2023

INVESTMENT REPORT
2023/2024

KEY FINDINGS

Transforming for competitiveness

European Investment Bank

2024

EUROPEAN INVESTMENT BANK INVESTMENT REPORT
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Investment Report 2023/2024: Transforming for competitiveness – Key findings

About the report
The annual EIB report on investment and investment finance is a product of the EIB Economics Department. The report provides a comprehensive overview of the developments and drivers of investment and investment finance in the European Union. It combines an analysis and understanding of key market trends and developments, with a thematic focus explored in greater depth. This year, the focus is on Europe's transition to an innovative and green future. The report draws extensively on the results of the annual EIB Investment Survey (EIBIS) and the EIB Municipality Survey, combining internal EIB analysis with contributions from leading experts in the field.

About the Economics Department of the EIB
The mission of the EIB Economics Department is to provide economic analyses and studies to support the Bank in its operations and to help define its positioning, strategy and policy. The director of Economics Department, Debora Revoltella, heads a team of 40 economists.

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The full version of the Investment Report 2023/2024: Transforming for competitiveness can be downloaded at:

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Introduction

The European economy stagnated in the second half of 2023, after performing strongly in the aftermath of the pandemic. Going forward, it will remain under pressure from slower growth and challenges to European competitiveness, while also navigating the green transition. After the pandemic, coordinated fiscal support from national governments and EU institutions proved critical, underpinning Europe's economic resilience and spurring the public and private investment needed to transform and modernise the economy. Some progress has been made in digitalisation, energy efficiency, decarbonisation and building up the resilience of supply chains.

The pace of change needs to accelerate, even as investment becomes harder to sustain. To remain competitive in a sustainable way, the European Union and its members should focus on improving productivity, encouraging innovation, addressing skill gaps, scaling up new technologies and supporting young, dynamic firms. To stay ahead, Europe needs to invest in bolstering supply chains, given the emerging challenges of deglobalisation, such as protectionist policies and insecure trade routes. It needs to transform its economy, making it more digital and less dependent on fossil fuels. Amid tight monetary policy, and as governments embark on fiscal consolidation, public financing will need to be much more targeted. It should focus on instruments that are catalytic, in that they align private-sector incentives with the goals of Europe's economic transformation. Europe-wide policy instruments will be particularly important, as they preserve the level playing field within the single market. The goal should be to create an environment that enables the digital and green transformation, reduces uncertainty, improves the availability of skills and ensures reliable and affordable energy, all the while leveraging the power of the single market.

As growth slows and downside risks increase, the challenge of competitiveness returns to the fore

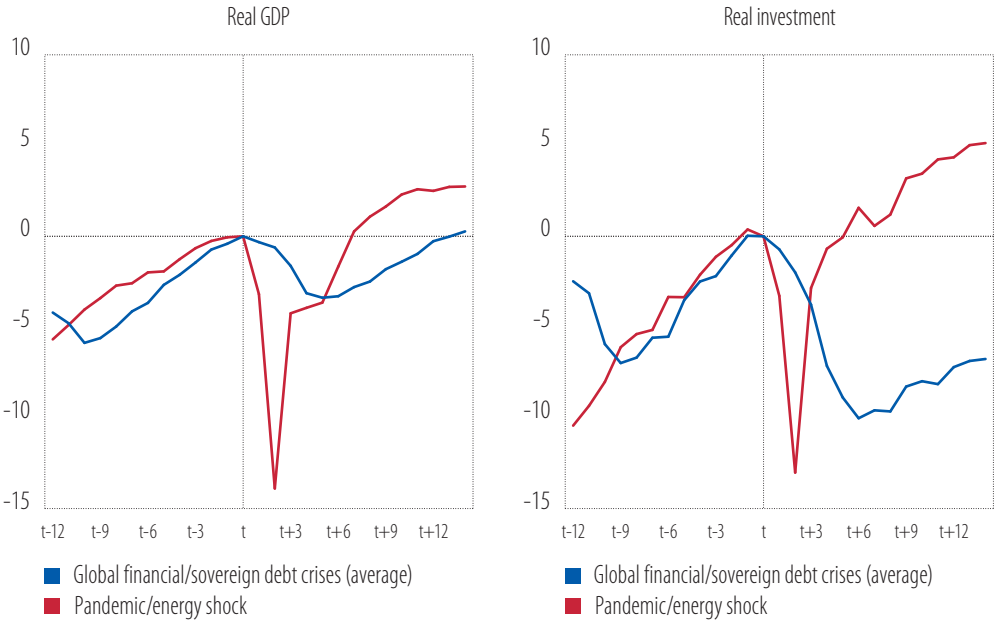
The combined shock of the pandemic and the energy crisis hit the European economy hard, but investment has proved significantly more resilient than in past crises. The economy rebounded quickly after the pandemic, buoyed by substantial policy support. Moreover, while the private sector entered the global financial crisis with excess debt, it faced the pandemic with financial reserves that acted as a buffer. The energy shock of 2022 once again buffeted the economy, and dealing with the crisis required additional fiscal support. At the same time, rising inflationary pressures triggered a tightening of monetary policies. As a result, growth abated and continued to decline in 2023, with intensifying downside risks. In this context, the resilience of investment has been a positive surprise. Investment rebounded rapidly in 2021 and expanded steadily, bringing real investment back to pre-pandemic levels after only six quarters, a pattern that contrasts with previous crises (Figure 1).

Investment growth is increasingly driven by machinery, equipment, intangible assets and non-residential construction. The strong recovery of investment following the pandemic was underpinned by expanding residential investment, but this weakened in the second half of 2022 in the face of monetary tightening and the dampening effect it had on housing markets. Since then, investment in machinery, equipment and intellectual property have taken up the slack, even though firms have been exposed to the same financial tightening (Figure 2). Strong firm profits helped support investment, as did ongoing public policy support.

Figure 1

GDP and investment trends

Pandemic/energy shock vs. the global financial/sovereign debt crises (deviation from the business cycle peak, in percentage points)

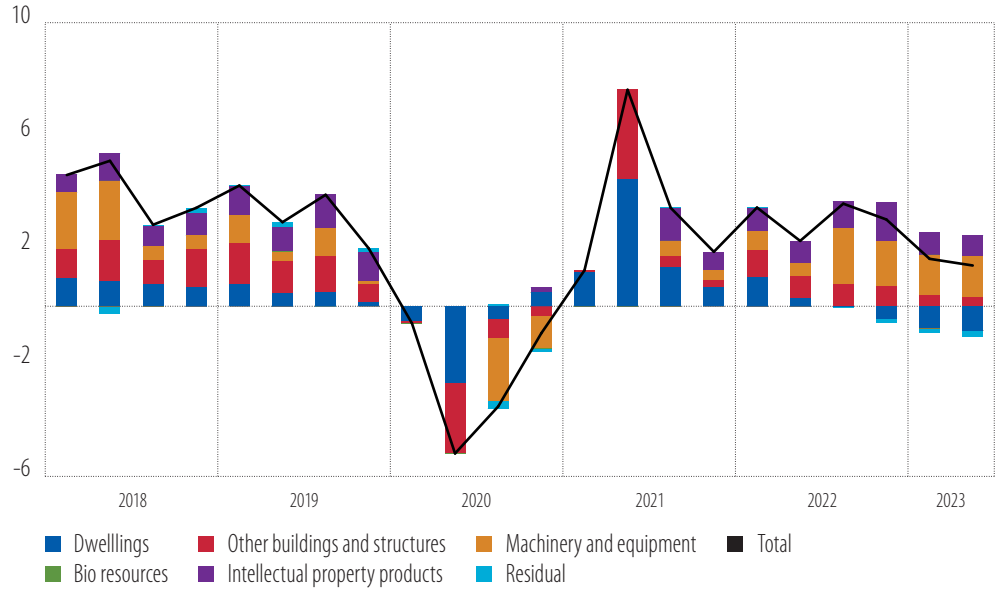


Source: *Eurostat national accounts database.*

Note: *The X-axis is time in quarters before and after the business cycle peak (t), which for the most recent period is the fourth quarter of 2019. The global financial crisis took place from the first quarter of 2008 to the second quarter of 2009 and the sovereign debt crisis from the third quarter of 2011 to the first quarter of 2013. GDP refers to gross domestic product.*

Figure 2

Contributions to EU investment growth (gross fixed capital formation, % change from the same period a year earlier)**, by asset class**

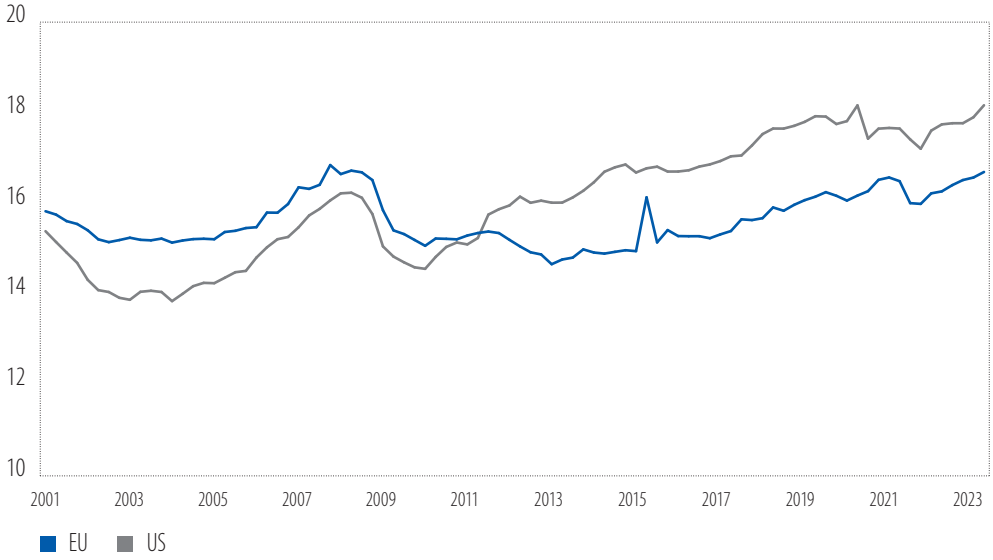


Source: *Eurostat. Data exclude Ireland.*

The resilience of investment is good news, but the gap in productive investment between Europe and the United States remains a challenge for European competitiveness. The resilience of investment means that productive investment (which excludes investment in housing) has continued to rise as a share of gross domestic product (GDP). This has been enough to keep pace with the rate of growth in productive investment in the United States. Europe shows no sign of falling (further) behind, as it did during the sovereign debt crisis. However, the gap remains at around 1.5 percentage points (Figure 3). Different levels of investment in machinery, equipment and intellectual property are behind this gap. The lack of investment represented by the gap is a significant cause for concern. Deglobalisation and the digital and green transitions require structural shifts in the European economy, which must also include a strong focus on developing skills.

Figure 3

Productive investment (real gross fixed capital formation excluding residential investment, % of real GDP)



Source: *Eurostat and Organisation for Economic Co-operation and Development (OECD) national accounts.*
Note: *European Union excluding Ireland. Productive investment includes all investment outside of residential investment.*

Looking back, policy intervention proved critical, underpinning public and private investment and allowing firms to step up their transformation

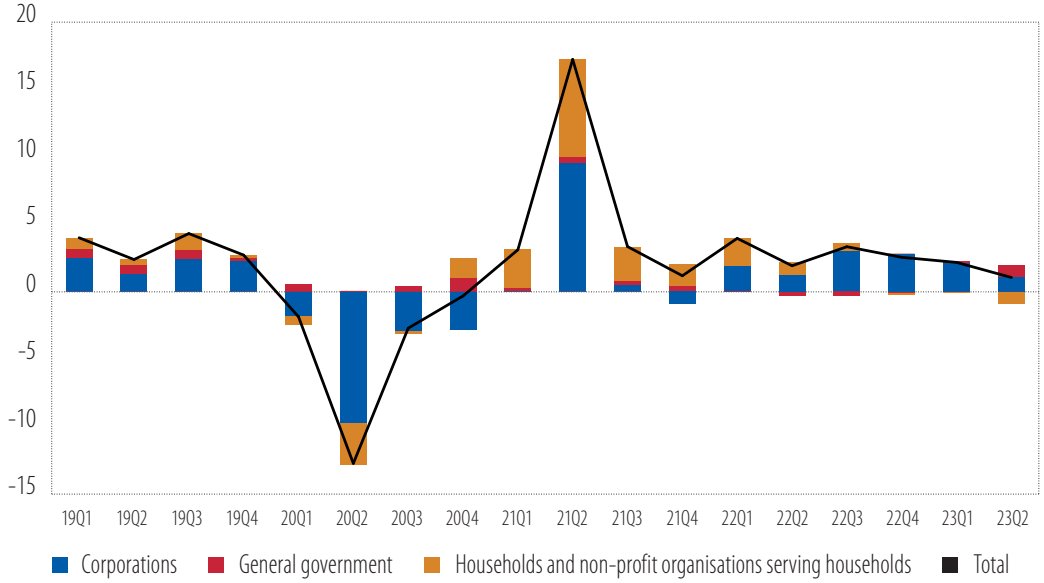
Public intervention at the national and EU level has played an essential role in cushioning the effects of shocks, allowing investment to recover strongly, driven first by households and more recently by companies. Accommodative fiscal policies meant that public investment remained resilient throughout the pandemic. Moreover, several types of fiscal spending supported firms and households, paving the way for a strong, demand-driven recovery. Households were the main driver of the recovery in investment from the fourth quarter of 2020. But Russia's invasion of Ukraine, the energy shock, inflation and rising interest rates then brought household investment to a standstill in mid-2022. Thereafter, the corporate sector, having benefited from public support and strong demand, took over as almost the sole driver of investment growth (Figure 4).

The performance of public investment since the start of the pandemic stands in remarkable contrast to the historical record of economic crises, thanks in part to the suspension of EU fiscal rules. The share of public investment in GDP increased sharply in 2020, as GDP fell. Since then, it has remained stable, even as GDP recovered. This performance contrasts with the average pattern of historical crises from 26 countries in the Organisation for Economic Co-operation and Development (OECD). Public

investment in those countries fell for at least three years after the peak of a crisis (Figure 5). The suspension of EU fiscal rules played an important part in the resilience of public investment. The energy shock resulted in a shift in government support to the direct benefit of businesses, and the start of the deployment of the Recovery and Resilience Facility helped to shield public investment.

Figure 4

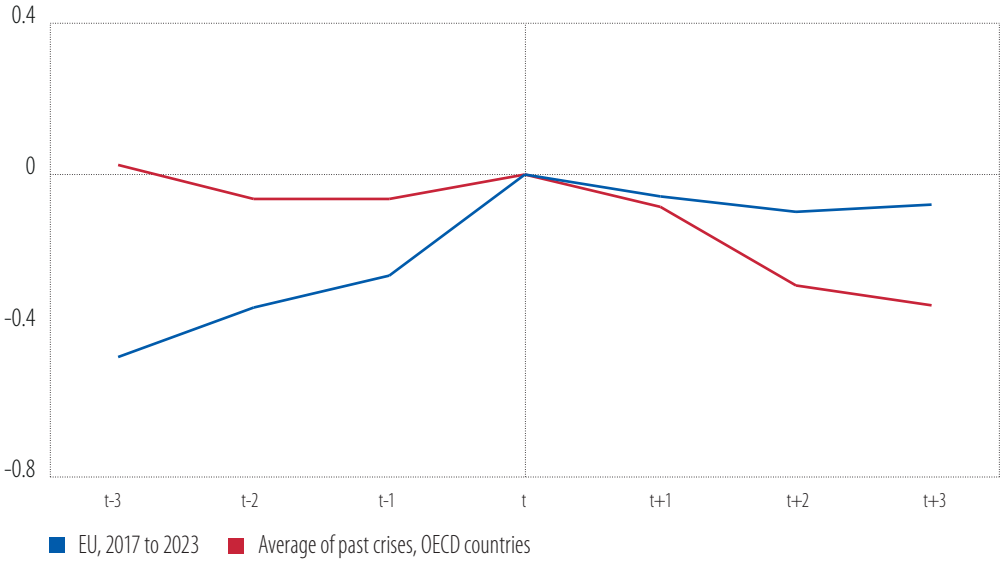
Contributions to EU investment growth (gross fixed capital formation, % change from the same period a year earlier)**, by institutional sector**



Source: *Eurostat.*
Note: *Data exclude Ireland.*

Figure 5

Government investment remained resilient in the wake of the pandemic, outperforming government investment after past crises (deviation from the crisis peak, in percentage points of GDP)

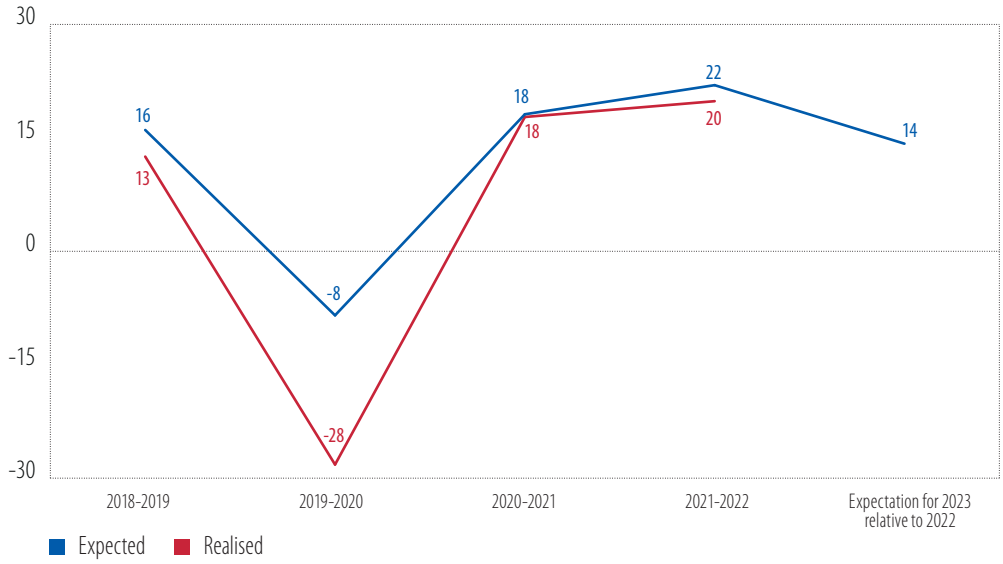


Source: *EIB staff calculations based on Eurostat and OECD national accounts.*
Note: *The crisis peak is represented by year t. The average of past crises is based on the methodology of Larch et al. (2022). See Chapter 2 for more information.*

Corporate investment has also proved resilient thanks to public support and companies' financial buffers, but firms' expectations for the current year were less optimistic. Exceptional public support during the pandemic, and the ensuing rapid recovery in demand, allowed firms to build up financial reserves, which helped them withstand the series of shocks. 80% of EU firms were profitable in 2023, 2 percentage points above the historical average. Firms with profits of at least 10% of turnover were 8 percentage points more likely to accelerate investment than firms that only broke even. Policy support and financial buffers have helped to shield and sustain corporate investment, with firms meeting their expectations for investment even in 2022, after the start of the energy crisis. However, this overall performance belies significant variation between countries and particularly between sectors. There are also signs of weakening, with fewer firms in 2023 expecting to increase investment (Figure 6).

Figure 6

Already in mid-2023, firms expected investment to slow in the year ahead (net balance of firms increasing investment vs. those decreasing it, % of firms)

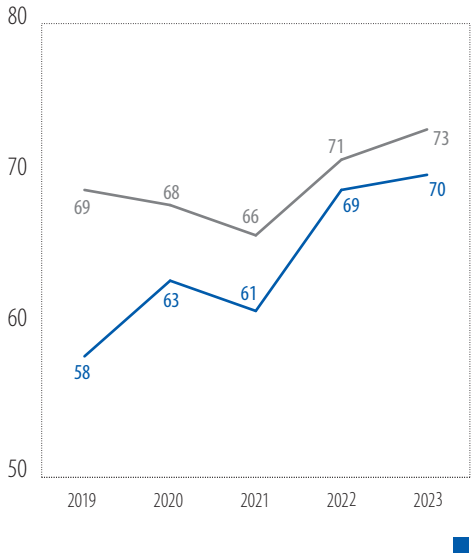


Source: *EIB Investment Survey (EIBIS) 2018-2023.*

Because they were able to keep investing, European firms could respond to shocks – notably through greater investment in digitalisation, energy efficiency and diversifying their supply chains – thus embarking on needed transformation. The use of advanced digital technologies by European firms picked up since the pandemic, effectively closing what had been a 11 percentage point gap with the United States (Figure 7). Firms have likewise been able to respond to high energy prices by accelerating investments in energy efficiency (Figure 8). In response to supply disruptions, 20% of firms say they have invested in digital inventory tracking systems and 24% of importers have sought to diversify supply chains. Indeed, firms have used repeated crises as an opportunity to transform. Firms also held on to their employees throughout the energy crisis. EU unemployment declined to 6% in October 2023 from 6.3% in January 2022. The number of bankruptcies remained surprisingly low.

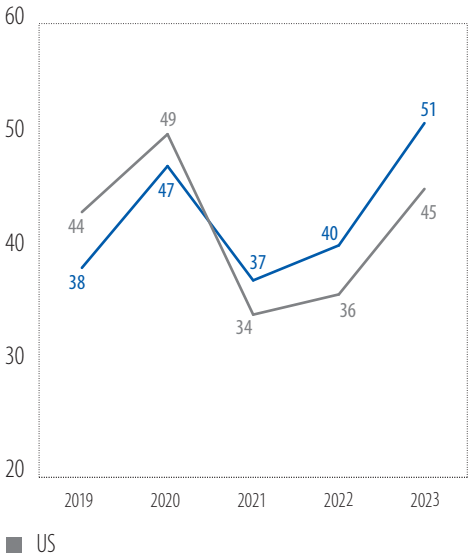
Strong corporate investment at the EU level belies substantial differences among EU members that are influenced by unique national conditions. While the sectoral breakdown of aggregate investment is not yet available for all EU members, even for early 2023, it is clear that there are different trends among countries and even within macro-regions. In some countries, real corporate investment exceeded its pre-pandemic level by 5% or more by early 2023, whereas in others it stagnated or remained well below levels before the pandemic (Figure 9).

Figure 7
Share of firms using at least one advanced digital technology (in %)



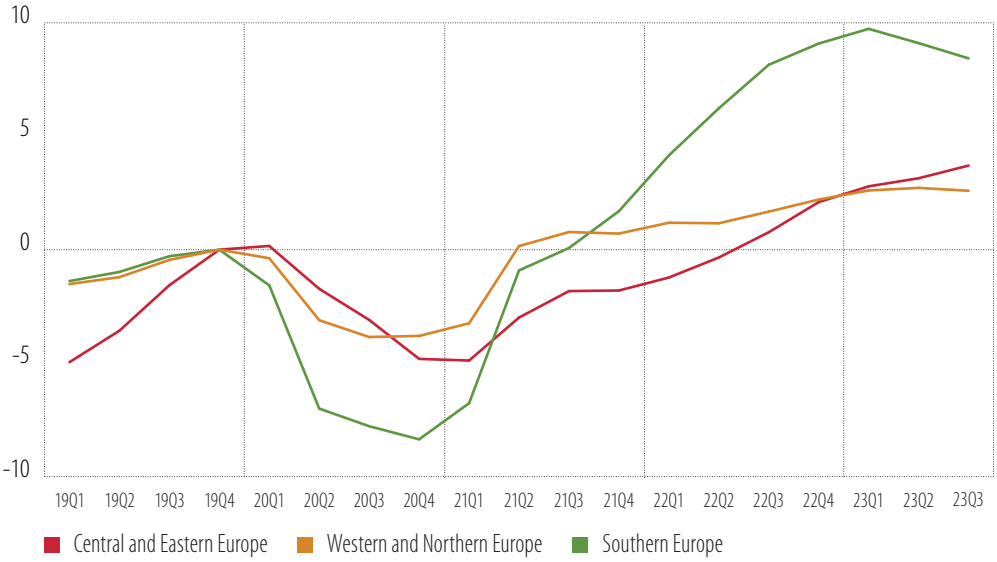
Source: *EIBIS 2019-2023.*

Figure 8
Share of firms investing in energy efficiency (in %)



Source: *EIBIS 2019-2023.*
Note: *Data refer to the year preceding the survey.*

Figure 9
Real private sector investment in the European Union (deviation from the fourth quarter of 2019, in %)



Source: *Eurostat.*

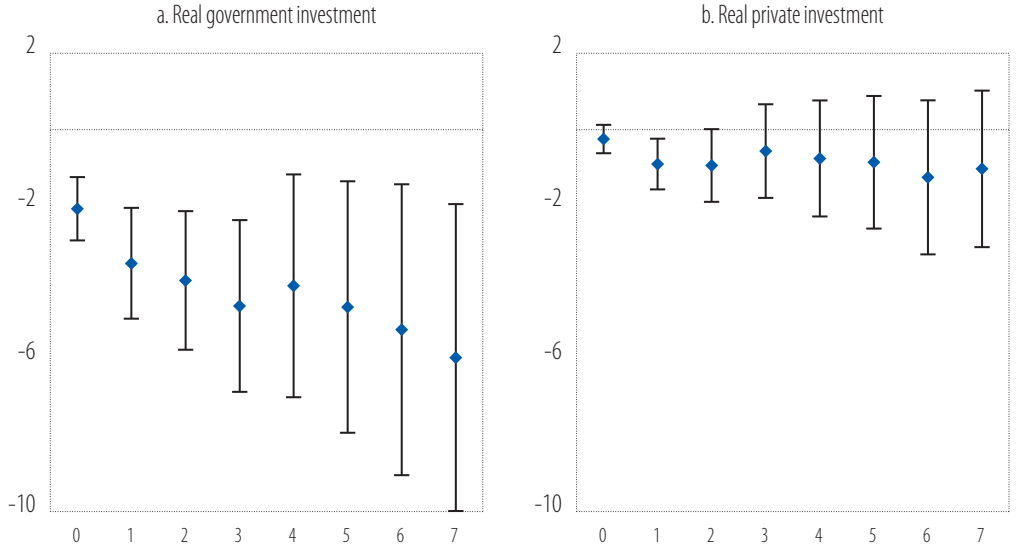
Looking forward, the pace of investment and transformation may be harder to sustain

Although governments are better prepared than in the past, the reinstatement of fiscal rules is likely to result in fiscal consolidation, which tends to affect public investment disproportionately. European governments made progress in fiscal consolidation after the sovereign debt crisis, and have already done so since the pandemic. This partly explains why interest rate spreads between euro area countries have continued to evolve within ranges reflecting economic fundamentals. Sovereign bond yields rose around 3% from January 2022 to October 2023, but risk spreads hardly widened. This environment has supported public investment, but the deactivation of the general escape clause of the Stability and Growth Pact in 2024 is likely to lead to further fiscal consolidation. Historical data for 16 OECD countries show that such fiscal retrenchment usually has a disproportionate and long-lasting effect on public investment (Figure 10a).

Private investment is also negatively affected by fiscal consolidation, with implications for growth and competitiveness. The analysis of past episodes of government belt-tightening shows that a fiscal consolidation of 1% of GDP can be expected to lead to a 1% fall in private investment (Figure 10b). This is largely caused by spillover effects from public to private investment, as well as the direct impact of eliminated tax incentives and subsidies. Investment in equipment and non-residential structures is usually most affected.

Figure 10

The effect of fiscal consolidation equivalent to 1% of GDP on real public and private investment (% change, by years after the announcement)**, based on data from 16 OECD countries**



Source: *Kolev and Schanz (2024).*
Note: *The black lines represent 95% confidence intervals.*

The Recovery and Resilience Facility may effectively shield public investment for the first three years after the reinstatement of EU fiscal rules, but its implementation is key. Grants provided by the facility are similar in size to the spending cuts that would be required by a reinstatement of the pre-crisis fiscal rules, particularly for countries in Southern and Central and Eastern Europe. The Recovery and Resilience Facility could therefore provide a temporary shield for public investment, but its implementation is already facing hurdles, with the gap between planned and completed disbursements widening to EUR 127 billion by the third quarter of 2023. Measures related to infrastructure investment are the most likely to be delayed. Obstacles include cost increases due to inflation, supply chain disruptions, lack of

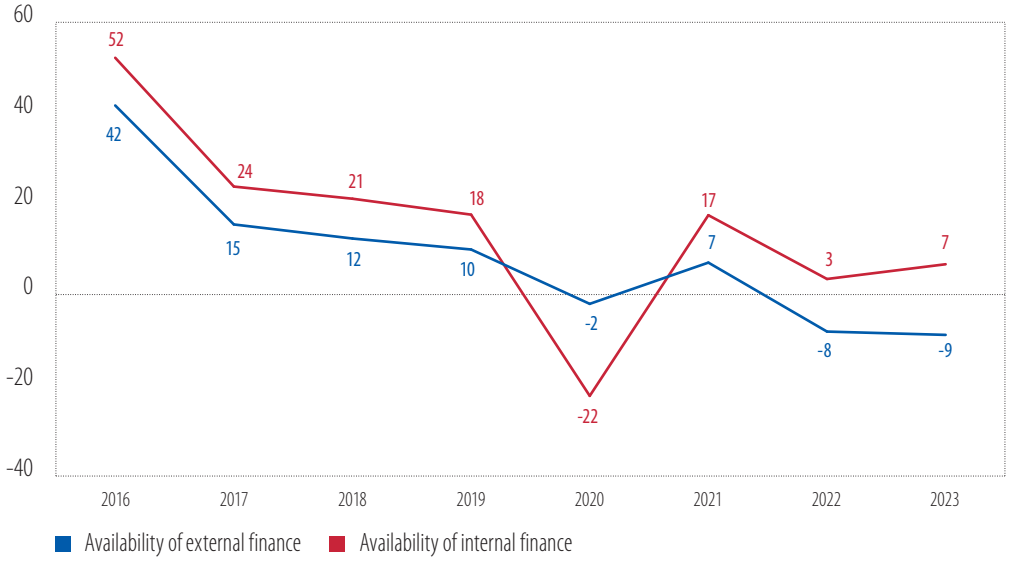
planning and implementation capacity for complex projects, particularly at the regional or local government level, and governance issues. The debate in Germany around internal debt brake rules illustrates how the public investment needed for long-term competitiveness and sustainability can face considerable governance hurdles at the national level.

Pulling back on public investment would be bad news for competitiveness, given the positive effect public investment has on private investment, including in digital technology and climate action. For example, regional investment in digital infrastructure (and thus higher internet speeds) and firms' adoption of advanced digital technologies are associated with higher levels of labour productivity. However, there is also a positive interaction between the two. Public investment can, in fact, increase returns from firms' investment in digital technology. We also show that an increase of 1 percentage point of GDP in public investment in a region is associated with a 1.1 percentage point increase in firms' investment as a share of assets. In another example, we show that the disbursement of EU financing for climate-related projects in a region is associated with greater investment in climate mitigation and adaptation measures not only by firms in that region, but also by firms in neighbouring regions.

The outlook for corporate investment is dimming, however, as policy support is wound down, internal financial buffers dwindle and external financing conditions tighten. Looking at the next 12 months, firms overall are pessimistic about the evolution of external financing, reflecting the combined effects of monetary tightening and the winding down of policy support linked to the pandemic and the energy shock (Figure 11). Corporate holdings of liquid assets have played a major role in supporting investment since the pandemic, shielding firms from the need to tap external financing, but these holdings are now back to their pre-crisis trend. In 2023, firms were only weakly positive about their ability to tap internal finance in the coming year, and aggregate data show that corporate bank deposits are trending lower.

Figure 11

Firms' view of the availability of external and internal finance in the coming year
(net balance of positive vs. negative views, % of firms)

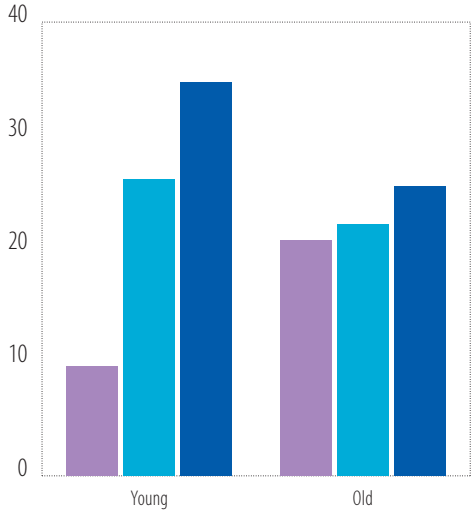


Source: *EIBIS 2016-2023.*

Worsening external finance conditions will particularly affect young and innovative companies. Firms introducing innovations that are new to the market are more likely to expect that their ability to access external finance will worsen. This is even more so the case for young, innovative firms, reflecting their greater dependence on external finance and exposure to any increase in risk aversion (Figure 12). Innovative firms are also more likely to finance investment using grants (Figure 13). Like all firms, they have enjoyed increased public support since 2020, but in 2023 most innovative firms were already seeing a marked drop in the availability of public grants, with worrying implications for innovation going forward.

Figure 12

Firms expecting the availability of external finance to worsen in the next 12 months (in %), **by age and innovation status**



Source: *EIBIS 2023.*

Figure 13

Firms using grants to finance investment (% of firms using external finance), **by innovation status**

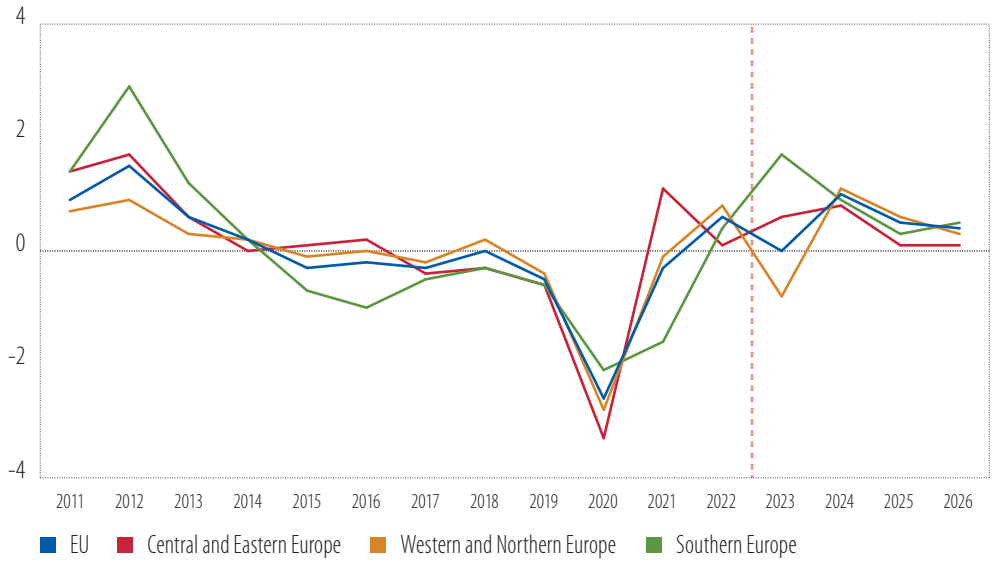
Source: *EIBIS 2016-2023.*

After years of sizeable and widespread policy support, firms will have to make do with much more targeted interventions. According the stability and convergence plans submitted by EU members, the fiscal stance of governments was still mixed in 2023, with countries in Northern and Western Europe adopting an expansionary stance (Figure 14). From 2024 onward, however, the overall stance across Europe is projected to be one of consolidation, standing in contrast to dramatic expansion during the pandemic. For firms, this is likely to result in weaker domestic demand and the withdrawal of many broad-based support measures that have helped to sustain corporate investment.

The longer-term outlook for corporate investment is also clouded by a number of structural barriers, of which energy costs, a lack of skilled staff and uncertainty about the future are the most prominent. Energy costs remained a major concern for EU firms, and were most often cited as a reason companies may pull back on future investment (Figure 15). This is unsurprising as 70% of EU firms saw energy prices rise by more than one-quarter, compared with only 30% of US firms. Even if the energy shock is now less severe, it will take more than a decade before energy prices drop to stable low levels, and European firms will have to find ways to remain competitive until that happens. A lack of people with the right skills remains a serious constraint for firms all over Europe (whether for specific skills, or an overall staff shortage). Uncertainty is also a key concern, limiting investment and transformation.

Figure 14

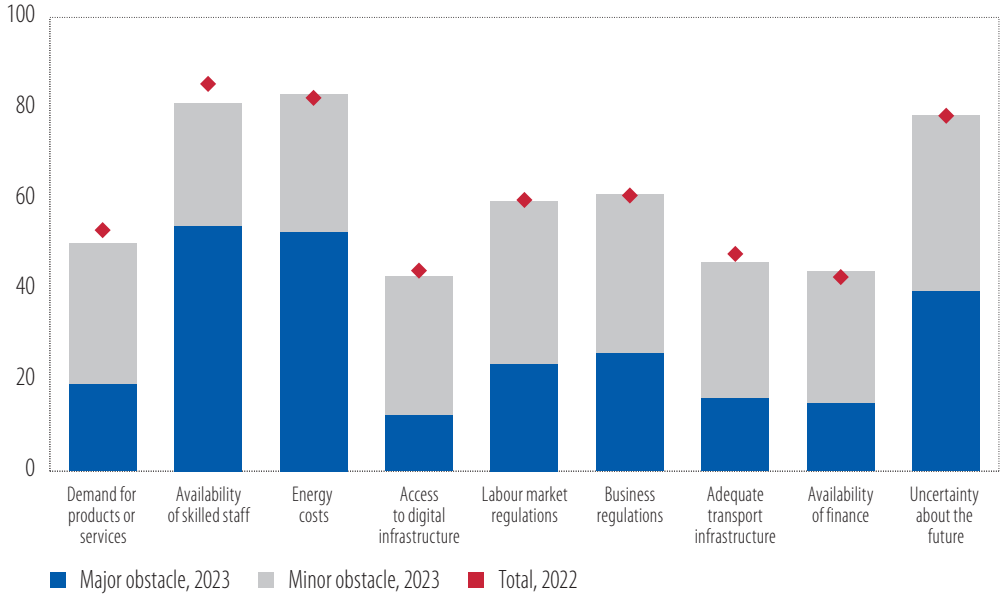
Historical changes to the structural primary balance and future projections based on EU members' stability and convergence programmes (% GDP)



Source: *Annual macro-economic database of the European Commission's Directorate-General for Economic and Financial Affairs (AMECO) and national stability and convergence programmes. Figures from 2023 onwards are forecasts.*

Figure 15

Long-term barriers to investment (% of firms)



Source: *EIBIS 2022-2023.*

Firms have made competitiveness-enhancing progress on innovation, digitalisation and the resilience of supply chains, but more must be done

In global innovation, Europe maintains a leading role in green technologies, but it lags behind on digital innovation and is at risk of being overtaken by China in the overall issuance of patents. This pattern is visible in the latest data on total research and development (R&D) expenditure, as well on the performance of top R&D investing companies. European firms account for 18% of the top 2 500 R&D companies globally, but only 10% of the new entrants to this group, vs. 45% for the United States and 32% for China. Europe's smaller role is also visible in data on patenting, which show that growing Chinese investment in R&D is bearing fruit (Figure 16). The European Union still leads in the number of patents for green technologies, but China has been catching up, while China and the United States already issue twice as many patents for digital technologies (Figure 17).

Figure 16
Number of patents issued (weighted by GDP), **by region**

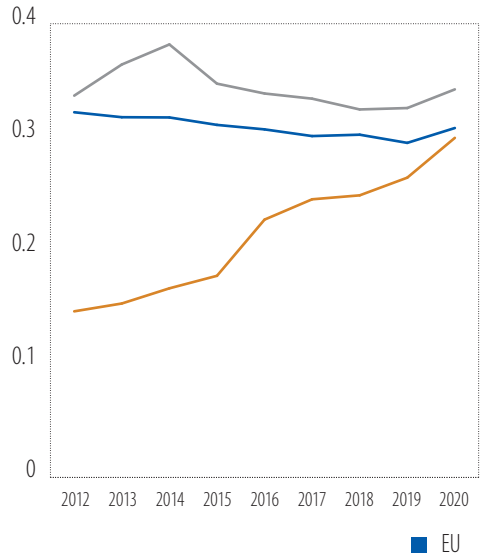
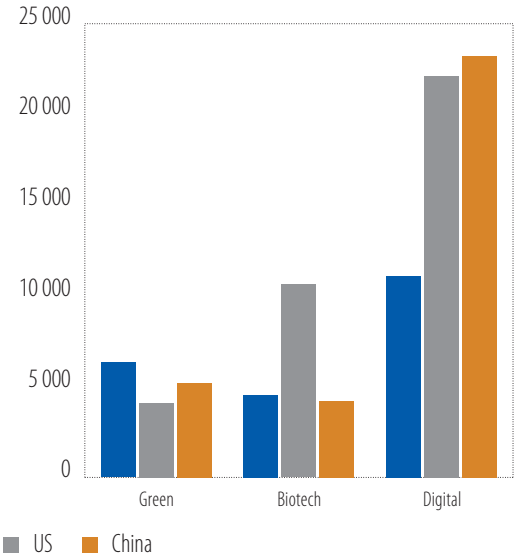


Figure 17
Number of patents issued in 2020, by technology domain



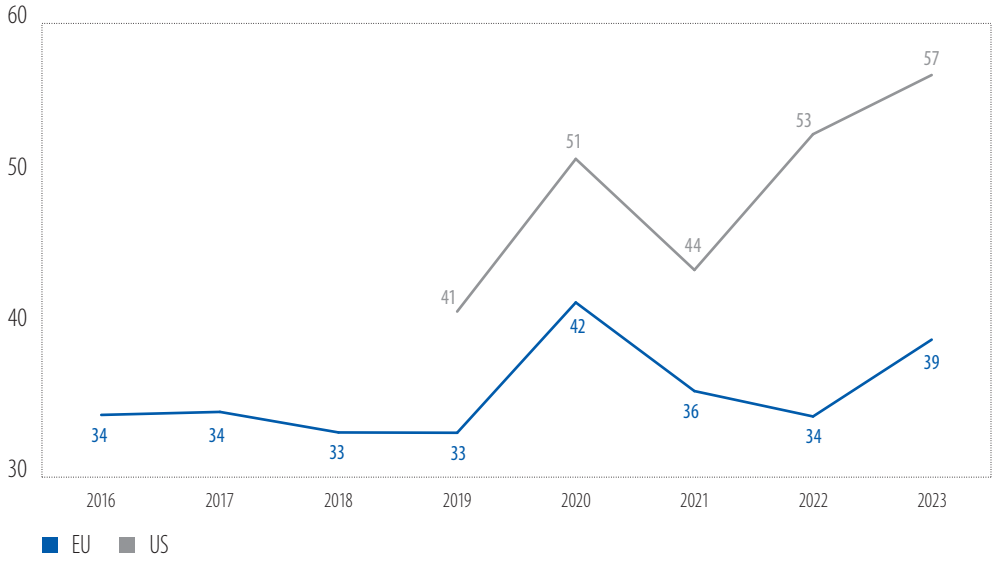
Source: *EIB staff calculations based on Patent Cooperation Treaty (PCT) patents (PATSTAT) in collaboration with the Research and Development Monitoring Research Centre at KU Leuven.*
Note: *For specifications see Chapter 5.*

European firms are also lagging in the adoption of new technologies. Specifically, data from the EIB Investment Survey (EIBIS) indicate that the European Union has a lower share of firms that invest to develop or introduce new products, processes or services than the United States (39% vs. 57%), with the gap remaining stable in the last two years at around 18 percentage points (Figure 18). This difference is overwhelmingly driven by the number of firms that say they invest to adopt products, processes or services that are used in their industry, but are new to the company.

Europe is focusing strongly on public support for innovation, from seed-stage to growth-stage financing, with finance for growth and scale-up companies being the most pressing concern. Venture capital finance in the European Union is underdeveloped relative to the United States and has been hurt by tighter financial conditions (Figure 19). This particularly affects funding for companies trying to scale up their operations. Despite strong public support, the fragmentation of Europe's capital markets limits investors' exit opportunities and leads to a strong reliance on mergers and acquisitions as an exit strategy, as well as an over-dependence on investors from outside the European Union. There is notably a dearth

of financing for more mature scale-up activities, with six to eight times as much financing available in the United States (in dollar terms). Venture debt is a nascent market in Europe, while other forms of growth finance are still in their infancy. The tightening of financial market conditions appears to have disproportionately affected scale-up activities.

Figure 18
Development or introduction of new products, processes, or services (% of firms)



Source: *EIBIS 2016-2023.*

Figure 19
Venture capital investment in the European Union (cumulative, USD billion)**, by month**

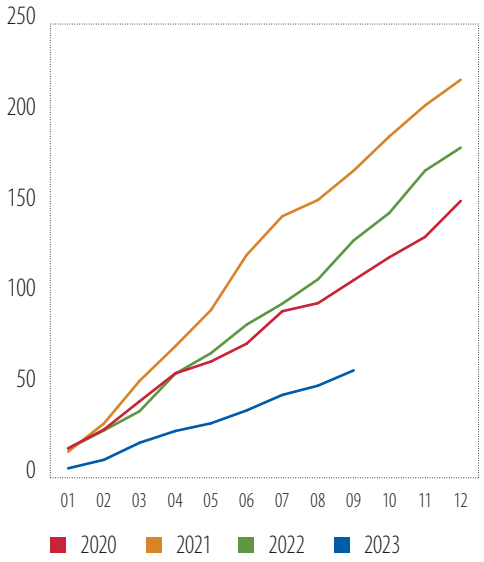
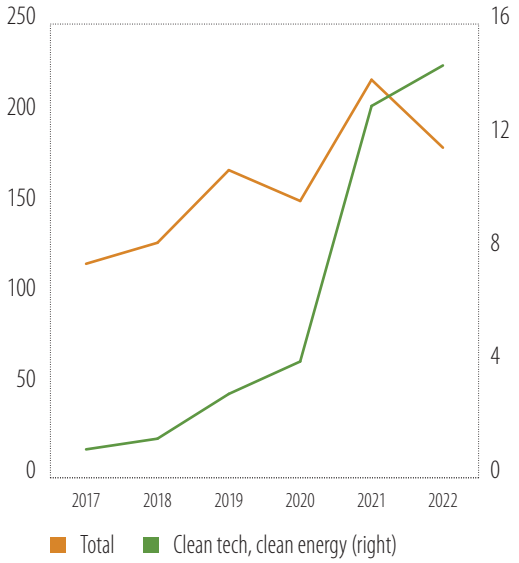
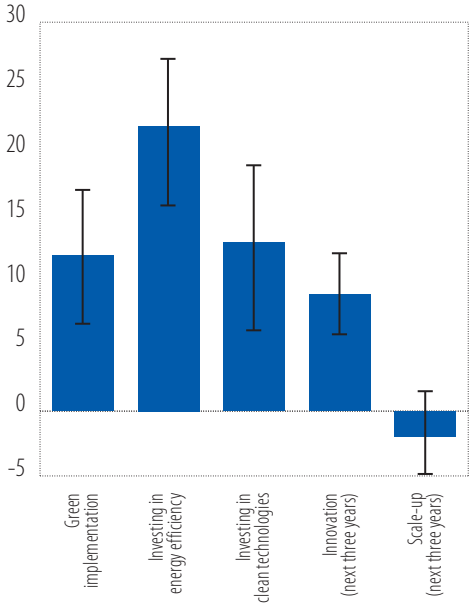


Figure 20
Venture capital investment (USD billion)**, 2017-2022**



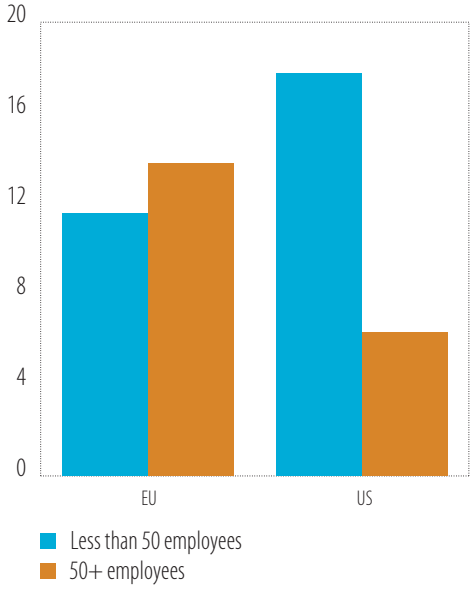
Source: *EIB staff calculations based on PitchBook data, Inc.*

Figure 21
Estimated effect of grants and subsidies on the probability of investing in climate, innovation and scaling up production (in %)



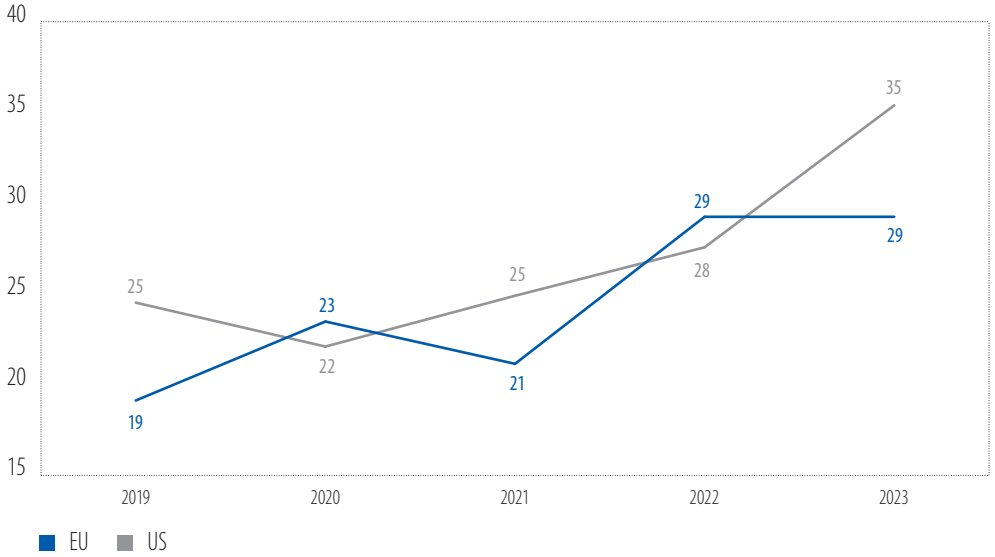
Source: *EIBIS 2016-2023.*
Note: *The black lines represent confidence intervals at the 95th percentile. See Chapter 3 for details.*

Figure 22
Estimated effect of grants and subsidies on the probability of making green investments (in %)



Source: *EIBIS 2016-2023.*
Note: *See Chapter 3 for details.*

Figure 23
Use of big data analytics and artificial intelligence (% of firms)



Source: *EIBIS 2019-2023.*

In Europe, grants and subsidies are more likely to go to larger firms, while firms that receive grants and subsidies invest more in innovation, including R&D, and in green investment (Figure 21). In Europe, large firms are more likely to receive grants and subsidies, which fund innovation and transformation (Figure 22). However, this may partly disincentivise radical transformation, as large incumbent firms may be more reluctant to carry through a radical change to their business model.

The gap in the adoption of advanced digital technologies between the United States and the European Union has been narrowing since the pandemic, but EU firms may be falling behind on artificial intelligence. Strengthening the competitiveness of the European economy through the green and digital transformation is not only about innovation at the technological frontier, but also about adopting and deploying these technologies. While the share of firms using at least one advanced digital technology is now similar on both sides of the Atlantic, US firms appear to be surging ahead on the use of big data analytics and artificial intelligence, with EIBIS data showing a 6 percentage point gap between the United States and Europe (Figure 23).

Competitiveness will also require further progress on decarbonisation, building on the recent acceleration in energy efficiency investment

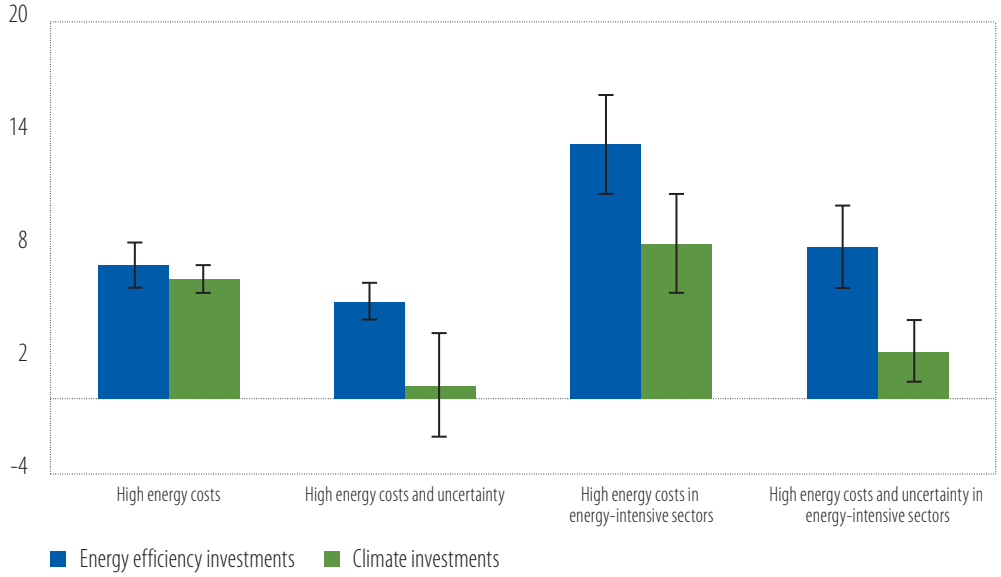
While firms have responded quickly to the energy shock by increasing energy efficiency, the more thorough structural transformation of energy-intensive industries is taking time, and it might affect the competitiveness of some EU industries going forward. EU members responded quickly to fast-rising energy prices and the threat to energy supplies, but mostly through relatively short-term fixes, such as subidies, to ameliorate energy market strains. EU firms invested in energy efficiency and also passed costs through to final consumers. They were less likely than US firms to stop the production of energy-intensive goods and services. It may take ten or 15 years, however, for electricity prices to be predominantly determined by the production costs of clean energy sources, and therefore structurally lower. In the meantime, energy costs may pose a challenge to the competitiveness of many industries.

Under pressure from high energy costs and uncertainty, firms are prioritising investments in energy efficiency, with uncertainty taking a heavier toll on more general investment in climate action; firms in energy-intensive sectors are investing more in both categories. Firms that see high energy costs as an obstacle are significantly more likely to invest in energy efficiency (Figure 24). Uncertainty about the future (including future energy policies and prices) reduces this effect, however. When both energy costs and uncertainty are seen as obstacles, the overall effect remains positive for energy efficiency investment, but not for general climate investment, which covers mitigation and adaptation. For climate investment, the positive effect of concerns about energy costs is outweighed by greater sensitivity to uncertainty, leading to no significant effect overall. Encouragingly, however, the overall impact on energy efficiency and climate investment always remains positive for firms in energy-intensive industries.

Firms are more likely to invest in new green products and services when they see the green transition as an opportunity rather than a risk. Industries can be categorised by whether they face a high, medium or low risk from the transition. Even when controlling for country, sector and size effects, firms in higher risk categories are more likely to invest in new green products and services (Figure 25). Unsurprisingly, this effect is much stronger for firms that see the transition as an opportunity, suggesting that transformative action is also being influenced by how companies perceive market opportunities.

Figure 24

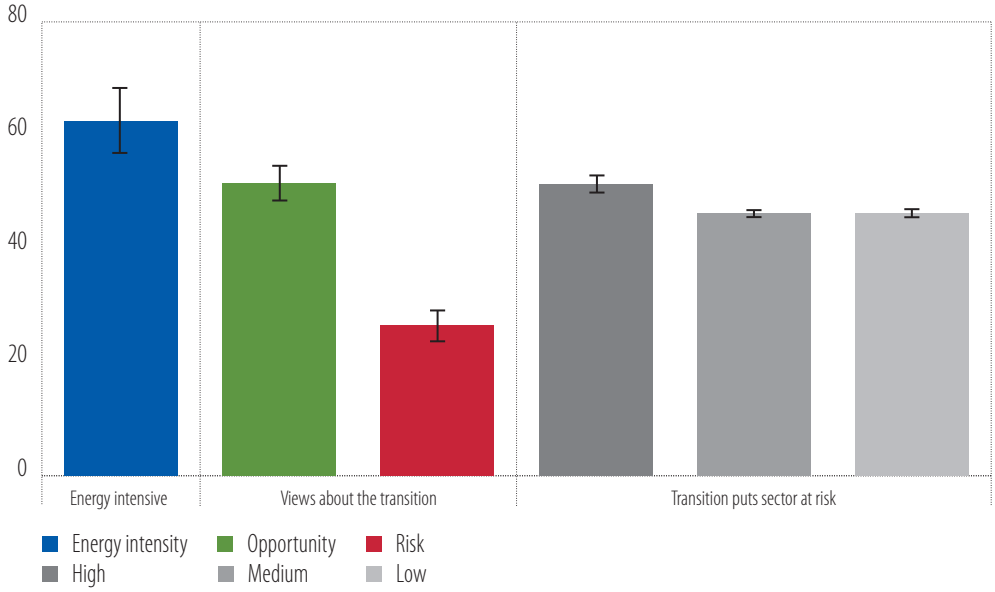
Marginal effects of higher energy costs and uncertainty on investment in climate action and energy efficiency (in percentage points)**, by energy intensity of industry**



Source: *EIB staff calculations.*
Note: *The black lines represent 95% confidence intervals. For details see Chapter 5.*

Figure 25

Probability of investing in new green products and services (in %)**, by transition risk category and firms' perception of the climate transition**

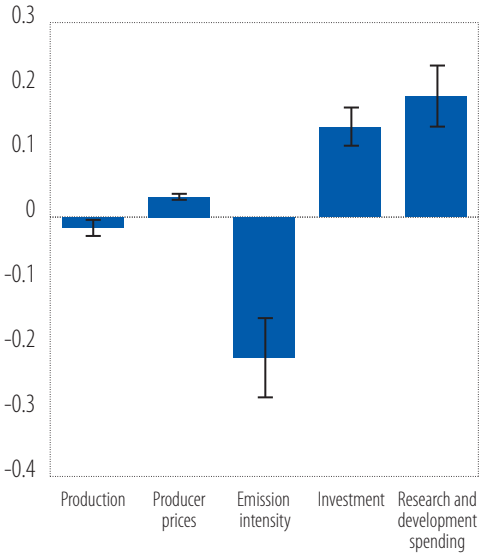


Source: *EIB staff calculations.*
Note: *The black lines represent 95% confidence intervals. For details see Chapter 5.*

The European Emissions Trading System is proving effective as a stimulus for investment and innovation, leading to a decline in the emissions intensity of industries it covers. Data for firms covered by the Emissions Trading System (ETS) were examined using panel regression for 2012 to 2022, after controlling for factors such as labour, energy costs and value added. It showed that a 1% increase in the price of carbon is associated with a significant 0.2% reduction in emissions intensity, but with only a very marginal effect on production volumes and prices (Figure 26). At the same time, a 1% rise in carbon prices is associated with increases of 0.1% in investment and 0.2% in R&D spending, suggesting that investment and innovation have been critical to reducing emissions. The decision to withdraw free carbon allowances for some industrial sectors under the latest phase of the trading system, Phase IV, also led to a 20% greater reduction in emissions intensity for those sectors than for sectors still granted free allowances (Figure 27).

Figure 26

Estimated effect of a 1% increase in the ETS carbon price (in %)



Source: *EIB staff calculations.*
Note: *The black lines represent 95% confidence intervals. For details see Chapter 5.*

Figure 27

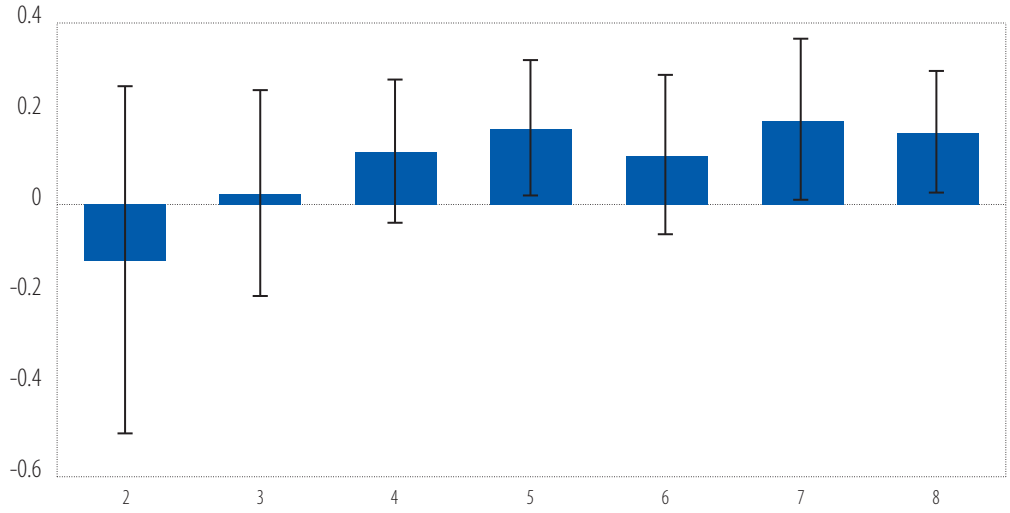
Effect of losing free allowances on firms' carbon emissions intensity (an index, 2015=100)

Source: *EIB staff calculations, EU Transaction Log and Eurostat.*
Note: *For details see Chapter 5. The red line represents when industries lost their free allowances.*

More carbon-intensive manufacturing firms rely on long-term debt to pay for investment in decarbonisation, but access to such finance will become scarcer as financial institutions increasingly price in climate risks. Access to external finance enables decarbonisation among manufacturing firms covered by the Emissions Trading System. For example, a 1 percentage point increase in firms' long-term debt-to-asset ratio is associated with 0.2% lower carbon intensity (Figure 28). Moreover, more carbon-intensive firms are more dependent on long-term debt, with those firms' leverage correlated with progress on reducing their carbon intensity. This emphasises the importance of long-term debt in financing decarbonisation. The risk for carbon-intensive firms is that such finance will become scarcer as financial conditions tighten and as the financial sector begins to price in the cost of climate risks.

Figure 28

Effect of leverage on the decarbonisation progress of firms in various deciles of carbon intensity (coefficient of correlation)



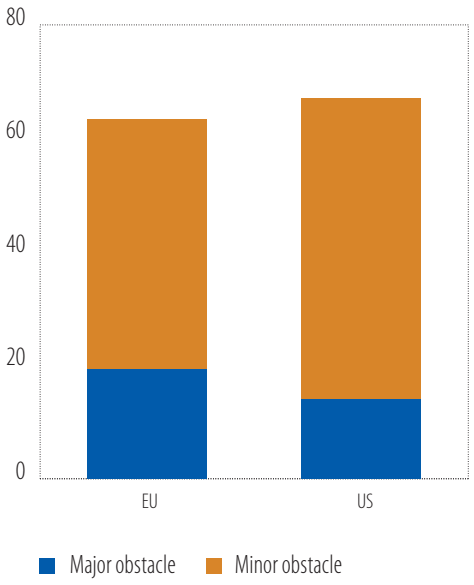
Source: *EIB staff calculations.*
Note: *Average statistics calculated on a sample of EU ETS manufacturing firms from 2013 to 2020. Leverage is loans and long-term debt scaled by total assets. For more details see Wolski (2024) and Chapter 5.*

The ETS manufacturing firms that are reducing their carbon intensity the fastest are also much more likely to transform by investing in innovative new products. A 2023 EIB survey of 373 manufacturing firms in the trading system separates firms that see themselves as ahead of competitors in decarbonisation from those that lag behind. Among firms that invested in technologies to reduce greenhouse gas emissions in the last five years, almost 60% of self-reported leaders focused on product innovation, compared with only 25% of laggards. The data also confirm that the leaders reduced the carbon intensity of their production faster.

Most EU firms say that climate change is already affecting their business, but fewer firms are implementing climate adaptation measures, with insurance notably underutilised. According to EIBIS 2023 data, 63% of the firms in the European Union and 67% in the United States say they are at risk from climate change, up by at least 6 percentage points from the previous survey (Figure 29). However, only 36% of EU firms have taken steps to adapt to climate change, and only 13% of firms in Europe have bought insurance against climate risks (Figure 30). Among firms that have already experienced the fallout of climate change, the share of those insured is only 17%. One obstacle may be the moral hazard of assuming that governments will bail out businesses in the event weather-related losses. The availability of finance poses another barrier, with finance-constrained firms less likely to invest in climate adaptation.

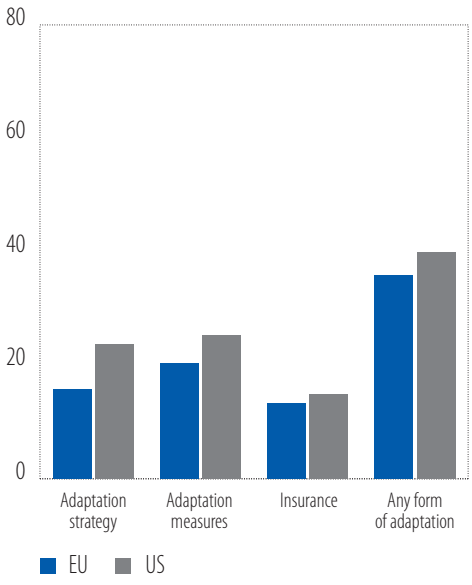
Public funds play a vital role in catalysing business investment in adaptation, especially in the most vulnerable regions and sectors. Analysis of EIBIS data confirms that European firms are more likely to invest in adaptation when a higher share of EU funds within the country is devoted to climate adaptation. These funds help companies to adapt by providing direct financial incentives, by creating a framework for adaptation through standards and guidelines or by supporting skills development, knowledge-sharing and research.

Figure 29
Share of firms that say climate change already affects their business (in %)



Source: *EIBIS 2023.*

Figure 30
Share of firms undertaking climate adaptation measures (in %)



Source: *EIBIS 2023.*

Amid fiscal consolidation, future competitiveness will require targeted regulatory and financial interventions that address market failures

In the face of climate change, the accelerating pace of digitalisation, deglobalisation and ageing, the challenges to Europe's competitiveness are becoming even more pressing. Europe needs to do whatever it can to raise productivity, ensure the resilience and diversification of its supply chains and make its economy sustainable. This cannot be done without maintaining and promoting productive investment, including a focus on supportive conditions, to address the massive investment required for the green and digital transformation.

Public investment should be protected from fiscal consolidation, while public support for firms should target the needs of the transformation. Recognising that fiscal space will be reduced, and investment conditions will likely worsen, the broad support measures employed during the pandemic and energy crises must be replaced by more targeted incentives that encourage structural transformation, to avoid an investment slowdown that would endanger Europe's competitiveness and the pace of the climate transition.

Innovation needs continued support, as do young, innovative firms; this support should also address the gap in financing for scale-up companies. Europe needs to protect its lead in green innovation and catch up in other areas. It also must address the greater financial constraints faced by younger and more innovative firms. With equity financing for startups and scale-ups particularly affected by tighter financial conditions, there is a heightened need for European public finance, which is a cornerstone investor in Europe's underdeveloped venture capital market.

EU policy instruments have an important role to play in promoting the scale-up of innovative firms and strategic industries while preserving a level EU playing field. Fragmented European markets weigh on the competitiveness of European firms, preventing them from leveraging the full potential of the single market. The single market should be an advantage, and it should help companies to reach economies

of scale quicker than major trading partners. A better integrated common market would enable the rapid development of infant industries and encourage the relocation of promising foreign firms to Europe to exploit competitive advantages. The European Union needs to make more progress on the capital markets union, which will widen markets and improve exit opportunities for the venture capital market, as well as bring in more private long-term investors.

The diversification and resilience of supply chains has also become an important policy goal. As much as one-third of firms in major manufacturing sectors report access to raw materials, microchips and other intermediate goods as major obstacles to production. In response, many firms are diversifying suppliers and employing digital supply-chain management tools. Achieving strategic autonomy in certain commodities and technologies is also vital for the green transition.

Firms need clear and consistent signals on policies and regulations, which will drive green investment. Analyses of the Emissions Trading System and the impact of high energy prices show just how effective price signals are at driving investment for decarbonisation. But they also show that uncertainty about future prices and policies strongly undermines investment. In addition, Europe needs to address the possible moral hazard of companies' betting that governments will come to their aid in the event of weather-related losses, which may be undermining business investment in adaptation, and therefore the resilience of the European economy to climate change.

Skills shortages are hampering transformation, with measures needed to support and encourage investment in training and facilitate the movement of labour. The number of firms reporting a lack of skilled workers as a major obstacle is increasing, but this has not resulted in more firms investing in training. The shortage of skilled employees is holding back the most transformative firms: those that are more innovative and advanced in adopting green technologies. It is important to encourage the efficient reallocation of resources to enable innovative, highly productive and high-growth firms to access skilled labour – something that is facilitated by the timely exit of less dynamic firms.

Actions to improve the business environment and lower barriers could provide a significant boost to investment. Some obstacles such as weak demand, adverse financing conditions and uncertainty clearly affect investment. Other obstacles like skills are more often an issue for more productive firms that invest more, and that need more skilled staff to expand. Analysis of the investment rates of firms that do and do not report obstacles suggests that addressing even one such barrier, so that it is no longer seen as a "major obstacle," could substantially stimulate corporate investment.

INVESTMENT REPORT 2023/2024

KEY FINDINGS

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