administration.

focus on aspects such as administrative simplification (Belgium, Greece and Germany), reform of the judicial system (Greece and Italy) or improving public finance sustainability through different channels, including spending reviews or the introduction of tax reforms (Belgium, Italy and Romania). Finally, as regards RRP governance, several countries (Portugal, Bulgaria, Croatia and Greece) launched public consultations which enabled social agents and the general public to contribute to the design of the proposed measures.

Box 2.4

LABOUR MARKET DUALITY AND SEVERANCE COSTS: A MODEL BASED ON THE AUSTRIAN FUND

The Spanish labour market presents a high degree of duality in relation to the compensation received by workers at the end of their employment relationship, with low compensation for those under temporary contracts of short duration and significantly higher compensation for those with permanent contracts and many years of service.[1] These differences can distort firms' decisions when they need to reduce their workforce. In particular, for the same level of productivity, workers who have accrued fewer entitlements, owing to their accumulated years of service or their contract type, tend to bear the brunt of staff reductions since they are owed less in severance compensation.[2] Moreover, quite frequently, the accumulation of these entitlements to compensation, which workers will only receive in the event of dismissal, hampers labour mobility, since those leaving their jobs voluntarily lose any entitlements accumulated hitherto.

One possibility that has been considered, both in the academic literature and in the public debate, to redress these shortcomings is the so-called "Austrian fund".[3] Under this system, firms make monthly contributions to a fund in the name of the worker, who is able to use the fund in the event of involuntary loss of employment, whether as a result of dismissal or contract expiry. In the case of voluntary termination, the worker does not lose the amount accumulated in the fund and can continue to build it up through contributions made by other employers. If it has not already been recovered, the entirety of the accumulated fund is accessible to the worker upon retirement. As a counterpart to firms' monthly contributions to their workers' individual funds, under this system the compensation that firms would have to pay when the employment relationship is terminated is reduced.

Fully or partially replacing the current severance cost framework with such a system could yield significant benefits in the medium and long term.[4] First, under this system the distribution among workers of the entitlements accrued over the course of their working lives would be less unequal. This is because all workers, without exception, would at some time receive the amounts accumulated in their fund, whereas at present only those who lose their employment are entitled to such compensation. Second, there would be more incentive for labour mobility over the course of employees' working lives, since the contributions built up in the fund are not lost in the event of voluntary termination, while under the current system all entitlements associated with years of service are lost when they change job. Third, from the standpoint of firms, the fact that the entitlements accrued by their workers are recognised gradually, via periodic contributions to each employee's fund, rather than as a one-off payment in the event of future dismissal (at a time when firms might be in a vulnerable financial position), means any liquidity tensions at the company can be smoothed over time. Lastly, and associated with the above, firms would base their employee termination decisions more on productivity and efficiency considerations and less than on the compensation entitlements accumulated by their workers, since the amounts payable by the firm at the time of dismissal would be less closely associated with those entitlements.

However, despite these potential medium and long-term benefits, the introduction of such a model is not without certain difficulties. The first relates to determining a sufficient level of protection against dismissal when the new system is fully operational for all workers. A second important matter, connected with the above, concerns the transition from the existing model to a new system based on such a mechanism. In particular, introducing the new system poses the challenge of recognising the compensation entitlements built up hitherto by current workers under the existing arrangements (and therefore not paid into an individual fund).

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1 By way of example, according to estimates based on the Continuous Sample of Working Histories (MCVL by its Spanish acronym), between 2013 and 2016 10% of workers receiving compensation at the end of their employment relationship collected €23 or less, while the 10% of workers who received the highest compensation collected €6,400 or more.

2 For more information on the evidence relating to the impact of Spain's labour market duality on hiring and firing decisions, see Box 6, "Job creation and destruction flows by type of contract during the recovery", *Economic Bulletin,* 1/2019, Banco de España.

3 The fund takes its name from the severance pay reform introduced in Austria in 2002, which replaced the compensation payable by firms to workers at the end of their employment relationship with a system under which firms made monthly contributions to an account in the worker's name equivalent to a specific percentage of their wage.

4 See, among other studies, J. I. Conde-Ruiz, F. Felgueroso and J.I. García-Pérez "El fondo de capitalización a la austríaca: costes y beneficios de su implantación en España", *Estudios Económicos* 6/2011, FEDEA, 2011. The role of an Austrian fund as a complement to retirement pensions, with favourable effects on the stock of capital in the economy and aggregate output, was recently analysed by J. Brogueira de Sousa, J. Díaz-Saavedra and R. Marimon, "Introducing an Austrian Backpack in Spain", *ADEMU WP Series* 139, 2018.

Box 2.4

LABOUR MARKET DUALITY AND SEVERANCE COSTS: A MODEL BASED ON THE AUSTRIAN FUND (cont'd)

The simulation below offers a quantitative illustration of the two above challenges in the recent context of the Spanish labour market. For this purpose, a hypothetical scenario is constructed under which an Austrian fund model is introduced – with firms making periodic contributions in the name of each of their workers – based on two assumptions. First, it is assumed that this model is introduced alongside a reform of severance costs, whereby, in the long run – once all workers are included in the new system – there is no reduction in the aggregate amounts paid to workers should they lose their employment, nor cost overruns for firms or public finances. Second, it is assumed that all entitlements accumulated under the previous model up until the introduction of the new system are maintained. The short-term costs of introducing this system – as a consequence of recognising the compensation entitlements already accrued by existing workers – are estimated on the basis of these two assumptions (under any realistic scenario, these assumptions would evidently be matters to be decided by social and economic agents and politicians).

Regarding the first of the above assumptions, on the information provided by the Panel of Data on Firms and Workers (PET by its Spanish acronym), available for the period 2013-2016, if firms' contributions to workers' individual funds are equivalent to six days of pay per year of service and the severance and termination costs for existing contracts are reduced by 50%,[5] in the long-term the total costs paid by firms – including both the regular contributions to individual funds and the new severance payments – would be very similar to the total severance payments that firms would pay under the current model (see Table 1, columns 1 and 2).[6]

Table 1
SIMULATION OF TOTAL COSTS FOR FIRMS OF THE CURRENT SYSTEM OF SEVERANCE COSTS AND OF A MIXED SYSTEM COMBINING AN AUSTRIAN FUND AND A REFORM OF SEVERANCE COSTS

€m	Total costs paid by firms under the current system	Total theoretical costs that firms would pay under the mixed system in the long term	Total costs paid by firms under the mixed system in the transition, without the support mechanism (a) (b)	Total costs paid by firms under the mixed system in the transition, with the support mechanism (a)			State contribution to individual funds in the transition to the mixed system, with the support mechanism (d)
				Severance compensation	Contributions to individual funds (c)	Total	
	(1)	(2)	(3)	(4)	(5)	(6) = (4) + (5)	(7)
2013	7,236	6,832	9,868	6,653	536	7,189	2,679
2014	6,809	6,810	9,057	5,651	1,135	6,786	2,270
2015	7,242	7,194	9,267	5,694	1,786	7,481	1,786
2016	6,501	7,044	8,560	4,767	2,529	7,296	1,264
Total period 2013-2016 (e)	27,998	28,010	37,093	23,082	5,979	29,062	8,031

SOURCES: Banco de España, based on data from the Social Security General Treasury (Panel of Data on Firms and Workers, 2013-2016).

a The total costs paid by firms under the mixed system during the transition are based on the assumption that the reform of severance costs is introduced on 1 January 2013. For workers registered prior to that date, the firm would have to pay the severance costs under the current system corresponding to the accumulated years of service up to 1 January 2013, plus the severance costs under the reform (half) for the years of service accumulated between 1 January 2013 and the date of termination.
b Note that column (3) corresponds to the sum of columns (4), (5) and (7).
c The firms' contributions to individual funds are equivalent to one day of pay per year of service in 2013, two days in 2014, three days in 2015 and four days in 2016.
d The State's contributions are equivalent to five days of pay per year of service in 2013, four days in 2014, three days in 2015 and two days in 2016.
e The estimated costs for the period 2013-2016 do not exactly match the sum of the costs estimated for each year. This is because the estimate for the period 2013-2016 uses the mode of each firm's size throughout the period as population weight, while for the annual estimate each firm's size in each year is used.

5 Equivalent to 16.5 days' pay per year of service for unfair dismissal, 10 days' pay per year of service for fair dismissals, and 6 days' pay per year of service for the termination of temporary contracts. The compensation ceilings would remain unchanged.

6 The exercise estimates the severance and termination costs under the current system for the period 2013-2016 and compares them with the same costs that would be incurred under the system proposed in this box, combining an Austrian fund with lower severance and termination costs. Under both systems, the total figure paid by firms is approximately €28 billion over the four years analysed. It is important to note that a more precise calibration of this exercise would need to take into account the average compensation over a complete economic cycle and not only in the period 2013-2016, but PET data are only available for this specific period.

Box 2.4

LABOUR MARKET DUALITY AND SEVERANCE COSTS: A MODEL BASED ON THE AUSTRIAN FUND (cont'd)

To estimate the costs of transitioning to the new model, PET data are once again used for the period 2013-2016 and a hypothetical scenario is assumed under which the reform comes into effect on 1 January 2013.[7] Under this hypothesis, the costs arising from each dismissal or termination are simulated, according to cause for termination, wage and contract start date, such that the compensation entitlements accumulated by workers prior to the reform are maintained. This latter circumstance gives rise to a cost overrun in respect of the funds needed to maintain the system in the long term, once all workers are included therein.

Column 3 of Table 1 shows the results of the simulation for each year. Specifically, in the transition to the new system (in the period 2013-2016) the total cost payable by firms – including both contributions to workers' individual funds and severance payments – would be higher by approximately €9 billion as compared with the current system. To cover this gap, the possibility is considered of the State financing a share of the firms' contributions to the new fund, albeit only in the short term and in a decreasing amount over time: five days' pay per year of service in the first year after the reform, four days' pay in the second year, and so on, such that firms would fully cover the payments to the fund six years after the approval of the reform.

Columns 4 and 5 of Table 1 show the amounts payable by firms as severance pay and the contributions to workers' individual funds, respectively. As can be seen, the total of these amounts for the overall period analysed (column 6) is very similar to that in column 1, which is the amount payable under the current system. Meanwhile, column 7 of Table 1 shows the cost of this transition mechanism to the State. In line with the design of the mechanism, that cost would gradually decline each year and would amount to approximately €8 billion during the period 2013-2016. Extrapolating those amounts to 2017,[8] the final year of the proposed transition period, the total cost to public finances of funding the transition would be approximately €8,660 million. These costs could be financed, at least in part, using the NGEU funds. Indeed, the European Commission's regulation states that the reforms eligible for such funds must help bolster growth and enhance economic or environmental sustainability, and cites pension system and labour market reforms as specific examples.[9]

It is worth emphasising that this quantitative illustration of the possible requirements entailed in implementing a system based on the Austrian fund in Spain has some limitations which should be taken into account when interpreting the above results. First, the analysis is static, in that it does not consider the possibility of firms and workers changing their labour decisions in response to the introduction of the proposed new system. This is indeed unrealistic. Firms might be more inclined to lay off workers since the marginal cost of making that decision would be reduced by half, and those lay-offs would be less concentrated among the workers with the fewest years of service. In view of this possibility and to strengthen the incentives for firms to internalise the costs arising from the termination of their employment relationships (both in terms of the worker's circumstances and spending on unemployment benefits), consideration could be given to introducing a bonus-malus system, under which firms with lower labour turnover pay lower Social Security contributions, and vice versa. Meanwhile, labour mobility would foreseeably increase since workers would be less reluctant to lose their accrued entitlements and less afraid of being the first to be laid off when they move to a new company. This increase in voluntary mobility would allow workers to find a better job match for their skills, with the concomitant aggregate benefit for the economy.[10]

Second, the data available in the PET restricts the period of analysis to the years from 2013 to 2016, which was a period of economic recovery. It should therefore be taken

7 Lay-offs with a contract start date after 1 January 2013 receive half of the compensation envisaged under the current system (16.5, 10 or 6 days' pay per year of service, depending on the cause of termination), while lay-offs whose contract began before that date receive the amounts established under the current system duly adjusted for the proportion of time worked prior to and after the reform. From 1 January 2013 onwards, all workers receive the contributions made to the Austrian fund.

8 The total cost of the Austrian fund is relatively constant over the years considered. Therefore, bearing in mind that in 2017 the State would pay one day's contribution as opposed to two in 2016, the cost in 2017 would be approximately half the €1,264 million paid in 2016.

9 See "Commission Staff Working Document. Guidance to Member States Recovery and Resilience Plans", *SWD* 205 final, European Commission, 2020.

10 See, for example, A. Kettemann, F. Kramarz and J. Zweimüller, "Job Mobility and Creative Destruction: Flexicurity in the Land of Schumpeter", *Working Paper* No 256, Department of Economics, University of Zurich, 2017.

into account that the exact calibration of the parameters of the above simulation could change if a longer period combining different cyclical phases is considered.[11] Consequently, the quantifications presented here should be interpreted with due caution.

Lastly, under the calibration used in the simulation, the aggregate amounts earmarked for employment protection would remain unchanged in the long term. However, their distribution would be altered, such that the reform would benefit some types of firms and workers and disadvantage other groups relative to the current situation.[12] Specifically, the new system could be relatively beneficial for firms with a high number of lay-offs. Therefore, as has been indicated, it might be appropriate to complement the new system with a bonus-malus arrangement to mitigate this bias. From the standpoint of workers, the new system would particularly benefit those laid off after few years of service and workers changing job voluntarily. The detailed study of these redistributive effects and of the policies that could be deployed to mitigate them should be subject to in-depth analysis in future.

11 In principle, the MCVL could be used to produce a more precise calibration. However, in this sample, the information on the causes of employment termination prior to 2013 is inadequate, particularly for temporary workers, since terminations by contract expiry cannot be distinguished from other causes. Assuming that all involuntary terminations of temporary contracts are due to contract expiry (which have been the majority since 2013), the total compensation paid under the proposed reform in the period 2000-2019 would be very similar (0.2% lower) to that under the current system, while the distribution over time would be less concentrated in periods of recession.

12 See A. Hijzen and A. Salvatori, "Introducing individual savings accounts for severance pay in Spain: An ex-ante assessment of the distributional effects", *OECD Social, Employment and Migration Working Papers,* No 259, OECD Publishing, Paris, 2021.

3

THE EFFECTS OF THE COVID-19 CRISIS ON THE PRODUCTIVE SECTORS IN SPAIN: ECONOMIC AND FINANCIAL IMPLICATIONS

THE EFFECTS OF THE COVID-19 CRISIS ON THE PRODUCTIVE SECTORS IN SPAIN: ECONOMIC AND FINANCIAL IMPLICATIONS

1 Introduction

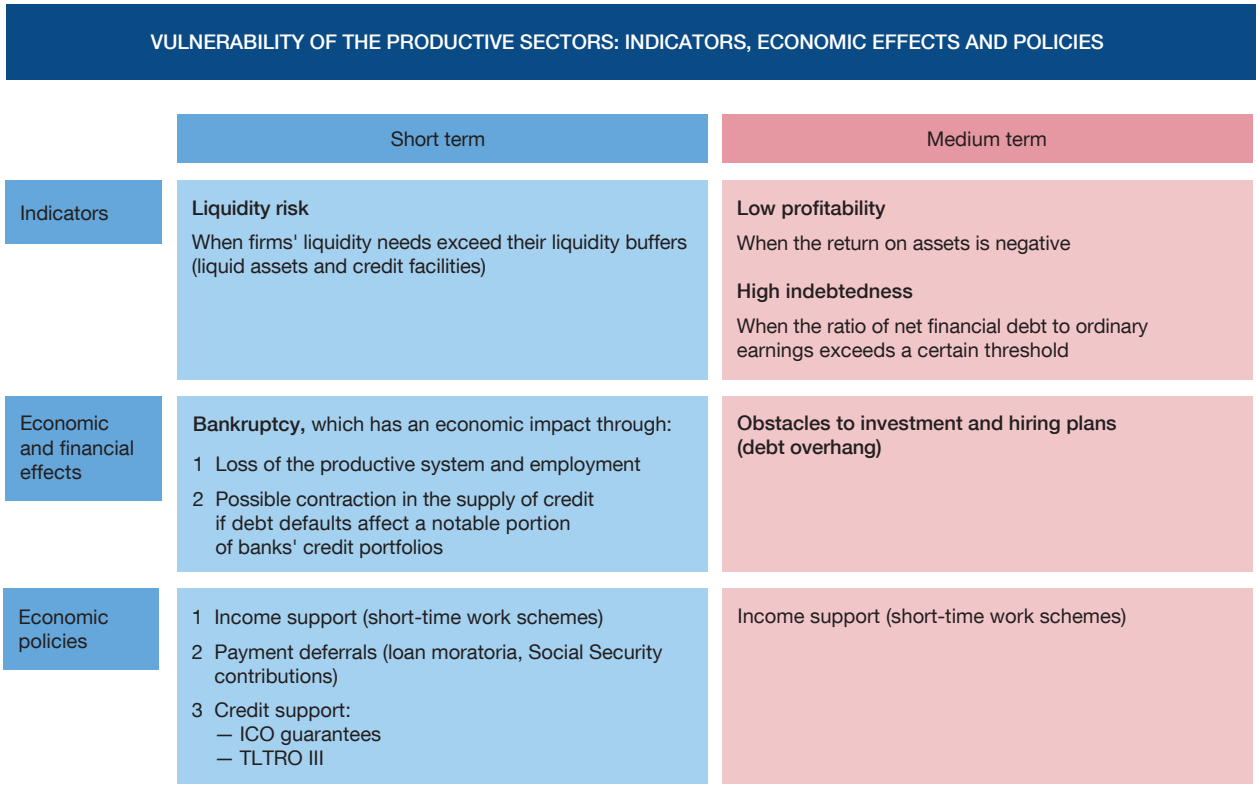
The crisis triggered by the COVID-19 pandemic has increased the vulnerability and risks faced by the productive sectors of the Spanish economy. At the outset of the pandemic, the decline in income, together with the existence of fixed outgoings, drove up firms' and sole proprietors' liquidity needs, in a climate of growing uncertainty and heightened concerns among lenders about the risks assumed. This increased the risk of some of these agents being unable to meet their payment obligations (liquidity risk). However, the resolute and forceful measures taken by economic authorities helped mitigate this risk, enabling a broad share of these agents to cover their liquidity needs by resorting to new debt. As the crisis has persisted, concerns have shifted towards the risks related to the deterioration in firms' and sole proprietors' financial position, associated with increasing liabilities and declining profits, especially in the sectors hit hardest by the crisis.

This greater vulnerability in the productive sectors could hamper the economic recovery through various channels (see Figure 3.1). Indeed, the historical evidence shows that highly indebted firms are more sluggish in taking investment and hiring decisions. In addition, if this downturn were to manifest in business solvency problems, persistent losses could arise in the productive system and employment. This situation could also impact financial institutions' balance sheet position if the business solvency problems were to affect a significant share of their credit portfolio. In extreme circumstances, this could make it difficult for the affected banks to accommodate loan applications from households and firms, which would limit growth in aggregate demand and curtail the economic recovery.

The relevance of these risks at the current juncture warrants particularly close monitoring of the economic and financial situation of the productive sectors and deposit institutions alike. Early identification of these risks is key if the economic authorities are to introduce the corrective measures needed to prevent them from materialising. The deployment of a broad range of measures since the start of the crisis has helped mitigate these risks. Any additional measures to be taken in the future will need to be adjusted based on macro-financial developments.

This chapter analyses how the COVID-19 crisis has affected the vulnerability and risks of the productive sectors of the Spanish economy, and the situation of deposit institutions. This chapter first reviews how the crisis has affected firms' and sole proprietors' liquidity, and goes on to assess the changes in their financial position and the scale of the viability and solvency problems.

Figure 3.1
VULNERABILITY OF THE PRODUCTIVE SECTORS



SOURCE: Banco de España.

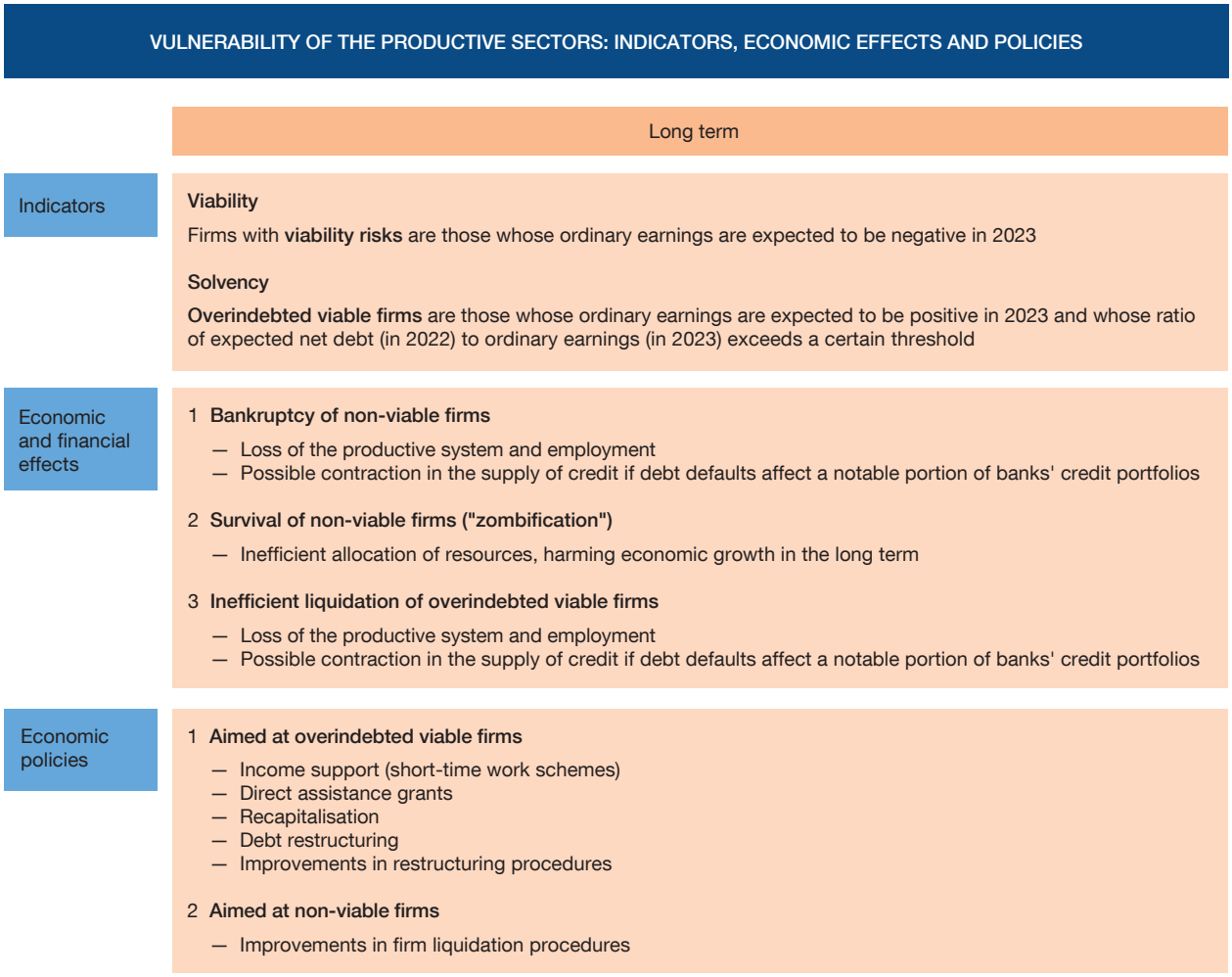
A discussion then follows on the macroeconomic implications of these developments and the role of economic policies. The chapter concludes with an analysis of the impact of these developments on deposit institutions' financial position.

2 Short-term liquidity risks of the productive sectors

2.1 Firms' liquidity needs

Firms' revenues fell sharply in 2020 as a consequence of the COVID-19 crisis, although there is high dispersion by sector and size. The measures taken by the authorities to limit the spread of the pandemic, together with the contraction in the demand for goods and services associated with the heightened uncertainty and the difficulties in undertaking certain expenses, have, in many cases, triggered a notable fall in business turnover. This decline has been highly heterogeneous by activity: accommodation and food service activities saw the sharpest falls (over 50%), while the manufacture of refined petroleum products, social and cultural services, transportation and storage, the manufacture of textiles, and the manufacture of

Figure 3.1
VULNERABILITY OF THE PRODUCTIVE SECTORS (cont'd)



SOURCE: Banco de España.

transport equipment all posted declines of more than 15% (see Chart 3.1.1). In this chapter, these are classified as sectors severely affected by the pandemic, while those whose sales declined by between 15% and 8% are classified as moderately affected sectors.[1] At end-2019, the severely affected sectors accounted for 24% of paid employment, 26% of the self-employed and 21% of the stock of bank credit. Moderately affected sectors accounted for 27%, 25% and 27%, respectively, of these variables. By size, microfirms (those with fewer than 10 employees) were the hardest hit in terms of sales within each sector (see Chart 3.1.2). In any event, beyond size, there was high intra-sectoral heterogeneity in firms' revenues in 2020.

The decline in firms' revenues raised their liquidity needs. The sharp reduction in turnover, combined with existing fixed costs, led to a rise in the share of companies

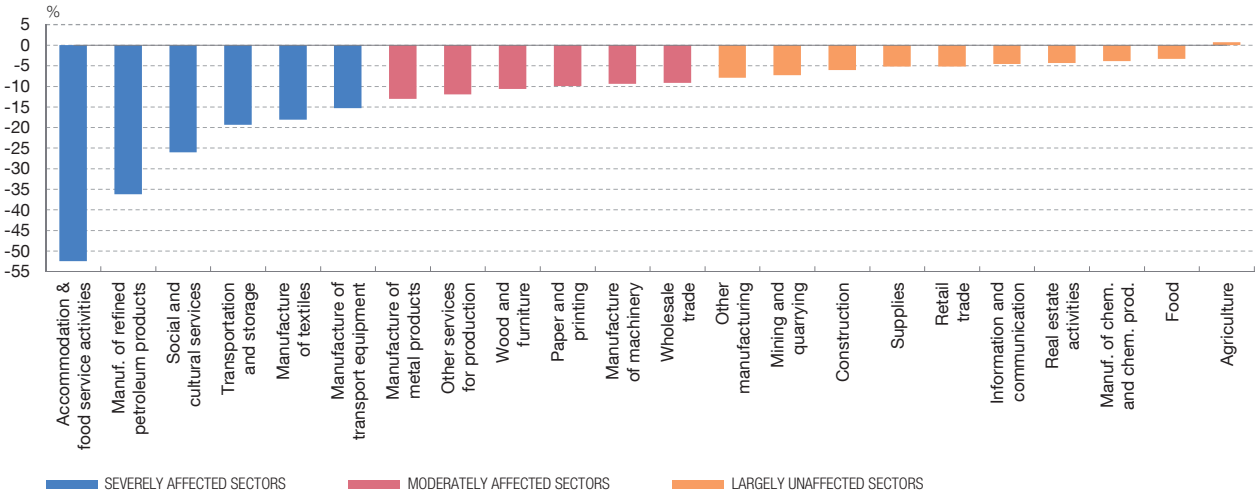
1 The rest are included in the group of largely unaffected sectors.

Chart 3.1

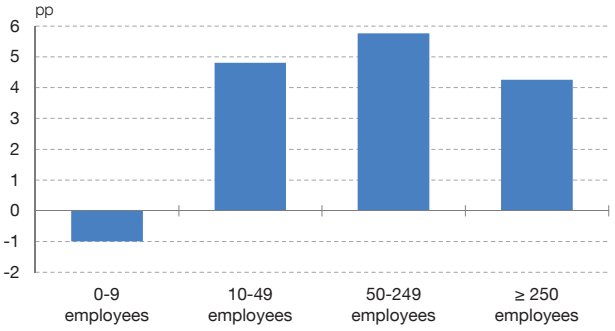
THE IMPACT OF COVID-19 ON BUSINESS REVENUES HAS BEEN SHARP, BUT HIGHLY HETEROGENEOUS

The COVID-19 crisis has triggered falls in business turnover across the board. The intensity of these falls has varied, depending on the sector and size of the firms. The activities hardest hit by the pandemic represent around 25% of employment and about 20% of the stock of credit.

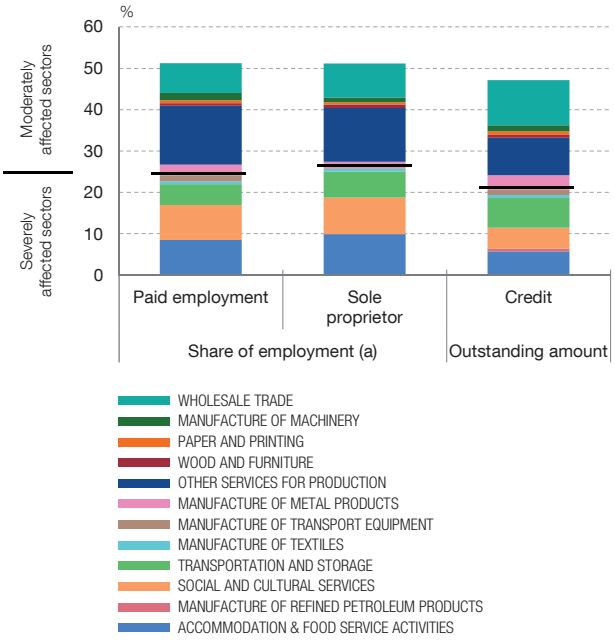
1 BUSINESS TURNOVER IN 2020, BY SECTOR
Year-on-year change



2 BUSINESS TURNOVER IN 2020, BY SIZE
Year-on-year change (difference with respect to sector average)



3 SHARE OF EMPLOYMENT AND CREDIT ACCOUNTED FOR BY MORE AFFECTED SECTORS. DECEMBER 2019



SOURCES: Agencia Estatal de Administración Tributaria, Seguridad Social and Banco de España.

a Calculated on the basis of average employees registered with Social Security in December 2019.

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with operating deficits, i.e. firms whose revenues were insufficient to cover current payments for utility bills, rents, financial expenses and personnel costs. Added to this were the liquidity needs stemming from their fixed asset investments and debt repayments. All this drove up liquidity needs, understood as the sum of the three foregoing components.

An estimated 70% of Spanish non-financial corporations had liquidity needs between April and December 2020, based on the results obtained from the micro-simulations conducted by the Banco de España.[2] This is 13 pp higher than under a (hypothetical) counterfactual scenario of no pandemic (see Chart 3.2.1). In any event, and as mentioned above in relation to the fall in turnover, the crisis has had an uneven impact on firms' liquidity needs. By size, the percentage of firms with liquidity needs is somewhat higher among smaller firms. By sector, the severely affected sectors saw a higher proportion of firms with liquidity shortfalls (80%).

The overall liquidity needs of the corporate sector amounted to around €233 billion in 2020 Q2–Q4 (see Chart 3.2.2)**.** The fiscal policies to support income (such as the greater ease in carrying out short-time work schemes and the deferral of rent, Social Security and tax payments) helped reduce firms' liquidity needs.[3] Nevertheless, the liquidity shortfall incurred between April and December is estimated to be around €67 billion higher than under a counterfactual scenario of no pandemic. Most of these liquidity needs derived from the repayment of outstanding debt.

Despite firms having high liquidity buffers, these were insufficient to cover a significant part of the aggregate liquidity needs, given the scale of the shock. To address such needs, firms that have difficulties in accessing external financing can resort to their liquid assets and the undrawn amount on existing credit facilities. Firms, particularly SMEs, had gradually built up their liquid assets following the 2008 financial crisis. Nevertheless, it is estimated that the corporate sector as a whole was able to cover a maximum of 44% of its liquidity needs in 2020 Q2-Q4 through full use of its buffers (see Chart 3.2.2). Further, the breakdown of liquidity needs shows that close to 37% of firms had insufficient internal funds to cover them.

Difficulties in internally covering liquidity shortfalls, together with the foreseeable tightening of access to external financing, initially increased

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2 These exercises were conducted using the information from the Central Balance Sheet Data Office integrated database (CBI), which contains data on around 400,000 firms for 2019 (the latest year available), and from the Central Credit Register as at December 2019 and March 2020. The estimates include the median of 100 micro-simulations in which each firm is randomly allocated a variation in 2020 sales such that the distribution of sales for each sector and firm size is replicated. These simulations are performed to generate heterogeneous sales patterns for the firms in each sector and size group. The amounts obtained have been extrapolated to the national total, based on the information available in the Central Companies Directory on the number of firms per sector and size segment. For more details of the methodology, see Blanco et al. (2021).

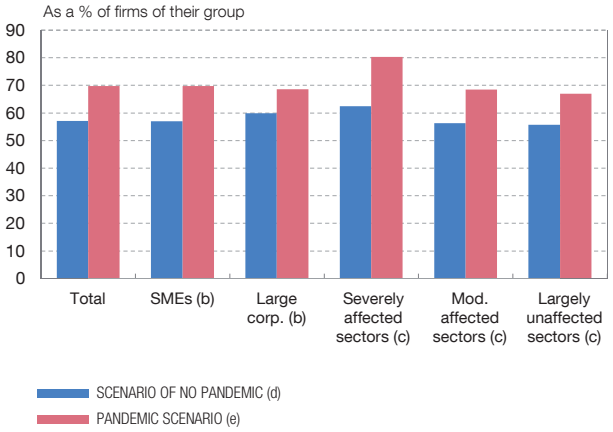
3 For a description of these measures, see Box 1.3 in Chapter 1 of this Report.

Chart 3.2

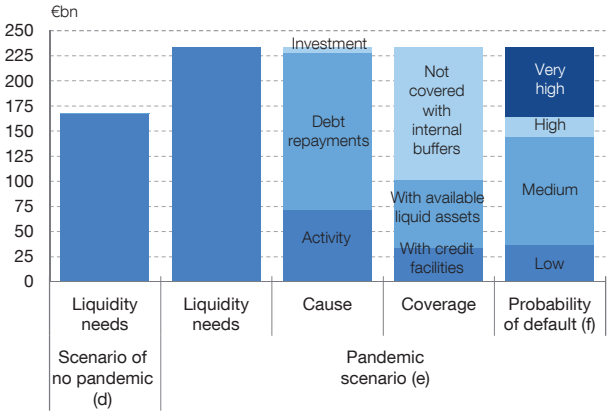
THE PANDEMIC HAS INCREASED FIRMS' LIQUIDITY RISKS

In 2020 Q2-Q4, an estimated 70% of firms had liquidity needs amounting to around €233 billion. Firms' liquidity buffers covered less than half of this liquidity shortfall. Further, around €90 billion arose at companies with a high risk profile.

1 PERCENTAGE OF FIRMS WITH LIQUIDITY NEEDS. 2020 Q2-Q4 (a)



2 FIRMS' LIQUIDITY: NEEDS, CAUSE, COVERAGE AND PROBABILITY OF DEFAULT. 2020 Q2-Q4 (a)



SOURCE: Banco de España.

a Excludes holding companies and financial services sector firms.
b The definition of size is in line with European Commission Recommendation 2003/361/EC.
c Sectors are defined as severely affected if their sales fell by more than 15% in 2020 and as moderately affected if their sales fell by betweeen 8% and 15%. Other sectors are deemed to be largely unaffected.
d Counterfactual scenario under which GDP growth is in line with the scenario published by the Banco de España in December 2019.
e The results shown correspond to the median of 100 micro-simulations in which each firm is randomly allocated a variation in 2020 sales such that the distribution of sales for each sector and firm size is replicated.
f Probability of default is considered very high if it exceeds 5%, high if it is between 3% and 5%, medium if it is between 0.5% and 3%, and low if it is below 0.5%.

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liquidity risk in the corporate sector. Liquidity risk refers to the capacity to meet payment commitments. If it materialises, it can entail severe damage to productive activity and, in extreme cases, jeopardise a firm's survival, with the consequent impact in terms of job destruction and damage to the productive system. This risk depends not only on the amount of the shortfall, but also on how readily it can be covered. As indicated above, given that a significant share of firms was unable to cover its liquidity needs using liquid assets and undrawn credit facilities, part of these needs had to be covered with external financing. Further, by heightening macroeconomic uncertainty and lender concern regarding credit risks, the COVID-19 crisis initially prompted expectations of tighter access to credit, especially for those firms with a worse credit profile. It should be borne in mind that a large portion of the estimated liquidity needs (almost €90 billion) arose at companies with a high risk profile[4] (see Chart 3.2.2).

4 Risk profiles are considered to be high when the probability of debt default exceeds 3%. This threshold corresponds to credit quality steps (CQS) 7 and 8. Probabilities of default are obtained drawing on the results of the statistical models developed by the Banco de España's Financial Risk Department for credit assessment. For more information, see Gavilá, Maldonado and Marcelo (2020).

2.2 Financing the liquidity needs

The swift and forceful measures taken by national and supranational authorities have helped to largely mitigate these liquidity risks. The public guarantee facilities managed by the Official Credit Institute (ICO, by its Spanish acronym) for business loans and the monetary and financial policy measures applied have stimulated the supply of financing. Thus, as indicated by the BLS, in 2020 Q2 credit institutions eased credit standards on loans to firms, in contrast to the sharp tightening of the loan supply at the onset of the 2008 financial crisis.[5] The banking system's starting position – significantly more sound at the beginning of the current crisis than in 2008 – and the different nature of the current crisis, which is non-financial in origin, also appear to have contributed to the expansion in the supply of credit during the first wave of the pandemic. Nevertheless, according to the BLS, from 2020 Q3 credit standards on loans to firms tightened slightly, owing to greater risk-related concerns among financial institutions, given the climate of heightened uncertainty and the prolongation of the health crisis. In the corporate debt markets, following a significant increase upon the outbreak of the pandemic, the cost of debt tended to decline gradually, especially after the ECB announced the launch of the PEPP.

Against this backdrop of favourable financing conditions, a large number of firms and sole proprietors resorted to external financing, chiefly bank credit, to cover their liquidity needs. Thus, according to the Financial Accounts, in 2020, net fund-raising by firms amounted to €43 billion (see Chart 3.3.1). This comprised mainly bank loans (€35 billion, compared with the negative flow of €9 billion on average in previous years) and, to a lesser extent, funds in the form of capital (€17 billion), corporate debt security issuances (€11 billion), foreign credit (€6 billion) and inter-company loans (€2 billion). By contrast, the net flow of trade credit was negative (€29 billion), in line with the sharp decline in business activity.[6]

Bank finance grew to a greater extent in the sectors that have been hit hardest by the pandemic and which, therefore, had greater financing needs. In 2020 lending to productive activities grew by 7.9% as compared with the previous year (see Chart 3.3.2). The breakdown by sector shows that this credit buoyancy was related to the impact of the crisis on firms' turnover. Thus, growth was 17.9% in the sectors severely affected by the pandemic, 10.6% in the moderately affected sectors and 2.6% in the rest.

The increase in the bank debt of non-financial corporations and sole proprietors has been highly heterogeneous. At end-2020, 35% of the stock of bank debt was

5 See Menéndez and Mulino (2021a).

6 If it is assumed that the fraction of purchases and sales payable in instalments and the average collection and payment periods are maintained, the fall-off in activity results in a reduction of the outstanding balance of trade debts.

on the balance sheets of firms and sole proprietors whose bank debt increased by more than 20% in 2020, compared with 26% a year earlier (see Chart 3.3.3). At the other end of the scale, nearly one-third of firms and sole proprietors reduced their stock of loans by more than 20%; this share was, admittedly, somewhat smaller than that observed a year earlier. Among the firms and sole proprietors that previously had no borrowings from Spanish credit institutions, the increase in bank debt was smaller in 2020 than in 2019, which could suggest that these agents had greater difficulties in raising financing through bank credit.

The microdata available for 2020 also show that firms covered the bulk of their liquidity needs by borrowing. For instance, the data on the sample of the Central Balance Sheet Data Office Quarterly Survey (CBQ), comprising around 800 (predominantly large) firms, suggest a high increase in 2020 Q2-Q4 in borrowing by the group of firms with a liquidity shortfall. This borrowing took the form of both bank debt and other types of instrument, chiefly loans received from the business group (see Chart 3.3.4).

It is estimated that, as a whole, Spanish non-financial corporations covered close to half of their liquidity needs through bank loans maturing after 2020. Specifically, the coverage of these needs is estimated at 48%, of which 34 pp is attributable to loans under the public guarantee schemes (see Chart 3.4.1). The share of loans under the guarantee schemes managed by the ICO as a percentage of total gross funds raised is comparatively higher among companies for which access to external financing is a priori more difficult, such as smaller firms and those presenting higher credit risk. This evidence suggests, therefore, that the guarantee schemes fostered access to credit for such firms. By contrast, firms with no previous bank debt covered barely 8% of their liquidity needs using bank loans, of which somewhat more than 60% were guaranteed by the ICO facilities. The evidence available suggests that this latter finding could be explained, at least in part, by the difficulties these firms had in accessing external financing.[7] Consequently, such companies would foreseeably have covered a notable part of their liquidity needs by using their liquidity buffers. In any event, it should be borne in mind that these firms' liquidity ratios are comparatively higher than those of the corporate sector as a whole, reducing the risk of their being unable to meet payment commitments. Moreover, Chart 3.4.2 shows that ICO-backed financing contributed decisively to the increase in the stock of loans to firms and, to a lesser extent, sole proprietors. Specifically, it shows that, for the non-financial corporate sector as a whole, loans other than those backed by ICO facilities made a negative contribution to the growth in debt. The breakdown by firm size shows this same pattern in the case of SMEs. By contrast, for large corporations, loans other than those backed by ICO facilities made a positive, albeit small, contribution to the growth in their debt.

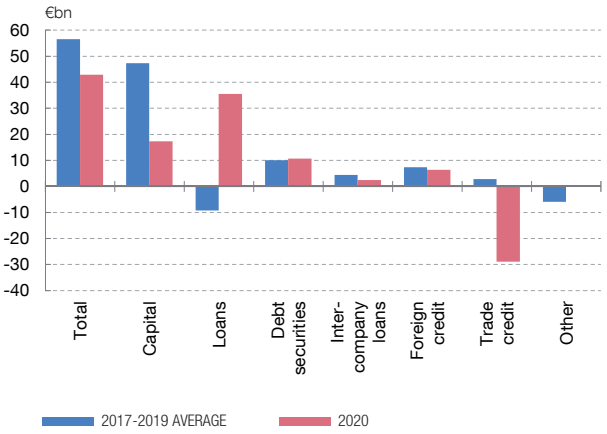
7 See Arce et al. (2021).

Chart 3.3

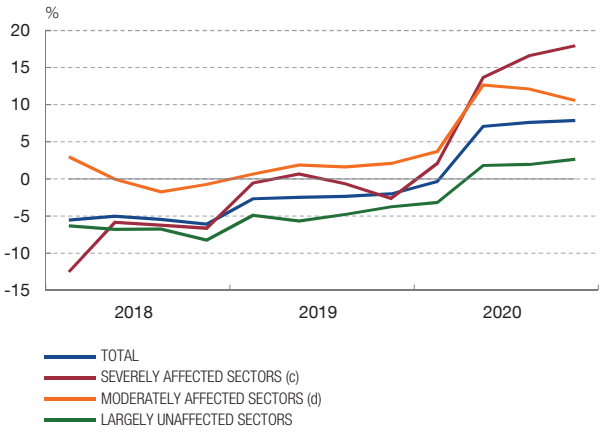
IN 2020, FIRMS COVERED THEIR LIQUIDITY NEEDS BY RESORTING MAINLY TO BANK FINANCING

Bank financing has been the main resource used by firms to cover their financing needs, followed by capital and issuances of corporate debt. Credit has been used to a greater extent in those sectors more affected by the pandemic, although there is high heterogeneity across firms. The CBQ microdata confirm this pattern.

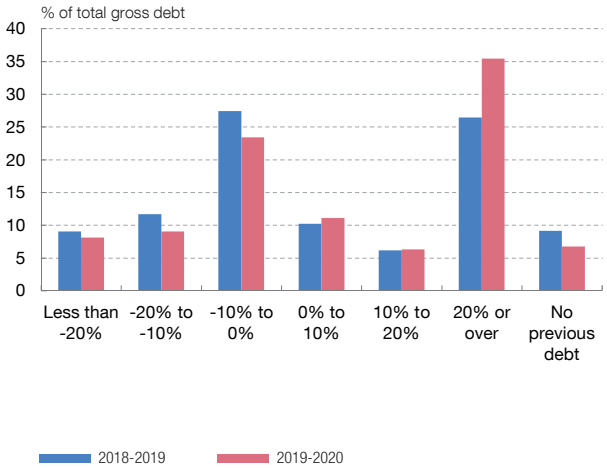
1 NET FINANCIAL FLOWS OF LIABILITIES OF NON-FINANCIAL CORPORATIONS (a)



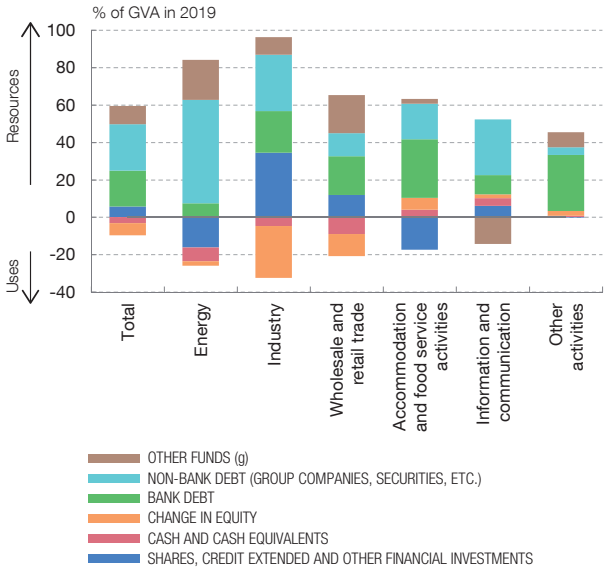
2 LENDING TO PRODUCTIVE ACTIVITIES, BY SECTOR (b)
Year-on-year change



3 DISTRIBUTION OF THE CHANGE IN GROSS DEBT OF FIRMS AND SOLE PROPRIETORS



4 RESOURCES AND USES OF FIRMS WITH LIQUIDITY NEEDS. 2020 Q2-Q4. CBQ (e) (f)



SOURCE: Banco de España.

a Cumulative flows in the first three quarters of each year.
b Excludes the financial intermediation sector.
c Severely affected sectors are those whose turnover fell by more than 15% in 2020, namely: accommodation and food service activities, the manufacture of refined petroleum products, social and cultural services, transportation and storage, the manufacture of textiles, and the manufacture of transport equipment.
d Moderately affected sectors are those whose turnover fell by between 8% and 15% in 2020, namely: the manufacture of metal products, other services for production, wood and furniture, paper and printing, the manufacture of machinery, and wholesale trade.
e The CBQ is the Central Balance Sheet Data Office Quarterly Survey.
f Excludes holding companies and financial services sector firms.
g Includes other accounts receivable other than customer receivables, other trade accounts payable other than payables to suppliers, and other assets and liabilities (net).

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2.3 The liquidity situation at end-2020

The use of the ICO facilities has helped improve firms' and sole proprietors' debt maturity profile and reduce the average cost of debt. Thus, between 2019 and 2020, these agents' bank debt structure showed a shift from short-term maturities (less than one year) towards medium-term maturities (between three and five years), particularly among firms (see Chart 3.5.3). During the same period, the weight of bank debt with an average interest rate of less than 3% rose by 4 pp in the case of non-financial corporations and 2 pp for sole proprietors, to the detriment of debt at a higher cost (see Chart 3.5.4). The use of the ICO facilities, with highly favourable financing conditions in terms of both interest rates and maturities,[8] has contributed to these developments in both cases.

Part of the increase in corporate debt during 2020 appears to have been earmarked for building up precautionary buffers, rather than for covering short-term liquidity needs. The CBQ data for 2020 suggest there is a positive relationship between the rise in gross indebtedness and the build-up of liquid assets (see Chart 3.5.1). Consequently, many firms' net indebtedness would have increased less than their gross debt, and their financial position would not therefore have worsened to the extent suggested by the raw data. This increase in liquidity buffers is more clearly apparent in the upper end of the liquidity ratio distribution (see Chart 3.5.2). In the same vein, it is observed that, overall, the firms with liquidity needs in this sample have not used their liquid assets to cover their liquidity shortfall. Indeed, they appear to have even increased their holdings of these types of assets, except in the case of companies in the hospitality and, to a lesser extent, information and communication sectors (see Chart 3.3.4). At the other end of the scale, some firms have repaid debt by disposing of a part of their liquid assets. These firms, which account for 43% of the sample, started out with significantly higher liquidity ratios than the firms that have increased their liquidity buffers.[9]

Despite the increase in many firms' liquidity buffers and the more favourable debt maturity profile, some liquidity risks persist. Indeed, it is estimated that the sectors hit hardest by the pandemic will continue to have relatively high financing needs in 2021 (albeit ones that are considerably more moderate than in 2020), as they are not expected to return to their pre-crisis levels of activity and profitability in the near term. Moreover, the latest information on financing conditions in the BLS suggests some tightening of credit standards which, if prolonged or intensified, could hamper the financing of some firms.

8 See Alves et al. (2020).

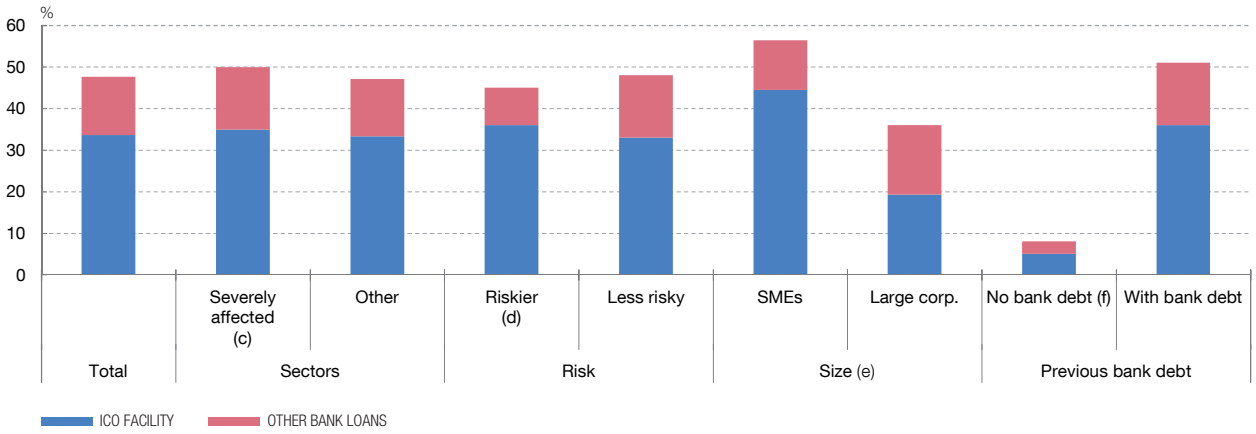
9 The results obtained from a test of means comparing the characteristics of firms in 2019, depending on whether or not they reduced their liquid assets in 2020, indicate that the firms that used their liquidity buffers in that year had a higher liquid assets ratio before the onset of the pandemic. However, statistically significant differences at the standard significance levels are not observed as regards their size, profitability or indebtedness.

Chart 3.4

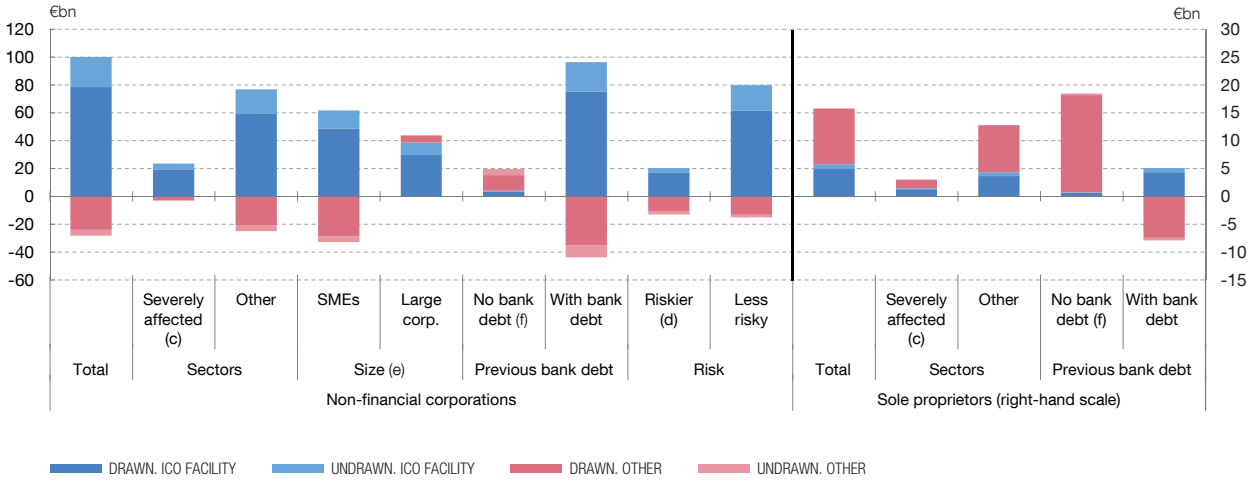
THE PUBLIC GUARANTEE FACILITIES HAVE PLAYED A VERY IMPORTANT ROLE IN COVERING FIRMS' LIQUIDITY NEEDS

An estimated 48% of liquidity needs were covered with bank loans, 71% of which were under the public guarantee schemes. This ICO-backed financing was more significant, in relative terms, in the firms severely affected by the pandemic, riskier firms and SMEs, and contributed decisively to the increase in the stock of loans to firms.

1 COVERAGE OF LIQUIDITY NEEDS OF NON-FINANCIAL CORPORATIONS BY SECTOR, SIZE AND RISK. MARCH-DECEMBER 2020 (a) (b)



2 CHANGE IN THE STOCK OF LOANS TO PRODUCTIVE ACTIVITIES. FEBRUARY-DECEMBER 2020



SOURCE: Banco de España.

a Includes new credit transactions (drawn and undrawn), but not drawdowns on previously granted credit facilities.
b Only credit transactions maturing after 2020 are considered, as those maturing in 2020 would have to be refinanced. Firms' liquidity needs are identified based on a simulation of their ordinary activities during 2020 and debt repayments between March and December 2020.
c Severely affected sectors are those whose turnover fell by more than 15% in 2020, namely: accommodation and food service activities, the manufacture of refined petroleum products, social and cultural services, transportation and storage, the manufacture of textiles, and the manufacture of transport equipment.
d Riskier companies are those with a probability of default of over 5%.
e The definition of size is in line with European Commission Recommendation 2003/361/EC. Small firms forming part of a business group are not classified as SMEs.
f Firms with no previous debt to credit institutions are those that neither had credit drawdowns nor held any credit facilities in early February 2020, on the information available in the Banco de España Central Credit Register.

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3 Firms' financial vulnerability in the medium and long term

3.1 Profitability

The CBQ data show that the average return on assets of the sample fell by more than 2 pp in 2020. These developments were attributable to the sharp contraction in activity, which was not sufficiently offset by the decline in personnel costs, and to the notable slide in financial income, chiefly as a result of the reduction in dividends received. The percentage of firms with negative profitability rose by 8 pp to 34%.

The micro-simulation exercises conducted by the Banco de España for the corporate sector as a whole also present a very significant decline in profitability in 2020, albeit with high heterogeneity.[10] SMEs' median profitability is estimated to have fallen by 5 pp to a negative value of -1.2%, while for large corporations it is estimated to have decreased by 4.3 pp to 1% (see Chart 3.6.1). The decline in profitability appears to be sharper in the 25th percentile of the distribution (below which are concentrated the least profitable firms), especially in the case of SMEs. The share of SMEs and large corporations with negative profitability is estimated to have increased by 24 pp (to 55%) and 18 pp (to 45%), respectively. Details by activity show that the downturn was substantially greater for the severely affected sectors, whose median profitability fell from 4.1% to -9.4% (see Chart 3.6.2).

From 2021 onwards, a gradual and uneven increase is expected in firms' profitability, in line with the recovery in economic activity envisaged in the baseline scenario of the Banco de España's latest macroeconomic projections.[11] The return to pre-crisis levels of profitability would be slower for firms operating in the sectors whose sales suffered a steeper drop in 2020. Thus, in 2023 median profitability in the moderately affected and largely unaffected sectors is expected to surpass its pre-pandemic levels, but would remain below pre-crisis levels in the severely affected sectors.

---

10 Simulated based on information from the CBI for 2019 and the State tax revenue service (AEAT) for 2020, and on the changes associated with the projected economic developments under the baseline scenario of the Banco de España's macroeconomic projections published in March 2021. The results obtained are extrapolated to the entire corporate sector. The median of 100 micro-simulations is presented, in which each firm is randomly allocated a variation in 2020 sales such that the distribution of sales for each sector and firm size is replicated. For 2023, it is assumed that the firms recover a level of sales compatible with the expected performance of sectoral GVA in nominal terms in the period 2019-2023. In the period 2021-2023, sales are interpolated between their 2020 and 2023 levels based on the growth of sectoral GVA. For more details on the methodology, see Blanco et al. (2021).

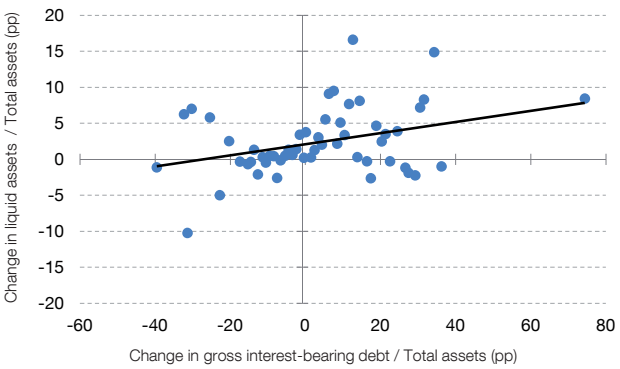
11 The baseline scenario of the Banco de España's macroeconomic projections of March 2021. For more information, see Banco de España (2021).

Chart 3.5

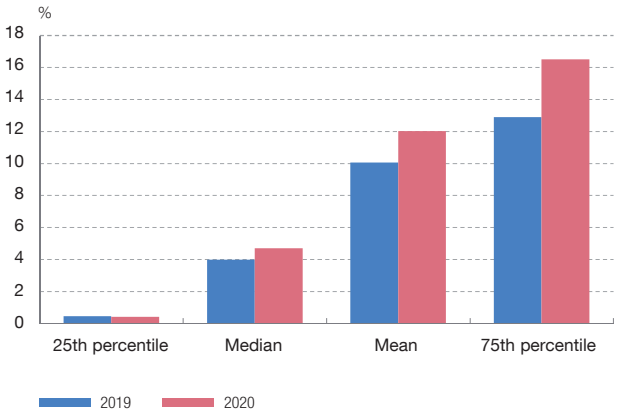
PART OF THE INCREASE IN CORPORATE DEBT APPEARS TO HAVE BEEN EARMARKED FOR BUILDING UP PRECAUTIONARY LIQUIDITY BUFFERS

The ICO facilities have helped improve firms' financing structure by extending maturities and reducing the average cost of bank debt. Net debt increased less than gross debt, as part of this debt appears to have been earmarked for building up liquidity buffers.

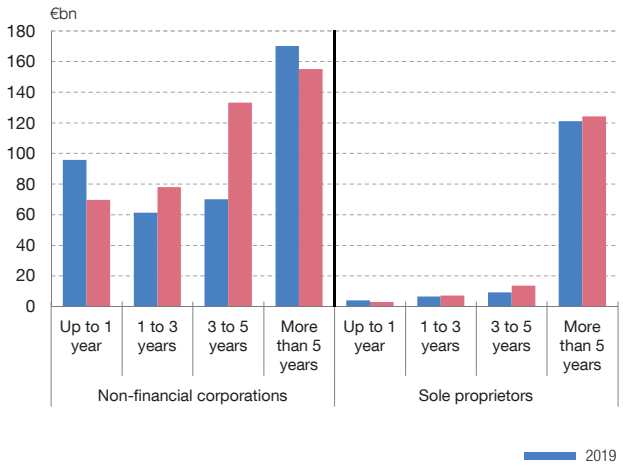
1 RELATIONSHIP BETWEEN THE CHANGES IN GROSS DEBT AND IN LIQUID ASSETS IN 2020. CBQ (a) (b)



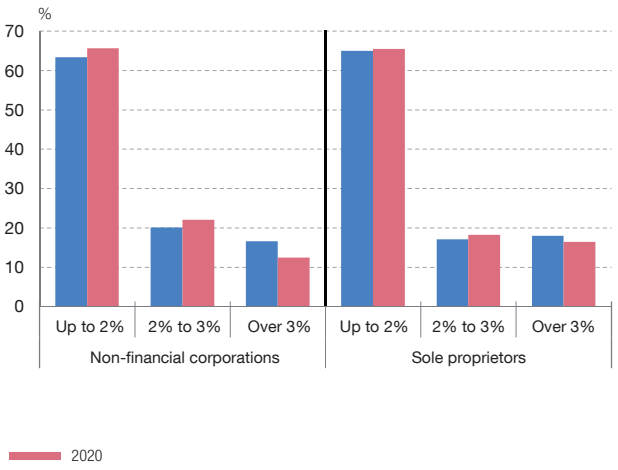
2 DISTRIBUTION OF FIRMS' LIQUIDITY RATIO. CBQ (a) (c)



3 DISTRIBUTION OF BANK DEBT BY MATURITY



4 DISTRIBUTION OF BANK DEBT BY INTEREST RATE



SOURCE: Banco de España.

a The CBQ is the Central Balance Sheet Data Office Quarterly Survey.
b Liquid assets are defined as cash and cash equivalents. Each point on the chart corresponds to the average change in gross interest-bearing debt as a percentage of total assets and to the average change in liquid assets as a percentage of total assets, which are obtained in intervals with a width of 1 pp of the change in debt relative to assets. Only those intervals containing more than one firm are considered.
c The liquidity ratio is defined as the firm's liquid assets as a percentage of its total assets.

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3.2 Financial position

The increase in debt and the decline in profitability may impair some firms' financial position. This section uses three indicators to proxy that position: one that assesses the level of equity and two that assess indebtedness. The first indicator explores the proportion of firms with negative equity. Although such a position, resulting mainly from the accumulation of losses over an extended period of time, does not automatically imply a firm's bankruptcy, it does represent an important factor of vulnerability since it increases the likelihood of bankruptcy in future. The first of the debt indicators, calculated as the ratio of net financial debt (financial debt less liquid assets) to the sum of net financial debt and equity, reflects the firms' liability structure. The second, calculated as the ratio of net financial debt to ordinary earnings (gross operating profit plus financial revenue), proxies firms' ability to repay financial debt out of the funds generated during the year.

The CBQ data for 2020 show a deterioration of the financial position of the firms in this sample, mostly attributable to the decline in profits, since the increase in net debt appears to have been moderate. According to the data available in this survey, the proportion of companies with negative equity increased in 2020 from 3% to 4%, owing essentially to the losses generated over the course of the year. As for the debt indicators, the CBQ data show that the distribution of the firms by weight of net debt in corporate balance sheets did not change very significantly in 2020, reflecting the relatively moderate increase in net debt for the majority of firms in this sample. As discussed in the previous section, this seems in part linked to the fact that a proportion of the increase in gross debt has been earmarked for building up liquidity buffers. By contrast, the distribution of firms by ratio of net debt to ordinary earnings points to a more marked deterioration. Therefore, these results suggest that the heightened financial pressure borne by the firms in this sample as a result of the COVID-19 crisis owes more to the decline in corporate profits than to the increase in net debt, which appears to have been moderate for the sector as a whole.[12]

The micro-simulation exercises conducted by the Banco de España show a more marked deterioration of the financial position for the overall corporate sector.[13] Thus, in 2020 the proportion of firms with negative equity increased by more than 9 pp (see Chart 3.7.1.1). Furthermore, the percentage of those presenting more vulnerable financing structures (understood as those with a net debt/balance sheet ratio of over 75%) increased by 7 pp in 2020. And the proportion of firms whose ratio of net debt to ordinary earnings exceeds 10 or which are loss-making rose by 15 pp (see Charts 3.7.1.2 and 3.7.1.3).

12 See Menéndez and Mulino (2021b).

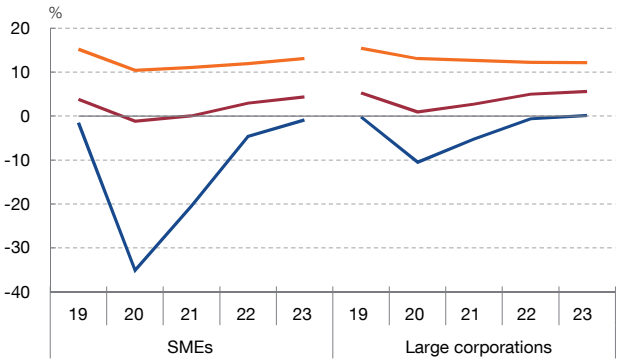
13 See footnote 10.

Chart 3.6

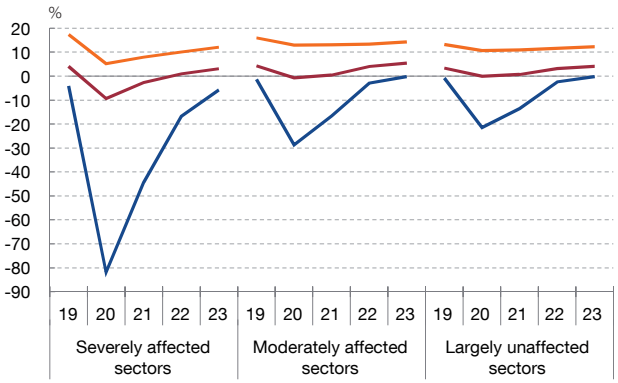
FIRMS' PROFITABILITY FELL SIGNIFICANTLY IN 2020 ON ACCOUNT OF THE COVID-19 CRISIS AND IS EXPECTED TO RECOVER GRADUALLY FROM 2021

On the micro-simulations conducted, the deterioration in profitability was especially severe in the sectors hit hardest by the COVID-19 crisis. From 2021, firms' profitability is expected to recover gradually. Median profitability for the corporate sector as a whole is not expected to return to pre-pandemic levels until 2023.

1 DISTRIBUTION OF THE RETURN ON ASSETS. BREAKDOWN BY SIZE (a) (b)



2 DISTRIBUTION OF THE RETURN ON ASSETS. BREAKDOWN BY SECTOR (a) (c)



25TH PERCENTILE 50TH PERCENTILE 75TH PERCENTILE

SOURCE: Banco de España.

a Return on assets (ROA) = (Ordinary net profit + Financial costs) / Assets net of non-interest-bearing borrowing. Results obtained based on simulations consistent with the economic developments projected under the baseline scenario of the macroeconomic projections published by the Banco de España in March 2021. The results shown in these panels correspond to the median of 100 micro-simulations in which each firm is randomly allocated a variation in 2020 sales such that the distribution of sales for each sector and firm size is replicated.
b The definition of size is in line with European Commission Recommendation 2003/361/EC.
c Sectors are defined as severely affected by the COVID-19 crisis if their sales fell by more than 15% in 2020 and as moderately affected if their sales fell by between 8% and 15%. Other sectors are deemed to be largely unaffected.

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The degree of vulnerability appears to have increased across all firm sizes and sectors of activity, albeit somewhat more acutely among smaller firms and, above all, in the sectors hardest hit by the crisis. The micro-simulation exercises indicate that, in 2020, the increase in the percentage of firms with negative equity and with high levels of debt was somewhat greater among SMEs than among large corporations. By sector, the severely affected sectors showed more acute downturns in all three indicators analysed (see Charts 3.7.1 and 3.7.2). It is also noteworthy that, before the crisis, there was a higher proportion of firms that were more vulnerable, based on these indicators, in the sectors hardest hit by the pandemic than in other sectors.

The projected developments over the coming years, under the Banco de España's latest baseline macroeconomic scenario (March 2021), point to a progressive stabilisation of the balance sheet structure indicators, while the debt-to-earnings ratio would gradually return to near pre-crisis levels. The simulation exercises suggest that the proportion of firms with negative equity and of those whose debt exceeds 75% of their balance sheet will increase moderately in 2021 and remain virtually unchanged in the subsequent two years. Conversely, the

pick-up in activity would, from 2021 onwards, allow a significant reduction in the proportion of firms with a net debt-to-ordinary earnings ratio above 10 or that are loss-making. Thus, by 2023 the percentage of vulnerable firms, as per this latter indicator, would be close to, albeit still somewhat higher than, pre-pandemic levels, except in the sectors severely affected by the crisis, where they would remain clearly higher.

3.3 Risks to corporate viability and solvency

The sharp downturn in corporate profitability in 2020 and the subsequent sluggish recovery, together with the increase in debt, could cause persistent damage to the financial position of some firms. These effects are proxied using two indicators, measuring, respectively, the risk of firms ceasing to be viable and the risk of them presenting solvency problems (overindebted firms) as a consequence of the crisis. Firms at risk of becoming non-viable are defined as those that would consistently accumulate losses in the period 2020-2023. Meanwhile, overindebted but viable firms are those with positive earnings in 2023 but that would find it difficult to repay their debt out of their expected future cash flows. A firm is deemed to face such difficulties when the ratio of estimated net debt for 2022 to ordinary earnings for 2023 exceeds a certain threshold.[14] It is important to note that the existence of these risks does not necessarily mean a significant deterioration in the ability to repay bank loans in the short term. This is, first, because in many cases much of the debt of such at-risk firms is not bank debt. Second, this analysis does not take into account the debt maturity structure, which is an important determinant of the time pattern of potential defaults.[15]

According to the micro-simulations conducted by the Banco de España,[16] the COVID-19 crisis will cause the proportion of firms at risk of becoming non-viable to rise moderately. Specifically, as compared with a counterfactual scenario of no pandemic, it would increase by between 2 pp and 3 pp, depending on whether the baseline macroeconomic scenario or a more adverse scenario is considered[17] (see Chart 3.8.1). The share of employment in the non-financial corporations sector accounted for by firms that would become non-viable would stand between 2.7%

14 Net debt is defined as liabilities (interest-bearing and non-interest-bearing) less cash and cash equivalents, short-term financial investments, inventories and amounts receivable.

15 In particular, the greater the share of debt maturing in the short term, the higher the probability of defaults occurring.

16 Simulated based on information from the CBI for 2019 and the State tax revenue service for 2020, and on the changes associated with the projected economic developments under the two scenarios (baseline and severe) of the Banco de España's macroeconomic projections, published in March 2021. The results obtained are extrapolated to the entire corporate sector. The median of 100 micro-simulations is presented, in which each firm is randomly allocated a variation in 2020 sales such that the distribution of sales for each sector and firm size is replicated. For 2023, it is assumed that the firms recover a level of sales compatible with the expected performance of sectoral GVA in nominal terms in the period 2019-2023. In the period 2021-2023, sales are interpolated between their 2020 and 2023 levels based on the growth of sectoral GVA. For more details on the methodology used, see Blanco et al. (2021).

17 The more adverse scenario corresponds to the severe scenario of the Banco de España's March 2021 projections.

and 3.7%, while their share of total gross debt[18] would be lower (between 0.6% and 1%, depending on the scenario considered). In any event, it should be noted that these estimates do not consider the potential structural changes in demand associated with the crisis and therefore may underestimate to some extent the risks relating to the viability of some firms' business.

There is high heterogeneity across firm sizes and sectors in the incidence of firms at risk of becoming non-viable. The increase in the percentage of firms in this situation on account of the crisis would be higher among SMEs than among large corporations. By sector, that percentage would rise far more markedly (by between 4.9 pp and 7.2 pp) in the sectors severely affected by the crisis.

The increased debt and the decline in expected future cash flows would also drive up the proportion of overindebted but viable firms. Specifically, it is estimated that, as compared with a scenario of no pandemic, the percentage of such firms would increase by 3 pp under the more benign scenario (baseline macroeconomic scenario and assuming that the threshold for overindebtedness – based on the ratio of estimated net debt for 2022 to ordinary earnings for 2023 – is 12 times).[19] Under the adverse macroeconomic scenario and with a lower debt threshold (9 times; hereinafter, less benign scenario),[20] the increase would be 4.7 pp (see Chart 3.8.2).[21] Overall, the firms that would become overindebted account for between 3.5% and 6.1% of employment and between 2.8% and 3.9% of gross debt in the corporate sector, depending on the scenario considered. For the sectors severely affected by the crisis, the percentage of overindebted but viable firms would rise by between 5.1 pp and 6.7 pp, while the increase in the other sectors (moderately affected and largely unaffected) would be considerably smaller. As noted in relation to the above estimates for the increase in firms at risk of becoming non-viable, these figures do not capture the possible effects of the crisis on the deterioration of corporate sector solvency associated with potential structural changes in demand. However, in this case, it should be borne in mind that the implicit assumption that firms will cover their financing needs over the coming years exclusively with debt would tilt the results in the opposite direction.[22]

The unsustainable debt of firms that would become overindebted as a consequence of the COVID-19 crisis, but would remain viable, would stand

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18 Includes interest-bearing and non-interest-bearing debt.

19 This threshold has been set assuming that firms are able to refinance their debts with a 15-year loan at the market interest rate. Under these conditions, a firm whose net debt is more than 12 times its ordinary earnings would have to earmark an amount exceeding its ordinary earnings to the annual repayment of that loan. The same threshold is used for the different firm sizes, given that there are no statistically significant differences in the average maturity of restructured loans based on borrower size.

20 This threshold has been set assuming that firms are able to refinance their debts with a 10-year loan at the market interest rate.

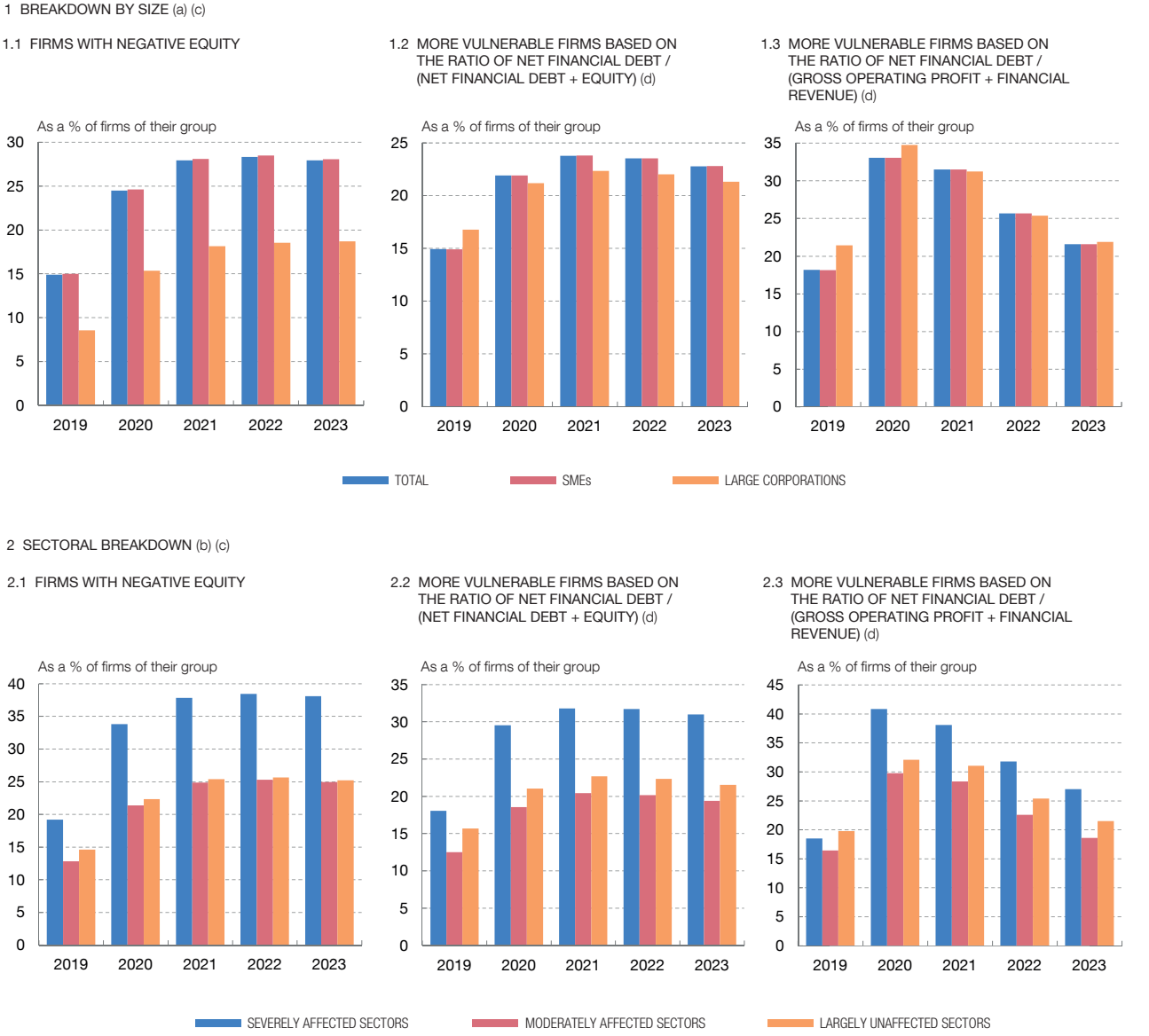
21 For more details on the methodology used, see Blanco et al. (2021).

22 Indeed, if firms were to cover their liquidity needs using own funds, their solvency would not be impaired.

Chart 3.7

IN 2020, THE FINANCIAL POSITION OF SOME FIRMS DETERIORATED AS A RESULT OF THE COVID-19 CRISIS. A GRADUAL IMPROVEMENT IS EXPECTED FROM 2021 ONWARDS

The deterioration in firms' financial position was more acute among SMEs and in the sectors most affected by the crisis. From 2021 onwards, a gradual decline in the proportion of vulnerable firms is expected, in line with the anticipated economic recovery.



SOURCE: Banco de España.

a The total excludes holding companies, financial services firms, property development and buying and selling of own real estate. The size definition is in line with European Commission Recommendation 2003/361/EC.

b Sectors are defined as severely affected if their sales fell by more than 15% in 2020 and as moderately affected if their sales fell by between 8% and 15%. Other sectors are deemed to be largely unaffected.

c Results obtained based on simulations consistent with the economic developments projected under the baseline scenario of the macroeconomic projections published by the Banco de España in March 2021. The results shown in these panels correspond to the median of 100 micro-simulations in which each firm is randomly allocated a variation in 2020 sales such that the distribution of sales for each sector and firm size is replicated.

d Net financial debt is defined as interest-bearing borrowing less liquid assets and short-term financial investments. More vulnerable firms are defined as those whose Net financial debt / (Net financial debt + Equity) ratio is higher than 0.75 or whose Net financial debt / (Gross operating profit + Financial revenue) ratio is higher than 10 or that have positive net financial debt and negative or zero earnings.

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between €9 billion and €19 billion, depending on the scenario considered, with just over half accounted for by SMEs (see Chart 3.8.3). In the simulation exercises, the unsustainable debt[23] of each firm is proxied by the portion of debt that exceeds the overindebtedness threshold. In other words, this measure indicates the amount by which these firms' debt would have to be reduced to avoid theoretical insolvency. The proportion of this unsustainable debt accounted for by SMEs would stand at around 73% under both of the scenarios considered.

This unsustainable debt is mainly concentrated in the sectors severely affected by the crisis, although other sectors likewise accumulate a significant amount. In the severely affected sectors, the unsustainable debt generated by the pandemic ranges between €4 billion and €6 billion, depending on the scenario considered, representing between 40% and 34%, respectively, of the total increase in such debt for the corporate sector as a whole (see Chart 3.8.3). Accordingly, the other sectors of activity (moderately affected and largely unaffected) would, together, likewise accumulate a significant increase in unsustainable debt.

If sole proprietors are included, unsustainable debt would stand between approximately €10 billion and €20 billion. The relative weight of sole proprietors and SMEs in the unsustainable debt of agents that would have become overindebted as a consequence of the COVID-19 crisis, but would remain viable, would be close to 75% under both of the scenarios considered.[24]

4 The economic implications of firms' financial vulnerability and the role of economic policy

4.1 Economic implications

The increase in firms' financial vulnerability generated by the COVID-19 crisis could have some negative implications for the economic growth outlook through various channels (see Figure 3.1). The empirical evidence shows that high corporate debt is associated with more sluggish investment and hiring decisions at firms, even at those with no solvency problems. In the literature, this is known as "debt overhang".[25] This sluggishness may owe to highly indebted firms using a large share of earnings from new and profitable projects to pay old creditors rather than remunerating shareholders, which could reduce the propensity to undertake new investment projects. In addition, financing conditions tend to be tighter for the most

23 Includes all types of financial and non-financial debt (trade credit, payables to employees, general government, etc.). In 2019, the share of bank loans in the total debt of firms that would remain viable but become overindebted stands at around 30%.

24 The unsustainable debt of sole proprietors is estimated by extrapolating the results for firms without employees. Specifically, the increase in unsustainable debt is calculated for each sector and multiplied by the ratio of sole proprietors in that sector to firms without employees.

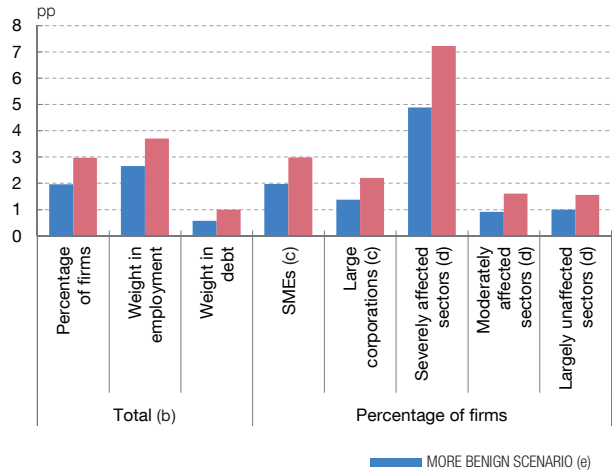
25 See Myers (1977).

Chart 3.8

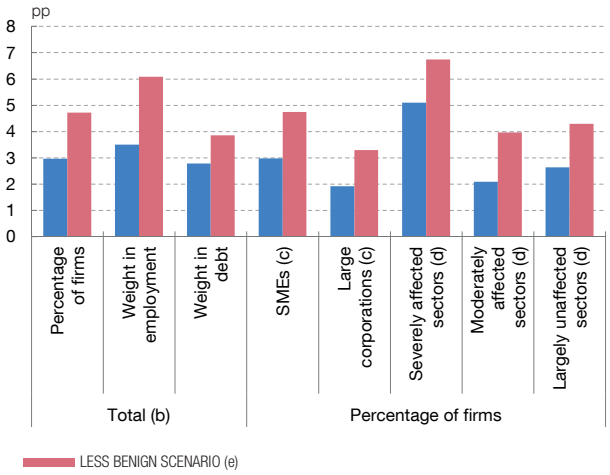
THE COVID-19 CRISIS HAS INCREASED THE PROPORTION OF FIRMS AT RISK OF NON-VIABILITY AND INSOLVENCY

The deterioration in firms' financial position, together with the decline in expected future cash flows, has driven up the proportion both of firms at risk of non-viability and of viable but overindebted firms. The unsustainable debt of firms finding themselves in the latter situation on account of the crisis would fluctuate between €9 billion under the more benign scenario and €19 billion under the less benign scenario.

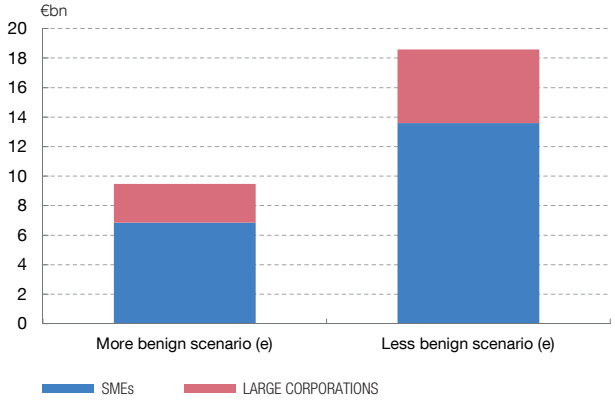
1 INCREASE, OWING TO THE COVID-19 CRISIS, IN THE PERCENTAGE OF FIRMS AT RISK OF NON-VIABILITY AND IN THEIR WEIGHT IN EMPLOYMENT AND DEBT (a)



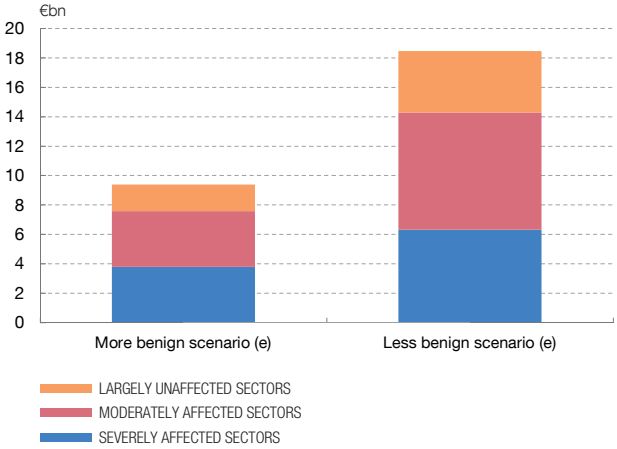
2 INCREASE, OWING TO THE COVID-19 CRISIS, IN THE PERCENTAGE OF VIABLE BUT OVERINDEBTED FIRMS AND IN THEIR WEIGHT IN EMPLOYMENT AND DEBT (a) (f)



3 UNSUSTAINABLE DEBT OF FIRMS THAT WOULD BECOME OVERINDEBTED BUT REMAIN VIABLE. BREAKDOWN BY SIZE (c) (f)



4 UNSUSTAINABLE DEBT OF FIRMS THAT WOULD BECOME OVERINDEBTED BUT REMAIN VIABLE. SECTORAL BREAKDOWN (d) (f)



SOURCE: Banco de España.

a Changes, with respect to a counterfactual scenario of no pandemic, in the median of 100 micro-simulations in which each firm is randomly allocated a variation in 2020 sales such that the distribution of sales observed for each sector and firm size is replicated. The counterfactual scenario is consistent with the Banco de España's December 2019 macroeconomic projections. Firms at risk of non-viability are defined as those with negative ordinary earnings (the sum of gross operating profit and financial revenue) in 2023.

b Excludes holding companies and firms in the following sectors: financial services, property development and buying and selling of own real estate.

c The definition of size is in line with European Commission Recommendation 2003/361/EC.

d Sectors are defined as severely affected if their sales fell by more than 15% in 2020 and as moderately affected if their sales fell by between 8% and 15%. Other sectors are deemed to be largely unaffected.

e Scenarios consistent with the baseline scenario (more benign) and severe scenario (less benign) of the Banco de España's March 2021 macroeconomic projections. The results shown correspond to the median of 100 micro-simulations in which each firm is randomly allocated a variation in 2020 sales such that the distribution of sales observed for each sector and firm size is replicated.

f Overindebted firms are defined as those with positive net debt in 2022 and whose debt ratio (calculated as Total net debt for 2022 / Ordinary earnings for 2023) exceeds 12 in the more benign scenario and 9 in the less benign scenario. Net debt is defined as borrowings (interest-bearing or non-interest-bearing) less cash and cash equivalents, short-term financial investments, inventories and debts pending collection.

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indebted firms, which hampers access to and raises the cost of new funding to finance business growth. Therefore, if a high level of corporate debt were to extend to a significant proportion of firms, this would tend to depress growth in investment, aggregate productivity and GDP.[26]

In the case of viable firms with solvency problems, a number of factors may lead to their inefficient liquidation, with potential adverse macroeconomic implications. Firms in this situation typically experience difficulties repaying their debt out of expected long-term cash flows, but also have a going-concern value that exceeds their liquidation value. Accordingly, the liquidation of these firms would be a sub-optimal solution from the standpoint of economic efficiency. Therefore, these companies would be able to continue operating if they manage to rectify their insolvency situation. However, certain frictions could bring about their inefficient liquidation. One factor that could lead to this outcome, particularly in private debt renegotiations,[27] is the so-called "holdout problem". This can arise at firms with numerous creditors where each individual creditor has no incentive to accept debt reductions on their portion of the debt, on the premise that accepting them will reduce the incentive for other creditors to do likewise. Each creditor acting in the same way will result in the firm's liquidation, despite it being viable, owing to a lack of coordination among creditors. Inefficient liquidations can also occur for firms (generally large corporations) whose social value exceeds their private value due to the high number of jobs that they generate or their multiple relationships with suppliers and customers.[28] The winding up of such firms would generate a negative externality for the overall economy. Given that private creditors do not internalise this effect and traditional insolvency systems are designed for idiosyncratic rather than systemic shocks, the upshot would be a socially inefficient number of corporate liquidations.[29] This would be accompanied by job destruction and loss of part of the productive system, with negative implications for short and medium-term economic growth.

The potential impact of the inefficient liquidation of firms that have solvency problems prompted by the COVID-19 crisis but remain viable could be significant. According to a macroeconomic model simulating a hypothetical extreme scenario that envisages the exit of all firms made overindebted by the crisis (but that remain viable), the maximum resulting loss in GDP one year after the shock would

26 See also Philippon (2010), Kalemli-Ozcan, Laeven and Moreno (2019), and Blickle and Santos (2020).

27 In private debt negotiations a consensus must be reached among all creditors, while in insolvency proceedings a qualified majority voting in favour of the restructuring would suffice.

28 For more details, see Blanchard, Philippon and Pisani-Ferry (2020).

29 A further circumstance that can lead to inefficient liquidations is where creditors have substantive decision-making power in insolvency proceedings and uncertainty over the firm's future value is high. The problem is that the creditors' claims structure based on the company's value means that the amount receivable by each creditor from the insolvent company is limited to the value of the debt that they hold. Therefore, the creditors bear all of the downside risk vis-à-vis the value of the company but enjoy none of the upside risk; this tends to bias them towards liquidation. See Aghion, Hart and Moore (1992). However, Spain's Insolvency Law is not clearly pro-creditor.

stand between 0.8% and 1.3%, depending on the severity of the scenario considered (see Box 3.1). It should be borne in mind that these estimates may underestimate the ultimate effect insofar as they do not capture certain channels that could be relevant, such as the effects associated with chains of bankruptcies owing to the trade and financial relationships between firms. If the effect of the liquidation of those firms rendered non-viable by the crisis is included, the total impact on GDP, again one year after the shock, would rise to between 1.4% and 2.1%. In any event, as discussed in the following paragraph, a swift and efficient exit from the market of non-viable firms can have beneficial effects on long-term growth.

In fact, the prolonged survival of non-viable firms may also have negative implications for medium and long-term economic growth. This circumstance arises when certain firms have a liquidation value that exceeds their business value – meaning it would be efficient to wind them up –, and yet they survive thanks to the support of other agents, such as their creditors or general government agencies. According to the economic literature, the survival of these companies, commonly known as "zombie" firms, has negative effects on the investment and employment of viable firms and represents an obstacle to the entry of new and more profitable firms. This leads to an inefficient allocation of resources, generating lower aggregate productivity in the economy and weaker economic growth in the medium and long term.[30]

Lastly, should the business solvency problems extend to a considerable share of the corporate sector, the capital of their creditor banks could be affected. This could ultimately limit their financial intermediation capacity, with adverse macroeconomic implications. Indeed, losses materialising in banks' credit portfolios could erode their capital. Should this fall below the minimum legal requirement or the levels demanded by the market, it could constrain new lending, with the attendant adverse effect on private sector spending decisions.[31]

4.2 The role of economic policy

The optimal solution for problems associated with firms' indebtedness and viability depends on the position of the firm concerned. In the case of non-viable firms, a swift, orderly and efficient exit from the market should be encouraged. By contrast, the optimal solution for overindebted but viable firms would be to restore

30 See Caballero, Hoshi and Kashyap (2008), McGowan, Andrews and Millot (2017 and 2018), Acharya, Eisert, Eufinger and Hirsch (2019), and Acharya, Crosignani, Eisert and Eufinger (2020). According to the empirical evidence available for Spain (see González et al. (2021)), a higher incidence, within a given sector, of financially vulnerable firms whose investment and turnover are also persistently stagnant produces a decline in both employment and aggregate productivity in the medium term. Therefore, the survival of these firms can stymie the reallocation of resources to other firms with stronger potential for growth and job creation, which comes at a significant macroeconomic cost.

31 See Brunnermeier and Krishnamurthy (2020).

their financial position by means of, for example, recapitalisation or debt restructuring (debt reduction or conversion of debt into equity or hybrid instruments).

Although there are private mechanisms for implementing these solutions, in some cases the existence of frictions or inefficiencies would justify the intervention of economic authorities. For instance, against a backdrop of heightened uncertainty, private investors might be reticent to invest in firms' capital given the difficulties in assessing the business outlook for certain productive sectors. This particularly applies to small firms, since gathering information on their situation is more complex.[32] To address these difficulties, which are especially significant in a climate of major economic uncertainty like that characterising the pandemic crisis, the public sector could invest directly in the firms affected, either by itself or in collaboration with the private sector (possibly offering incentives for the latter's participation). Another possibility would be to incentivise the restructuring of these firms' debt through various channels, or to bolster their financial position by granting direct assistance.

In any event, these potential public actions face significant implementation challenges. First, identifying firms that are in a highly vulnerable financial position and that simultaneously remain viable, i.e. those that should be provided with public support, is no simple matter. This is particularly true in the current context of heightened uncertainty regarding the potential structural effects of the crisis on changes in demand patterns. Second, the task is all the more challenging when it comes to small firms and sole proprietors – which represent a large portion of the Spanish productive system and have been hit comparatively harder by the crisis – owing to their high number and the typically lower availability of information regarding their economic and financial position and outlook. Lastly, instruments are not always available to efficiently channel public funds towards small firms in need of capital.

The Spanish Government has undertaken various actions during the current crisis to strengthen the balance sheets of viable firms with solvency problems. Specifically, last summer it set up a €10 billion fund to recapitalise firms affected by the COVID-19 crisis that are deemed strategic to the productive system (see Box 3.2). In March 2021, the Government approved a raft of measures, with a budget of €11 billion, structured around three main courses of action: direct assistance, recapitalisation of firms, and debt restructuring. The first of these accounted for the bulk of the funds (€7 billion).

The ultimate effectiveness of these measures will depend on their actual implementation and their adaptability, in terms of size and design, to developments regarding the impact of the pandemic on firms' economic and financial position. On the estimates presented in Section 3.3, under the more

32 See Berger, Klapper and Udell (2001).

benign of the scenarios considered in the above micro-simulations, the total budget of the programme approved in March 2021 (€11 billion) appears sufficient to cover the restructuring needs of firms and sole proprietors that remain viable but have accumulated unsustainable levels of debt as a result of the crisis. Therefore, the programme should be bolstered if less benign scenarios materialise.

The direct assistance programme approved by the Government focuses on improving the financial position of certain viable firms whose financial situation has deteriorated severely as a result of the crisis. This is particularly the case for smaller-sized firms and sole proprietors. As noted above, channelling resources in the form of capital poses difficulties which are particularly significant in the case of the smallest firms.

The direct assistance is allocated on the basis of simple criteria, which can make it easier to implement in a context of some urgency. However, such a design could reduce the effectiveness in the fulfilment of the objectives pursued. Insofar as the assistance eligibility requirements are based on criteria relating to belonging to certain sectors and the decline in turnover, there is a risk that not all viable but overindebted firms (and sole proprietors) will benefit. Indeed, the findings of the previous section show that insolvency problems would increase, albeit less extensively, even in sectors that are not among the hardest hit by the crisis. This is largely because the situation of insolvency analysed in the above exercises depends not only on the decline in turnover, but also on the firms' profitability and debt position prior to the crisis. In any event, flexibility in regional governments' application of the support programme approved in April could mitigate this risk.[33] Similarly, it cannot be ruled out that the symmetric risk will materialise. That is to say, the mechanical application of criteria relating to sector and recent turnover could lead to the programme's funds being allocated to firms and the self-employed that may not actually be clearly at risk of insolvency or in a situation of unsustainable indebtedness.

The measures adopted to date could be complemented by other measures to encourage private recapitalisations. For example, consideration could be given to reducing or eliminating the tax bias towards the raising of funds in the form of debt rather than capital, or other kinds of tax incentives. This bias arises from the deductibility of debt interest from the corporate income tax base, which is a disincentive for firms to issue shares. Alternatively, the possibility of introducing incentives for investors in these instruments could be explored.

Another ostensible priority in the current context of deteriorating business solvency is the improvement of debt restructuring mechanisms. Debt can be

33 Royal Decree-Law 6/2021 of 20 April 2021 adopting complementary support measures for firms and the self-employed affected by the COVID-19 pandemic.

restructured through formal insolvency proceedings or out-of-court proceedings, be they pre-insolvency arrangements or private renegotiations (see Box 3.3). The foreseeable increase in congestion in the Commercial Courts due to a surge of bankruptcy filings once the insolvency moratorium expires (currently scheduled for the end of the year) suggests the need to encourage out-of-court proceedings as an alternative. This is essentially because insolvency proceedings tend to be lengthy and costly, which reduces a firm's business value and results in its liquidation. Meanwhile, the success of private renegotiations is limited by the problems discussed above relating to collective action.

In the current circumstances, it would be worthwhile fostering pre-insolvency arrangements and reviewing the role of public sector creditors. One advantage of pre-insolvency arrangements over wholly private solutions is that the enforcement of guarantees on the debtor's assets is suspended during negotiations between the firm and its creditors, thus preventing the firm from being dismantled. There is a crucial role for the public sector to play in incentivising both these arrangements and insolvency proceedings, given that public credit can represent a considerable share of firms' liabilities, particularly for small firms.[34] Furthermore, as a claimant the public sector is diversified among all taxpayers, which means, a priori, it is better positioned to assume any losses stemming from potential debt relief.

Consideration could also be given to designing specific insolvency mechanisms for small firms. To be successful, these proceedings should be designed to be faster and less costly than insolvency proceedings for larger firms. Standardised and highly automated solutions, aimed at facilitating the debt restructuring of small firms, would be of particular value in this regard.[35] That automation could benefit from the fact that these firms tend to have simpler capital structures than their larger counterparts, since they usually have fewer creditors.

5 The impact of the financial vulnerability in productive sectors on deposit institutions

5.1 Deposit institutions' exposure to productive sectors

Banks' exposure to productive activities has increased since the onset of the pandemic, especially in the riskier segments. In 2020, credit to non-financial corporations and sole proprietors increased by 8.9%. Rapid access to the ICO

34 In their reports on the Spanish economy, both the International Monetary Fund (2013, 2014 and 2015) and the Organisation for Economic Co-operation and Development (2018) have recommended that public law claims (taxes and Social Security contributions) be eligible for negotiation in pre-insolvency arrangements and insolvency proceedings and waived in bankruptcies of sole proprietors and small firms. According to these organisations, such reforms would improve the efficiency of insolvency proceedings in Spain.

35 See, for example, Skeel (2020).

guarantee facility in 2020 Q2 more than offset the decline in the stock of credit (due to repayments and write-offs) in that period, while its impact in H2 was far more muted owing to the slowdown in the scheme's deployment, with a net reduction of the stock of credit to productive activities (see Chart 3.9.1). In the year as a whole, growth was strongest (21.5%) in the sectors severely affected by the pandemic, whereas the increase was 12.7% in the moderately affected sectors and 2.4% in those that were largely unaffected.[36] Bank lending to SMEs and sole proprietors increased at a somewhat faster rate (close to 10%) than that to larger firms (around 8%). In any event, the dispersion among banks of the credit growth in the riskier segments (sectors severely affected by the pandemic and SMEs) is relatively high (see Chart 3.9.2).[37]

At end-2020, lending to the sectors severely affected by the pandemic accounted for a relatively low share (less than 20%) of total bank lending to businesses. However, if the moderately affected sectors are included, the exposure exceeds 50% of the total, which is similar to the share of total financing extended to SMEs (see Chart 3.10.1). The percentage of exposures guaranteed by the State through the ICO facilities in relation to total lending is higher in the moderately affected sectors (26%) than for the rest of the portfolio (18% for the severely affected sectors and 12% for the largely unaffected sectors). However, the bulk of the lending extended through ICO guarantee facilities went to firms in the largely unaffected or moderately affected sectors (41% and 36%, respectively). By firm size, the share of State-guaranteed credit is higher in the SMEs segment. The dispersion among banks of the exposure to the severely affected sectors and of the portion covered by State guarantees is low. However, there is greater variability in the share of the portfolio accounted for by loans to SMEs (see Chart 3.10.2).

5.2 The effects on banks' balance sheets and results in 2020

The adverse effects of the COVID-19 pandemic on economic activity have not, thus far, led to an increase in non-performing loans (NPLs) in financing extended to the corporate sector, although they have prompted an increase in Stage 2 loans. This is explained, at least in part, by the public support measures such as the guarantee schemes and, to a lesser extent for this sector, by the loan

36 The data availability with respect to bank exposures precludes the use of exactly the same classification by economic activity as in the previous sections, but the approximation is very close. The severely affected sectors include accommodation and food services, the manufacture of refined petroleum products, social services and entertainment, transportation and storage, and the manufacture of transport equipment. The moderately affected sectors include basic metals, the manufacture of machinery, other manufacturing, professional services, mining and quarrying, wholesale and retail trade, and repair of vehicles. The largely unaffected sectors comprise the group of other productive activities.

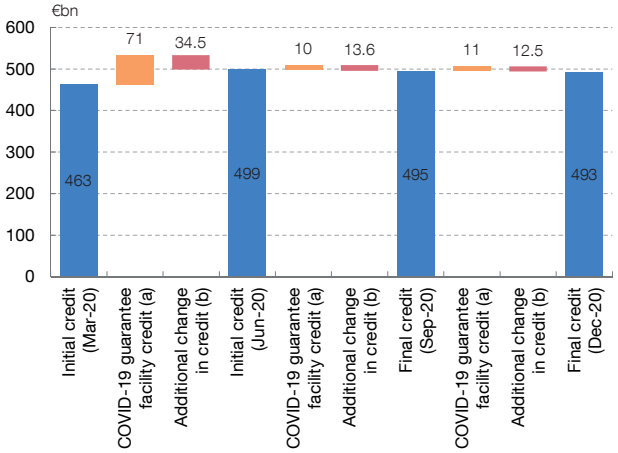
37 Chart 3.9.2 shows that the median growth in lending to SMEs and sole proprietors is lower than that for large corporations. This has not prevented the volume-weighted average growth being higher in the smaller-sized firms segment for deposit institutions as a whole.

Chart 3.9

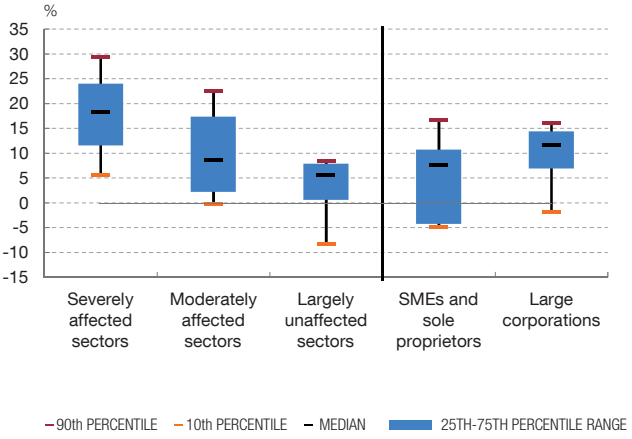
THE IMPACT OF THE COVID-19 GUARANTEE FACILITY ON THE GROWTH OF BUSINESS LENDING WAS VERY MARKED IN 2020 H1 AND MORE LIMITED IN H2, WITH A HETEROGENEOUS EFFECT BY SECTOR AND FIRM SIZE

The launch of the State guarantee facility for firms and sole proprietors approved by Royal Decree-Law 8/2020 stimulated growth in the stock of bank credit to this sector in 2020, particularly in the quarter following its approval. However, its impact in 2020 H2 was very limited. Stronger growth was observed in the sectors severely affected by the pandemic, with notable heterogeneity among institutions. Nevertheless, the greatest dispersion across institutions came in the moderately affected segment. ICO guarantees have provided significant support to SME financing, albeit again with considerable dispersion among institutions.

1 CHANGE IN BANK CREDIT TO NON-FINANCIAL CORPORATIONS AND SOLE PROPRIETORS BETWEEN MARCH AND DECEMBER 2020 (a) (b)
DIs. Individual data. Business in Spain



2 CHANGE IN CREDIT IN 2020 BY SECTOR OF ACTIVITY AND FIRM SIZE (c) (d)
DIs. Individual data. Business in Spain



SOURCES: ICO and Banco de España.

a COVID-19 guarantee facility of Royal Decree-Law 8/2020 up to a total of €100 billion. The total guaranteed credit granted up to December 2020 amounted to €115 billion, with around €92 billion actually drawn down by non-financial corporations and sole proprietors.
b The additional change in credit to non-financial corporations and sole proprietors reflects the change in the stock of credit not explained by the implementation of the COVID-19 guarantee scheme, which corresponds to the net difference between new lending outside the guarantee scheme and repayments and write-offs.
c Shown are the year-on-year rates of change for the 10th, 50th and 90th percentiles and the interquartile range for significant institutions.
d The severely affected sectors include accommodation and food service activities, the manufacture of refined petroleum products, social services and entertainment, transportation and storage, and the manufacture of transport equipment. The moderately affected sectors include the manufacture of basic metals, the manufacture of machinery, other manufacturing, professional services, mining and quarrying, wholesale and retail trade, and repair of vehicles. The other productive activities comprise the group of largely unaffected sectors.

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moratoria.[38] Thus, for 2020 as a whole, NPLs arising from credit to non-financial corporations and sole proprietors declined by 1.8%, although this drop was far more muted than that recorded in previous years (the decline in 2019 exceeded 23%). Meanwhile, forborne performing loans shrank at a year-on-year rate of 13.9% in 2020, similar to the drop of 13.2% in 2019. However, the sharp increase in corporate loans classified as Stage 2[39] is noteworthy, growing at a rate of 37% in 2020,

38 The moratoria entail the temporary suspension of payment obligations deriving from credit agreements; they mostly affect individuals but may also apply to firms. The characteristics of the legislative moratoria and the eligible borrowers are set out in the corresponding Royal Decrees: Royal Decree-Law 8/2020, Royal Decree-Law 11/2020, Royal Decree-Law 26/2020 and Royal Decree-Law 25/2020. The moratoria arrangements between lending institutions and their customers are also provided for in the agreements fostered by banking associations (banking sector moratoria) and envisaged in Royal Decree-Law 19/2020.

39 Loans for which credit risk has increased significantly since their initial recognition, but with insufficient credit impairment to be classified as non-performing.

compared with a decline of around 4% a year earlier (see Chart 3.11.1). Stage 2 loans to the corporate sector amounted to €48.6 billion in December 2020, equivalent to 9.8% of this portfolio.

Developments in troubled assets (NPLs and Stage 2 loans) have been uneven across the sectors of activity. For the sectors severely affected by the pandemic, the distribution among institutions of the weight of troubled assets in the portfolio has shifted towards higher values, while the dispersion among institutions has simultaneously increased. By contrast, the distribution of this metric for the other sectors has held relatively stable (see Chart 3.11.2). The troubled loans ratio for deposit institutions as a whole has risen by 5.3 pp in the hardest-hit sectors, while it increased by 1.3 pp in the moderately affected sectors and remained stable in the other sectors. All this reflects banks' greater risk perception for exposures to firms operating in the activities hardest hit by the crisis.

Despite the stability observed in NPLs, bank profitability in Spain declined in 2020, largely as a result of the increase in impairment provisions for the portfolio of loans for productive activities. On data in the individual statements of business in Spain, the aggregate return on assets (ROA) fell by close to 70 basis points (bp), into negative territory (-0.12%). The growth of impairment provisions for loans for productive activities in Spain appears to have contributed in part to these developments, as illustrated by the negative correlation between this item and the change in ROA in 2020 (see Chart 3.12.1).

Bank profitability is also being affected by the reduction in interest income on lending to productive activities. The banking sector's interest income on loans to resident non-financial corporations fell in 2020 (by 13 bp, relative to the loan volume in the previous year). These developments were similar to those in overall interest income for loans extended to the private non-financial sector. However, in the case of business loans, the changes in volume (positive effect of 17 bp) and in average interest rates (negative effect of -28 bp) have been more marked and partially offset each other (see Chart 3.12.2). The adverse effect of the reduction in average interest rates could, in part, be linked to the improvement in financing conditions and the lower credit risk of guaranteed loans. In this case, the benefits in terms of lower future credit losses would therefore offset, at least in part, the reduction in current income.

5.3 Outlook for credit risk developments

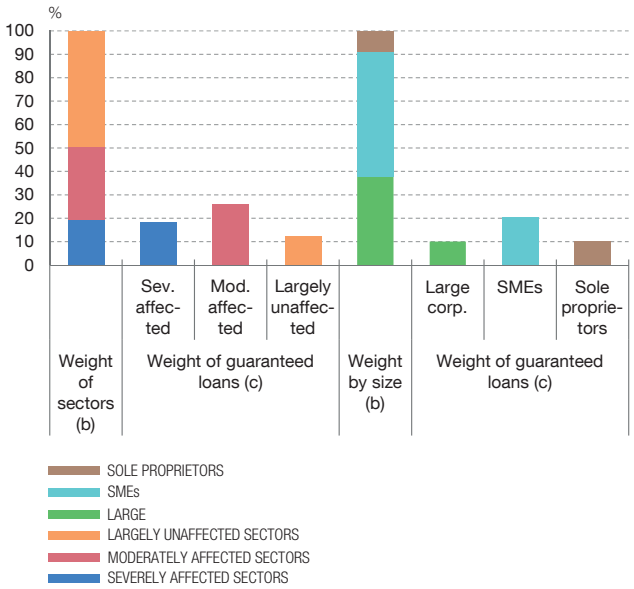
Historical experience shows that economic recessions have a significant impact on the profitability of productive sectors, with the credit quality of financial institutions' exposures to these sectors subsequently deteriorating. In the wake of the 2008 global financial crisis, very significant across-the-board

Chart 3.10

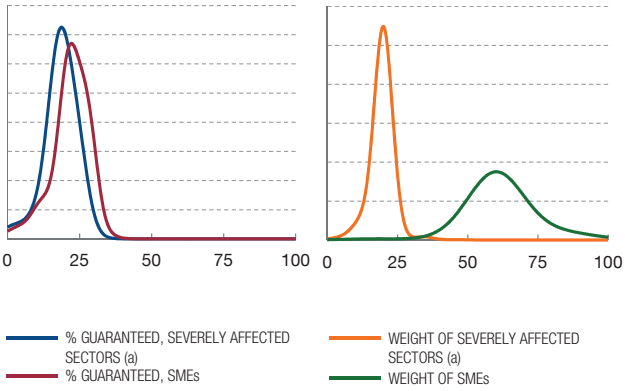
THE EXPOSURE OF DEPOSIT INSTITUTIONS TO THE SEVERELY AFFECTED SECTORS IS RELATIVELY LOW, BUT IT IS HIGH TO MODERATELY AFFECTED SECTORS AND SMEs

Relative to total business lending, exposure to the severely affected sectors (less than 20% on average) and its dispersion among banks is low, which limits the attendant risks for the banking sector. However, the relative weights of firms in moderately affected sectors (more than 30%) and of credit to SMEs (more than 50% on average) are higher, with greater dispersion among banks in the latter category. The percentage of guaranteed exposures relative to total lending is comparatively higher in the severely and moderately affected sectors, as it is in the smaller firms segment, with low dispersion among banks.

1 PERCENTAGE OF GUARANTEED CREDIT BY SECTOR AND FIRM SIZE, AND THEIR RELATIVE WEIGHT (a)
DIs. Individual data. Business in Spain. December 2020



2 DISTRIBUTION OF THE PERCENTAGE OF GUARANTEED CREDIT IN SEVERELY AFFECTED SECTORS AND SMES, AND THEIR WEIGHT IN TOTAL LENDING TO PRODUCTIVE ACTIVITIES (d)
DIs. Individual data. Business in Spain. December 2020



SOURCES: ICO and the Banco de España Central Credit Register.

a The severely affected sectors include accommodation and food service activities, the manufacture of refined petroleum products, social services and entertainment, transportation and storage, and the manufacture of transport equipment. The moderately affected sectors include the manufacture of basic metals, the manufacture of machinery, other manufacturing, professional services, mining and quarrying, wholesale and retail trade, and repair of vehicles. The other productive activities comprise the group of largely unaffected sectors.
b Weight of the volume of lending to each sector of activity, classified by their sensitivity to the pandemic and by firm size, as a proportion of total lending to non-financial corporations and sole proprietors.
c For each segment, by sectoral sensitivity to the pandemic and by firm size, the weight of credit with an ICO guarantee as a proportion of total loans
d The charts show the density function of the corresponding variables weighted by the amount of credit to the severely affected sectors and to SMEs (left-hand panel) and by the total amount of credit to business activity (right-hand panel). This function is approximated through a kernel estimator, which allows a non-parametric estimate of the density function, yielding a continuous and smoothed graphical representation of that function.

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growth was observed in the NPL ratio of loans for productive activities, which persisted until 2013. Specifically, the NPL ratio reached 20.9% in this portfolio (37.3% in the case of construction and real estate activities). The deterioration in credit quality was accompanied by a loss of production capacity, having been preceded by adverse changes in firms' profitability and their debt burden, which posted its worst figure in 2012 (see Charts 3.13.1 and 3.13.2).

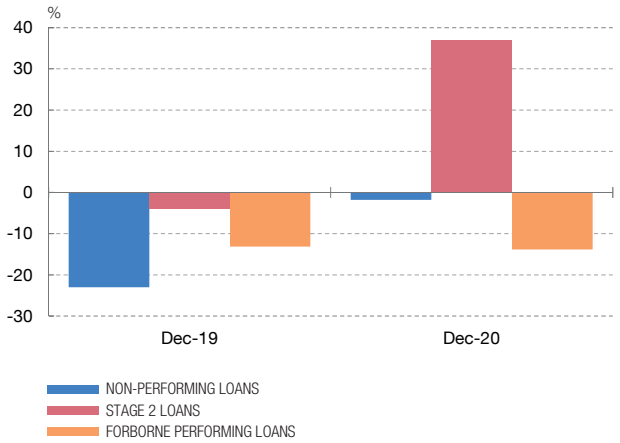
In the current crisis, the swift and broad deployment of public support measures has, so far, contributed to substantially mitigating the deterioration

Chart 3.11

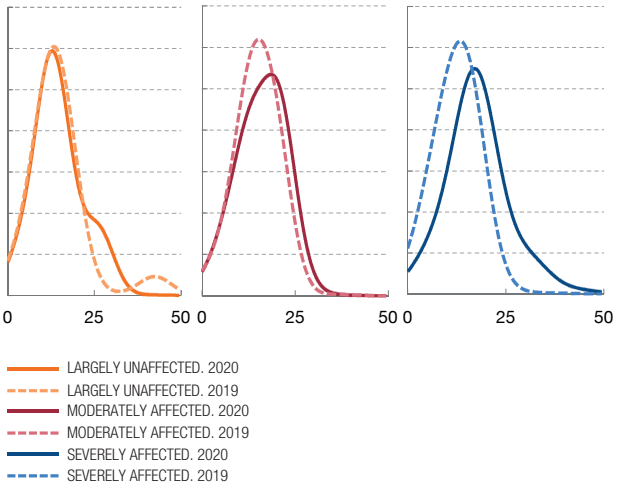
THE VOLUME OF NPLs IN LENDING TO BUSINESS HAS NOT INCREASED SINCE THE ONSET OF THE PANDEMIC, ALTHOUGH THERE HAS BEEN AN INCREASE IN STAGE 2 LOANS, WHILE DEVELOPMENTS IN TOTAL TROUBLED ASSETS HAVE BEEN UNEVEN ACROSS SECTORS OF ACTIVITY

The decline in NPLs in loans to business observed in recent years slowed in 2020, while the rate of reduction in forborne performing loans to non-financial corporations was unchanged. Stage 2 business loans have risen sharply since the onset of the COVID-19 pandemic, at a year-on-year rate of close to 40%. By sector of activity, the proportion of troubled assets increased more in the sectors severely affected by the pandemic, where cross-institution heterogeneity was likewise higher. The distribution of this proportion deteriorated only slightly in the moderately affected sectors, while there was a slight improvement in the largely unaffected sectors.

1 YEAR-ON-YEAR RATE OF CHANGE IN TROUBLED AND FORBORNE PERFORMING LOANS FOR BUSINESS ACTIVITY
DIs. Individual data. Business in Spain (a)



2 DISTRIBUTION OF TROUBLED LOAN RATIO BY SECTOR OF ACTIVITY (b) (c)
DIs. Individual data. Business in Spain



SOURCE: Banco de España.

a The categories of Stage 2 loans and forborne or refinancing transactions are not mutually exclusive, particularly as of the entry into force of Banco de España Circular 3/2020 of 11 June 2020, amending Circular 4/2017 of 27 November 2017 to credit institutions on public and confidential financial reporting rules and financial statement formats.

b The troubled loan ratio considers the proportion of non-performing exposures and Stage 2 exposures relative to the total lending of deposit institutions in Spain to non-financial corporations and sole proprietors. The density function of this variable is approximated through a kernel estimator, which allows a non-parametric estimate of the density function, yielding a continuous and smoothed graphical representation of that function.

c The severely affected sectors include accommodation and food service activities, the manufacture of refined petroleum products, social services and entertainment, transportation and storage, and the manufacture of transport equipment. The moderately affected sectors include the manufacture of basic metals, the manufacture of machinery, other manufacturing, professional services, mining and quarrying, wholesale and retail trade, and repair of vehicles. The other productive activities comprise the group of largely unaffected sectors.

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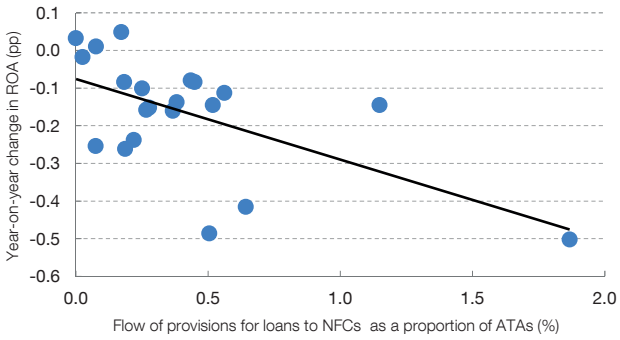
in borrowers' repayment capacity, thereby helping prevent an increase in the business exit rate. As discussed above, contrary to what happened in the previous global financial crisis, the unprecedented drop in GDP in 2020 has not, to date, led to rising NPLs in loans to business, despite the deterioration in firms' financial situation, as shown in previous sections (see Chart 3.13.1). This difference appears to be largely due to the public measures to support the productive sectors deployed during the current crisis – which have sustained businesses' debt repayment capacity –, and to the credit support measures and banks' stronger starting position, which has enabled them to accommodate the increase in demand for financing for productive activities.

Chart 3.12

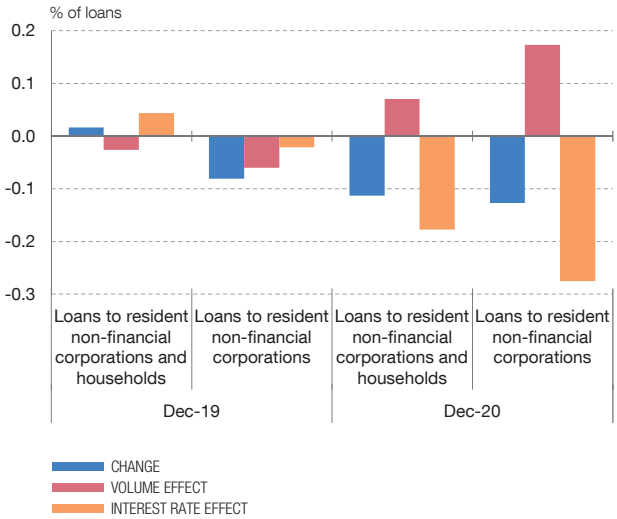
IN 2020, A NEGATIVE CORRELATION IS OBSERVED BETWEEN IMPAIRMENT PROVISIONS FOR LOANS TO NON-FINANCIAL CORPORATIONS AND THE PROFITABILITY OF THE BANKING BUSINESS IN SPAIN, WHILE A REDUCTION IN INTEREST RATES CONTRIBUTED TO LOWER INCOME GENERATION IN THIS SEGMENT

Provisions have increased owing to the potential impact of the COVID-19 crisis on the credit quality of loans to non-financial corporations; the increase appears to be associated with lower profitability for banks in Spain in 2020. Interest income on loans to non-financial corporations and households declined last year, and the business sector experienced greater relative shocks in relation to volume (positive effect) and interest rates (negative effect). The increase in volume is clearly linked to the deployment of the ICO guarantee facility approved by Royal Decree-Law 8/2020, but more favourable credit standards due to moderating credit risk appear also to have contributed to the decline in interest rates on business loans.

1 FLOW OF PROVISIONS FOR LOANS TO NFCs RELATIVE TO ATAs AND CHANGE IN ROA IN 2020 (a)



2 ESTIMATED CHANGE IN INTEREST INCOME ON CREDIT DIs. Breakdown of effects (b)



SOURCE: Banco de España.

a The sector's largest institutions (by average total assets in 2020) are included, except for two institutions which registered a very sharp change in ROA in 2020 owing to highly significant negative extraordinary adjustments.

b The estimated change in interest income on credit (Interest income t - Interest income t-1) breaks down as follows: 1) the volume effect ((Loans t - Loans t-1) x (Interest income t-1 / Loans t-1)), and 2) the interest rate effect (Loans t-1 × ((Interest income t / Loans t) – (Interest income t-1 /Loans t-1)). Each of these effects is relative to the volume of loans in (t-1).

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The fact that NPLs have not increased in the near term does not rule out the possibility of greater credit default risk materialising in the medium term. In the global financial crisis, stock price corrections were very pronounced during the initial phase (2008-2009), despite the increase in NPLs being contained across most sectors during that time relative to the deterioration observed in the broader period 2008-2013 (see Chart 3.13.3). This historical experience shows that credit risk materialises with some delay after a shock occurs.

The decline in stock prices for the sectors hardest hit by the pandemic provides an implicit signal of increased credit risk, although the cumulative stock price falls have eased following the rises posted in recent months. Stock prices for sectors such as hospitality, leisure and transportation have deteriorated since March 2020, as have those of the banking sector, which is exposed to the credit risk of

business activities (see Chart 3.13.3). This performance coincided with greater uncertainty about the profitability of non-financial corporations and it therefore appears to be reasonably associated with a more negative perception among investors of the latent credit risk.[40] Nevertheless, the recovery in stock prices in recent months could suggest an easing of these signs of risk.[41]

Credit default risk could materialise once the effects of the support measures peter out, although part of their mitigating impact is expected to extend beyond the near term. While the moratoria and public guarantee schemes[42] have some exclusively short-term effects (for instance, payment deferrals), by preventing the triggering of chains of bankruptcies, they also help maintain activity and the ability to pay bank debt over a longer time frame. The new support measures in Royal Decree-Law 5/2021 to shore up the financial position of firms and the self-employed are also expected to directly strengthen the recipients' payment capacity over a longer horizon. Further, the existence of the public guarantee scheme, as a mitigator of banks' losses, is likely to lessen the sensitivity of bank solvency to the deterioration in the quality of credit extended to non-financial corporations compared with that observed in the 2008-2013 crisis (see Chart 3.13.4). Banks also have more capital now, bolstered by the regulatory reform in response to that crisis, and are therefore in a position to bear greater deterioration without their lending capacity being affected.

The differences between the current crisis and that of 2008-2013, in terms of the composition of the banking sector's credit portfolio and the nature of the shock, could also limit to some extent the increase in NPLs in lending to business during this crisis. In the run-up to 2008, the construction and real estate development sectors took on a systemic dimension both in terms of economic activity and the volume of credit (accounting for around 50% of lending to productive activities in 2008). The current concentration of lending in the sectors most affected by the pandemic is much more limited (close to 20%). That said, if the moderately affected sectors are included, the weight of the portfolio approaches 50% of loans for productive activities in Spain. The medical advances against the pandemic could limit the duration of the adverse effects of this crisis, as it originated in an exogenous shock to the financial system, rather than in the build-up of unsustainable imbalances in the productive system (as occurred in the previous crisis, and which required a prolonged period of correction).

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40 Stock prices would reflect the latent credit risk of larger firms. This can be interpreted as a lower bound for SMEs and sole proprietors, which have less access to financing than larger firms. The negative trajectory of the banking sector (the main funding provider for these smaller-scale entrepreneurs) also appears to be influenced by an adverse outlook for this sector.

41 In any event, it should be borne in mind that share prices move not only because of changes in firms' earnings expectations, but also owing to other factors, such as changes in interest rates, in the degree of uncertainty, and in investors' risk aversion.

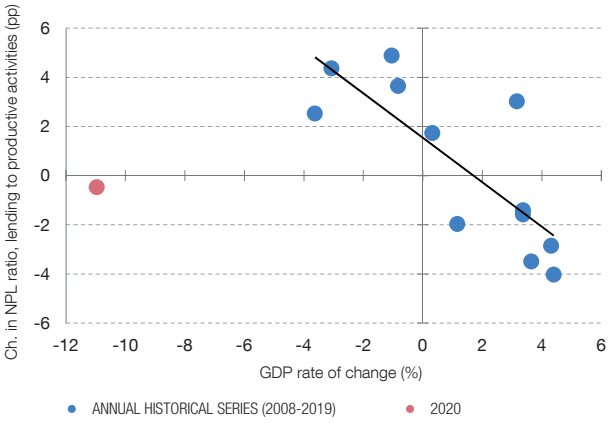
42 Most of the loans under the guarantee scheme include a grace period on principal payments.

Chart 3.13

THE SHARP CONTRACTION IN GDP HAS NOT, SO FAR, RESULTED IN AN INCREASE IN NPLs IN LENDING TO PRODUCTIVE ACTIVITIES THANKS TO THE PUBLIC SUPPORT MEASURES. HOWEVER, NPLs COULD RISE IN THE MEDIUM TERM AND AFFECT BANKS' CAPITAL

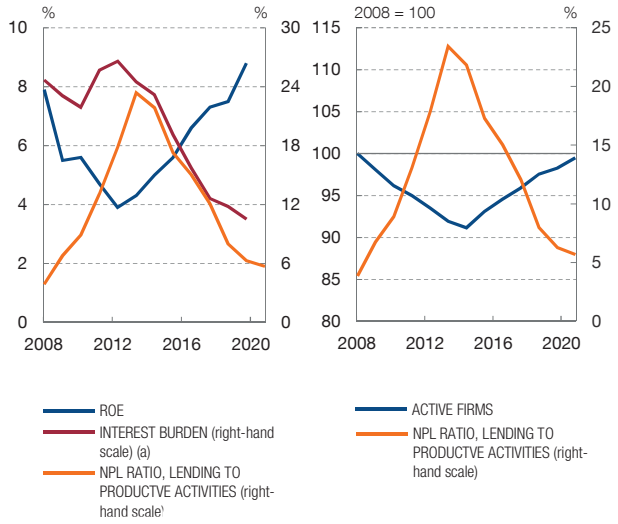
As evidenced by the global financial crisis, a severe contraction in activity weakens firms' financial situation, which anticipates impairment of their credit quality and potential damage to the productive system. However, in the current crisis the support measures have so far prevented this adverse scenario from materialising and sustained businesses' debt repayment capacity, despite the slump in activity and income. In any event, the stock market performance of some sectors since March 2020, much of which has been reversed in recent months, provides an implicit signal of increased perceived credit risk among investors. Its materialisation would have a negative impact on bank solvency, although lower sensitivity to a given increase in the NPL ratio is to be expected owing to the presence of support measures, such as the ICO guarantees.

1 RATE OF CHANGE OF GDP AND CHANGE IN THE NPL RATIO FOR PRODUCTIVE ACTIVITIES

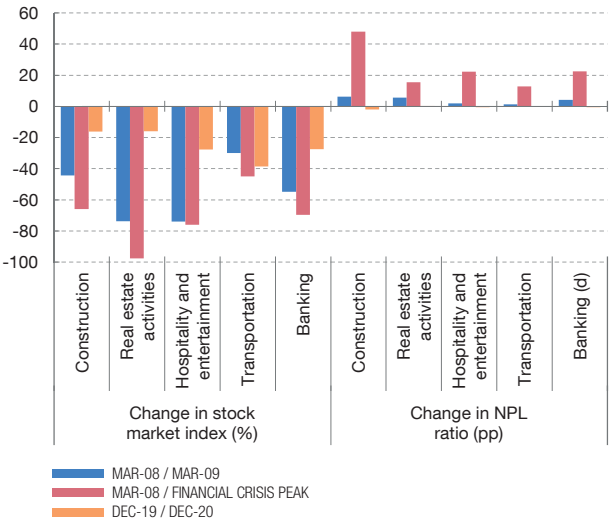


2.1 ROE, INTEREST BURDEN AND NPL RATIO

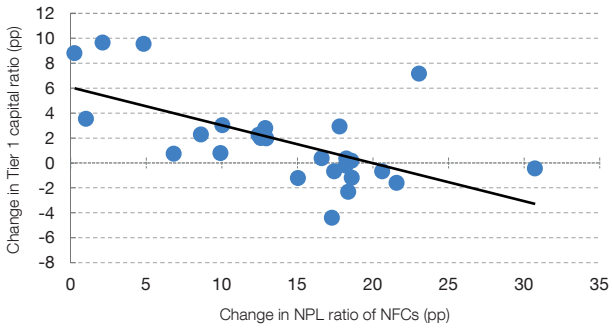
2.2 NPL RATIO AND CHANGE IN NUMBER OF ACTIVE FIRMS (b)



3 CHANGE IN THE STOCK MARKET INDICES AND NPL RATIOS OF THE MAIN SECTORS IN THE GLOBAL FINANCIAL CRISIS AND IN THE CURRENT CRISIS (c)



4 CHANGE IN THE NPL RATIO OF NFCs AND IN THE TIER 1 RATIO BETWEEN 2008 AND 2012



SOURCES: Banco de España, INE and Thomson Reuters.

a The interest burden is defined as the ratio of interest on funding received to the sum of gross operating profit and financial revenue.
b The number of active firms is calculated at 1 January of each year.
c The chart shows the change in the non-performing loan ratio and in the stock market index of some sectors of the Madrid Stock Exchange. Shown is the change in the first year of the global financial crisis (March 2008-March 2009), from the onset of the global financial crisis to its peak (for NPLs) and trough (for market levels), and in the first year of the current crisis (December 2019-December 2020).
d The NPL ratio for the banking sector refers to the NPL ratio of non-financial corporations as a whole.

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Despite these mitigating factors, the quality of banks' credit portfolios could be significantly affected if the crisis ultimately brings about persistent damage to corporate sector balance sheets. The historical evidence suggests that a hypothetical prolongation of the financial vulnerability in the productive sectors could be accompanied by a notable deterioration in bank solvency. Under extreme scenarios, this could limit banks' intermediation capacity, with the consequent adverse impact on the prospects of economic recovery (see Chart 3.13.4).[43] This underscores the need to strengthen firms' financial situation in order to prevent this risk scenario from materialising. In this context, close monitoring of firms' financial position is essential so as to identify any signs of additional deterioration at an early juncture and to adopt the containment measures needed, should such deterioration occur.

43 In the period 2008-2013, the Tier 1 capital ratio increased for banks as a whole owing to the 2013 data incorporating the government intervention aimed at strengthening their capital. The period 2008-2012 has therefore been considered so as to exclude the effect of this intervention, although a negative relationship can be observed between the increase in the NPL ratio and the change in the Tier 1 capital ratio both in 2008-2012 and in 2008-2013.

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Box 3.1

THE MACROECONOMIC EFFECT OF THE VIABILITY AND SOLVENCY PROBLEMS OF FIRMS CAUSED BY THE COVID-19 CRISIS

The analysis of the financial position of Spanish firms presented in the main text provides an estimate of the percentages of such firms that, as a consequence of the COVID-19 crisis, are at risk of becoming non-viable or that, although viable, are over-indebted. The first group of firms is destined to exit the market, while the latter may survive if they manage to turn around their situation by means of a debt restructuring, recapitalisation or public support in the form of direct assistance.

According to the results of the analysis mentioned in the main text (summarised in the first two columns of Table 1), firms that under the more benign scenario (consistent with the baseline macroeconomic scenario of the Banco de España's March 2021 projections and with a debt threshold of 12 times earnings, for the purposes of determining whether a situation of over-indebtedness exists) will become over-indebted as a result of the crisis, while remaining viable, accounted for 1.8% of pre-pandemic investment and 3.5% of pre-pandemic employment. Under the less benign scenario (consistent with the severe macroeconomic scenario of the Banco de España's March 2021 projections) those percentages rise to 3.1% of investment and 6.1% of employment. When firms that will become at risk of being non-viable are also included, these shares rise to 2.3% of investment and 6.1% of employment under the more benign scenario and to 3.8% of investment and 9.8% of employment under the less benign scenario. These figures represent the direct impact on aggregate investment and employment that the disappearance of these groups of vulnerable firms would have under each of the scenarios considered.

These direct impacts, however, underestimate the overall effect of a shock of this type, owing to the existence of certain general equilibrium effects. To enable this overall effect to be approximately quantified, simulations conducted using the Quarterly Model of the Banco de España (MTBE,[1] by its Spanish initials) are presented below. This macroeconomic model, estimated using historical series for the Spanish economy, captures the general equilibrium effects of a fall in unemployment on household income and spending decisions and how firms, in the face of lower demand, reduce their own demand for employment and investment. In addition to these amplifying effects, the model also incorporates certain dampening channels, associated with price reductions and with automatic stabilisers, such as those arising from the increase in unemployment benefits increase. Also, as a consequence of the decline in incomes, direct taxes and social contributions decrease and, as a result, real household disposable income falls by less than employment. It should be noted, however, that the model does not capture certain financial channels, such as, for example, the effects associated with multiple business failures resulting from the commercial and financial relationships between firms.

The exercises summarised below quantify the effects on GDP of the possible loss of production capacity associated with the problems of business viability and solvency generated by the COVID-19 crisis, under different macroeconomic scenarios. The disappearance of the affected firms is assumed to take place gradually during 2021.

When the impact of the shock is simulated using the MTBE (the first two columns of Table 1 show the size of the shock and the other three show the results of the simulation), the amplifying effects are more pronounced in terms of business investment than in terms of employment, as the automatic stabilisers are more effective in the case of employment, ensuring that the dampening channels almost completely offset the amplifying ones. Overall, under the more benign scenario, a contractionary effect of 0.8% of GDP is estimated for 2022 (when the maximum impact occurs, owing to the delayed effect with which the transmission channels operate in this model), stemming from the disappearance of viable firms that are over-indebted after the COVID-19 crisis. This effect, albeit not permanent, is persistent: after five years the effect is approximately one third of what it was initially, so that the average effect is 0.6% of GDP and the cumulative loss of GDP over those five years amounts to 3.2% of annual GDP (see the last column of Table 1). Under the less benign scenario, the impact on GDP in 2022 associated with the failure of all the firms with over-indebtedness problems as a result of the crisis is 1.3%. If the impact of the failure of all the firms that become at risk of being non-viable as a consequence of the crisis is also considered, the estimated effect is a contraction of 1.4% of GDP in 2022 under the more benign scenario and 2.1% under the less benign one.

1 See Arencibia Pareja, Hurtado, De Luis and Ortega (2017), "New version of the Quarterly Model of Banco de España (MTBE)", *Occasional Papers*, No 1709, Banco de España.

Box 3.1

THE MACROECONOMIC EFFECT OF THE VIABILITY AND SOLVENCY PROBLEMS OF FIRMS CAUSED BY THE COVID-19 CRISIS (cont'd)

Table 1
MACROECONOMIC EFFECT OF THE DISAPPEARANCE OF FIRMS IN DIFFICULTY

%	Share of firms in difficulty relative to all firms		Macroeconomic effect in 2022 of the disappearance of firms			Cumulative effect on GDP over 5 years (a)
	In investment	In employment	On GDP	On inv.	On empl.	
More favourable scenario						
Disappearance of firms that become over-indebted but remain viable	1.8	3.5	-0.8	-2.9	-3.5	-3.2
Disappearance of firms that become at risk of being non-viable and over-indebted but remain viable	2.3	6.1	-1.4	-4.0	-6.2	-5.3
Less favourable scenario						
Disappearance of firms that become over-indebted but remain viable	3.1	6.1	-1.3	-4.8	-5.9	-5.2
Disappearance of firms that become at risk of being non-viable and over-indebted but remain viable	3.8	9.8	-2.1	-6.4	-9.6	-8.2

SOURCE: Banco de España.

a Calculated as five times the average annual impact in percentage terms.

Box 3.2

ECONOMIC MEASURES APPROVED IN SPAIN DURING THE COVID-19 CRISIS TO SHORE UP BUSINESS SOLVENCY

The COVID-19 crisis has entailed a worsening of the financial position of many firms and sole proprietors, especially in the sectors most affected. Against this background, the Spanish government has approved various measures to strengthen these agents' financial position. The measures can be grouped into three blocks on the basis of the instruments used: recapitalisations, direct aid and support for the restructuring of financial debt.

As regards the first group of measures, the Spanish government set up firstly the Strategic Companies Solvency Support Fund, managed by SEPI (the State Industrial Holdings Corporation).[1] The aim of this €10 billion fund Is to shore up the solvency of large non-financial corporations affected by the COVID-19 crisis and which are considered strategic to the productive system.The fund draws on various instruments such as participating loans, subordinated debt and the subscription of shares or other capital instruments. To date, €968 million has been granted (9.7% of the total budgeted) and distributed in four operations.

Further, as part of a wide range of measures included in Royal Decree-Law 5/2021 of 12 March 2021, on extraordinary business solvency support measures in response to the COVID-19 pandemic,[2] the creation of a fund worth €1 billion (the "Fund for the Recapitalisation of COVID-Affected Companies") is being considered. Its aim is the recapitalisation of viable medium-sized firms facing solvency problems and which cannot gain access to the SEPI-administered fund.[3] The Fund will be managed by COFIDES (the Spanish Development Financing Company), a State commercial public limited company with public and private capital. The Fund will use various financial instruments, such as average loans, participating loans and capital or other instruments to support these companies.

Some regional governments have also introduced business solvency support mechanisms. Thus, for example, the Valencia government and the Valencia Finance Institute have designed a public-private collaboration framework for the recapitalisation of Valencian SMEs at risk of insolvency owing to the COVID-19 crisis. To this end, the Valencia government has selected a venture capital company to manage a fund endowed with a total sum of €60 million (€25 million provided by the regional government and €35 million by private investors).[4] The Andalusia regional government has set up a hybrid capital fund, using participating loans, endowed with €60 million, to assist in the recapitalisation of Andalusian SMEs whose structure has been weakened by the crisis. The Catalonian regional government has made available a participating loan facility, worth €9 million, on which Catalonian firms particularly affected by the crisis may draw. A similar arrangement, involving funds totalling €6 million, has been implemented in Asturias to cover the investment needs for all types of assets of companies belonging to the industrial sector.

As to the second block of measures, the Royal Decree-Law establishes the "COVID line of direct aid to sole proprietors and companies" with the chief purpose of reducing the debt incurred as from March 2020 by the firms and sole proprietors most affected by the crisis. This facility, funded with a total of €7 billion, will channel direct aid to firms and sole proprietors whose activity has been most adversely affected by the economic effects of the pandemic, insofar as their income in 2020 has fallen by more than 30% on 2019 and they belong to certain sectors. It involves in particular specific-end direct aid that allows for the payment of debts incurred by firms since March 2020, such as payments to suppliers, supplies, wages, rentals and, in the event of any remaining amount, debts with bank creditors, giving priority to the reduction of the publicly backed debt's

1 See Royal Decree-Law 25/2020 of 3 July 2020 on urgent measures to support the economic recovery and employment.

2 Receiving all the aid envisaged in the Royal Decree-Law will be conditional upon the recipient firms not being domiciled in a tax haven, not being subject to insolvency proceedings or having ceased trading at the time of application, being up to date with their tax and social security payments, not distributing dividends or increasing the wages of their management team for a period of two years and maintaining their activity until June 2022.

3 The operations financed by the SEPI Fund shall be for an amount of no less than €25 million per beneficiary, except in duly justified cases.

4 It is envisaged that private investors should grant participation loans to vulnerable but viable companies, while the creditor banks forgive the unsustainable portion of the companies' debt, in exchange for them repaying the rest of the debt.

Box 3.2

ECONOMIC MEASURES APPROVED IN SPAIN DURING THE COVID-19 CRISIS TO SHORE UP BUSINESS SOLVENCY

(cont'd)

face value. This aid may rise to 40% of an over-30% decline in revenue for micro-SMEs and sole proprietors, and to 20% for other firms, with a fixed amount of €3,000 for sole proprietors paying tax under the objective estimate scheme and between €4,000 and €200,000 for other companies. The regional governments will manage this facility.[5] Subsequently, in April 2021, the Royal Decree-Law was further amended to allow regional governments to apply more flexible criteria regarding the beneficiary sectors and the requirement to post earnings in 2019.

Finally, the Royal Decree-Law establishes the "Line for the restructuring of financial debt with a State guarantee", endowed with €3 billion. Its aim is to enable the ICO to join restructuring processes of debt with a public guarantee applied for during the pandemic. Specifically, measures may be agreed on, first, to extend for a further period the maturity of loans with a public guarantee; and second, to convert loans with a public guarantee into participating loans and, as a last resort, to grant direct aid to reduce the amount of the debt. The structuring of these measures will involve the approval of a Code of Good Practices, to which financial institutions may voluntarily adhere, whose aim is to set in place a common framework for action in the restructuring of corporate balance sheets.

5 The line is structured in two compartments. The first, endowed with €5 billion, is for all regional governments except the Balearic and the Canary Islands, and for the city-enclaves of Ceuta and Melilla; and the second compartment, worth €2 billion, is for the Balearic and Canary Islands, given the greater differential impact of the crisis stemming from the high weight of tourism in their economies.

Box 3.3

HOW THE INSOLVENCY AND PRE-INSOLVENCY SYSTEM WORKS IN SPAIN

This box reviews the main features and shortcomings of insolvency procedures in Spain. These procedures generally play an important role in the development of business activity, since they allow insolvent but viable firms, whose debt needs to be restructured, to be distinguished from unviable firms that need to be liquidated. International evidence[1] shows that the existence of an efficient insolvency system helps to raise aggregate productivity, the rate of innovation and business investment. In addition, soundly functioning insolvency mechanisms support the intermediation activity of banks as they make it easier for them to recover part of their unpaid loans. Finally, the correct functioning of bankruptcy procedures for individuals encourages entrepreneurship: sole proprietors will be less concerned about the possibility of failure, since part of their debts can be discharged.

In Spain, pre-insolvency and insolvency procedures are governed by the Insolvency Law approved in 2003, which came into force on 1 September 2004.[2] However, the increase in insolvency proceedings as a result of the global financial crisis laid bare various malfunctions in the system, which led to six reforms of the Insolvency Law in the period 2009-2015. These procedures can also be used by consumers, although this box focuses on firms and the self-employed. Figure 1 shows the various pre-insolvency and insolvency procedures according to the type of firm involved.

The aim of insolvency proceedings is to resolve a situation of insolvency via one of two channels: a restructuring agreement or liquidation. A restructuring agreement is an agreement between creditors and the debtor company, which includes a debt restructuring seeking to ensure that lenders recover the highest possible proportion of their claims and that the firm continues to operate. The agreement may envisage a reduction in the nominal amount of the debt, a deferral (postponement of the scheduled payments), a debt-equity swap and assignment of assets and rights in payment of debt. Such agreements must have the backing of the majority of unsecured credit. A liquidation involves the sale of a firm's assets to pay its creditors in accordance with a certain order of priority of claims.

In addition, there are two types of pre-insolvency arrangements, which aim to resolve insolvency problems that are detected early: out-of-court payment agreements for individuals and small firms; and refinancing agreements, which are used predominantly by firms of a certain size. The latter include a variant – court-approved refinancing agreements – that offers greater protection to the debtor firm.

Lastly, in the case of individuals, whether self-employed or owners of small businesses, there are two insolvency channels: immediate discharge of debt following liquidation of the debtor's assets; and the fresh-start mechanism, which consists of a five-year repayment plan ending with discharge of all other debts.

By international standards, very limited use has been made of insolvency proceedings in Spain, even during economic crises. This is mainly explained by the low use of these procedures by the self-employed and microfirms (firms that employ fewer than 10 persons), which make up the bulk of the productive system in Spain. In the case of the self-employed, in 2019 there were 2 insolvency proceedings for every 10,000 self-employed persons in

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1 M. A. McGowan, D. Andrews and V. Millot (2017), "Insolvency regimes, zombie firms and capital reallocation", *OECD Economic Department Working Papers Eco* No 31. V. V. Acharya and K. Subramanian (2009), "Bankruptcy Codes and Innovation", *The Review of Financial Studies,* Volume 22, Issue 12, pp. 4949–4988. J. Ponticelli and S. Alencar (2016), "Court Enforcement, Bank Loans and Firm Investment: Evidence from a Bankruptcy Reform in Brazil" *Quarterly Journal of Economics,* 131 (3), pp. 1365-1413. R. La Porta, F. Lopez de Silanes, A. Shleifer and R. W. Vishny (1997): "Legal Determinants of External Finance", *Journal of Finance,* 53, pp. 1131-1150. M. Giannetti (2003), "Do Better Institutions Mitigate Agency Problems? Evidence from Corporate Finance Choices", *Journal of Financial and Quantitative Analysis,* 38(1), 185-212. J. Qian and P. Strahan (2007), "How Laws and Institutions Shape Financial Contracts: The Case of Bank Loans", *Journal of Finance,* 52(6), 2803-2834. G. Rodano, N. Serrano-Velarde and E. Tarantino (2016), "Bankruptcy Law and Bank Financing," *Journal of Financial Economics,* Volume 120, Issue 2, pp. 363-382. W. Fan and M. White (2003), "Personal bankruptcy and the level of entrepreneurial activity", 46:2, *Journal of Law and Economics,* 543-68. J. Armour and D. Cumming (2008), "Bankruptcy Law and Entrepreneurship", *American Law and Economics Review,* V10 N2, pp. 303–350.

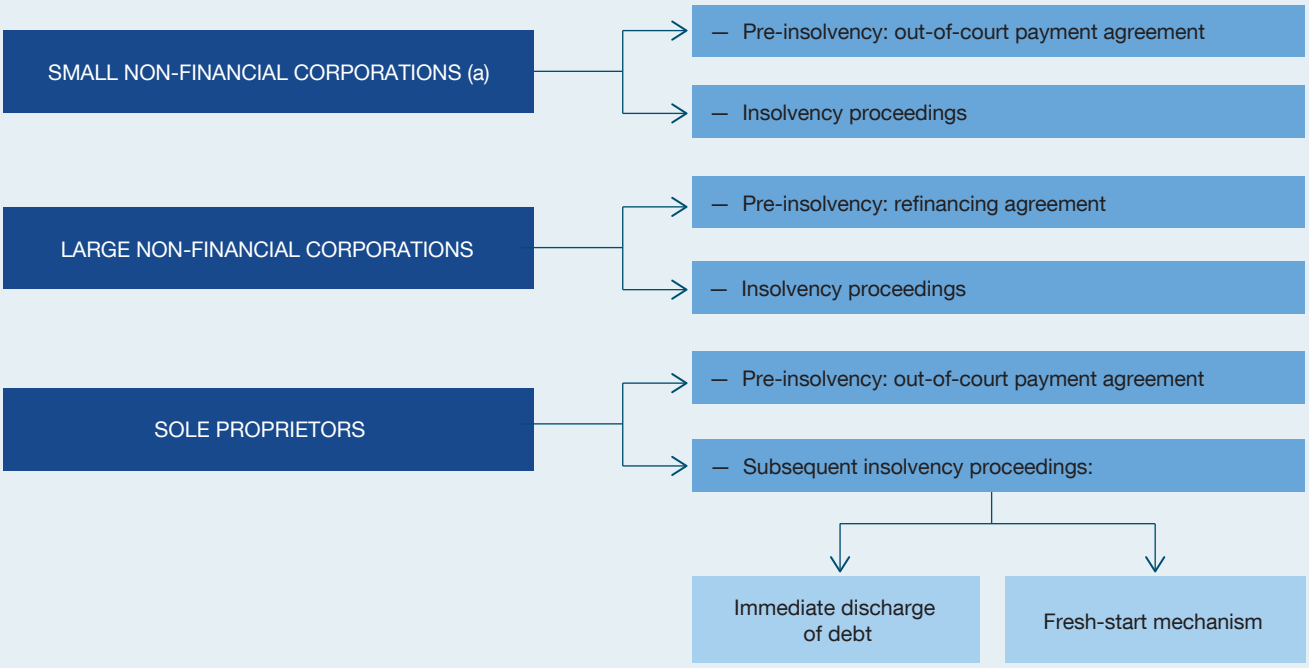
2 Law 22/2003 of 9 July 2003. Owing to the numerous amendments to the original text, the Consolidated Text of the Insolvency Law came into force on 1 September 2020. See Royal Legislative Decree 1/2020 of 5 May 2020, approving the consolidated text of the Insolvency Law.

Box 3.3
HOW THE INSOLVENCY AND PRE-INSOLVENCY SYSTEM WORKS IN SPAIN (cont'd)

Spain, as against 32 in France and 74 in England and Wales. As regards microfirms, in 2019 there were 9.5 insolvency proceedings for every 10,000 Spanish microfirms, as against 105 in France.[3]

This limited use of insolvency proceedings in Spain is essentially for two reasons: (i) the inefficiency of the insolvency system, reflected in how slow the proceedings are (with an average duration of 3-4 years),[4] which is a result, at least in part, of congestion in the commercial courts; and (ii) the lack of appeal that the system has for individuals, considering how difficult it is to obtain a discharge of debts. In particular, public claims (essentially taxes and social security contributions) cannot be discharged and usually make up a significant part of the debt of microfirms and the self-employed. Also, some experts stress that the repayment plan of the fresh-start mechanism is excessively long (five years), although the transposition of the EU Insolvency Directive[5] should reduce the duration of the repayment plan to a maximum of three years. Lastly, a further deterrent is the fact that the cost of the proceedings (legal costs, remuneration for insolvency administrators and lawyers) is high and largely fixed or not sufficiently dependent on the amount of the firm's debt or assets. In consequence, and given the stigma that may result from using pre-insolvency and

Figure 1
PRE-INSOLVENCY ARRANGEMENTS AND INSOLVENCY PROCEEDINGS FOR NON-FINANCIAL CORPORATIONS AND SOLE PROPRIETORS



SOURCE: M. García-Posada (2020), "Analysis of insolvency proceedings in Spain against the backdrop of the COVID-19 crisis: insolvency proceedings, pre-insolvency arrangements and the insolvency moratoriums", *Occasional Papers*, No 2029, Banco de España.

a Fewer than 50 creditors, estimated liabilities of no more than €5 million, assets of no more than €5 million.

3 M. García-Posada (2020), "Analysis of insolvency proceedings in Spain against the backdrop of the COVID-19 crisis: insolvency proceedings, pre-insolvency arrangements and the insolvency moratoriums", *Occasional Papers,* No. 2029, Banco de España.

4 M. García-Posada and R. Vegas (2018), "Bankruptcy reforms in the midst of the Great Recession: the Spanish Experience", *International Review of Law and Economics,* Volume 55, September 2018, pp 71–95.

5 Directive (EU) 2019/1023 of the European Parliament and of the Council of 20 June 2019 on preventive restructuring frameworks, on discharge of debt and disqualifications, and on measures to increase the efficiency of procedures concerning restructuring, insolvency and discharge of debt, and amending Directive (EU) 2017/1132.

insolvency procedures,[6] firms generally use insolvency proceedings only as a last resort. This means that the great majority of proceedings end in liquidation,[7] because when firms file for insolvency their financial situation is already extremely vulnerable.

Finally, as regards pre-insolvency arrangements, refinancing agreements seem to be performing their function of providing an alternative mechanism to insolvency proceedings for firms of a certain size. Conversely, the limited use of out-of-court payment agreements shows that they are not attractive for the self-employed and owners of small businesses.[8] According to some experts,[9] there are two reasons for this. First, negotiation of the debt with public creditors is beyond the scope of out-of-court payment agreements. Second, the economic incentives for possible mediators to recommend an out-of-court payment agreement to potential beneficiaries are generally limited since the remuneration is usually very low, and consequently most do not recommend them and do not inform debtors of the existence of this procedure. In this context, some analysts[10] have proposed various ways of promoting the participation and performance of the professionals involved in pre-insolvency and insolvency procedures, by for example increasing the remuneration of insolvency mediators entrusted with managing and negotiating out-of-court payment agreements, guaranteeing the remuneration of insolvency administrators and broadening the scope of application of justice provided free of charge (the *turno de oficio* system) to the area of insolvency.

6 M. A. McGowan and D. Andrews, (2018): "Design of insolvency regimes across countries"; *OECD Economics Department Working Papers* No. 1504.

7 93% according to M. García-Posada and R. Vegas (2018), "Bankruptcy reforms in the midst of the Great Recession: the Spanish Experience", *International Review of Law and Economics*, Volume 55, September 2018, pp 71–95.

8 According to Van Hemmen (2020a), between 1 March 2015 and 31 March 2020 only 93 out-of-court payment agreements were initiated. E. Van Hemmen (2020a), ***Estadística concursal. Anuario 2019,*** Colegio de Registradores de la Propiedad y de lo Mercantil de España, Madrid.

9 S. Van Hemmen (2020b), *"Acompañando la segunda oportunidad"*, *Anuario de Derecho Concursal*, No 50.

10 M. Celentani and F. Gómez Pomar (2020). *"Concursos y pre-concursos de personas físicas, autónomos y microempresas:* déjà vu all over again", *InDret* 3/2020.

4

THE SPATIAL DISTRIBUTION OF POPULATION IN SPAIN AND ITS ECONOMIC CONSEQUENCES

THE SPATIAL DISTRIBUTION OF POPULATION IN SPAIN AND ITS ECONOMIC CONSEQUENCES

1 Introduction

The highly uneven demographic dynamics in different areas of Spain and their economic and social causes and consequences have gradually gained ground in the public debate in recent years. According to the February 2019 CIS barometer (a public opinion poll conducted by a public research institute), 88% of the general public considered rural depopulation in Spain to be a quite or very serious problem. In October 2020, the Recovery, Transformation and Resilience Plan for the Spanish economy, which will inform how the European funds are absorbed up to 2023, reflected the public's concern by including as its first guiding policy the "Urban and rural agenda, the fight against rural depopulation and the development of agriculture".

Meanwhile, the outbreak of the pandemic has sped up the structural change in two realms linked to the population's decisions on where to live: digitalisation and remote working. According to the National Statistics Institute (INE) survey on the impact of COVID-19, more than 30% of the firms that have implemented remote working and more than 20% of those that have resorted to e-commerce during the pandemic will continue to do so in the future.[1] In addition, the possible impact of these changes on people's decisions as to where to live can already be glimpsed in some indicators. For example, drawing on Ministry of Transport, Mobility and Urban Agenda data, housing transactions in rural municipalities have risen from 11% of all transactions between January 2013 and December 2019 to 15% in September 2020.[2] Also, according to INE Migration Statistics, the first half of 2020 was the first six-month period since the global financial crisis that began in 2008 in which the province of Madrid had a negative inter-provincial migration balance.

Against this background, the availability of a detailed analysis of the factors driving how the population and economic activity are distributed in Spain is a priority. Such analysis should lay the foundations for diagnosing the situation, enabling in turn all facets of the economic policies to be discussed; in other words, a broad analytical framework that includes both the policies' benefits and the costs that any measure incurs.

This chapter describes in detail the spatial distribution of population in Spain and its relationship to several important economic matters. After this

1 See Indicadores de confianza empresarial. Módulo de opinión sobre COVID-19.

2 Gupta et al. (2021) document an increase in rents in the suburbs of the main US cities compared with rents in the respective city centres throughout 2020. In addition, as house prices followed the same pattern, albeit less markedly, they conclude that the increase in relative demand in the peripheries has a structural component.

introduction, Section 2 places Spain in the context of the global trend towards greater urbanisation, as a result of the process of economic development that has also been observed in many other advanced economies. However, some idiosyncrasies are documented compared with the European experience: Spain has a higher percentage of uninhabited areas and a higher concentration of population. These two characteristics result in a greater incidence of municipalities that are at risk of depopulation in Spain and that also present significant shortcomings in terms of access to various services. Furthermore, in recent decades, the loss of momentum in smaller Spanish urban areas is shown to have catalysed the rural depopulation process. Section 3 analyses in detail these population dynamics in Spanish cities. Specifically, the migration of younger adults to larger urban areas is identified as a prominent factor. A panoramic view of the factors lying behind this pattern is also provided. Furthermore, the section documents a growing concentration of workers in high-skilled occupations in the major cities, resulting in increased labour income disparities both within and between urban areas. Lastly, in light of the evidence presented in the chapter, Section 4 offers some general considerations on how public policies should be designed.

2 The distribution of population in rural and urban areas

2.1 Urbanisation around the world and in Spain

Cities exist because the social interactions resulting from physical proximity benefit people in manifold ways. Having the population and economic activity concentrated in relatively small areas of the territory enables access to services to be granted at a lower cost per person and facilitates interaction between firms and workers, with the consequent productivity gains. Thus, while there are costs associated with spatial concentration, which will be discussed below, agglomeration economies, which arise when the synergies stemming from physical proximity are harnessed, largely explain the concentration of the population in general and the existence of cities in particular.

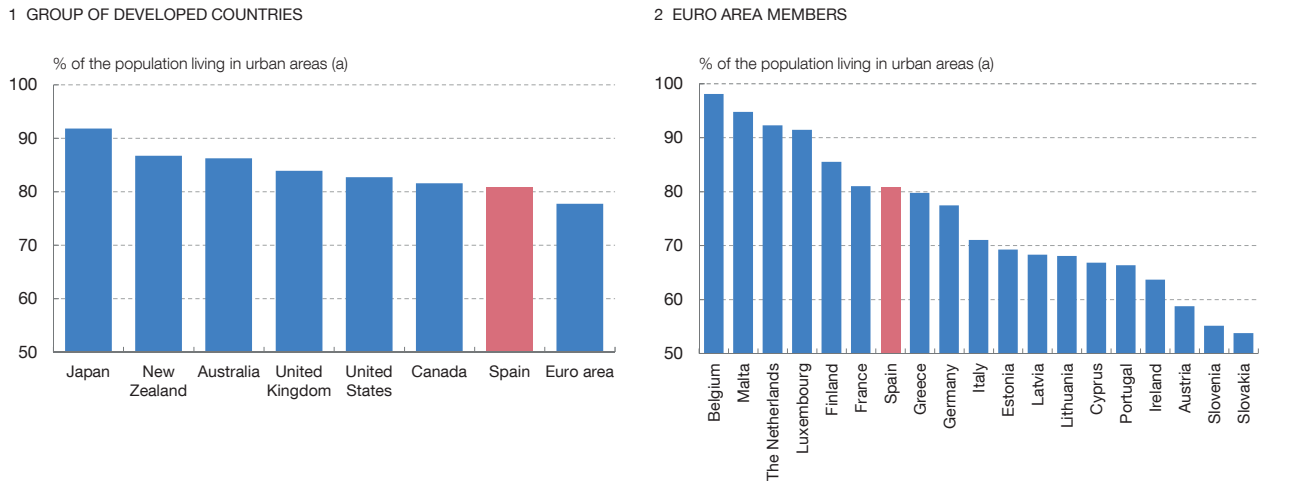
Set against the global trend towards urbanisation, the percentage of the population residing in cities in Spain is in line with that of other advanced economies. Drawing on United Nations data, the global percentage urban practically doubled between 1950 and 2020, from 29.6% to 56.2%.[3] In the case of Europe, North America, Australia and Japan, 81.4% of the population was urban in 2020. In other words, eight of every ten people in the developed world lived in cities in 2020. A similar trend can be seen in Spain. The Spanish percentage urban stood at 80.8%

3 The percentage urban is defined here as the percentage of the population living in municipalities with 10,000 inhabitants or more. This definition considered by the United Nations facilitates the comparison with different countries around the world. For more details on how these statistics were constructed, see 2018 Revision of World Urbanization Prospects, United Nations.

Chart 4.1

THE HIGH PERCENTAGE URBAN IN SPAIN IS PART OF THE GLOBAL URBANISATION TREND

The percentage urban in Spain was in line with that of other developed countries in 2020. According to the United Nations, the Spanish percentage urban was somewhat below that of Japan, the United Kingdom and the United States, slightly above that of Germany and Italy, and practically the same as that of France and Greece.



SOURCE: United Nations.

a According to the United Nations definition, urban areas are those municipalities or local administrative units with 10,000 or more inhabitants.

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in 2020, slightly above the euro area as a whole, but below the other developed countries (see Chart 4.1). In addition, the latest available United Nations projections point to the percentage of the population living in urban areas continuing to increase, to 68.4% globally and 86.6% in the more developed countries taken as a whole by 2050. It should be highlighted that while the percentage urban is an indicator that reflects the population agglomeration process over recent decades, it is a variable that may prove to be imperfect when analysing the degree of population concentration in a specific territory. First, because it depends on the definition of administrative unit considered. Second, because it does not take into account the population density in the different geographical areas. In light of this, using more granular data on the population's places of residence enables more accurate information on its degree of concentration to be extracted.

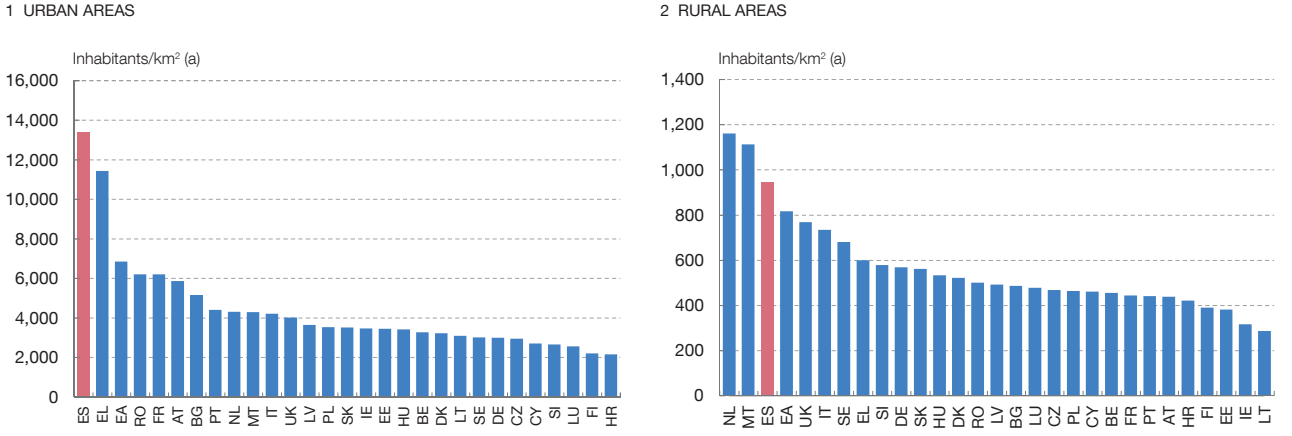
In any event, the concentration of population in Spain is very high compared with the other European countries. Drawing on Eurostat data on population density in Europe,[4] the concentration of population in Spain is among the highest in Europe in both urban and rural population centres. Specifically, Spain has an average

4 These statistics are based on a division of the European territory into a grid of 1 km^2 cells and reflect the number of inhabitants living in each cell (0 if the cell is uninhabited and a positive number if the cell is inhabited). For further details, see Population Grids, Eurostat Statistics explained.

Chart 4.2

THE CONCENTRATION OF POPULATION IN SPAIN IS HIGHER THAN IN OTHER EUROPEAN COUNTRIES

The Spanish population is more highly concentrated than in other European countries. The population-weighted density is very high compared with Europe in both urban and rural areas. This is because of the high percentage of uninhabited territory in Spain, which is an outlier from a European standpoint (see Box 4.1), and a greater concentration of population in the inhabited areas.



SOURCE: Eurostat.

a The measurement of density considered refers to the population-weighted average number of inhabitants per km². In other words, it captures the average number of people living within a 1 km² radius around each inhabitant of a rural or urban area.

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population density[5] of 13,369 and 946 inhabitants per km² in its urban and rural areas, respectively, compared with 6,839 and 816 for the euro area as a whole (see Chart 4.2). Conversely, according to the traditional measurement of density, which considers both the inhabited and uninhabited areas, Spain is slightly below the euro area as a whole, with 94 and 104 inhabitants per km², respectively. In other words, in addition to a high concentration of population in the inhabited surface area, a large expanse of the Spanish territory is uninhabited, such that only 12.7% is inhabited[6] in Spain, compared with 67.8% in France, 59.9% in Germany and 57.2% in Italy. Indeed, this figure is only comparable with that of the most remote areas of the Scandinavian countries (see Gutiérrez et al. (2020b)). Lastly, it should be highlighted that Spain's geo-climatic particularities do not appear to be the sole explanation for the high level of concentration and low settlement density that make Spain a unique case in Europe in terms of the spatial distribution of population (see Box 4.1). While the extremely high concentration of the Spanish population in a small part of the territory could be related to various factors (see Box 4.1), the lack of historical information at a sufficient level of spatial granularity impedes a sufficiently thorough analysis of the concentration of population over time. Therefore, the percentage urban in Spain over the last 70 years is analysed below by comparing it

5 This measurement refers to the average number of people living within a 1 km² radius around each inhabitant of a rural or urban area. Specifically, it is calculated as the population-weighted average number of inhabitants/km² in a specific geographical area.

6 The percentage of inhabited territory refers to the percentage of cells (km²) with at least one inhabitant.

internationally. This analysis casts light on the factors explaining, at least partially, the current distribution of population in Spain.

2.2 The Spanish urbanisation process, 1950-2018

The percentage of the population living in urban areas has increased significantly in Spain since 1950, although two clearly distinct stages can be identified. While there is no objective delimitation between rural and urban areas, since the sociodemographic, economic and cultural characteristics inherent in each of them form a whole, the definition of rural area considered in this chapter refers to all municipalities that have not had more than 10,000 inhabitants between 1950 and 2018 and that, in addition, are not part of a functional urban area.[7] Based on this definition, between 1950 and 2018 the percentage urban increased by more than 20 percentage points (pp) and now stands slightly above 80%. Two distinct phases in this urbanisation process can be identified. A first stage, which was characterised by particularly strong migration from rural to urban areas among the different provinces during the "rural exodus" between 1950 and the culmination of the industrialisation process in the 1980s. And a second, subsequent stage coinciding with the establishment of Spain's regional governments and the development of the welfare state, in which the percentage urban continued to grow, albeit at a much slower pace (see Chart 4.3). The characteristics of, and the connection between, the two stages are analysed below.

In the first stage, dubbed the rural exodus, the percentage urban increased significantly, from 59.6% to 79.6% between 1950 and 1991. The rural-urban migration which took place in Spain during that period was part of a structural shift, reflected by the increased weight of industry and services in the economy, to the detriment of agriculture. This process, common to the economies of other countries, is due to changes in relative productivity, such that the primary sector is able to produce with fewer workers and, at the same time, the population demands more manufactured goods and services as its income increases (see González-Díez and Moral-Benito (2019)). In addition, economies of scale and agglomeration economies are more conducive to the production of such goods and the provision of services being concentrated in urban areas, giving rise to the rural exodus. Thus, the agricultural sector's lower weight and the increased percentage urban would be two manifestations of the same structural transformation associated with the development of any economy (see Michaels et al. (2012)). Indeed, countries' percentage urban and level of economic development are intimately connected; Spain is part of the group

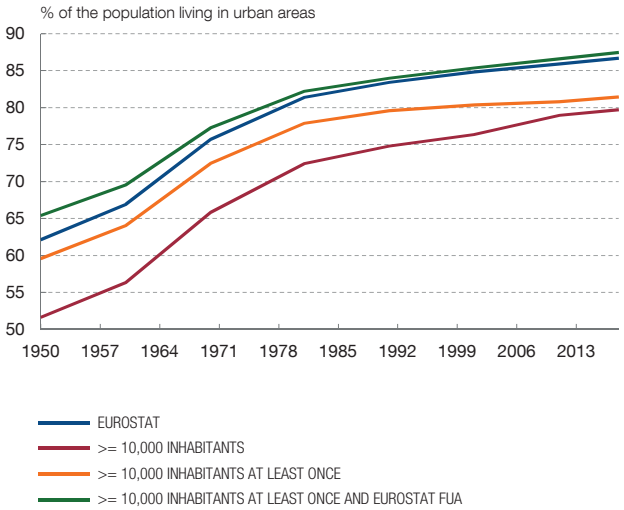
7 According to Eurostat, a functional urban area is defined as a city and its commuting zone and therefore consists of a densely inhabited city and a less densely populated commuting zone whose labour market is highly integrated with the city (see Section 3 of this chapter for a detailed discussion of urban areas as a whole in Spain). Gutiérrez et al. (2020a) provide more details on the different definitions of rural and urban areas in Spain.

Chart 4.3

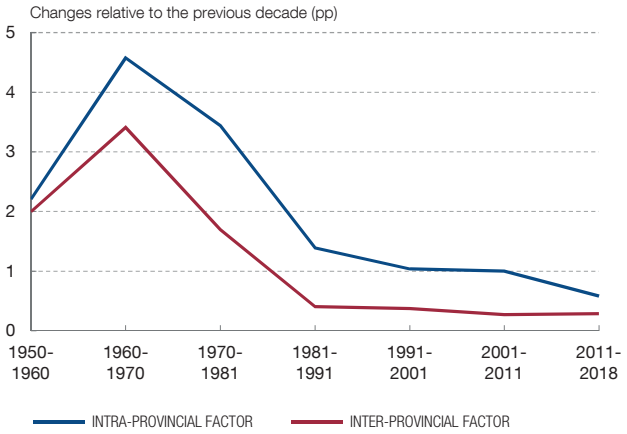
URBANISATION IN SPAIN OVER THE LAST 70 YEARS IS CHARACTERISED BY TWO DISTINCT PHASES

The percentage urban increased sharply between 1950 and the end of the 1980s. From the 1990s onwards, the percentage urban increased at a much more moderate pace. In addition, the rural-urban inter-provincial migration component was particularly significant during the first stage (1950-1991), but has stood at practically zero since 1991.

1 PERCENTAGE URBAN. DIFFERENT DEFINITIONS (a)



2 BREAKDOWN OF THE CHANGES IN THE PERCENTAGE URBAN (b)



SOURCES: Banco de España and Eurostat.

a Eurostat: population in urban municipalities as defined by Eurostat; >= 10,000 inhabitants: population in municipalities with at least 10,000 inhabitants in that year; >= 10,000 inhabitants at least once: population in municipalities with at least 10,000 inhabitants at some point during the 1950-2018 period; >= 10,000 inhabitants at least once and Eurostat FUA: population in municipalities with at least 10,000 inhabitants at some point during the 1950-2018 period or in municipalities belonging to functional urban areas as defined by Eurostat.

b The change in percentage urban at the national level can be broken down into two terms which reflect the change in percentage urban and population weights of each province. The intra-provincial factor increases, for example, in the event of rural-urban migration within the same province. The inter-provincial factor rises, for example, in the event of rural-urban or urban-urban migration from less urbanised to more urbanised provinces. See Gutiérrez et al. (2020a) for more details.

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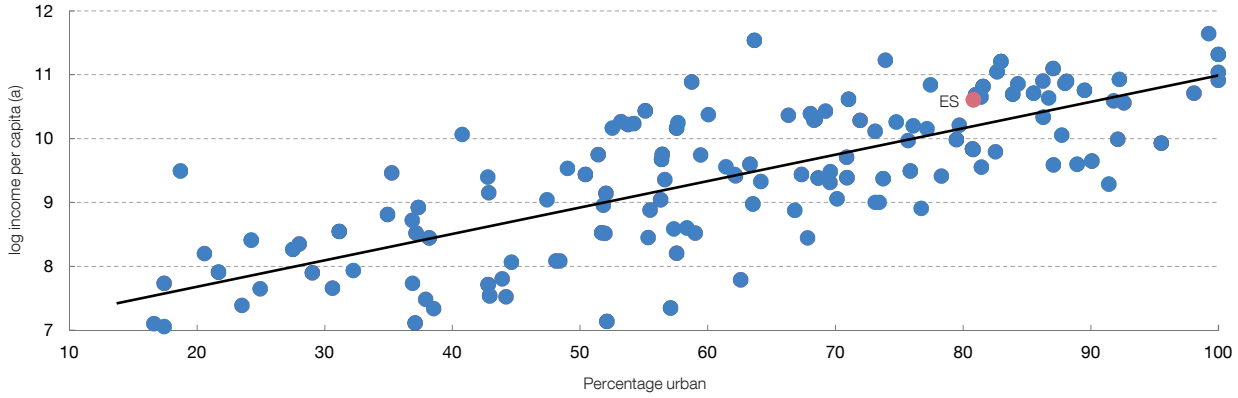
of more developed countries with high per capita incomes and percentages urban by international standards (see Chart 4.4).

Migration flows between regions during the rural exodus could explain, at least partly, the current distribution of economic activity in Spain. While the structural shift from an agriculture-based economy to an industry and services-based one is inseparable from the increase in percentage urban, rural-urban migration flows may present different patterns depending on the point in time when this structural transformation occurs (see Henderson et al. (2018)). Specifically, if the structural transformation occurs when mobility and transport costs are high, migration from rural to urban areas tends to be observed within each region, resulting in a more uniform industrialisation across different parts of the territory (see Eckert and Peters (2018)). However, deagriculturalisation and urbanisation had still not taken place in Spain by the mid-20th century, when mobility and transport costs were already relatively low by broad historical standards. Indeed,

Chart 4.4

THERE IS A CLEAR POSITIVE CORRELATION BETWEEN INCOME PER CAPITA AND PERCENTAGE URBAN AT THE INTERNATIONAL LEVEL

The structural shift from an essentially agriculture-based economy to one based on industry and services triggers an increase in countries' level of well-being and their percentage urban.



SOURCES: United Nations and Penn World Table version 10.0.

a Income per capita refers to 2019 and is measured in USD adjusted for purchasing power parity. For more details, see https://www.rug.nl/ggdc/productivity/pwt/?lang=en.

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the agricultural sector still accounted for 36.5% of the Spanish economy in 1960. This was much higher than in countries such as the United States or Germany, where it only accounted for 5.7% and 13.7% of total employment, respectively. Thus, the deagriculturalisation and urbanisation that began in the early 1960s in Spain were accompanied by a relatively high proportion of inter-regional rural-urban migration compared with other countries[8] (see Chart 4.5). In other words, the fact that Spanish industrialisation was completed relatively late in comparison with other developed countries could have contributed at least partly to the greater concentration of the population and economic activity in certain regions observed today (see Box 4.2).

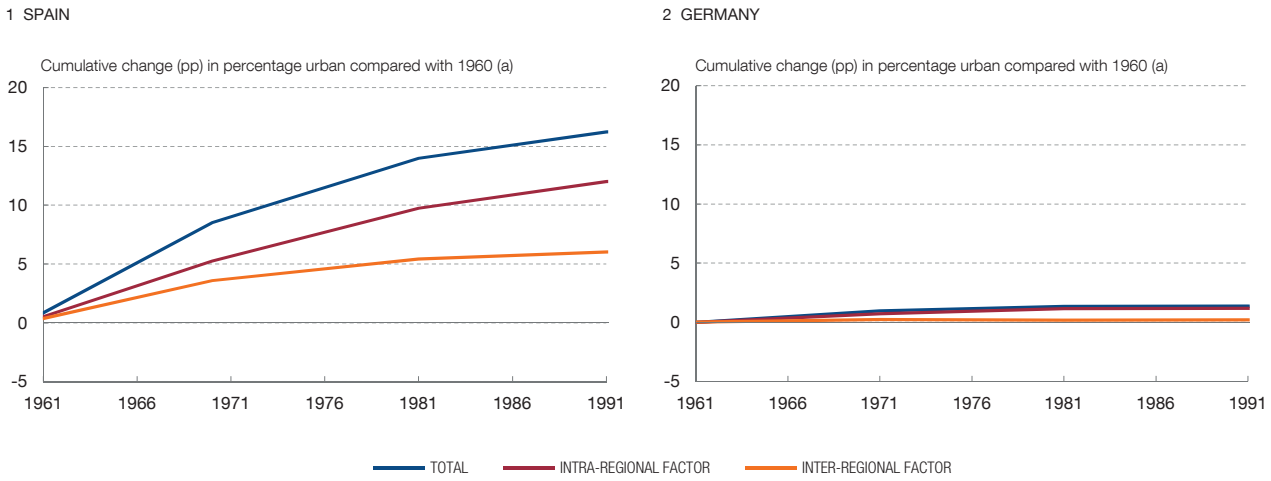
In the second stage, from the 1990s onwards, the percentage urban continued to increase, but at a significantly slower pace. Once the structural transformation of the economy was complete, and coinciding with the development of the welfare state in Spain, the percentage urban increased very slightly from 1991 onwards. Specifically, the percentage urban grew by barely 2 pp to stand slightly above 80% at present. This increase in the percentage urban was underpinned by population

8 During this period, the rural-urban migration process was accompanied by an increase in external migration to Latin America from the end of the 1940s and to industrialised Europe from the 1960s. However, the scale of this external migration was significantly smaller than domestic migration flows. Specifically, between 1960 and 1974 more than 50,000 Spaniards emigrated to Europe per year, compared with close to 400,000 who migrated internally (see Arroyo Pérez (2003)).

Chart 4.5

THE PERCENTAGE URBAN IN SPAIN ROSE SHARPLY BETWEEN THE 1960s AND THE 1990s

The structural transformation of the Spanish economy from the 1960s onwards triggered the rural exodus and the increase in the percentage urban. However, other countries, such as Germany, had already completed this process as of the early 20th century.



SOURCES: Banco de España and Eurostat.

a The change in percentage urban at the national level can be broken down into two terms which reflect the change in percentage urban and population weights of each region. The intra-regional factor increases, for example, in the event of rural-urban migration within the same region. The inter-regional factor rises, for example, in the event of rural-urban or urban-urban migration from less urbanised to more urbanised regions. See Gutiérrez et al. (2020a) for more details.

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growth in urban areas compared with population declines in rural areas due, above all, to ageing, as analysed below (see Chart 4.6.2).

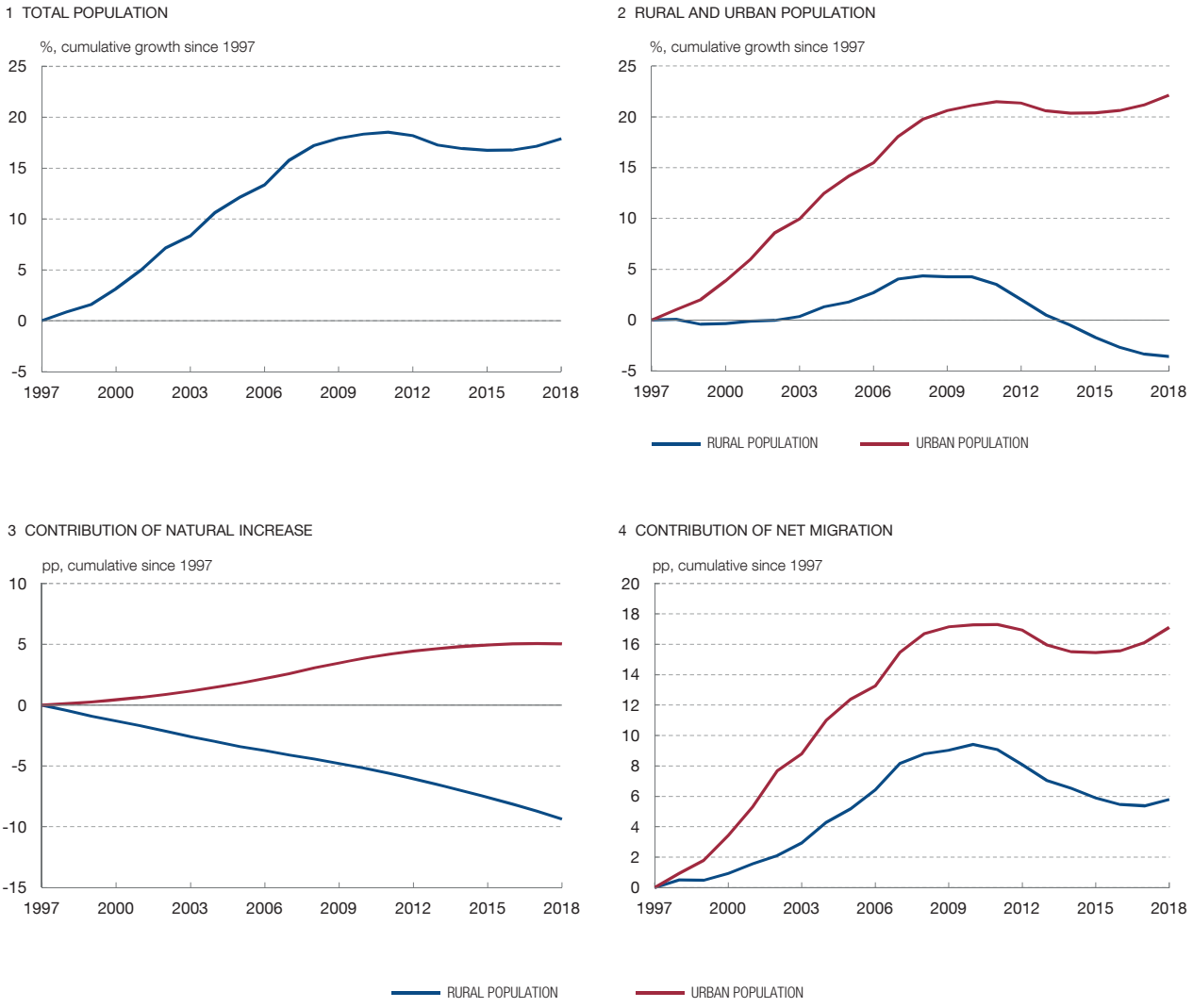
The key factor in this second stage was not migration, as in the rural exodus, but the natural population growth differential between rural and urban areas. In other words, an old population in the rural areas resulting from the rural exodus led deaths to outnumber births from the 1990s onwards, continually sapping momentum from rural municipalities' population dynamics. Hence, natural growth meant that the population in rural municipalities fell by 10 pp between 1997 and 2018, whereas it made a positive contribution of 5 pp in urban municipalities (see Chart 4.6.3). Furthermore, there is a positive correlation between population growth at the municipal level during the rural exodus and natural growth in the most recent period. More specifically, the rural municipalities that experienced negative natural growth over the last two decades were precisely those which underwent population declines over the 1950-1991 period (see Chart 4.7).

Net migration in this latest period also contributed to the slight increase in the percentage urban, albeit to a lesser degree. Overall, rural municipalities underwent positive net migration during the economic upswing up to 2010, in part due to international migration. However, both internal and external migration have

Chart 4.6

URBANISATION HAS CONTINUED SINCE THE 1990s, ALBEIT AT A SLOWER PACE

The slight increase in the percentage urban since 1997 is due to the different population dynamics in rural and urban areas. The rural population as a whole fell slightly between 1997 and 2018, mainly as a result of negative natural growth year after year. The urban population increased significantly thanks to natural increase and positive net migration.



SOURCES: Banco de España and INE.

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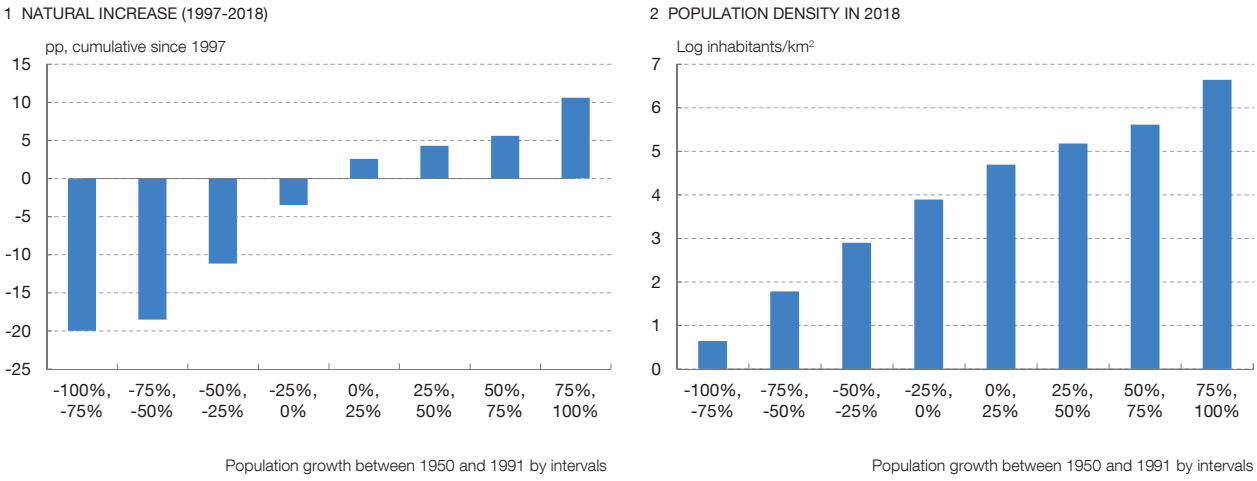
turned negative since then and, as a result, contributed to the rural depopulation in the years following the global financial crisis that began in 2008. Thus, net migration contributed 6 pp to rural population growth between 1997 and 2018, as opposed to the 17 pp contribution in urban municipalities (see Chart 4.6.4).

Lastly, population dynamics across rural municipalities have been somewhat heterogeneous in the most recent period. Specifically, most population declines in rural areas have arisen in smaller rural municipalities far away from urban areas

Chart 4.7

POPULATION DYNAMICS DURING THE RURAL EXODUS LARGELY DETERMINE RECENT DEVELOPMENTS

The municipalities with steeper population declines during the rural exodus (1950-1991) had a worse negative natural population balance between 1997 and 2018 and have a lower population density at present.



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SOURCES: Banco de España and INE.

(Gutiérrez et al. (2020a) offer a more detailed analysis of these developments). The following subsection describes the different municipalities according to the severity of the demographic challenge they face.

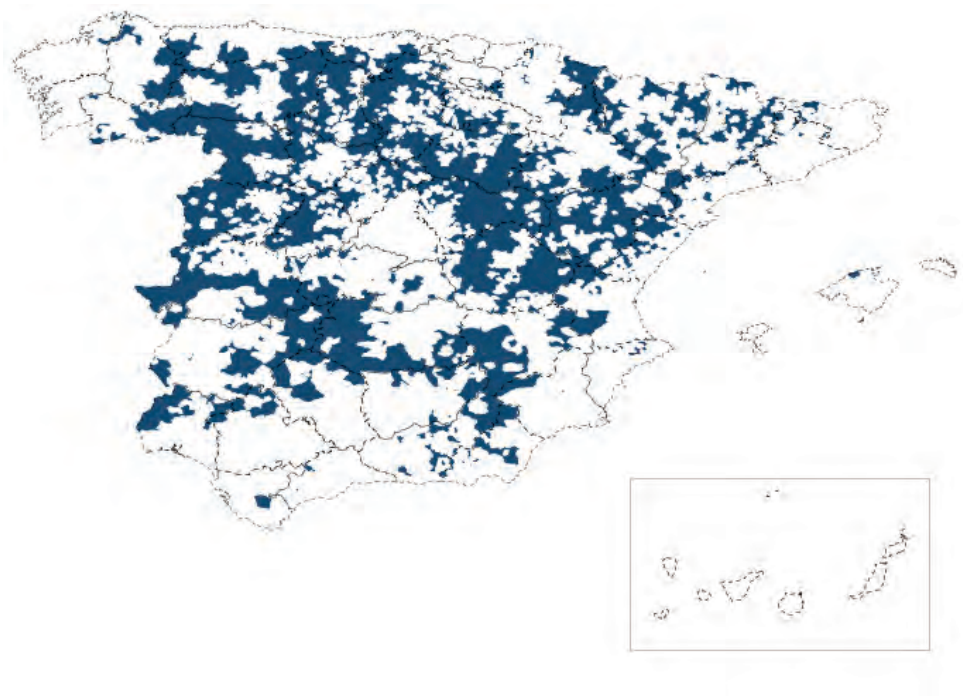
2.3 The municipalities at risk of depopulation and access to services in rural areas

There are a number of rural municipalities whose long-term survival may be under threat should their recent population dynamics continue. Within the gradual urbanisation process described in the preceding subsection, rural depopulation has been particularly pronounced in some municipalities that, unlike others, did not benefit from the positive migration flows of the 2000s. In other words, there are many rural municipalities that not only record negative natural growth year after year, but whose populations also declined continuously over the last two decades, even during the expansionary phase when the overall rural population grew. These would be the municipalities at risk of depopulation, whose viability appears to be under threat, insofar as the related secular population decline could be considered irreversible and could potentially trigger their disappearance (see Recaño (2017)). The disappearance of these municipalities could also represent a threat to the environment, in terms, for example, of a higher incidence of wildfires and lower biodiversity, if no mitigating measures are implemented.

Chart 4.8

A SIGNIFICANT SHARE OF SPANISH MUNICIPALITIES ARE AT RISK OF DEPOPULATION (a)

A total of 3,403 municipalities at risk of depopulation are identified. These account for 42% of municipalities in Spain and for 2.3% of the population, approximately 1,000,000 inhabitants.



SOURCES: Banco de España and INE.

a Municipalities at risk of depopulation are defined as those with negative population growth between 2001 and 2018, a negative natural population balance since 2001 and a population density below 12.5 inhabitants per km^2.

The incidence of municipalities at risk of depopulation in Spain is far higher than in the euro area as a whole. Based on population-decline and low-density criteria, 3,403 municipalities at risk of depopulation are identified.[9] These account for 42% of municipalities in Spain and for 2.3% of the population, approximately 1,000,000 inhabitants (see Chart 4.8). While the scarcity of data hinders an international comparison,[10] the available evidence suggests that these percentages exceed those for the rest of the euro area. Taken as a whole, 10% of the rest of the euro area's municipalities are at risk of depopulation. In particular, the 42% of municipalities at risk of depopulation in Spain contrasts with the figures for other euro area countries such as Germany, France and Italy, where only 1%, 7% and 4%,

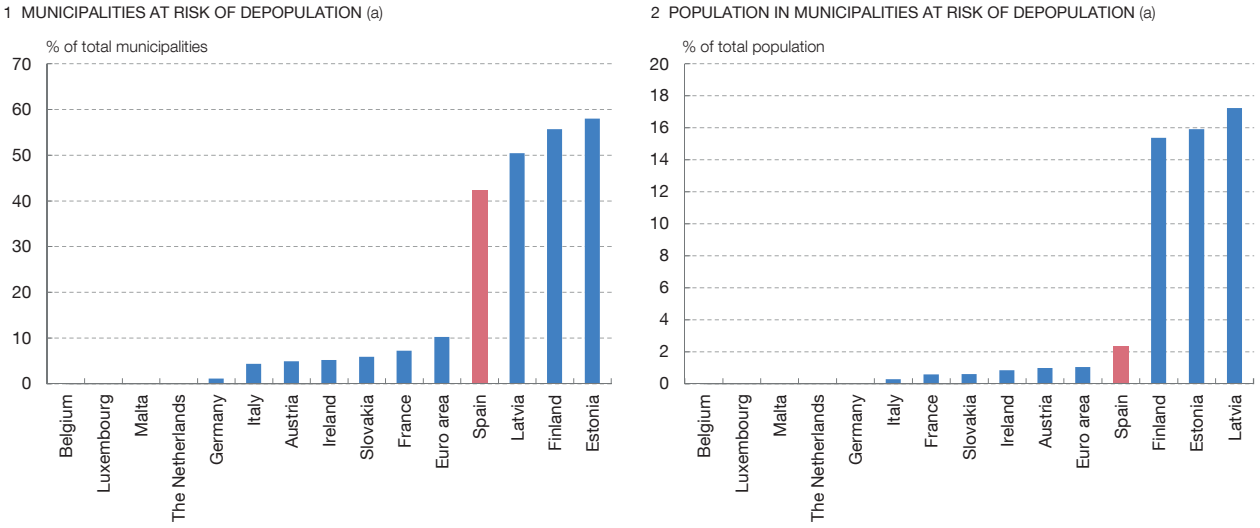
9 Defined here as those municipalities with negative population growth between 2001 and 2018, a negative natural population balance since 2001 and a population density of below 12.5 inhabitants per km^2. This definition is based on that considered in European Parliament Resolution P8_TA (2019)0303 on the European Regional Development Fund and on the Cohesion Fund to identify areas facing natural or demographic handicaps and challenges. The main difference is that here the period from 2001 to 2018, rather than from 2007 to 2017, is considered. The pre-global financial crisis period was included since it was deemed relevant to determining the municipalities with persistent population declines, in light of the wildly different population dynamics before and after 2007 detailed in the preceding subsection, at least in the case of Spain.

10 Specifically, insufficient data are available for Portugal, Greece, Lithuania, Slovenia and Cyprus, and information on Austria, the Netherlands, Luxembourg, Ireland and Estonia is only available to 2011.

Chart 4.9

COMPARED WITH THE REST OF EUROPE, IN SPAIN THE INCIDENCE OF MUNICIPALITIES AT RISK OF DEPOPULATION IS VERY HIGH

In Spain the incidence of municipalities at risk of depopulation and the percentage of the population living in those municipalities are above those for the euro area as a whole. Specifically, they are much higher than other euro area members such as France, Italy and Germany, and are slightly lower than countries farther north such as Latvia, Finland and Estonia.



SOURCES: Banco de España and Eurostat.

a Municipalities at risk of depopulation are defined as those with negative population growth between 2001 and 2018, a negative natural population balance since 2001 and a population density below 12.5 inhabitants per km^2.

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respectively, of municipalities are at risk.[11] However, the Spanish incidence of municipalities at risk of depopulation is in line with countries located farther north, such as Finland, Estonia and Latvia where the percentages are around 50% (see Chart 4.9). A common characteristic among these countries and Spain is the high percentage of uninhabited territory (see Gutiérrez et al. (2020b)). This could explain the difficulties that the smallest rural municipalities face in attracting and retaining population, since they are surrounded by vast expanses of empty land that further isolates inhabitants.[12] Rural areas at risk of depopulation in Spain display idiosyncrasies compared with other rural and urban areas.

Rural and urban municipalities display a series of significant differences in facets such as orography, demographics and/or socioeconomic situation (see

11 In Spain, 2.3% of the population lives in municipalities at risk of depopulation, as opposed to 0.05%, 0.6% and 0.3% in Germany, France and Italy, respectively.

12 Note that, unlike the high percentage of uninhabited territory, a high number of municipalities or local administrative units in the countries with a higher incidence of municipalities at risk of depopulation does not appear to be a common characteristic that could explain this phenomenon. Specifically, there are 18 municipalities at risk of depopulation per 100,000 inhabitants in Spain, compared with 14, 56 and 14 in Germany, France and Italy, respectively, and 6, 17 and 6 in Finland, Estonia and Latvia, respectively. For the European Union as a whole, there are 21 at-risk municipalities per 100,000 inhabitants.

Table 4.1

RURAL MUNICIPALITIES HAVE A SET OF DIFFERENT CHARACTERISTICS AND SIGNIFICANTLY LESS ACCESS TO SERVICES COMPARED WITH URBAN MUNICIPALITIES (a)

Rural municipalities in Spain are significantly different from urban ones in aspects such as orography, demographics and/or socioeconomic situation. In addition, rural municipalities have significantly less access to on-site and digital services. This gap is considerably wider in the case of rural municipalities at risk of depopulation.

	All	Urban	Rural	Rural (not at risk)	Rural (at risk of depopulation)
Population in 2018	5,794	47,975	1,258	2,072	320
Dependency ratio	0.51	0.23	0.53	0.37	0.72
Share of female population (%)	44.46	48.75	44.00	46.22	41.44
Share of foreign population (%)	8.33	13.48	7.74	9.22	5.81
Distance to provincial capital (km)	44	33	45	41	51
Distance to coast (km)	127	65	133	107	163
Height above sea level (m)	677	324	715	573	878
Temperature (ºC)	12.95	15.47	12.68	13.60	11.63
Share of agriculture in employment (%)	7.15	3.01	7.66	6.12	9.84
log income per capita	9.20	9.19	9.20	9.20	9.20
House prices (€/m^2)	1,132	1,572	1,058	1,160	823
Property tax (rate)	0.58	0.68	0.57	0.60	0.54
Road tax	86.85	117.81	83.52	90.04	76.52
log debt per capita	3.39	5.87	3.12	3.98	2.20
Protest vote (%)	18.25	23.50	17.69	18.69	16.53
Regionalist vote (%)	11.33	11.94	11.27	17.49	4.09
Distance to basic services (km)	20.60	2.15	22.59	13.76	32.03
Distance to other services (km)	24.73	8.40	26.49	19.21	34.88
Broadband coverage (100 MBps)	26.30	82.75	20.22	33.46	4.96
No bank branch (%)	53.34	0.00	59.07	42.06	78.70
Number of municipalities	8,116	788	7,328	3,925	3,403

SOURCES: Banco de España and INE.

a Although the variables considered in the table are self-explanatory, more details on how they were built at the municipal level can be found in Alloza et al. (2021) and Gutiérrez et al. (2020b).

Table 4.1).[13] Demographically, compared with urban municipalities, rural ones are smaller (1,258 inhabitants as against 47,974) and older (dependency ratio — defined as the ratio of the over-64s to those aged 16 to 64 — of 0.53 compared with 0.23), and women (44% versus 49%) and foreigners (7.7% versus 13.5%) account for smaller shares of the population. Rural municipalities are also more remote, because of their more unfavourable geographical conditions in terms of greater height above sea level (714 metres versus 324 metres) and greater distance from the provincial capital (45 km compared with 32 km) and the coast (133 km versus 65 km). As regards socioeconomic aspects, agriculture accounts for a larger share of their employment

13 See Alloza et al. (2021) for a more detailed description of how the different indicators used in this subsection were developed and their differences across rural and urban municipalities. Most of the indicators considered refer to 2011 when the latest available census took place. The definitions of the variables considered in the analysis can also be found in Table 4.2.

and they have a lighter tax burden and a lower incidence of what the political science literature has dubbed the protest vote,[14] which in Spain, unlike in other countries, appears to be a markedly urban phenomenon (see Rodríguez-Pose (2018)).

As regards the provision of services, access to services is worse in rural municipalities than in urban ones. There are alternative measurements that can be used jointly to explore the differences between rural and urban areas in terms of accessibility to different services. Specifically, Kompil et al. (2019) have developed a generic indicator for access to services measured in terms of distance in kilometres to the nearest local services in each municipality, taking local services to mean facilities such as a primary school, a health clinic and a sports centre.[15] A citizen from a rural municipality has to travel on average 22.59 km to access the different local services, compared with 2.15 km on average for a citizen from an urban municipality (see Table 4.1).[16] Alloza et al. (2021) find that some of these differences in accessibility to physical services can be explained by factors such as geographical particularities or the lighter tax burden in rural municipalities for those taxes regulated at municipal level.[17] In addition, as analysed in the last section of this chapter, the provision of these services on a minimal scale makes their cost per inhabitant higher in the smaller rural municipalities.

Rural municipalities also have significantly less access to financial services. Drawing on Banco de España data, 59% of rural municipalities were branchless in 2020. In addition, the available time series show that this percentage has increased significantly since 2008, when it stood at 48% (see Jiménez and Tejero (2018) for a detailed analysis of the bank branch consolidation process in Spain). While branch closures in rural areas can be justified by the search for profitability and by falling demand,[18] they affect the population, above all in relation to access to cash that cannot be covered, unlike other banking services, by online banking. Hence, banks have adopted a series of measures to offset the closures, such as mobile banking buses and financial agents, which regularly serve customers in those branchless municipalities. Other available alternatives are cashback and, more recently, bilateral agreements between different banks and Correos, the public postal service, to provide access to cash at post offices.

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14 Defined as the percentage of votes for recently established political parties at the extremes of the political spectrum. In the specific case of Spain, it refers to the percentage of votes for VOX and Unidas Podemos in the 2019 general election. Both parties have parliamentary representation and were established after the financial crisis that began in 2008.

15 Note that the regulatory dimension regarding what type of services must be subject to specific public service obligations is not addressed here. See Alloza et al. (2021) for an analysis of this matter.

16 These differences are also observed when considering a supplementary measurement of access to services based on the distance in kilometres to the nearest petrol station, school, ATM or hospital, obtained on the basis of the geolocation of these establishments available from various online sources. The authors are grateful to Kiko Llaneras for sharing the data. For more details see "Un mapa del contraste entre el campo y la ciudad", *El País*.

17 These include property tax (IBI), the tax on business activity (IAE), road tax (IVTM), the tax on buildings, installations and other works (ICIO) and the tax on increase in urban land value (IVTNU).

18 Martín-Oliver (2019) analyses the main driving factors of this process, considering demand-side and supply-side factors.

Access to digital services is also worse in rural municipalities than in urban ones. The information published by the Ministry of Economic Affairs and Digital Transformation[19] for 2019 documents a significant lack of access to broadband and, therefore, to digital services in rural municipalities. Focusing on 100 MBps broadband, the speed considered necessary to hold a videoconference, for example, rural municipalities have significantly less access than urban ones. In particular, just 20% of rural households have 100 MBps broadband coverage, compared with 83% of urban households. Furthermore, as documented by Alloza et al. (2021), unlike the on-site services addressed above, factors such as geographic location and taxation at the municipal level lie behind a very small portion of this digital access gap.

In the specific case of rural municipalities at risk of depopulation, all the rural-urban differences described above are significantly heightened. For example, the dependency ratio in municipalities at risk of depopulation is 0.72, as against 0.37 in the other rural municipalities and 0.23 in urban ones; i.e. in municipalities at risk of depopulation there is almost one working-age inhabitant per inhabitant aged over 65, whereas in the other rural municipalities and in the urban ones there are almost three and more than four, respectively. As regards accessibility to services, the gap in rural municipalities at risk of depopulation is much wider. On average, inhabitants of municipalities at risk of depopulation have to travel more than 30 km to the nearest school, health clinic, petrol station or sports centre, compared with 14 km on average for inhabitants of other rural municipalities and 2 km on average for those of urban ones. As regards financial services, 79% of municipalities at risk of depopulation are branchless, far more than the other rural municipalities (42%) and the urban ones (0%). Lastly, with regard to access to digital services, just 5% of households have access to 100 MBps broadband in municipalities at risk of depopulation, compared with 33% and 83% of households in other rural municipalities and urban ones, respectively.

In sum, within the rural world a general distinction should be drawn between two quite different realities. While the differences between rural municipalities taken as a whole and urban ones are significant in areas such as orography, demographics and service accessibility (rural municipalities are more remote, their populations are older and they suffer a service provision gap), the differences are significantly more pronounced in municipalities at risk of depopulation.

2.4 Cities as a driving force for rural development

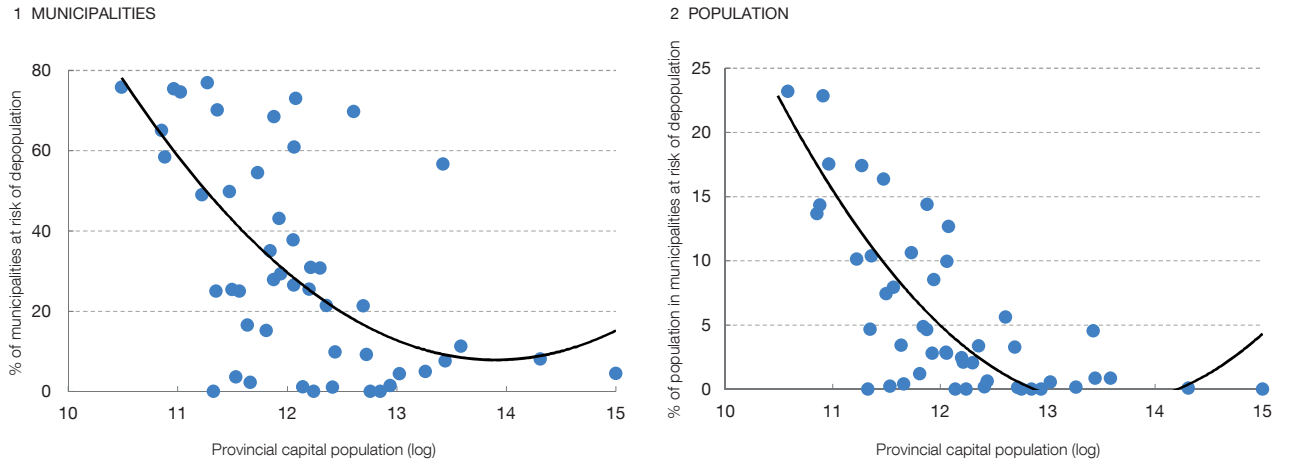
The traditional distinction between urban and rural areas is becoming increasingly blurred. Nowadays the places where people live, work and consume largely span both urban and rural areas, which are increasingly connected economically, demographically and environmentally. For example, according to the

19 See Cobertura banda ancha, Avance Digital.

Chart 4.10

THE PROVINCES WITH BIGGER PROVINCIAL CAPITALS HAVE A LOWER INCIDENCE OF MUNICIPALITIES AT RISK OF DEPOPULATION

There is a clear negative correlation between provincial capital size and percentage of municipalities at risk of depopulation in each province. The percentage of the population living in those municipalities in each province and the size of the respective provincial capital are also significantly negatively correlated.



SOURCES: Banco de España and INE.

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INE's first mobility study based on mobile phone data conducted in 2019, even in those rural municipalities not forming part of an urban area,[20] approximately 10% of their employed population spent a minimum of four hours a day at least twice a week in an urban area in the same province. In addition, these interactions between urban and rural areas may be expected to be even more important in the future, insofar as digitalisation and the implementation of remote working will increase the dissociation between the place of residence and the place of work.

Those regions with more developed urban areas also have more dynamic rural areas and, therefore, a lower incidence of municipalities at risk of depopulation. For Spanish provinces, there is a clear negative correlation between the size of the provincial capital and the percentage of municipalities at risk of depopulation (see Chart 4.10). In other words, those provinces whose capital is smaller are also the provinces with a higher incidence of municipalities at risk of depopulation relative to total municipalities in the province. This correlation suggests that urban areas act as a driving force for their surrounding rural areas in a kind of rural-urban symbiosis.

20 A municipality is considered to belong to a functional urban area if at least 15% of its employed population works in the main city and it borders other municipalities in the same area. In Spanish municipalities with fewer than 2,000 inhabitants, the commuting-rate threshold is higher: from 1,000 to 2,000 inhabitants, 25% of the employed population; from 500 to 1,000, 35%; from 100 to 500, 45%, and from 0 to 100, 50%.

Table 4.2

THE URBAN POPULATION ACTS AS A DRIVING FORCE BEHIND THE GROWTH OF RURAL AREAS

Rural municipalities close to urban centres tend to show greater momentum in terms of their inter-censal growth. In addition, this association is stronger the bigger the urban centre, as can be seen when comparing columns 1 and 4 below. Furthermore, this impact is also significant when considering the sample of municipalities at risk of depopulation (column 5).

Urban area definition (a)	(1) [50,000]	(2) [100,000]	(3) [250,000]	(4) [500,000]	(5) [500,000]
Initial population	0.018	0.014	0.013	0.017	0.017
(standard error)	(0.011)	(0.011)	(0.012)	(0.011)	(0.011)
Urban population within 0-50 km	0.005***	0.005***	0.006***	0.008***	0.007***
(standard error)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Urban population within 50-100 km	-0.000	0.000	0.000	0.004***	0.002***
(standard error)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
# obs	83,365	83,365	83,365	83,365	40,654
R2	0.437	0.436	0.435	0.436	0.579
Sample of municipalities	All	All	All	All	At risk
Fixed effects, municipality	Yes	Yes	Yes	Yes	Yes
Fixed effects, census	Yes	Yes	Yes	Yes	Yes

SOURCES: Banco de España and Beltrán Tapia et al. (2017).

a The dependent variable in the regressions is inter-censal growth (approximately every 10 years) in each municipality over the 1900-2011 period. Columns 1 to 5 refer to the different definitions of urban population depending on whether the reference urban area has more than 50,000, 100,000, 250,000, or 500,000 inhabitants. ***p<0.01, **p<0.05, *p<0.1.

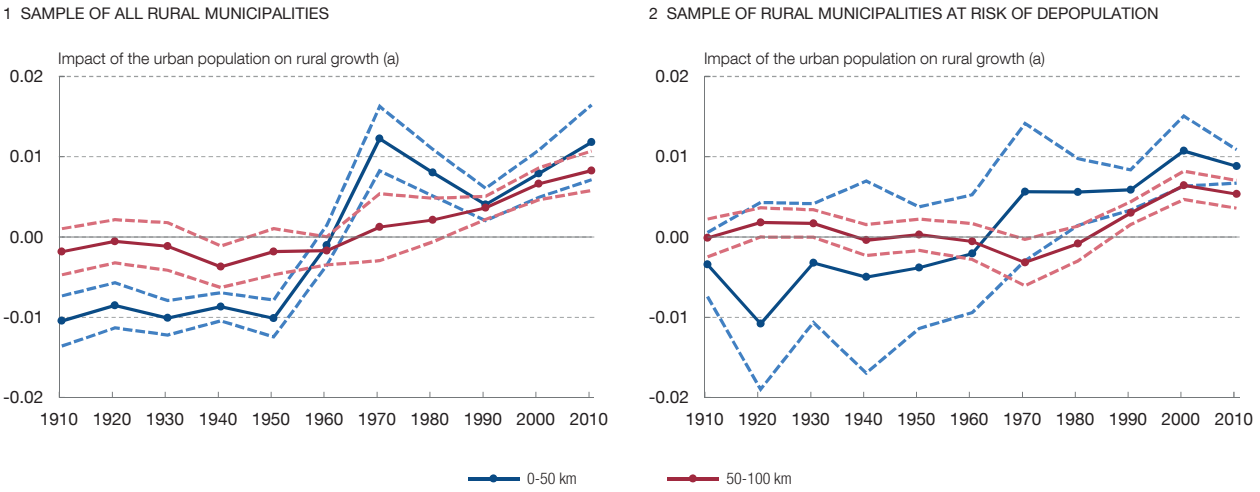
The available evidence corroborates the hypothesis of the urban population having a positive impact on the rural population. Specifically, for the 1900-2011 period the inter-censal population growth of each rural municipality is regressed on the size of the urban population within a radius of 0-50 and of 50-100 km around the municipality. Columns (1) to (4) of Table 4.2 show the estimated coefficients when the urban population size is defined as cities with more than 50,000, 100,000, 250,000 and 500,000 inhabitants, respectively. As can be seen, those rural municipalities more exposed to an urban population within a 50 km radius showed greater inter-censal growth throughout the 20th century and at the beginning of the 21st. In addition, this impact is greater the bigger the city nearby the rural municipality. Cities of more than 500,000 inhabitants (column 4) have the highest coefficient. These cities approximately correspond to the average size of Spanish provincial capitals when considering not only their main municipality, but also the group of municipalities comprising their urban area. In this case it is also observed that the impact of the urban population is sizeable even within a 50-100 km radius, i.e. larger urban areas have a larger impact.[21] Lastly, the

21 These regressions are slight variants of the approach considered in Beltrán Tapia et al. (2017). Note that different exercises were also considered that corroborate the robustness of the estimates presented in this subsection. For example, the results remain practically unchanged when considering only rural municipalities not forming part of functional urban areas, when excluding from the sample the municipalities of Madrid and Barcelona, and when considering radii of 0-25, 25-50 and 50-100 km as in the original paper. The authors are grateful to Francisco Beltrán Tapia for kindly sharing the data.

Chart 4.11

THE URBAN POPULATION HAS HAD A MORE FAVOURABLE IMPACT ON RURAL AREAS IN RECENT DECADES

Larger urban populations are associated with greater population growth in the rural municipalities located within a radius of 0-50 km or 50-100 km around the urban centre (see Table 4.2). This favourable impact has been far stronger in recent years, when commuting costs have been lower.



SOURCES: Banco de España and Beltrán Tapia et al. (2017).

a Charts 4.11.1 and 4.11.2 are based on similar regressions to those used in columns 4 and 5 of Table 4.2, respectively. In other words, inter-censal population growth in rural municipalities is regressed on the size of the urban population within a radius of 0-50 km and of 50-100 km for the 1900-2011 period. However, unlike the specifications of Table 4.2, the coefficients associated with the urban population within the two radii were allowed to vary for each inter-censal period (decade).

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urban population's impact is estimated to be positive even when limiting the sample to rural municipalities at risk of depopulation. Based on the coefficients estimated in column (5) of Table 4.2, an increase of ten inhabitants in the Spanish provincial capitals would result in an increase of 1.5 inhabitants in the group of municipalities at risk of depopulation located within a 50 km radius around those capitals.

The impact of urban areas on rural municipalities is particularly strong in recent decades, as the costs of travelling between rural and urban areas have fallen. In the case of the United States in the early 20th century, when commuting costs were high, cities' greater momentum drew the population away from neighbouring rural areas because it was more attractive to workers to live near their workplace in the same city. Conversely, in the second half of the 20th century, when commuting costs fell as cars became more widely used, greater urban momentum was associated with greater momentum in nearby rural areas, because workers found it more attractive to live in the latter and commute to their workplace in the city (see Cuberes et al. (2019)). This pattern also arose in Spain. As shown by Chart 4.11, the positive impacts estimated in Table 4.2 for the 1900-2011 period are due mainly to the estimated impact in the most recent decades, when transport costs were lower in Spain. However, the estimated impact was immaterial or even negative in the early 20th century.

This result is particularly interesting in light of the sudden surge in remote working in response to the COVID-19 pandemic. Specifically, remote working could in fact reduce the costs of commuting between cities and rural areas, insofar as employees' ongoing presence at their normal workplace would not be required.[22] Hence, rural municipalities could attract some workers from the cities and thereby start an endogenous rural growth process, as the new inhabitants demand certain services be provided. These effects could even benefit municipalities at risk of depopulation, directly in those cases where employees work from home most or all of the working week and indirectly, in the medium term, via the development of intermediate municipalities that would act as a driving force for the remotest rural areas. In this regard, strengthening the measures that facilitate mobility between larger centres with the capacity to act as a driving force and the neighbouring rural areas would be key to increasing the former's ability to boost the latter.[23] Urban areas could thus prove to be allies of the rural areas in a kind of rural-urban symbiosis, particularly against the backdrop of remote working and digitalisation in the post-pandemic scenario. However, for the time being very high uncertainty surrounds the persistence and intensity of these health crisis-induced patterns of behaviour and, consequently, the possibility of the population trends described being observed.

All things considered, the loss of momentum in some Spanish cities in recent years could have exacerbated rural depopulation in some provinces. In the presence of cities' impact on rural municipalities, including those at risk of depopulation, the higher incidence of rural depopulation in certain provinces could be due, at least partly, to the cities in those provinces having less momentum. A detailed analysis of recent population dynamics in Spanish cities is therefore essential in order to understand the factors behind these developments. This is the purpose of the following section.

3 Spanish cities' population dynamics and their causes

3.1 Migration flows towards big cities

Given some cities' scant demographic momentum and its possible role in the rural depopulation documented in the preceding section, this section analyses in detail urban areas taken as a whole and their recent population dynamics in Spain. To this end, Eurostat's standard definition of urban areas at the European level and the greater availability of information at the individual level enable new economic activity-related dimensions, such as migration and the distribution of

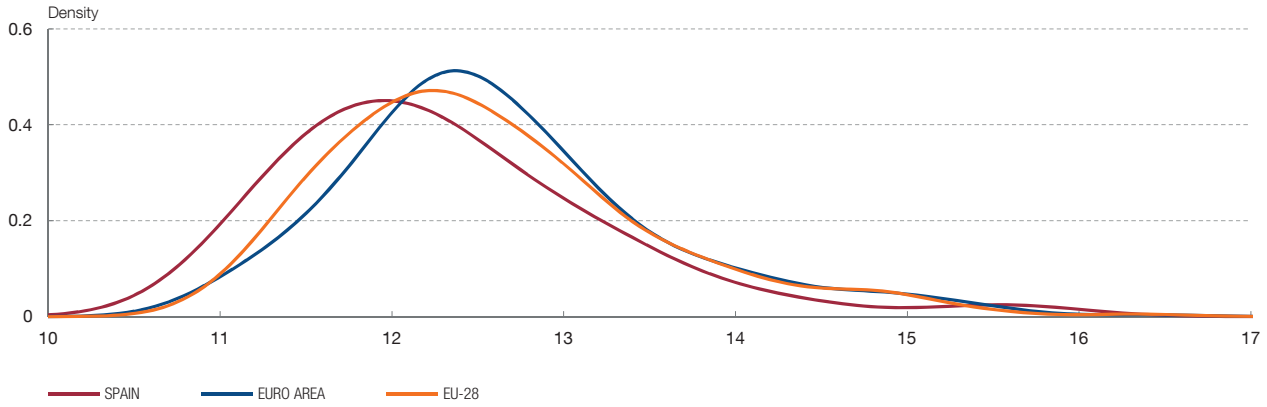
22 According to the Spanish Labour Force Survey, the percentage of workers working from home more than half the week in Spain has risen from 4.8% in 2019 to 16.2% in 2020.

23 This is one of the policies adopted in the case of Japan, via the "compact and connect" strategy (see Section 4 of this Chapter).

Chart 4.12

SPANISH CITIES ARE ON AVERAGE SMALLER THAN OTHER EUROPEAN CITIES

Based on Eurostat's standardised definition of urban area, Spanish cities are smaller than their European counterparts. However, the population distributions in the different cities are not statistically different. For example, the percentage of the population living in Spain's largest urban area (21%) is practically the same as the percentage for the euro area as a whole (23%).



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SOURCE: Eurostat.

workers in the different cities, to be explored. In this section the terms city and urban area are used interchangeably, although strictly speaking the figures refer to urban areas at all times.[24]

Compared with other European cities, the first noteworthy characteristic of Spanish cities is their smaller size. On average, Spanish urban areas had 439,322 inhabitants in 2018, 20% less than the average size of urban areas in the rest of the euro area. However, apart from this average size disparity, the population is no more densely concentrated in the largest Spanish urban areas (see Chart 4.12).[25] For example, the largest urban area in Spain accounts for 21% of the total population, compared with 23% in the other euro area countries (if the two largest urban areas are considered, these percentages would be 36% in Spain and 34% in the euro area).

As regards population dynamics, the population in Spanish cities increased during the 2000s, thanks, above all, to positive net international migration. Drawing on Residential Variation Statistics, positive net migration in all Spanish

24 According to Eurostat, a functional urban area consists of a city and its commuting zone, which, therefore, form an integrated labour market. Specifically, a municipality is considered to belong to an urban area if at least 15% of its employed population works in the main city and it borders other municipalities in the same area. Based on this definition, 718 urban areas (or cities for the purposes of this section) are identified in the European Union and 74 in Spain. For more details, see Methodological manual on territorial typologies, EU Publications.

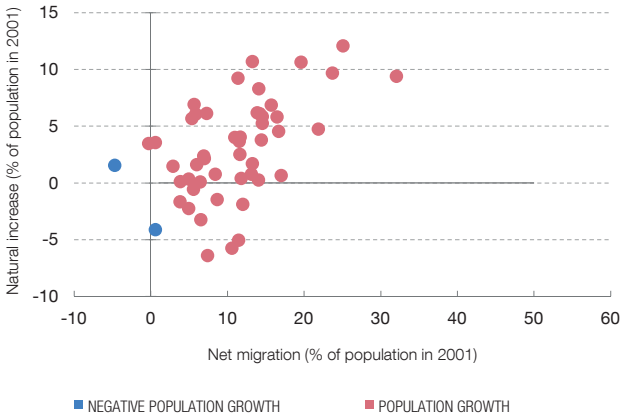
25 Note that the differences between the population distributions in Chart 4.12 are not statistically significant according to the Kolmogorov-Smirnov test.

Chart 4.13

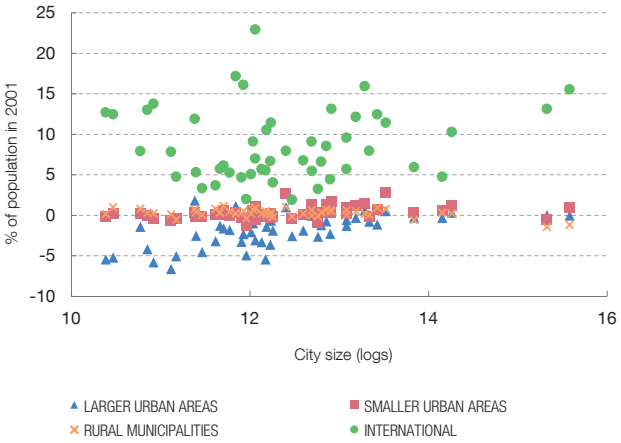
INTERNAL MIGRATION TO LARGER URBAN AREAS HAS CONTRIBUTED TO POPULATION DECLINE IN SMALLER URBAN AREAS THROUGHOUT THE 2001-2018 PERIOD

Over the last two decades, internal migration to larger urban areas has resulted in less momentum in smaller urban areas in Spain. This loss of momentum was offset by international migration during the 2000s, but in recent years this has not been the case.

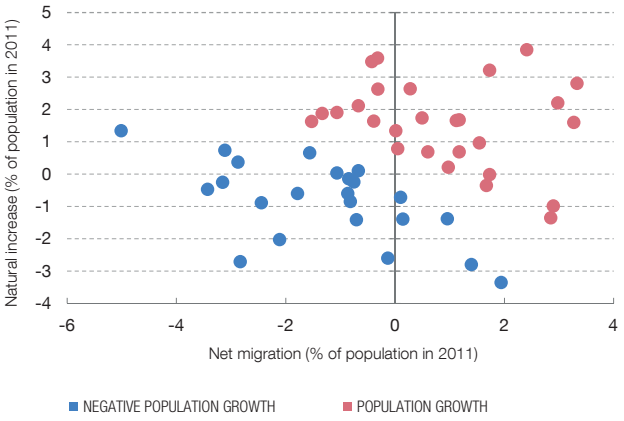
1 SPANISH URBAN AREAS. NATURAL INCREASE AND MIGRATION (2001-2018) (a)



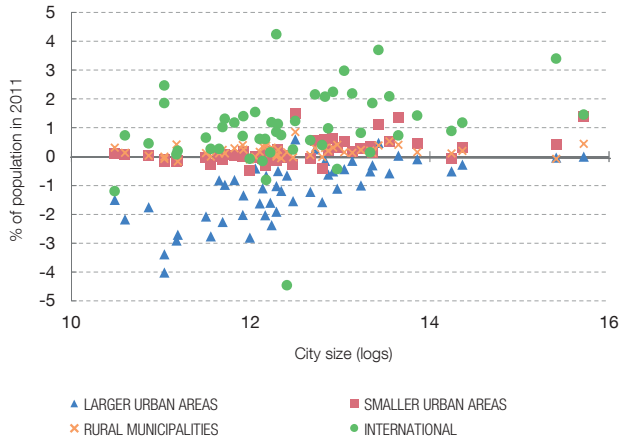
2 BREAKDOWN OF NET MIGRATION BY ORIGIN-DESTINATION (2001-2018) (b)



3 SPANISH URBAN AREAS. NATURAL INCREASE AND MIGRATION (2011-2018) (a)



4 BREAKDOWN OF NET MIGRATION BY ORIGIN-DESTINATION (2011-2018) (b)



SOURCE: INE.

a As explained in the main text, an urban area consists of a city and its commuting zone whose labour market is highly integrated with the city. See https://op.europa.eu/s/oLPh for more details.

b Four shapes are shown for each urban area. These denote the respective net migration balance over the period vis-à-vis larger urban areas in Spain, smaller urban areas in Spain, rural municipalities in Spain and international destinations.

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cities was due mainly to international migration, in a general setting in which the country as a whole received particularly sizeable migration flows during the first decade of the 21st century. This momentum contrasts with the significant negative net internal migration to practically all Spanish cities. Net migration to rural or smaller urban areas was on a much smaller scale (see Chart 4.13).

Since 2011 smaller Spanish urban areas have undergone population decline. This downward pattern has persisted over the last decade due to internal migration to larger urban areas. However, the difference compared with the 2000s is that net international migration fell drastically after the financial crisis that began in 2008. Hence, international migration ceased to offset the population decline in small urban areas arising from emigration to larger ones. This resulted in the population declining in practically half the Spanish urban areas between 2011 and 2018 (see Chart 4.13).

Lastly, the protagonists of these inter-city migration flows in Spain are mostly younger adults. Specifically, 90% of total internal migration-related population declines in Spanish cities is explained by population flows to larger urban areas of those aged between 18 and 39. In sum, the pattern of internal migration by younger adults to larger urban areas has been a constant theme over the last two decades. The question of why young adults move to larger cities is addressed in the following subsection.

3.2 The advantages and disadvantages of big cities

An individual's decision to move from a small to a larger urban area is based on comparing the costs and benefits associated with such move. The costs and benefits inherent in the size of cities must be analysed to understand the pattern of migration flows to larger urban areas documented in the preceding subsection. Broadly speaking, a larger urban area is associated with advantages in the form of higher productivity levels and a more efficient provision of public and private services. However, it is also linked to disadvantages related to the various costs of congestion. Some manifestations of these three forces are described below.

From a production standpoint, the spillover effects arising between workers and firms when a large number of these agents gather in a specific spatial area result in higher levels of productivity for firms which, in turn, give rise to higher wages for workers. In other words, agglomeration economies make firms and workers more productive in larger urban areas. There are three explanations for this: (i) a larger market facilitates access to a wider variety of suppliers and workers, in addition to a more efficient shared use of transport infrastructure; (ii) a larger local market also provides for a better match between employers and employees or suppliers and customers; and (iii) a larger market also catalyses more effectively interactions between firms and workers, resulting in the transfer and accumulation of knowledge that fosters the development and adoption of new technologies and business practices.

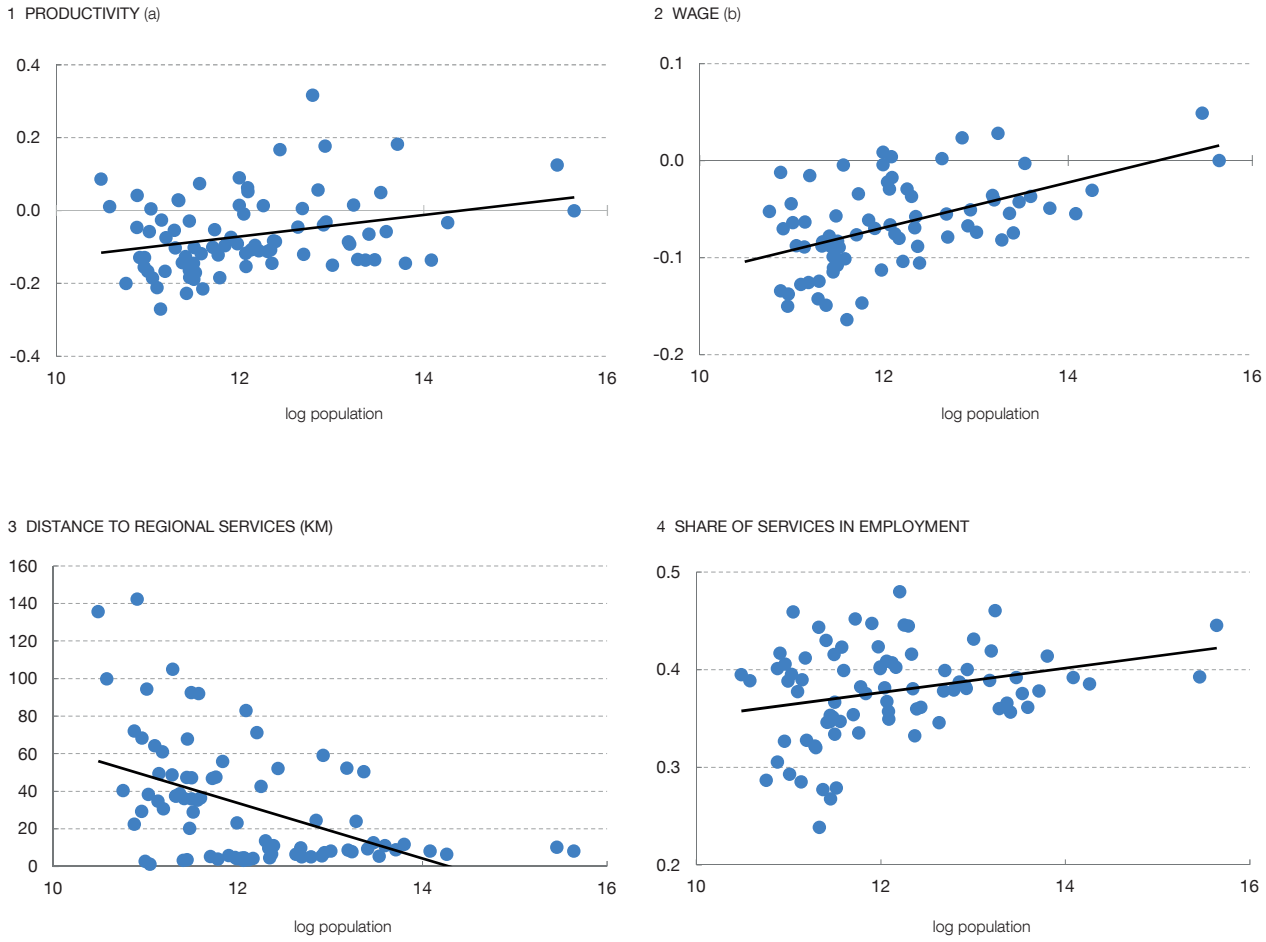
While in practice it is hard to quantify these effects, in the literature there is a consensus on the assumption that they are sizeable.[26] In the case of Spain,

26 For a summary of this literature, see Duranton and Puga (2020).

Chart 4.14

THERE ARE PRODUCTIVITY, WAGE AND SERVICE-ACCESS BENEFITS ASSOCIATED WITH CITIES' LARGER SIZE

Productivity and wages are higher in larger urban areas, even for firms and workers with the same observable characteristics and in the same sectors. In addition, larger urban areas offer a wider range of services that are provided more efficiently.



SOURCE: Banco de España.

a Productivity in each city takes into account the differences in observable characteristics of the firms located in the different cities. Specifically, drawing on data from the Banco de España's Central Balance Sheet Data Office, a firm-level productivity regression was conducted on a series of firm characteristics (size, sector of activity, age and level of indebtedness) and a group of fixed effects for each city. These fixed effects capture the average productivity of firms in each city after stripping out the composition effects that might contaminate the comparison of average productivity among cities.

b The wage in each city takes into account the differences in observable characteristics of the workers located in the different cities. Specifically, drawing on MCVL data, the logarithm of each worker's wage was regressed on observable characteristics (education, experience and sector of activity) and a group of fixed effects for each city. These fixed effects capture the average wage of workers in a city once the composition effects have been stripped out.

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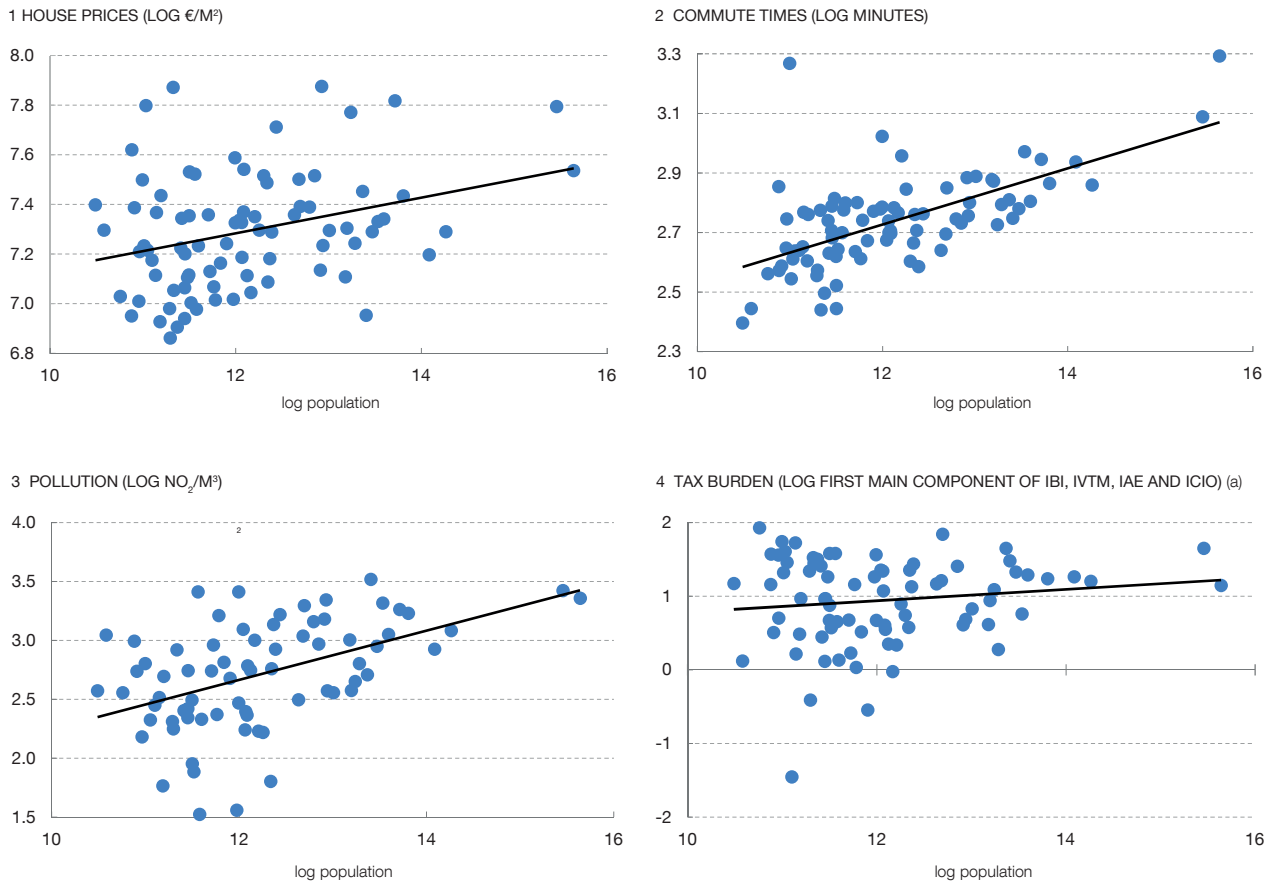
Chart 4.14 shows the positive correlation between the size of cities and the average productivity of their firms.[27] In keeping with the elasticities in the literature, a 1% increase

27 Here, average productivity refers to the logarithm of total factor productivity. Furthermore, the elasticity or premium associated with the size of cities is calculated by controlling for differences in the observable characteristics of the firms located in the different cities. In particular, drawing on data from the Banco de España's Central Balance Sheet Data Office, a firm-level productivity regression was conducted on a series of firm characteristics (size, sector of activity, age, and level of indebtedness) and a group of fixed effects for each

Chart 4.15

A SERIES OF COSTS ASSOCIATED WITH BIGGER CITY SIZE APPEAR IN VARIOUS FORMS OF CONGESTION

Larger city size is associated with greater congestion. The highest levels of congestion appear in the form of higher house prices, longer commute times, more pollution and a heavier tax burden.



SOURCE: Banco de España.

a IBI: property tax; IVTM: road tax; IAE: tax on business activity; and ICIO: tax on buildings, installations and other works.

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in a city's population is associated with an average rise of 0.029% in the productivity of its firms. The effect of agglomeration economies is also reflected in workers' wages (see Chart 4.15). The largest cities have higher average wages, even after controlling for workers' observable characteristics, such as education, experience and sector of activity.[28] Specifically, a 1% increase in a city's size seems to be associated with an increase of 0.046% in the average wage of its workers. This evidence for Spain is consistent with that available for other countries (see Combes et al. (2010)).

city. These fixed effects capture the average productivity of firms in each city after stripping out the composition effects that might contaminate the comparison of average productivity among cities.

28 This elasticity is calculated using a similar methodology to that used for firms. Drawing on social security administrative labour records (MCVL) data, the logarithm of each worker's wage was regressed on observable characteristics (education, experience and sector of activity) and a group of fixed effects for each city. These fixed effects capture the average wage of workers in a city once the composition effects have been stripped out.

The provision of services is also more efficient in larger urban areas. This results in better accessibility and the availability of a wider range of products for consumers. For example, the largest urban areas have a much wider range of food products and restaurants (see Handbury and Weinstein (2015)). In terms of access to on-site public services, the higher population density in big cities means that the average distance to the nearest point of service (e.g. a hospital) is shorter for a given number of citizens per service. Indeed, Chart 4.14 reflects the negative correlation between city size and distance to the nearest hospital or university. It also depicts the greater weight of the services sector in the larger urban areas.[29]

The congestion inherent in large urban centres is another of the costs associated with their larger size. House prices can be deemed an indicator of congestion, insofar as higher prices are the result of demand outweighing supply. Indeed, the positive correlation between city size and house prices is a widely documented stylised fact. Specifically, the estimated elasticity between city size and house prices for Spain exceeds the elasticities estimated for productivity and wages (see Chart 4.15). Higher house prices are usually accompanied by higher commuting costs, insofar as residents move further away from the centre and the transport infrastructure becomes congested, as reflected by the positive correlation between commute time and city size in Spain (see Chart 4.15). Accordingly, the greater congestion in the larger urban areas also tends to be associated with a heavier tax burden (see Chart 4.15), as the local authorities try to alleviate the costs of congestion through transport infrastructure investment which incurs high economic costs.

The costs associated with the pollution that residents of large urban areas suffer are also noteworthy. A greater population agglomeration within cities may result in their residents being more exposed to pollution, as can be observed in Spain (see Chart 4.15). This may be associated with a reduction in life expectancy (see Carozzi and Roth (2020)) and makes citizens of large urban areas extremely willing to assume certain costs in order to reduce their exposure to particulate matter (see Chay and Greenstone (2005)). However, available evidence for the United States points to residents in larger urban areas being responsible for fewer greenhouse gas emissions and fewer particulates per person than residents in smaller urban areas, resulting in an overall benefit. This is due to more energy efficient means of transport and the differences in emissions associated with home heating (see Glaeser and Kahn (2010)).

However, the costs and benefits associated with city size discussed in this subsection ignore the potential heterogeneity in the effects analysed.

29 See Ahlfeldt and Pietrostefani (2019) for a detailed analysis of the other benefits associated with the larger size of cities in terms of amenities and greater accessibility to various services.

Specifically, it could be the case that certain population groups obtain more or less benefits from city size, as analysed below.

3.3 Concentration of high-skilled employment in big Spanish cities

The younger population comprise most of the migration flows from smaller urban areas to big cities, presumably in search of better professional opportunities, and also for greater opportunities for leisure and other amenities. Although enhanced access to services in large urban areas cannot be quantified precisely on an individual basis, a detailed analysis of individual gains in employment conditions achieved by migrants to big cities may be made drawing on MCVL data. Specifically, of all the workers who moved from a smaller to a larger urban area to work between 2005 and 2018, 51% were unemployed in their area of origin, 10% were employed but in a lower social security contribution group and 16% were paying contributions in the same professional category but with a lower wage. Accordingly, three of every four migrations to larger urban areas resulted in better employment conditions, either on the extensive margin (access to employment) or the intensive margin (access to more highly skilled and/or better paid employment). However, do some workers benefit more than others from pursuing their professional activity in larger urban areas?

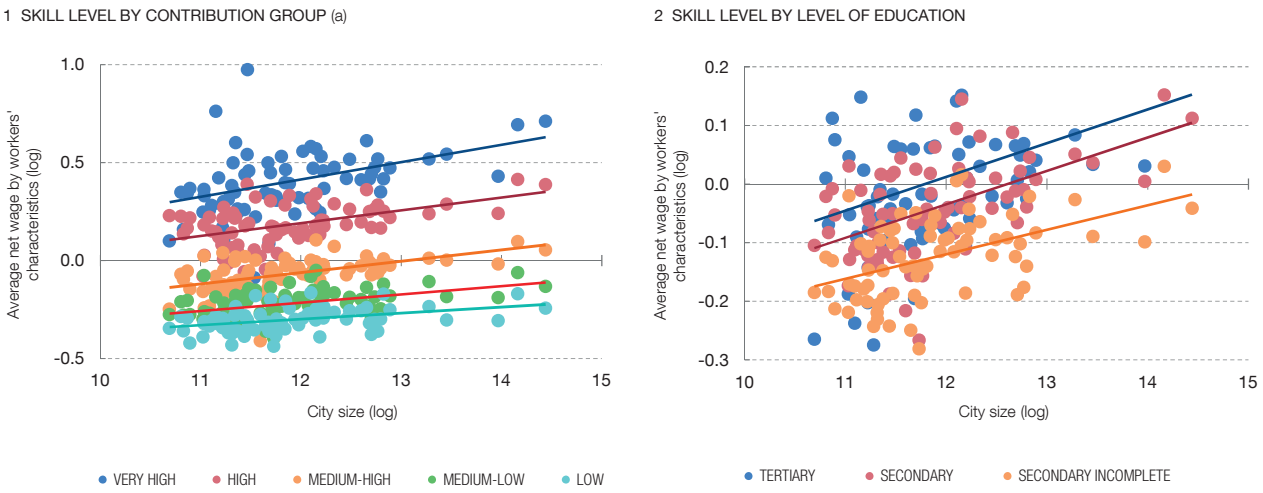
The best indicator available on individual gain is the wage premium associated with working in big cities, which is also higher for workers in more highly skilled occupations. As discussed in the previous subsection, estimated elasticity for the average worker is 0.046, which may be interpreted as the wage premium associated with city size. However, this average elasticity masks a significant degree of heterogeneity across workers' skill levels.[30] Specifically, the wage premium for workers in very highly skilled occupations is 0.106, whereas for workers in low-skilled occupations it is 0.030 (see Chart 4.16). By way of illustration, these elasticities mean that the wage of a worker in a high-skilled occupation in Madrid will be 33.2% higher than the wage of a worker in an equivalently skilled occupation in Cáceres, whereas this premium for a worker in a low-skilled occupation will be 9.5%, given the comparative size of the urban areas of Madrid and Cáceres. As regards the reasons for these wage premia, the available evidence shows that workers who move to larger urban areas obtain an immediate premium through the channels described in the previous subsection and, also, that over time they build up more valuable experience than in smaller urban areas.

30 Workers' skill levels are proxied by their contribution group and their education level, both of which are available in the MCVL. Specifically, skill levels are considered very high for contribution group 1, high for groups 2 and 3, medium-high for groups 4 to 6, medium-low for groups 7 to 9 and low for group 10. In the case of education, a distinction is drawn between three levels: high for workers with tertiary education, medium for those who have completed secondary education, and low for those who have not completed secondary education. For more details, see Moral-Benito and Quintana (2021).

Chart 4.16

THE WAGE PREMIUM ASSOCIATED WITH CITY SIZE IS HIGHER FOR WORKERS IN HIGH-SKILLED OCCUPATIONS

Wages are higher in bigger cities, even when comparing equivalent workers in terms of experience, age and sector of activity. The wage premium is significantly higher for workers in more highly skilled occupations, measured in terms of contribution group and level of education.



SOURCES: Banco de España and MCVL.

a Each dot denotes the fixed city-group effect drawing on a regression on observable characteristics (education, experience and sector of activity) of the log wage of each worker and a set of fixed city-skill group effects. These fixed effects capture the average wage of workers in a city and their skill group, after stripping out the composition effects. Skill levels are considered very high for contribution group 1, high for groups 2 and 3, medium-high for groups 4 to 6, medium-low for groups 7 to 9 and low for group 10.

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However, the added value of this valuable experience gained in big cities persists even when the workers return to their areas of origin (see De la Roca and Puga (2017)).

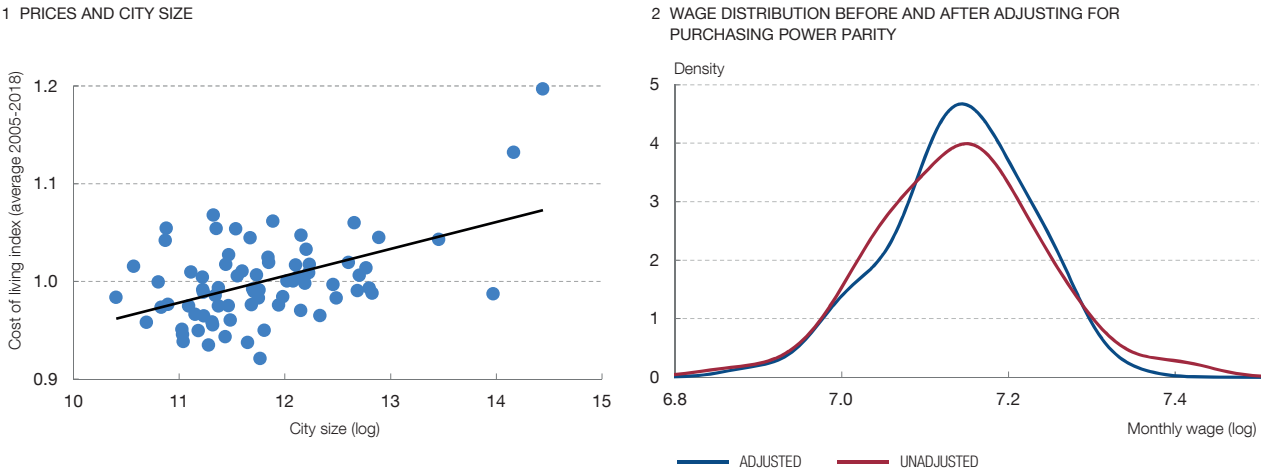
Nevertheless, differences in the cost of living are one important aspect that can affect wage comparisons between urban areas. For instance, according to the Residential Rental Price Index (RRPI) of the Ministry of Transport, Mobility and Urban Agenda, the average rental price in Madrid was €13.2 per m^2 in 2018, compared with €5.0 in Cáceres. In consequence, a cost of living index must necessarily be considered for the different cities of Spain in order to compare wages adjusted to reflect purchasing power, to provide a more accurate indicator of workers' actual welfare. According to the index calculated in Forte-Campos et al. (2021),[31] prices are

31 The cost of living index draws on data from the Household Budget Survey (HBS), the CPI series by province compiled by the INE and the RRPI of the Ministry of Transport, Mobility and Urban Agenda. Specifically, drawing on the RRPI, the price per m^2 of housing in apartment blocks at the urban area level is obtained. Local prices for consumption groups – food, beverages and utilities – are obtained from the HBS (these goods account for some 50% of total household expenditure). For all other consumption groups local prices are estimated drawing on the correlation between inflation at provincial level for those groups and inflation at the provincial level for groups for which local price information is available. Lastly, the prices of each group are weighted according to the respective proportion of spending (HBS).

Chart 4.17

COST OF LIVING DIFFERENCES ARE SIGNIFICANT AMONG CITIES AND AFFECT WAGE COMPARISONS

Prices (the cost of living) are higher in bigger cities. Once wages are adjusted to reflect purchasing power parity in each city, wage differences among big and small cities become significantly smaller.



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SOURCES: Banco de España and MCVL.

higher in larger urban areas, especially in Madrid and Barcelona, where average cost of living indices are some 20% higher than in the other Spanish cities. In consequence, wage differences between cities are significantly smaller when wages are compared in terms of purchasing power parity (see Chart 4.17).

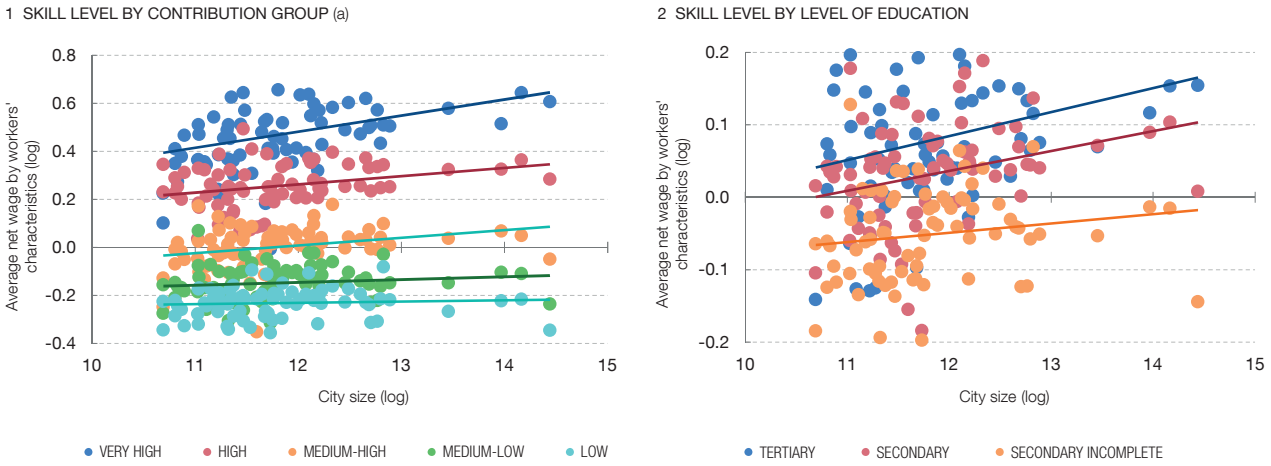
Once wages are adjusted to reflect purchasing power, the wage premia associated with city size are lower, and even disappear for workers in low-skilled occupations. Although the wage premium in big cities decreases significantly for all groups of workers when cost of living differences are considered, it only disappears for workers in low-skilled occupations. Specifically, elasticity for workers in high-skilled occupations drops from 0.106 to 0.071, while for workers in low-skilled occupations it falls from 0.03 to 0.00. In other words, wages of workers in low-skilled occupations are no higher in larger urban areas once purchasing power is taken into account (see Chart 4.18). Continuing with the previous example, this means that the wage premium for workers in high-skilled occupations in Madrid compared with workers in equivalently skilled occupations in Cáceres falls from 33.2% to 22.2%, but from 9.5% to 0% for workers in low-skilled occupations.

These differences in wage premia between groups of workers have significant effects on the composition of the population dynamics of Spanish cities. Specifically, there is a high level of heterogeneity in net migration to large urban

Chart 4.18

THE WAGE PREMIUM ASSOCIATED WITH CITY SIZE DECREASES SIGNIFICANTLY OR EVEN DISAPPEARS WHEN COST OF LIVING DIFFERENCES AMONG CITIES ARE TAKEN INTO ACCOUNT

When wages are adjusted to reflect purchasing power parity, the wage premium associated with city size decreases significantly for workers in more highly skilled occupations and disappears for workers in low-skilled occupations.



SOURCES: Banco de España and MCVL.

a Each dot denotes the fixed city-group effect drawing on a regression on observable characteristics (education, experience and sector of activity) of the log wage of each worker and a set of fixed city-skill group effects. These fixed effects capture the average wage of workers in a city and their skill group, after stripping out the composition effects. Skill levels are considered very high for contribution group 1, high for groups 2 and 3, medium-high for groups 4 to 6, medium-low for groups 7 to 9 and low for group 10.

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areas according to workers' skill levels. MCVL data for the period 2005-2018 show that the larger urban areas received a higher proportion of skilled workers. For instance, Madrid and Barcelona received each year the equivalent of 0.86% and 0.36% of all workers in very highly skilled occupations in the country overall, equivalent to some 10,000 and 4,400 workers, respectively. Yet it is interesting to note that the larger urban areas have a negative net balance in the case of workers in low-skilled occupations. For example, between 2005 and 2018 Madrid and Barcelona saw net outflows of workers in low-skilled occupations amounting to the equivalent of 0.03% and 0.02% of the national total of workers in those occupations, some 1,600 and 1,100 workers per year, respectively (see Chart 4.19).

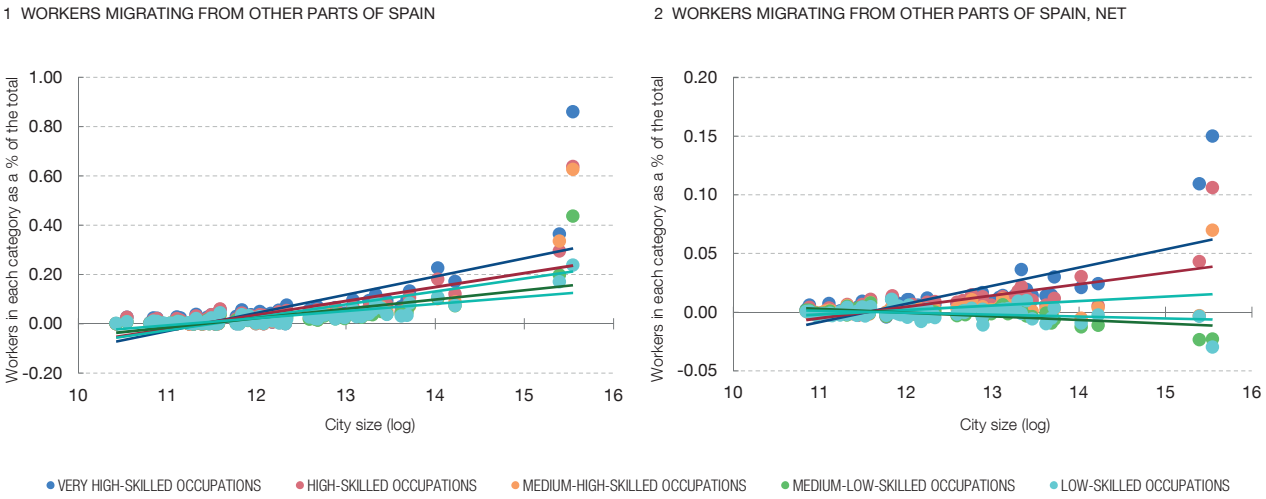
As a result of all these patterns, Spain is tending towards a growing concentration of workers in high-skilled occupations in a small number of big cities.[32] This may create greater income disparity, not only between but also within cities, as shown by the wage differences between different contribution groups in the same city and the same contribution groups in different cities (see Chart 4.19). Indeed, drawing on information from the tax authorities, between 2005 and 2018

32 This trend is also documented in the case of the United States (see Berry and Glaeser (2005)).

Chart 4.19

BIGGER CITIES RECORD NEGATIVE NET MIGRATION IN THE CASE OF WORKERS IN LOW-SKILLED OCCUPATIONS

Although there was more migration to larger urban areas than to smaller ones among workers in occupations of all skill levels, the difference is most acute among workers in more highly skilled occupations. Also, considering not only migration to but also migration from each city, the bigger cities recorded a negative net balance in the case of workers in low-skilled occupations over the period 2005-2018.



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SOURCES: Banco de España and MCVL.

labour income dispersion increased both within and between the different cities.[33] In addition, the larger urban areas have higher levels of labour income heterogeneity among their workers than the smaller urban areas (see Chart 4.20).

4 Some public policy considerations

Place-based public policies account for a significant part of public budgets. For example, at the European level there are widespread policies in place that seek to mitigate the effects of the demographic deficit in certain regions: two of the five European Investment and Structural Funds, namely the European Regional Development Fund (ERDF) and the European Agricultural Fund for Rural Development (EAFRD), together with the common agricultural policy (CAP), include among their explicit objectives balanced growth in the different regions of the European Union or economic development in rural areas. In addition, the European Social Fund (ESF)

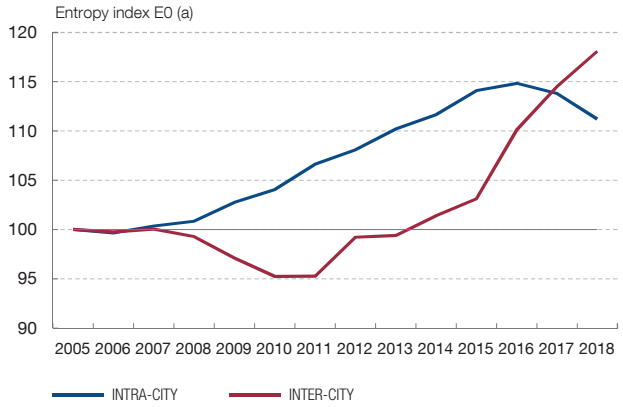
33 Specifically, the data contained in the 2005-2018 Personal Income Tax Samples (Muestras IRPF 2005-2018 IEF-AEAT (Declarantes)) are used to construct a Theil entropy index (mean log deviation), to break down the aggregated index into two components: one that proxies labour income dispersion between persons filing income tax returns in each city (within) and another that captures dispersion between average labour income in different cities (between). The first component (within) explains 97% of the degree of dispersion. For more details, see Shorrocks and Wan (2005).

Chart 4.20

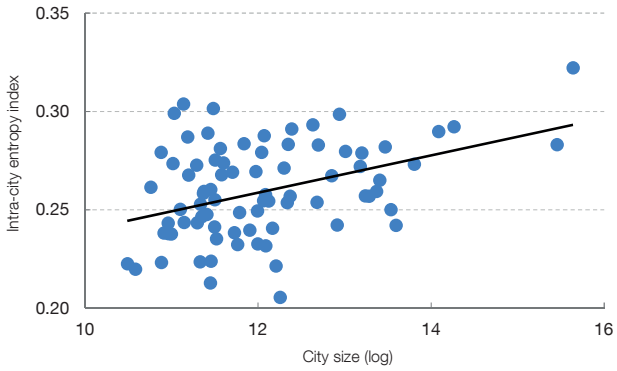
LABOUR INCOME DISPERSION HAS INCREASED SINCE 2005, BOTH WITHIN EACH CITY AND BETWEEN THE DIFFERENT CITIES

Labour income dispersion among workers in Spanish cities increased between 2005 and 2018, both within each city and between the different cities. There is also a high correlation between city size and the level of labour income dispersion.

1 DISPERSION (2005=100)



2 INTRA-CITY DISPERSION AND CITY SIZE



SOURCES: IEF-AEAT and Banco de España.

a Drawing on the data contained in the 2005-2018 Personal Income Tax Samples (Muestras IRPF 2005-2018 IEF-AEAT (Declarantes)) a Theil entropy index (mean log deviation) is constructed to break down the aggregated index into two components: one that proxies labour income dispersion between persons filing income tax returns in each city (within) and another that captures dispersion between average labour income in different cities (between). The first component (within) explains 97% of the degree of dispersion. For more details, see Shorrocks and Wan (2005).

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distributes its funding according to the relative wealth of the regions. Accordingly, 33% of the EU budget goes to economic, social and territorial cohesion policies. In the case of Spain, the main aim of the National Demographic Challenge Strategy, approved in 2017, is to design a joint response to mitigate the issues of population ageing and regional depopulation. Insofar as these policies seek to encourage development in more disadvantaged areas through public investment, subsidies, tax exemptions, etc., they may be considered redistributive policies as, by one means or another, they transfer public resources to households in more disadvantaged areas.

As in the case of all other public policies, the efficiency and efficacy of these policies must be assessed, to ensure their optimal design. The main argument for public measures in this area is their social benefit in terms of a more equitable distribution of resources.[34] But these policies may also entail costs in the form of efficiency losses. For example, if a specific geographical area receives public

34 Other arguments are based on the existence of market failures and/or externalities, insofar as firms and workers choose their locations on the basis of costs and private benefits, without taking into account the costs and benefits for society as a whole. For example, a worker and/or a firm may generate positive externalities towards other workers and/or firms in a small urban area that are not internalised when they decide to move to a larger one where the private benefits will be greater but the positive externality will, in relative terms, be smaller (see Fajgelbaum and Gaubert (2020)). However, in the Spanish case, the empirical evidence available on this type of market failures and/or externalities is very limited (see Cuberes and Moral-Benito (2021)).

support, workers and/or firms may move from other locations where marginal productivity is higher, with the consequent adverse impact on aggregate productivity (see Gaubert (2018)). In addition, it is also important to consider the opportunity cost of resources allocated to more disadvantaged areas, which could be allocated for redistributive purposes but according to other criteria, for example, income criteria (see Glaeser (2008)).[35]

A distinction must be drawn between policies that adapt to depopulation and those that aim to mitigate it. The former seek to maintain a minimum level of services to ensure people's welfare, while the latter seek to curb the demographic decline and encourage development in the medium term (see Copus et al. (2020)). This distinction is especially important in view of the two realities of the rural world documented in this chapter in the case of Spain.

In the case of the adaptation policies, the literature has identified two key factors that explain the difficulties, documented in this chapter, facing rural municipalities in the provision of certain services at the local level. First, with the existence of economies of scale in the provision of some services, the small size of many rural municipalities means that fixed costs per inhabitant are very high. Second, there are regulatory factors that could be limiting the provision of certain public services, as there is a lack of clarity in the distribution of some powers among the administrations concerned and, in addition, rural municipalities are highly reliant on transfers from other tiers of government, which may result in greater uncertainty as to the volume of resources available.[36]

In this setting, certain measures could be considered to more clearly define the distribution of powers among the different tiers of government and to boost collaboration between municipalities to exploit economies of scale. Associations of municipalities ("mancomunidades" in Spain) may play a key role in easing the difficulties that rural municipalities face to provide services. Such associations, formally established between a number of municipalities, mean that they can jointly provide services and execute works, allowing them to harness possible synergies and economies of scale. These associations would be especially beneficial were they to include larger municipalities with more drive, as they could act as hubs for the provision and distribution of services (see OECD (2013)).

The provision of digital and financial services could also be a significant catalyst for the rural world, beyond considerations of regional equality in access to services. The evidence available for Spain shows that the closure of bank branches in rural municipalities had an adverse impact on investment and on

35 According to the most recent literature, redistribution based on geographical criteria may be preferable to other forms of redistribution under certain circumstances. For instance, where population mobility is low or where there is a high concentration of highly skilled employment in certain regions (see Gaubert et al. (2021)).

36 Alloza et al. (2021) present a detailed analysis of the available literature on both these aspects.

the survival of small firms operating in those municipalities (see Martín-Oliver et al. (2020)). The development of new technologies and digital infrastructures provides an opportunity for communities to gain access to and use financial services. They may pose significant challenges for banks, but they could potentially play a very important part in mitigating the adverse effects of branch closures (see Barruetabeña (2020)).

Financial and digital education programmes are a necessary ingredient in the design of a joint strategy to defend vulnerable population groups in rural settings from financial exclusion and the digital gap. The complementarities between technological capital and the population's digital skills require that public policies address both aspects in a coordinated manner (see Cuadrado et al. (2020)). In this respect, collaboration between public authorities and financial institutions would appear to be essential to ensure that public education programmes enable rural populations to make optimal use of financial and digital services. Here, financial education programmes specifically geared to meet the demands of the rural world should play a fundamental role.[37]

The mitigation policies must be designed from an integral standpoint that takes into account, in particular, the interactions between rural and urban areas. In this respect, some regional, national and EU programmes are based on providing momentum to a single sector or group of activities, ignoring the complex and multifunctional nature of the rural world and its interactions with urban areas, without fully taking into account the institutional and economic setting, the situation of other geographical areas, interaction with other public policies or how social agents will respond. For example, as discussed earlier in this chapter, the development of the Spanish infrastructure network during the rural exodus contributed to the depopulation of rural areas as it cut transport costs and encouraged the concentration of economic activity and population in more industrialised regions. Indeed, investments in infrastructure that reduce transport costs may actually produce greater regional inequality if differences in productivity levels between the different regions persist (see Krugman (1991)). Moreover, the available evidence is inconclusive regarding the impact of policies such as tax incentives for firms (see Button (2019)) or relocation of public institutions (see Becker et al. (2021)). In other words, partial policies that ignore general equilibrium effects and/or the multi-faceted nature of the challenge may possibly not have the desired effects, and they may even trigger opposite effects to those sought, despite their potentially high opportunity cost.

Certain international experiences, conveniently adapted to Spain's particular circumstances, may be considered benchmarks. In this regard, the role and

37 See, for example, the cooperation agreement to develop the Financial Education Plan signed by the Banco de España, the National Securities Market Commission (CNMV) and the Ministry of Consumer Affairs.

trajectory of the Highlands and Islands Enterprise (HIE), which was created in 1965 with the aim of reversing rural depopulation trends in the Scottish Highlands, stands out. The population in the region fell by more than 15% between 1900 and 1965, and has risen by more than 20% since the HIE was launched in 1965, compared with growth of just 2% in the country overall. The main policies developed by the HIE include providing courses that are tailored to the needs of the local business community, in an endeavour to be able to identify and retain young talent in the region.[38] This is especially relevant to the case of Spain, in light of the evidence presented in this chapter. The close coordination between training and promoting local entrepreneurship, developed in part through social enterprises,[39] also stands out (see Southern Sparsely Populated Areas network (2017)). The Japanese experience may also be considered a benchmark for Spain since Japan is one of the highest risk countries in the world in terms of rural depopulation as a consequence of population ageing (see Matanle and Rausch (2011)). In this case, the "compact and connect" strategy, which consisted in combining municipalities and reducing their number, from 3,200 to 1,700 between 2000 and 2013, stands out (see Kato (2014)). This consolidation process was not merely a matter of combining administrations, but rather a result of integral planning, with a view to harnessing the opportunities of each group of municipalities around a hub which constitutes the driving force, and with special emphasis on retaining the younger population in line with the Scottish experience. Lastly, the Italian Agenzia per la Coesione Territoriale[40] also deserves a mention. This agency, created in 2013, is considered an example of good practice for its development of an integral strategy in the fight against rural depopulation. One essential element of this strategy is the design and coordination of various projects, to be funded through the European Structural and Investment Funds, to introduce local development and innovation policies in the provision of services in rural areas, with a holistic view at the national level (see European Network for Rural Development (2020)).

Digitalisation, population ageing and the energy transition not only pose new challenges, but also opportunities for developing the rural world. These trends pose some risks to rural areas, associated with the digital gap between generations

38 The University of the Highlands and Islands (UHI) plays a vital role in generating talent and developing innovative business projects. It is a public university with a mix of public/private funding. Its main aim is to provide courses tailored to the needs of the region and its business community. Also, given the region's low population density, the UHI is a leading advocate of online learning. In 2017 it was the European university with the highest proportion of classes delivered by videoconferencing.

39 These enterprises are part of the social economy, which encompasses all economic and business activities which, while operating in the private sphere, seek a collective interest that will benefit their members and/or society as a whole. Accordingly, while being economically viable, they focus on their social purpose rather than on profit-making.

40 Other countries outside Europe have also recently opted for this type of agency. For example, in 2019 Australia established the Centre for Population, whose main objective is to achieve more balanced population growth between the different regions. The system is organised around four main pillars: (i) establishing common metrics and objectives at the national level; (ii) encouraging greater collaboration between different jurisdictions; (iii) enhancing transparency and cost-benefit analysis of the different measures; and (iv) identifying success cases and facilitating common initiatives.

and between geographical areas. This gap could, for example, hinder the older rural population's access to services as headway is made in the provision of digital services on different fronts. However, as analysed below, at the same time the trends offer opportunities that should not be underestimated.

Digitalisation. The wide gap in the development of digital infrastructures between rural and urban areas could warrant investment in next generation broadband networks in municipalities that still lack access, to enable them to become more competitive in the digital world. Actions to provide the public with support and training in the new technologies would be an indispensable complement, to make optimal use of the digital infrastructures, as indicated earlier. These municipalities could thus achieve not only access to digital services and remote working for their inhabitants, but also access to e-commerce as a sales channel for their firms.

Demographic challenge. One of the most noteworthy peculiarities of the rural world is its ageing population, which increasingly demands products and services to meet its specific needs. Accordingly, initiatives for the "third age" would be desirable, linked at least partly to rural and smaller urban areas, which could offer certain comparative advantages for the provision of some of the services demanded by the older population (residential services, leisure, etc.).

Energy transition. Projects linked to the development of highly innovative alternative energy sources present an opportunity for rural and smaller urban communities. These initiatives could be developed in industries that currently have a low presence in these areas and that could flourish in new locations with low population density. According to data from the Ministry for the Ecological Transition and the Demographic Challenge, 77% of total installed renewable energy capacity in Spain corresponds to plants located in rural municipalities.

5 Conclusions

The secular depopulation of Spanish rural areas has taken centre stage in the public debate in recent years. With a view to understanding the causes and consequences of this process, this chapter provides an analysis of changes in the population in Spanish towns and cities from an international perspective. While Spain has been part of the global trend towards urbanisation, set against its European peers it is an outlier due to its high percentage of uninhabited territory, which results in a very high incidence of rural municipalities at risk of depopulation. In addition, the decline in young adult populations in smaller urban areas in favour of larger ones proves to be a key factor behind rural depopulation and, in turn, gives rise to a higher concentration of workers in high-skilled occupations in a few large urban areas.

The efficiency and efficacy of policies in this area must be assessed, to ensure their optimal design. In light of the evidence presented in this chapter, two types of policies to alleviate the effects of population concentration in big cities may be considered. First, adaptation policies to ensure that a certain level of services is available to inhabitants of rural municipalities. Second, mitigation policies that seek to reverse the population dynamics in those municipalities with growth potential given the circumstances and opportunities in their surroundings. In any event, any public policy should be assessed in depth, comparing the potential benefits in terms of greater regional equity with the costs it might incur for society as a whole, so as to minimise possible efficiency losses in the use of public resources.

To conclude, the analysis contained in this chapter is essentially intended to serve as a diagnosis. In this respect, the discussion on the possible role to be played by public policies should be viewed as an initial approach to the surface of what is a very complex and multi-faceted issue. Due to their importance to society and the Spanish economy, the matters broached in this chapter require a more detailed analysis, on which to base a consensus on a comprehensive and lasting strategy for the depopulation challenge ahead.

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Box 4.1

THE SPATIAL DISTRIBUTION OF POPULATION IN SPAIN

As discussed in the main text, Spain is markedly idiosyncratic, from a European perspective, as regards population concentration patterns and the prevalence of uninhabited areas, even after accounting for the country's geo-climatic particularities. This box explores this issue in detail.[1]

Eurostat provides data for 2011 on the spatial distribution of population based on 1-km^2 grid cells covering the whole of Europe. As this level of spatial resolution is not dependent on administrative boundaries, we can more accurately capture the relevant economic density in which individuals and firms interact. Conversely, traditional indicators, such as the ratio of the number of inhabitants resident in an administrative division to the surface area of that division, may convey a distorted picture of the level of population concentration if the division has a large natural or uninhabited surface area.[2]

Eurostat data (GEOSTAT 2011) reveal two differentiating patterns in the distribution of the Spanish population with respect to other European countries. First, Spain has a very large uninhabited surface area. Only 13% of the 1-km^2 grid cells in Spanish territory are populated, the lowest percentage in the European Union and some distance off countries such as France, Italy, Germany and Portugal, where 68%, 57%, 60% and 47% of the grid cells have a positive number of inhabitants (see Chart 1).

Second, the Spanish population is highly concentrated. Specifically, each populated grid cell hosts, on average, 737 inhabitants, the second highest value in the European Union and well above the levels of the above-mentioned countries, all of which are below 400 inhabitants per populated square kilometre. Significantly, the proportion of inhabitants to total surface area in Spain is 94 inhabitants per square kilometre, similar to the European average and close to the values for France and Portugal, with 114 and 119 inhabitants per square kilometre, respectively.

One aspect determining the spatial distribution of population and, therefore, a factor which might explain the high prevalence of uninhabited territory in Spain is the country's climatic and orographic features. In particular, Spain stands out in terms of its climatic diversity, the extreme temperatures reached in certain areas, its high average altitude and its extensive mountainous terrain.

To assess to what extent these climatic and geographic particularities may justify low settlement density in Spain and the high spatial concentration, we estimate a regression model to explain population density and concentration in the European regions (NUTS3, provinces in the case of Spain) as a function of their geo-climatic features and of a region fixed effect.

We measure the two dependent variables —density and concentration— at 250-km^2 grid cell level. We define settlement density as the percentage of 10-km^2 cells inhabited within each 250-km^2 grid cell. We calculate spatial concentration as the percentage of the population living in the most populated one percent of the surface area in each grid cell. The geographic and climatic factors included in the model (at cell level) are temperature, rainfall, altitude, ruggedness of terrain, soil quality and distance from the coast. The inclusion of these explanatory variables would allow the region fixed effect to be interpreted as the portion of population density and concentration in that region which cannot be accounted for by its geo-climatic features. This fixed effect can therefore be used as a proxy for certain anomalies in the distribution of population.

Chart 2.1 confirms Spain's unique characteristics in terms of settlement density. The vertical axis shows the value of the region fixed effect in the model without controlling for geo-climatic factors, i.e. the average settlement density in the grid cells within each region with respect to the omitted category (the Paris region). The chart shows that a large share of the Spanish provinces (marked with red dots) exhibit the lowest levels of settlement density, along with

1 This box summarises part of the analysis published in E. Gutiérrez, E. Moral-Benito, D. Oto-Peralías and R. Ramos (2020): "The spatial distribution of population in Spain: An anomaly in European perspective", *Working Paper* No 2028, Banco de España.

2 See G. Duranton and D. Puga (2020): "The economics of urban density". *Journal of Economic Perspectives,* 34 (3), pp. 3-26.

other regions in the Nordic countries, such as Iceland, Norway and Sweden.

When controlling for geo-climatic factors (horizontal axis), the value of the fixed effect stands above the omitted category in the case of these Nordic regions and, therefore, their low settlement density can be fully explained by their climatic and orographic features. Conversely, many Spanish provinces, after accounting for the effect of geo-climatic factors, continue to show an extraordinarily low settlement density. In particular, 16 of the 20 regions with the largest share of empty territory, after taking into account their geographic and climatic particularities, are located in Spain.

Chart 2.2 shows the same analysis using population concentration as a dependent variable. As can be seen, a large amount of Spanish provinces (highlighted in red) exhibit the highest concentration levels among European regions, even after accounting for the effect of the above-mentioned geo-climatic factors.

We may thus conclude that Spain shows a spatial distribution of population that is unique in Europe. On the one hand, a large proportion of its territory is uninhabited. On the other, inhabited surface areas are characterised by a high level of population concentration. Further, although Spain's geo-climatic features impact the territorial distribution of the population, they cannot alone explain

Chart 1
SPAIN HAS A SINGULARLY LOW SETTLEMENT DENSITY COMPARED WITH THE REST OF EUROPE

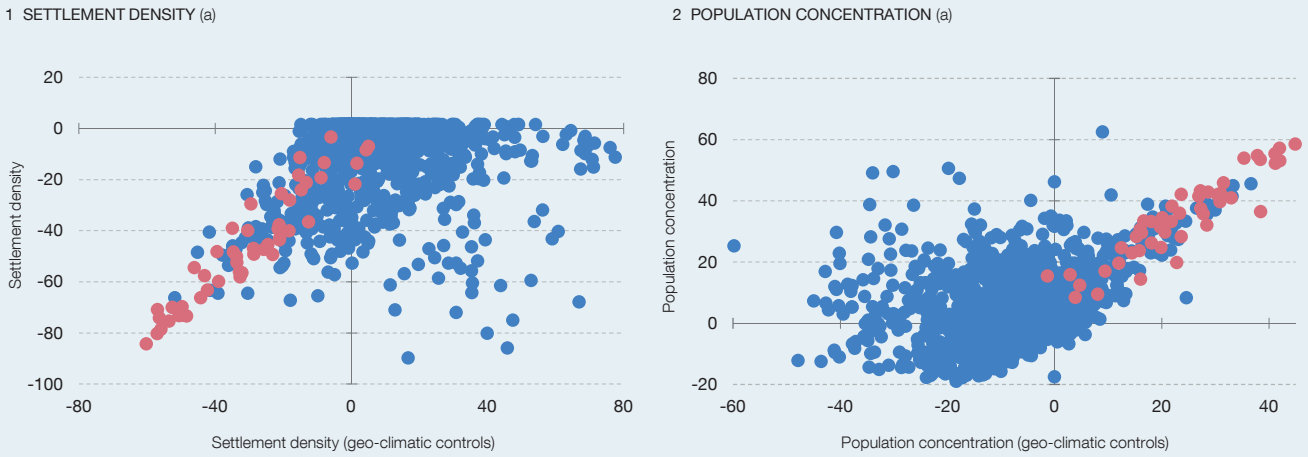
Only 13% of the 1-km^2 grid cells of Spanish territory are populated (depicted by the blue points on the map). This percentage is the lowest in the European Union and is some distance off other Member States such as France, Italy, Germany and Portugal.

SOURCE: Eurostat.

these idiosyncratic patterns. In this connection, the literature has highlighted some possible reasons. In particular, it has been documented that the scarcity of inhabited territory is not a recent phenomenon. For example, in the 17th century there were already accounts attesting to the scarcity of settlements in Spanish territory.[3]

Chart 2
GEO-CLIMATIC FACTORS CANNOT ALONE EXPLAIN THE LOW SETTLEMENT DENSITY AND HIGH POPULATION CONCENTRATION IN SPAIN

The Spanish provinces, highlighted in red, show a bigger proportion of unpopulated territory and a greater concentration of population compared with other regions in Europe, even after taking into account the influence of geo-climatic factors.



SOURCE: Gutiérrez et al. (2020).

a Each point refers to the difference in settlement density (or population concentration) of each European province relative to the Paris region, which is considered as the omitted category in this exercise. For example, a value of -20 indicates that settlement density or population concentration in a specific province stands 20 pp below Paris. See Gutiérrez et al. (2020) for more details on this methodology.

3 See G. Brenan (1950): "The Spanish labyrinth: An account of the social and political background of the Spanish Civil War". Cambridge. Cambridge University Press. In this respect, some studies have pointed out that the mediaeval conflict between the Christian kingdoms and Al-Andalus, characterised by frontier instability and the requirement to occupy large land masses with few people, is a historical event that might have shaped, at least in part, current settlement patterns. For more details on this hypothesis, see D. Oto-Peralías and D. Romero-Ávila (2016): "The economic consequences of the Spanish Reconquest: The long-term effects of medieval conquest and colonization." *Journal of Economic Growth,* 21, pp. 409-464 and D. Oto-Peralías (2020): "Frontiers, warfare, and economic geography. The case of Spain." *Journal of Development Economics,* 146, pp. 1-19.

Box 4.2

THE RURAL EXODUS AND THE CONCENTRATION OF ECONOMIC ACTIVITY IN SPAIN

The main body of the text linked the Spanish economy's belated process of deagriculturalisation to the greater spatial concentration of the population and of economic activity currently seen relative to other countries. This box aims to set out details of this evidence and to discuss some mechanisms that justify this hypothesis.[1]

The economic development of nations is characterised by a decline in the relative demand for agricultural products in favour of industrial products and services. This transformation in the economic structure of countries poses a challenge for those regions whose main activity in the initial stages of development is agriculture. In particular, the economic future of agricultural regions depends on their capacity to industrialise, since their inhabitants will otherwise migrate to those regions with a more dynamic industrial sector offering better job prospects. Traditionally, the industrialisation capacity of initially agricultural regions has been deemed to depend on their convergence in terms of productivity with those regions leading the way in industrialisation. However, changes in migration and inter-regional trade costs may also be determining factors. For example, a reduction in internal migration and trade costs enables more industrialised regions to attract a larger amount of workers and, in turn, to sell its products to the other regions, increasing the degree of spatial concentration of industry.

Indeed, although the relative productivity of Spain's provinces converged as from the mid-20th century, the predominantly agricultural provinces did not manage to industrialise and experienced negative migratory flows to the provinces with a greater weight of industry. In particular, drawing on information on average labour productivity in each sector and province since 1940, it is seen how the provinces with higher productivity growth in the industrial sector from 1940 were, precisely, those with a lower initial level of productivity. Moreover, this convergence pattern is also seen in agriculture, services and construction (see Chart 1).

Yet despite this convergence in relative productivities, the initially more agricultural provinces underwent the loss of major population swathes in favour of provinces with a greater weight of industry, especially between 1950 and 1970. For example, provinces such as Ávila, Jaén, Lugo and Teruel, more than two-thirds of whose employment was concentrated in agriculture in 1940, lost population, whereas more industrial provinces such as Barcelona, Madrid, Valencia and Vizcaya, where less than one-third of employment was in agriculture in 1940, attracted considerable population flows (see Chart 2). The outcome of this intense inter-provincial migratory process is visible today insofar as most of the provinces initially specialising in agriculture have not recovered their 1940 population levels despite the substantial growth of the population at the national level.

These developments pose something of a paradox in light of the traditional models of structural change. Unlike the case observed for Spain, these models predict, for fixed transport and migration costs, the industrialisation of those agricultural regions that are capable of converging in terms of their relative productivity. Thus, to analyse the Spanish development experience and its consequences for the spatial distribution of activity, it is essential to bear in mind additional mechanisms related to the decline in trade and migration costs in conjunction with the changes in cross-regional relative sectoral productivity.

To quantify the significance of the different mechanisms that influence the geographical dimension of development and structural change, we consider a macroeconomic model of structural change with migration and domestic trade.[2] Specifically, the model postulates an economy comprising four sectors of activity (agriculture, construction, manufacturing and services) and a set of provinces. In each province and sector there are many potential producers, but only the most productive survive the competition at the national level. Further, the goods and services produced by the sectors and consumed by households are subject to heterogeneous inter-provincial trade costs across sectors and provinces. In turn, workers may choose to migrate to provinces offering better opportunities, but always subject to migration costs and to their own heterogeneous preferences to live in specific areas. Against this background, the cross-provincial

1 This box summarises part of the analysis developed in Budí-Ors and J. Pijoan-Mas (2021): "Migration, Trade, and Structural Change", mimeo.

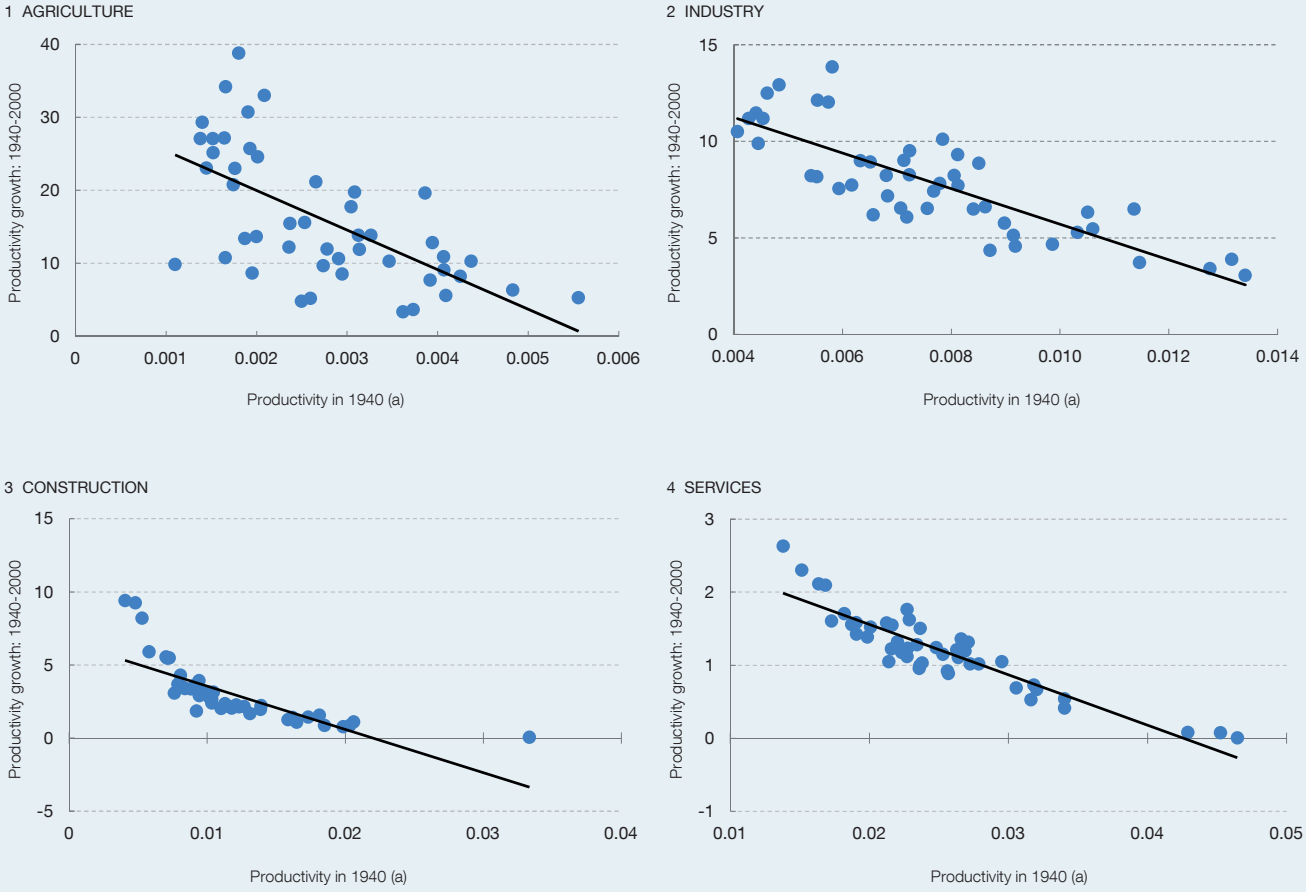
2 Interested readers can consult the essential features of these types of models in L. Caliendo, M. Dvorkin, and F. Parro (2019): "Trade and Labor Market Dynamics: General Equilibrium Analysis of the China Trade Shock". *Econometrica,* 87, pp 741-835; Morten, M. and J. Oliveira (2018): "The Effects of Roads on Trade and Migration: Evidence from a Planned Capital City". NBER Working Paper 22158.

distribution of competitive advantages is key to the development of different sectors. Thus, the most productive provinces in industry will tend to attract workers from the other provinces to produce manufactured goods and sell them to the rest of the country. Conversely, the provinces that import industrial goods will reduce their industrial production, concentrating it in a sub-set of goods in which they are more productive. As a result, industrial productivity growth in the provinces that do not industrialise stems partly from a composition effect. The significance of this mechanism will be greater the bigger the cross-regional differences in sectoral productivity and the lower the inter-provincial trade and migration costs.

Hence, the model's mechanisms allow us to rationalise the apparently paradoxical experience of Spanish development, characterised by the depopulation of initially agricultural regions associated with structural change despite convergence in productivities, via a decline in migration and transport costs. This would be so inasmuch as the decline in transport and migration costs were to come about at greater speed than convergence in productivities of the less developed provinces. While there is no information source that enables us to quantify accurately the reduction in transport costs in Spain, it is worth mentioning some specific figures that suggest a very significant decline in the rural exodus years. For instance,

Chart 1
THE PRODUCTIVITY OF SPANISH PROVINCES HAS CONVERGED IN ALL SECTORS OF ACTIVITY

Those provinces with lower productivity levels in 1940 experienced higher productivity growth in subsequent decades. This pattern of convergence is observable in all sectors of activity.



SOURCES: INE and Fundación BBVA.

a Productivity in 1940 in millions of pesetas per worker.

the emergence of the Seat 600 in the 1950s pioneered the widespread use of the motor vehicle, whereby from 1950 to 1960 the number of cars tripled, lorries doubled and buses grew by 50%. To tackle the unprecedented increase in journeys, projects were launched to modernise and extend the road network. These included the 1962 Road Modernisation Plan and the 1965 REDIA Plan. Based on information from the Ministry of Transport, Mobility and Urban Planning,[3] the national road network increased from 139,212 km in 1970 to 155,675 km in the late 1980s. Note that this 12% increase in two decades does not take into account the improvement in the quality and width of highways, and contrasts with the 1% increase in the past two decades.

Indeed, the fall in merchandise transport and migration costs allows for the concentration of industrial employment in a few leader regions, which export their products to the agricultural regions despite the relative growth of industrial productivity in the latter. By contrast, owing to their less tradable nature, the production of services or construction is not concentrated in specific areas of the national territory with the same intensity. As a result, the pattern of structural change in the initially agricultural regions exhibits a decline in agricultural employment, which is reassigned to services or construction production in the same province or to manufacturing production in other regions, but not to a local industry. The industrial regions, for their part, with little employment in agriculture in 1940, increase their employment in manufacturing and their population size thanks to the arrival of agricultural workers from other regions.

By way of illustration, this pattern can be seen most markedly in two provinces representative of each group: Jaén and Vizcaya (see Chart 3). Between 1940 and 1980, Jaén lost 100,000 jobs in agriculture. However, unlike the classic pattern of structural change, no growth was discernible in provincial employment in industry or construction, and there was only a slight increase in the services sector. The 100,000 workers ejected from the land did not find new jobs in Jaén, but migrated to other provinces. Vizcaya, in contrast, generated 80,000 industrial jobs and 100,000 services jobs during the same 1940-1980 period. A portion of these workers might have come from agriculture in Vizcaya, which lost 30,000 workers, but

Chart 2
TOTAL EMPLOYMENT FELL SIGNIFICANTLY IN THOSE PROVINCES WITH A GREATER WEIGHT OF AGRICULTURE IN 1940

The provinces with a greater weight of employment in agriculture in 1940 were those that lost employment in subsequent decades. Also the provinces with a lower weight of agricultural employment in 1940 experienced significant increases in their total employment thereafter. However, this pattern is not observable in the United States, whose structural change process began in 1880.

1 CHANGE IN TOTAL EMPLOYMENT AND INITIAL WEIGHT OF AGRICULTURAL EMPLOYMENT IN SPANISH PROVINCES (1940-2001)

2 CHANGE IN TOTAL EMPLOYMENT AND INITIAL WEIGHT OF AGRICULTURAL EMPLOYMENT IN US REGIONS (1880-1940)

SOURCES: INE, Fundación BBVA and US Census.

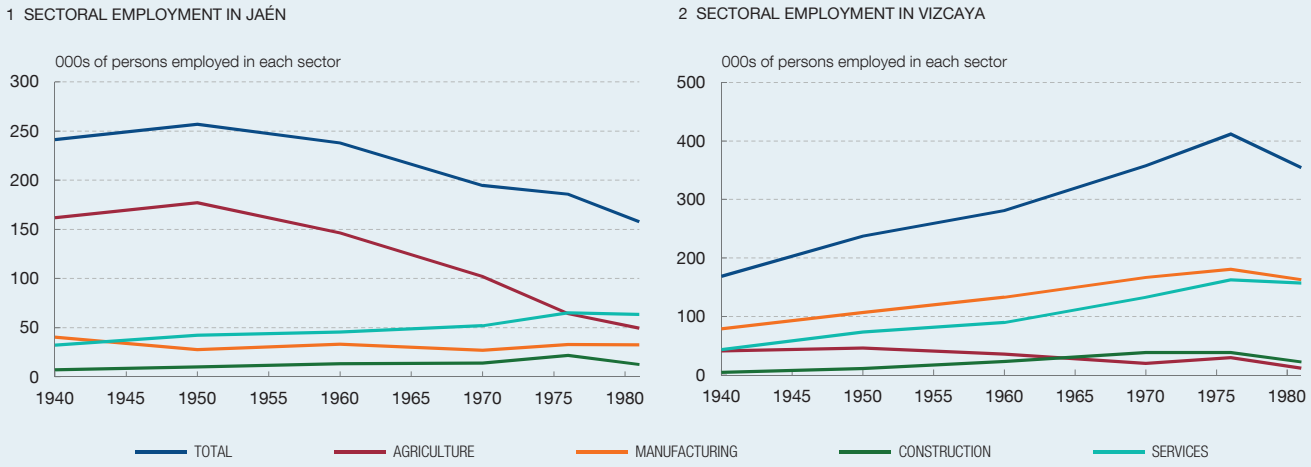
3 See Ministerio de Transportes, Movilidad y Agenda Urbana, Catálogo y evolución de la red de carreteras.

the rest came from other provinces. Consequently, Jaén lost 40% of its initial employment while in Vizcaya it more than doubled in an inter-provincial and inter-sectoral migration process.

Finally, these development patterns in the Spanish economy contrast with those in other countries. For example, the evidence available for the United States shows that initially agricultural regions did manage, generally, to industrialise and grow in terms of population.[4] Specifically, the relationship between the initial proportion of farm employment and regional employment growth was very weak in the case of the United States between 1880 and 1940, the period in which the US structural transformation took place (see Chart 2). A plausible explanation based on the theory described in this box is that transport/trade costs and internal migration costs at the end of the 19th century could not be assumed by most economic agents. That gave rise to each region, including the initially agricultural ones, having to develop their own industrial sector. Accordingly, we may conclude that the scale of the trade and internal migration barriers in the initial stages of industrialisation is a major determinant of the degree of spatial concentration of a country's economic activity.

Chart 3
THE CONSEQUENCES OF INTER-PROVINCIAL MIGRATIONS ON EMPLOYMENT IN DIFFERENT SECTORS IN THE CASES OF JAÉN AND VIZCAYA

An eminently agricultural province in 1940, such as Jaén, experienced a significant decline in total employment owing to the loss of agricultural employment, which was not accompanied by an increase in employment in other productive sectors. An eminently industrial province in 1940, such as Vizcaya, experienced a significant increase in its total employment owing to employment growth in industry and services, despite the diminished momentum of agricultural employment.



SOURCES: INE and Fundación BBVA.

4 See F. Eckert and M. Peters (2018): "Spatial structural change". mimeo.

INDEX OF PHOTOGRAPHS

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ACRONYMS AND ABBREVIATIONS

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
CBI	Central Balance Sheet Data Office integrated database
CBILS	Coronavirus Business Interruption Loan Scheme
CBQ	Central Balance Sheet Data Office Quarterly Survey
CBSO	Central Balance Sheet Data Office
CCFF	COVID-19 Corporate Financing Facility
CCR	Central Credit Register
CCyB	Countercyclical capital buffer
CNE	Spanish National Accounts
CNMV	National Securities Market Commission
CPI	Consumer Price Index
CRII	Coronavirus Response Investment Initiative
CSPP	Corporate sector purchase programme
DGF	Deposit Guarantee Fund
EBA	European Banking Authority
EBAE	Banco de España Business Activity Survey
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EDP	Excessive Deficit Procedure
EFF	Spanish Survey of Household Finances
EFSF	European Financial Stability Facility
EIB	European Investment Bank
EMU	Economic and Monetary Union
EONIA	Euro Overnight Index Average
EPA	Official Spanish Labour Force Survey
ERTE	Furlough-like and short-time work schemes
ESA 2010	European System of National and Regional Accounts
ESCB	European System of Central Banks
ESFS	European System of Financial Supervisors
ESM	European Stability Mechanism
ESRB	European Systemic Risk Board
EU	European Union
EURIBOR	Euro Interbank Offered Rate
EUROSTAT	Statistical Office of the European Communities
FASE	Financial Accounts of the Spanish Economy
FDI	Foreign direct investment
FROB	Fund for the Orderly Restructuring of the Banking Sector
FSB	Financial Stability Board
GDI	Gross disposable income
GDP	Gross domestic product
GFCF	Gross fixed capital formation
GNP	Gross national product
GVA	Gross value added
HICP	Harmonised Index of Consumer Prices
ICO	Official Credit Institute
IFRSs	International Financial Reporting Standards
IGAE	National Audit Office
IIP	International Investment Position
IMF	International Monetary Fund
IMV	Minimum income scheme
INE	National Statistics Institute
LTROs	Longer-term refinancing operations
MREL	Minimum requirement for own funds and eligible liabilities
MROs	Main refinancing operations
MTBE	Quarterly Model of the Banco de España
NCBs	National central banks
NECP	National Energy and Climate Plan
NFCs	Non-financial corporations
NGEU	Next Generation EU
NPISHs	Non-profit institutions serving households
NPLs	Non-performing loans
OECD	Organisation for Economic Co-operation and Development
PELTROs	Pandemic emergency longer-term refinancing operations
PEPP	Pandemic Emergency Purchase Programme
PMI	Purchasing Managers' Index
PNACC	National Plan for Adapting to Climate Change
PPP	Purchasing power parity
QNA	Quarterly National Accounts
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
SDRs	Special Drawing Rights
SGP	Stability and Growth Pact
SMEs	Small and medium-sized enterprises
SRB	Single Resolution Board
SRM	Single Resolution Mechanism
SSM	Single Supervisory Mechanism
SURE	Support to Mitigate Unemployment Risks in an Emergency
TFP	Total factor productivity
TLTROs	Targeted longer-tem refinancing operations
VAT	Value Added Tax
WHO	World Health 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	HRK (Croatian kuna)
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.