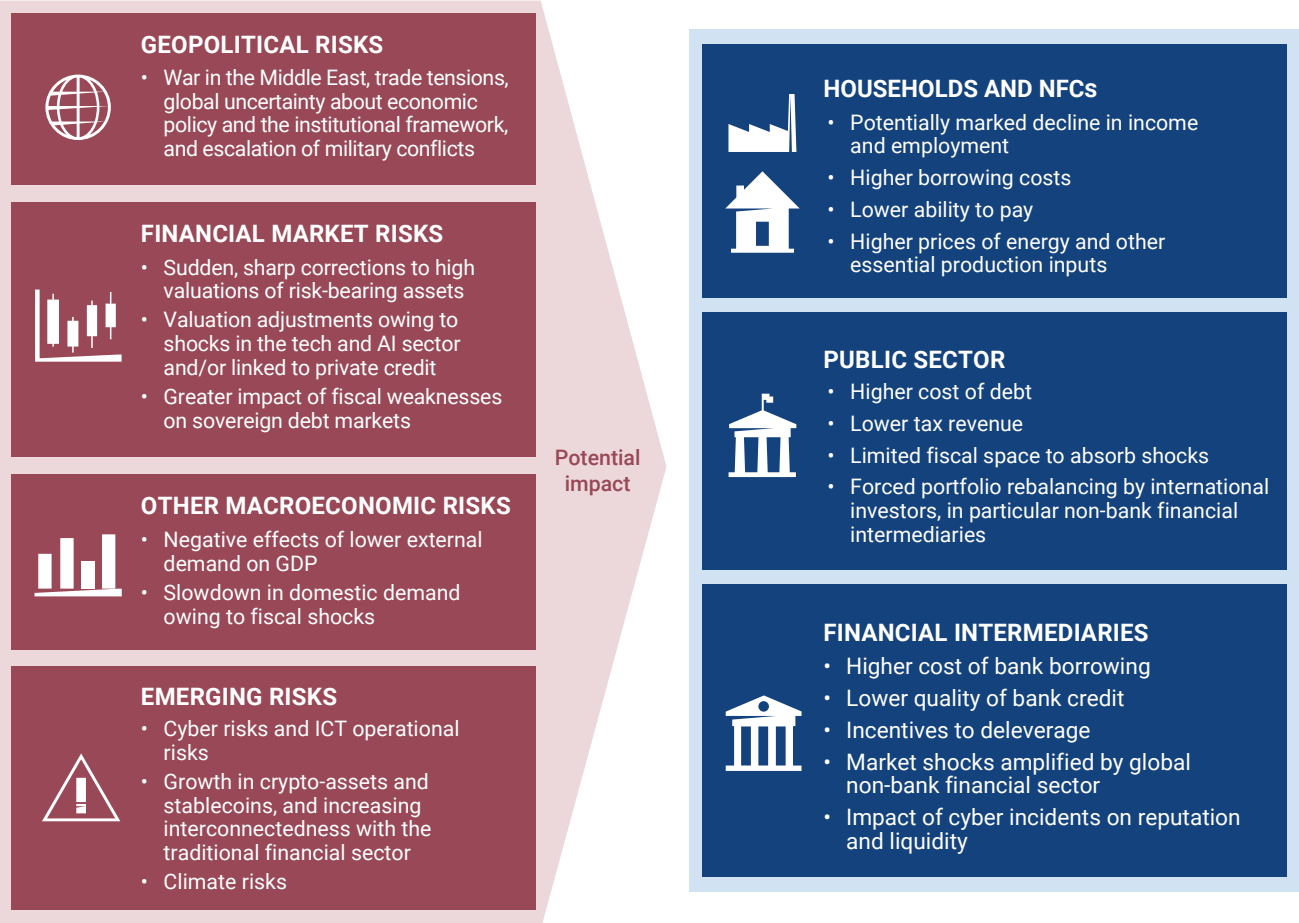
5

RISK ANALYSIS

Figure 5.1
Risk analysis (a)



SOURCE: Banco de España.

a Risks to financial stability are defined as adverse changes – with an uncertain probability of occurrence – in economic and financial conditions, or in the physical or geopolitical environment, which hamper or impede financial intermediation, with negative consequences for real economic activity.

This chapter discusses the risks to the stability of the Spanish financial system identified by the Banco de España and how they may interact with the vulnerabilities analysed in previous chapters. This risk analysis is underpinned by the discussions that the Banco de España has held with various external experts (see Box 5.1) and by its own analysis.

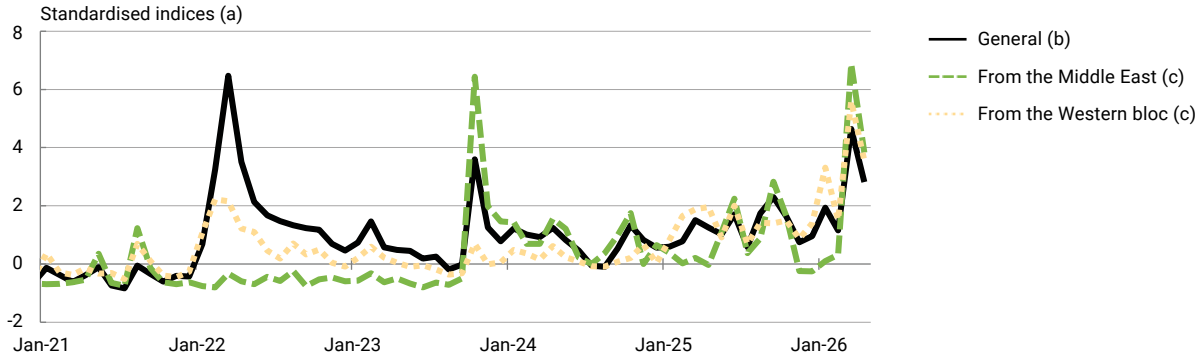
5.1 Geopolitical risks

The war in the Middle East has heightened geopolitical tensions considerably. Since it broke out in February, the war has triggered a rise in the geopolitical risk indicators, which were already elevated in prior editions of this report. This increase results in greater economic uncertainty, in particular over energy prices and, to a lesser extent, headline inflation (Charts 5.1.a and 5.1.b).

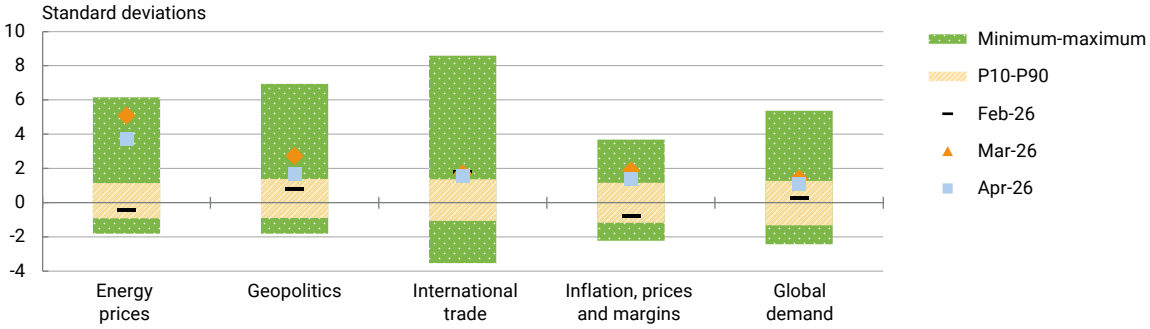
Chart 5.1

The war in the Middle East has driven up geopolitical and economic uncertainty considerably, in an environment that was already strained due to the uncertainty over economic policy in the United States and at global level

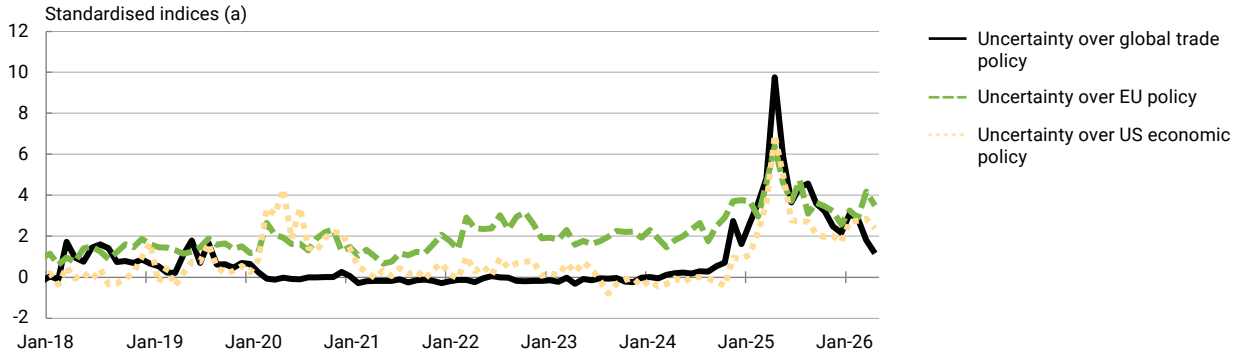
5.1.a Bilateral indices of Spain's geopolitical risk



5.1.b Uncertainty indicators, by topic (RAUI) (d)



5.1.c Uncertainty indices



SOURCES: Irma Alonso Álvarez, Ekaterina Bukina, Marina Diakonova, Nino Khitarishvili, Javier J. Pérez and Pedro Piqueras. (2026). "Geopolitical Risk: A Database of General and Bilateral Indices". Documentos Ocasionales, Banco de España, 2603. (Chart 5.1.a); Banco de España calculations drawing on Morteza Ghomi and Samuel Hurtado. (2026). "RAUI: Uncertainty Indicators Built With Artificial Intelligence". Documentos de Trabajo, Banco de España, 2609 (Chart 5.1.b); www.policyuncertainty.com, drawing on data in Scott R. Baker, Nicholas Bloom and Steven J. Davis. (2016). "Measuring Economic Policy Uncertainty". *The Quarterly Journal of Economics* (Chart 5.1.c). Latest observation: April 2026 (Charts 5.1.a and 5.1.c) and 26 April 2026 (Chart 5.1.b).

a Standardised indices with data from 1997.
b The general geopolitical risk (GPR) index shows geopolitical risk perceived for Spain, regardless of the source of risk.
c The bilateral GPR index measures the extent to which the geopolitical risk perceived in country i is associated with events arising in country or region j. Unlike the general GPR index (which reflects the overall intensity of news on geopolitical risk that are relevant for a country), the bilateral index breaks down this perception by geographical origin. Methodologically, the bilateral GPR index is constructed by identifying, within the set of articles contributing to the national GPR, those which explicitly mention a specific country or region (e.g. Russia, China or the Middle East and North Africa). (Alonso Álvarez et al., 2026).
d The RAUI are uncertainty indicators built with artificial intelligence techniques (an embedding model to select relevant news via a semantic search and a large language model to assess the level of uncertainty in each news article) to quantify the level of uncertainty in Spanish press articles on different topics.

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Such uncertainty has also been driven upward by the lack of certainty surrounding US trade policy and, more broadly, economic policy at global level (Chart 5.1.c). April's announcement of the ceasefire in the war in the Middle East lowered uncertainty indicator levels only moderately.

War in the Middle East

Energy prices have surged since the outbreak of the US-Israeli war on Iran. While part of the increase reversed following the announcement of the ceasefire, the uncertainty persists and the prices have risen again recently (at the end of April oil prices reached new highs since the start of the conflict). Over a broader time horizon, real prices are still some way off their all-time highs (Chart 5.2.a). Futures are predicting gradual price declines, although the expected levels, in particular for 2026, remain significantly above their pre-war levels.[1] Volatility has risen very markedly in these markets, reflecting the uncertainty associated with this conflict. For example, oil price volatility is at extreme levels of its historical distribution (Chart 5.2.b).

A very high volume of global energy supply is adversely affected by the conflict. Traffic through the Strait of Hormuz has been severely restricted since the outbreak of the war. Under normal conditions, around 20% of the world's supply of oil and liquefied natural gas (LNG) exports pass through the Strait. The region's overall oil production accounts for close to 30% of the world total and has been further affected by damage to energy infrastructure. This is a higher percentage of energy supply than affected by Russia's invasion of Ukraine in 2022, and it is harder to substitute due to it being blockaded in the region.[2] Meanwhile, the damage to Russia's energy exports infrastructure, in the context of its war with Ukraine, currently increases the downside risks to global oil and gas supply.

However, for the time being only a portion of the flow of the region's energy production is actually restricted. In the case of oil, a drop of around 37% of the region's pre-conflict production (close to 10% of world production) is estimated.

The extension and prolongation of these restrictions could fragment global energy supply – impacting regions asymmetrically – and leave it scarred. The oil and gas shipped through the Strait of Hormuz is mostly bound for Asia,[3] with China, India and Japan among the main destinations, meaning that this region will be relatively harder hit by this crisis and face a greater risk of low supply. The repercussions for supply could be long-lasting, first because the Gulf countries forced to cut production will need time to increase it due to technical restrictions.

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1 Energy commodity futures prices have risen significantly since the outbreak of the conflict in the Middle East. The pre-war average oil (natural gas) futures prices for the remainder of 2026 and 2027 stood at around $70 and $67 per barrel (€31 and €27 per MWh). At the cut-off date for this report, they were $97 and $80 per barrel (€47 and €38 per MWh).

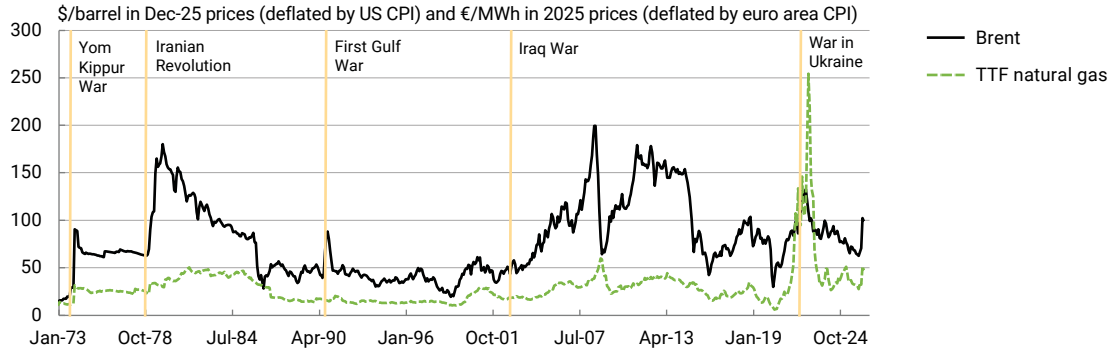
2 At end-2021 Russia accounted for roughly 11% of global oil production and 17% of that of gas. Russian production was not blockaded as a result of the outbreak of that conflict, although it did reduce its export capacity due to the various international sanctions imposed in response. The greater impact of the war in the Middle East on oil compared with the Russia-Ukraine war means a larger impact on the transportation sector.

3 https://www.iea.org/about/oil-security-and-emergency-response/strait-of-hormuz.

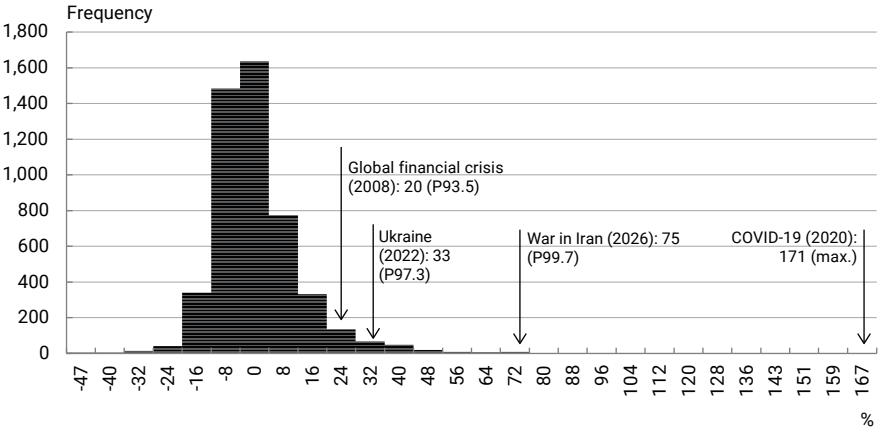
Chart 5.2

The conflict in the Middle East is driving energy commodity price levels and volatility

5.2.a Real Brent oil and European natural gas (TTF) prices (a)



5.2.b Histogram of changes in expected oil price volatility (b)



SOURCES: LSEG, World Bank, FRED and Banco de España. Latest observation: 29 April 2026 (Chart 5.2.a) and 27 April 2026 (Chart 5.2.b).

a Pre-euro area consumer price data area are constructed drawing on a weighted average of domestic consumer prices of the member countries in 1999.
b Using the CBOE Crude Oil Volatility Index (OVX), which measures the expected 30-day volatility of crude oil based on option prices. The changes are two-week percentage changes in the index. For each historical episode, the maximum increase in volatility in the two weeks following the start of the episode and its percentile in the historical distribution is depicted. The series uses daily data (smoothed with two-week moving averages) between 24 May 2007 and 27 April 2026.

Second, any damage that the war may inflict on energy infrastructure and fields in the region could require a prolonged period of repairs, in the case of the former, and may be partially irrecoverable, in the case of the latter.

Various countries have adopted partial mitigating measures in response to this negative supply shock. First, strategic oil reserves have been released, which offset a small fraction of the lost production.[4] Second, some jurisdictions are deploying tax measures and

4 In particular, International Energy Agency members agreed to the largest ever oil stock release, of around 400 million barrels. Taking into account technical restrictions, 2 million barrels per day could be released over 200 days. This is well below the production currently affected by the war, estimated at around 10 million barrels per day.

demand-management policies (e.g. lower consumption, energy efficiency).[5] However, their impact is expected to be limited and their cost may adversely affect pre-existing fiscal vulnerabilities.

The conflict is also adversely affecting other components of global value chains and poses further significant risks to them. Specifically, under normal conditions, one-third of global fertiliser trade and a considerable portion of the supply of helium and neon (which are critical to manufacturing semiconductors) transit the Strait of Hormuz. In addition, due to its effects on key shipping routes and fuel prices, the disruption to global production chains could affect transport costs for all manner of inputs.

Trade tensions

US trade policy has been disrupted in recent months as a result of legal disputes. In February the US Supreme Court repealed part of the tariff regime introduced in April 2025, deeming it not to comply with the legislation upon which it was based. In response, the US Government imposed a global 10% tariff (effective for 150 days), with the option to raise it to 15%, under different legislation. This new regime exists alongside other tariffs imposed on national security grounds and in response to disloyal trade practices.

Overall, these decisions have resulted in a reduction in the average tariff level applied by the United States, albeit unevenly across countries. Economies such as China, Canada and Mexico have recorded sharper declines, while for the euro area the reduction in the effective tariff is much smaller (Chart 5.3).[6]

Looking ahead, the uncertainty surrounding US trade policy has risen significantly, especially in the medium term. After the initial five-month period, the potential extension of the tariffs must be based on legal frameworks that, in most cases, only allow for the imposition of permanent measures for specific sectors.[7] This could give rise to a less predictable, more fragmented and sectoral trade framework, increasing uncertainty for export companies and hindering medium-term planning for global supply chains.

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5 In March 2026 the Spanish Government approved an extraordinary package of measures, mobilising around €5 billion. The measures include tax cuts and a series of subsidies, direct aid and other support measures, notably the additional fuel rebate of €0.20 per litre for the transport, agricultural and livestock sectors and the aid for the industrial and energy sectors. The package also contains transfers to the primary sector and maritime transport, measures to protect energy consumers and personal income tax deductions for the purchase of electric vehicles.

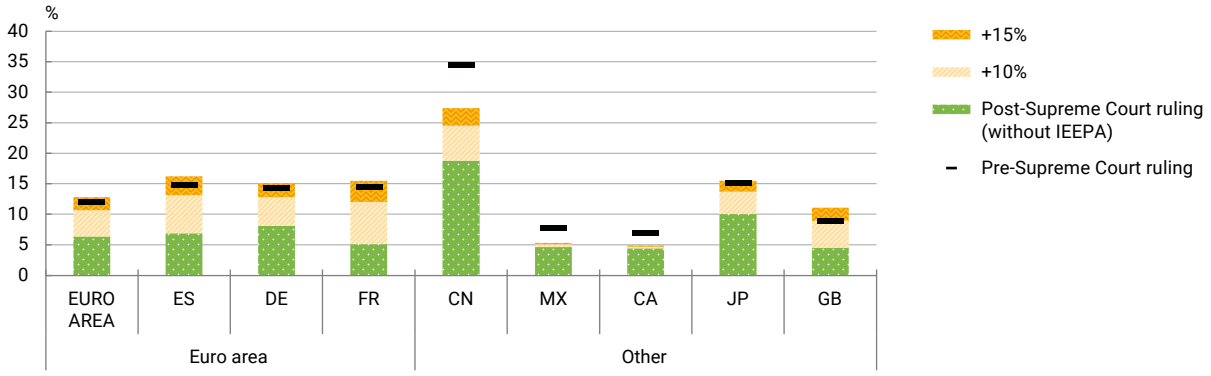
6 The consequences of changes in US tariff policy also vary across products. For instance, close to 60% of the products exported by the euro area and Spain to the United States currently face a lower tariff, while around one-third bear higher tariffs.

7 For example, there are different legal frameworks enabling the United States to launch formal investigations into third countries' trade practices and, based on the findings, impose tariffs or other restrictions. The investigations currently under way focus on excess capacity and production in the manufacturing sector and the national frameworks for imports of goods produced with forced labour, although their potential scope also extends to sectors such as the pharmaceutical, digital, environmental and agrifood sectors.

Chart 5.3

Following the Supreme Court ruling invalidating part of the United States' trade policy since 2025, the effective tariff on imports from the euro area has not changed significantly

5.3.a Effective US tariffs: post-Supreme Court ruling (a)



SOURCES: Global Trade Alerts and Banco de España.

a Four scenarios are compared: (1) situation prior to the Supreme Court ruling; (2) situation after the ruling; (3) temporary global tariff surcharge as of 24 February: +10% (currently in place); and (4) +15% (maximum envisaged under the current framework). Note A2.5.1.1 in Annex 2.

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Risks of trade tensions in strategic sectors – in particular in rare earths,[8] advanced technologies and semiconductors – likewise persist. The European Union has a high external dependency on critical inputs, exposing it to shocks stemming from trade restrictions or export controls. While Spain's direct exposure is limited, the indirect effects through European supply chains, in particular in the automotive and manufacturing sectors, are a significant risk channel.

Other uncertainties in geopolitical relations

In the United States, uncertainty over other economic policies with implications for the global economy remains high. Specifically, in the financial domain US authorities have shown they are willing to lower capital requirements for banks relative to the previously announced plans.[9] In addition, uncertainty over the independence of public agencies persists amid shocks to the institutional framework, which may have negative price and financial stability repercussions, especially in the medium and long term.

More broadly, the deterioration in multilateral cooperation hinders coordinated responses to global shocks. This fragmentation limits progress in areas such as climate policy and may also undermine joint responsiveness to systemic financial crises, where coordinated action can be key, as seen during the global financial crisis.

8 Rare earths are a set of 17 metals (the 15 lanthanides plus scandium and yttrium) used as critical inputs in advanced technologies, whose economic importance stems, in particular, from the high geographical concentration of their supply chains.

9 See Bowman's statements in her speech "Capital Rules for the Real Economy" at the Cato Institute Policy Forum: Basel III and Bank Capital Rules.

Potential impacts of geopolitical risks

The Spanish economy, marked by a high degree of trade openness and energy dependence, would be affected were further geopolitical risks to materialise. Such risks are currently dominated by the conflict in the Middle East, which tilts global activity to the downside, especially in areas that are net importers of energy (e.g. the euro area),[10] and inflation to the upside. An initial analysis of the effects on the Spanish economy was conducted in the Banco de España's March projection exercise.[11] Under the baseline scenario, the conflict is expected have moderate effects, but more severe scenarios – associated with a more intense conflict and more persistent energy shock – would significantly compound the contractionary effects on activity and increase the upward pressures on inflation. In particular, relative to the baseline scenario, the severe scenario envisaged in those projections reduces GDP growth by 0.4 pp in 2026 and 0.6 pp in 2027, while the inflation rate would run at 5.9% and 3.2%, respectively.

The duration of the conflict in the Middle East is highly uncertain. Its prolongation could increase the effects on prices and the availability of energy and other production inputs. Accordingly, to properly assess the financial stability risks in Spain, further hypothetical scenarios that differ markedly from the baseline also need to be considered.[12] Box 5.2 analyses two macroeconomic scenarios based on highly adverse hypothetical assumptions about oil prices ($145 and $220 per barrel of Brent oil, respectively) and assesses their effects on bank solvency using the Banco de España's Forward Looking Exercise on Spanish Banks (FLESB) framework. The results show that, while banks' ability to generate profits is dented, overall, the Spanish banking system is considerably resilient to these types of scenarios.

There are risks associated with the Spanish banking sector's exposure to various emerging market economies that could also be amplified as a result of the war in the Middle East. These notably include Latin America and Türkiye, which had demonstrated considerable resilience since early 2025. The conflict has stressed financial conditions in these countries and tightened expectations for their monetary policy stances. All this against a backdrop of persisting fiscal sustainability risks in some of these countries (e.g. Brazil, Mexico and Colombia), given their high levels of domestic and foreign debt. In addition, the budgetary position in some of these countries is sensitive to episodes of dollar appreciation, since the bulk of their international public debt issuance is denominated in dollars.

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10 The euro area is significantly exposed to external shocks because of its high integration with global value chains and international financial markets, as well as its dependence on imported energy inputs, particularly gas. The outbreak of the conflict in the Middle East coincided with low natural gas storage levels in the euro area, increasing the sensitivity of benchmark European gas prices amid supply tensions and competition for demand from other areas.

11 "Macroeconomic projections and quarterly report on the Spanish economy. March 2026".

12 From an economic projections and monetary policy standpoint, while less likely than the baseline, the alternative scenarios considered do not deviate far from expectations, as the economic policy decisions they inform need guidance based on the most likely economic developments. From a financial stability perspective, it is necessary to consider unlikely – but still plausible – scenarios to measure and ensure the resilience of the financial system to these extreme hypothetical cases.

Other geopolitical risks, associated with US trade policy or changes in the international institutional framework, could also adversely affect the Spanish economy. Overall, these risks would have adverse consequences on activity (e.g. by deterring household consumption and business investment), but their effects on inflation are less clear (for instance, under some scenarios Asian exports redirected to Europe could have deflationary effects). In this setting, lower direct trade exposure to the United States than other European economies would partially mitigate the risks through trade channels.

5.2 Financial market risks

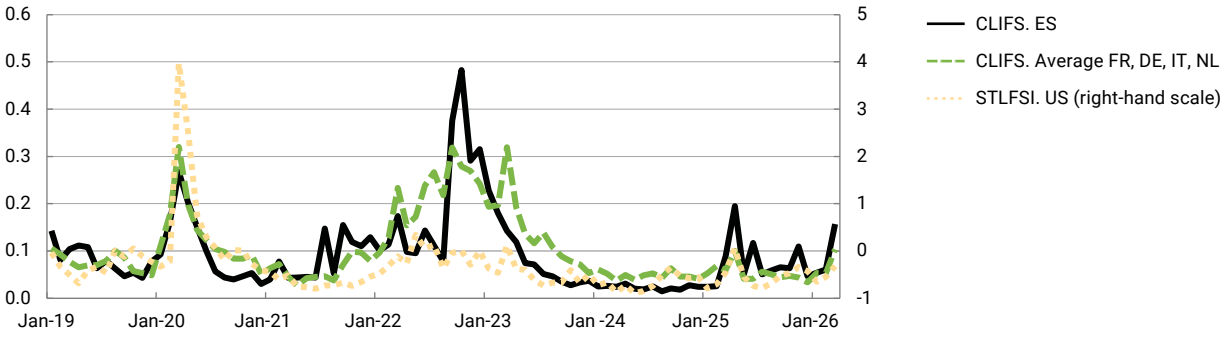
Favourable financial market conditions and risk of an abrupt correction

Despite the heightened uncertainty associated with the conflict in the Middle East, financial market conditions are still favourable and the risk of an abrupt correction remains high. As discussed in Section 4.2, the downward correction in risk-bearing asset prices following the outbreak of the war was very moderate relative to comparable episodes of military conflict or global supply disruptions (e.g. COVID-19). This may reflect favourable expectations regarding the duration or scope of the conflict. Indeed, for the time being, indicators of financial stress do not point to a tightening comparable to recent severe crises, such as COVID-19 or Russia's invasion of Ukraine (Chart 5.4). However, uncertainty is high and market perceptions could deteriorate should the conflict escalate.

Chart 5.4

Financial markets are showing no signs of significant stress so far, but geopolitical developments could lead to rapid shifts

5.4.a Financial stress indicators (Country-Level Index of (CLIFS) and St. Louis Fed Financial Stress Index (STLFSI4)) for different jurisdictions (a)



SOURCES: Federal Reserve System and ECB. Latest observation: March 2026.

a The ECB's CLIFS measures the degree of financial stress in each country using market-based indicators for different segments (equity, sovereign bond, money and foreign exchange markets), capturing both price movements and episodes of high volatility. Values range from 0 to 1, with higher values indicating a higher level of financial stress. The STLFSI4 measures US financial stress using a set of market variables encompassing the fixed-income, credit and equity segments, as well as volatility. Positive values indicate levels of financial stress above the historical average.

High equity and corporate bond valuations

Stock prices may be particularly affected, as they reflect very strong corporate earnings expectations. Price/earnings (P/E) ratios are slightly above the 75th percentile of the historical distribution in the euro area and well above this level in the US market (Chart 5.5), with the "Magnificent Seven" tech firms recording even higher levels. These high valuations reflect expectations of substantial earnings growth relative to current levels. However, such expectations may be difficult to sustain if the macroeconomic outlook deteriorates or if certain sectors, such as technology, are particularly affected by the current crisis, as discussed below.

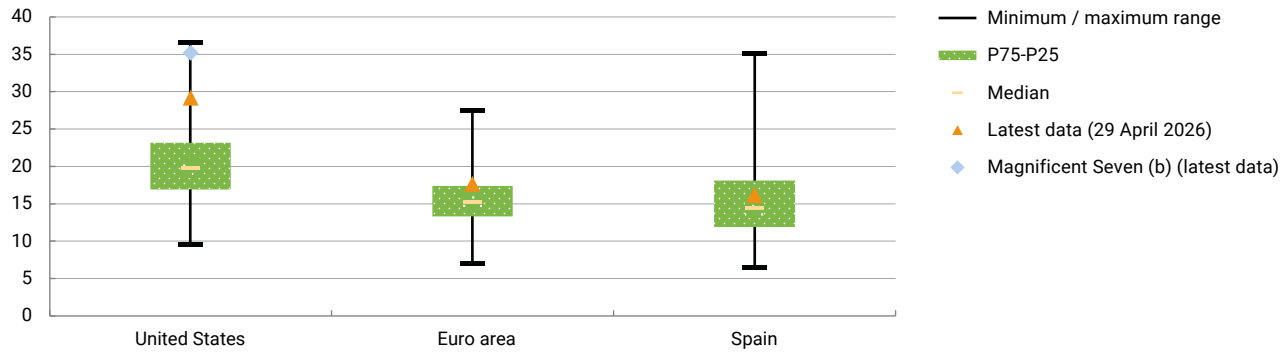
Corporate risk premia could also rise sharply. Corporate risk premia have proved highly resilient since the outbreak of the war, showing a gradual recovery in late April (see Section 4.2). However, certain corporate sectors could be particularly impacted in the most severe Middle East war scenarios, which could include short-term constraints on production capacity. This could lead to higher risk premia on newly issued corporate bonds. Such a deterioration in business solvency would also feed through to private credit funds.

Private credit

Private credit funds have come under strain in recent months. Instances of bankruptcy among private credit borrowers (e.g. First Brands; see Box 3.2) have reduced investor confidence. This has resulted in downward corrections in their market prices (Chart 5.6) and in some cases caused limitations or suspensions of fund redemptions (Box 3.2).

Chart 5.5
Stock market P/E ratios remain high by historical standards

5.5.a Stock market P/E ratios (a)



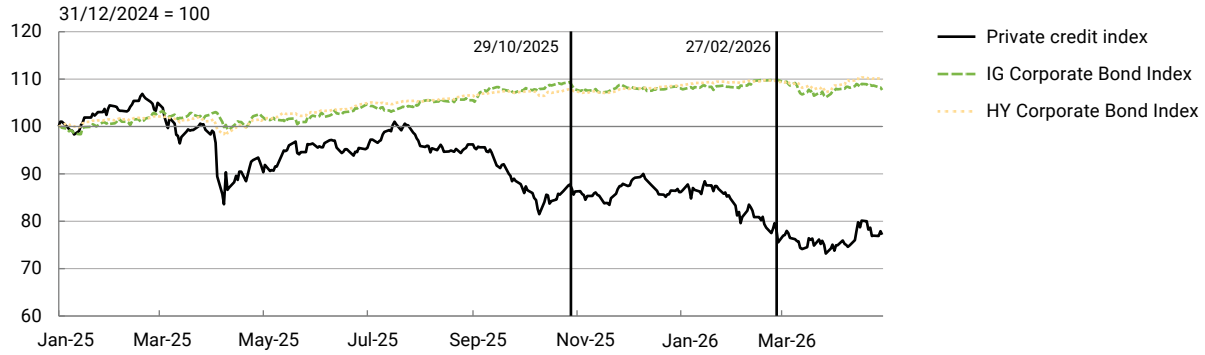
SOURCES: Banco de España and LSEG Datastream. Latest observation: 29 April 2026.

a Drawing on monthly stock market index series constructed by Datastream since 1985 for the euro area and the United States, and since 1987 for Spain. The P/E ratio measures a firm's share price relative to its earnings per share.
b Amazon, Apple, Google, Meta, Microsoft, Nvidia and Tesla.

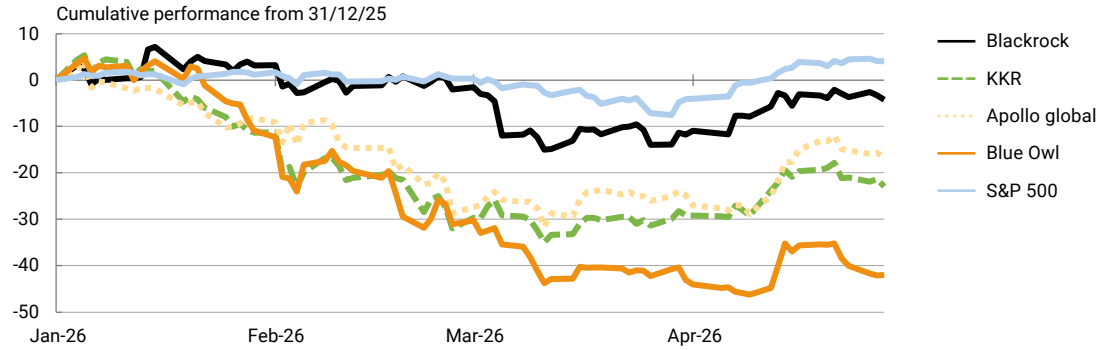
Chart 5.6

Private credit has been penalised by the materialisation of a series of adverse credit and liquidity risk events, which have weighed on the valuations of private credit fund managers

5.6.a Private credit index (a)



5.6.b Cumulative stock market performance of the main private credit fund managers and the S&P 500



SOURCE: Bloomberg Data License. Latest observation: 29 April 2026. 29/10/2025 is the cut-off date for the last *Financial Stability Report;* 27/02/2026 is the last market close prior to the Iran war.

a The S&P BDC index measures the stock market performance of 44 US business development companies focused on private credit. The IG Corporate Bond Index, compiled by iBoxx, comprises the 3,000 foremost US investment-grade bonds. The HY Corporate Bond Index, compiled by iBoxx, comprises the 1,200 foremost US high-yield bonds.

A further valuation correction or increase in redemption requests in this segment could act as a stress transmission mechanism. These vulnerabilities could be amplified by the lower structural liquidity of the underlying assets and any disparity compared with the redemption conditions offered by other investment vehicles, such as business development companies.[13] The total volume of private credit financing is estimated to stand between $1.5 trillion and $2 trillion worldwide, but the segment could affect the broader financial system through multiple channels.[14] Against this backdrop, various financial supervisors have stepped up their monitoring efforts, although no clear indications of systemic risk have been identified to date.[15]

13 A business development company is a US regulated, closed-end investment fund that provides debt and equity financing to unlisted small and medium-sized enterprises. Under certain conditions, they benefit from favourable tax treatment since the bulk of profits are distributed to shareholders.

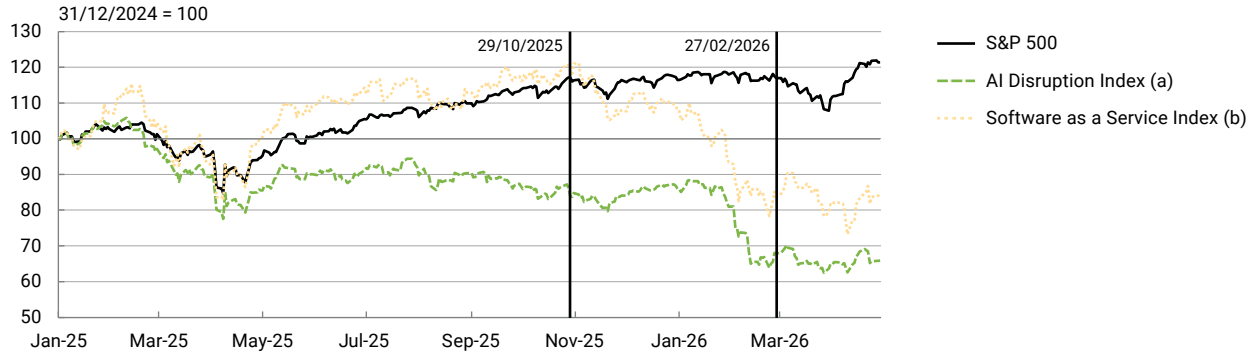
14 See Report on Vulnerabilities in Private Credit published by the FSB on 6 May 2026.

15 See, for example, the speech by Jerome Powell, Chair of the US Federal Reserve, on 30 March.

Chart 5.7

The disruptive impact of AI is reflected in declining stock prices among the most exposed sectors

5.7.a S&P 500, AI Disruption Index and Software as a Service Index



SOURCES: Bloomberg Data License. Latest observation: 29 April 2026. 29/10/2025 is the cut-off date for the last *Financial Stability Report;* 27/02/2026 is the last market close prior to the Iran war.

a Morgan Stanley's US AI Disruption Index. Includes 108 firms that could be adversely affected by AI developments.
b The UBS Software as a Service Index. Includes companies that provide cloud software services (Adobe Inc., Zoom, Dropbox, etc.).

Market risks associated with artificial intelligence

The market has begun to penalise certain sectors potentially more exposed to business model disruption driven by artificial intelligence (AI). AI technology is changing at a rapid pace, making it difficult to pinpoint which sectors will be most affected over the medium to long term. However, there are signs that the market is starting to distinguish between firms based on the degree to which they could be affected by the adoption of AI. The software development as a service sector is a case in point (Chart 5.7). The emergence of AI tools – particularly those that lower software development costs – has weakened the sector's growth and revenues outlook, leading to a drop in share prices.

AI firms themselves are also exposed to significant risks. As noted in previous reports, the potential entry of new competitors and market fragmentation driven by geopolitical tensions are sources of vulnerability for valuations in the sector. In a fundamental way, these valuations are subject to the risk that the expected productivity gains from the development and application of these technologies do not materialise – or at least not in the scale anticipated. In such a scenario, unmet earnings expectations could trigger potentially sharp downward corrections in AI firms' valuations.

The Iran war may be particularly detrimental to AI firm valuations. This conflict could affect trade in or the production of semiconductors, on which AI is particularly dependent. In addition, AI is an especially energy-intensive technology[16] and would therefore be very adversely affected by further increases in energy costs as a result of the war.

16 For instance, in 2024 the U.S. Department of Energy reported that electricity consumption by data centres rose from 58 TWh in 2014 to 176 TWh in 2023 (equivalent to 4.4% of total electricity production in the United States) and projected an increase of between 325 TWh and 580 TWh by 2028 (to 12% of total US electricity production).

Economic growth being reliant on a strong technology sector constitutes an additional risk to activity and financial stability. Should the risks to the sector materialise, the impact would extend beyond financial markets, potentially leading to a correction in investment, with particularly significant consequences for systemic economies such as the United States. The adverse repercussions for activity would spread to export-oriented economies that specialise in technology goods, most notably those in Asia.

Sovereign debt

Sovereign debt could also be affected by a further escalation of the conflict in the Middle East. Both the economic slowdown in certain productive sectors and the support measures to mitigate the impact on households will weigh on countries' fiscal health. In some advanced economies starting from an already fragile fiscal position, such a scenario could drive an increase in risk premia, above the levels observed to date.

Possible impacts of financial market risks

A tightening of financial conditions would have a significant impact on the Spanish economy. The materialisation of the above risks could trigger a broad-based increase in risk premia. In the case of sovereign debt, this could constrain countries' fiscal response to crisis scenarios, given the limited fiscal space available. Similarly, the financial sector could be adversely affected by greater capital market fragmentation, leading to a marked increase in its funding costs. Ultimately, households and firms would face greater difficulties in accessing retail financing. This sequence would weigh on real economic activity, acting as a feedback loop and reinforcing upward pressure on risk premia.

5.3 Other macroeconomic risks

In a global environment marked by elevated uncertainty surrounding the conflict in the Middle East, the Spanish economy faces certain additional macroeconomic risks, which are examined in this subsection. Their potential impact is lower than that of the risks discussed in Sections 5.1 and 5.2, but they could nonetheless slow economic activity and tighten financial conditions.

Dynamism of economic growth in Spain

Spain's economic growth faces risks associated with certain specific sectors. In particular, exports of travel services, which account for a sizeable share of GDP (5.3% in 2025), could be affected by shocks to global tourism preferences or cyclical swings in tourism demand. However, these adverse effects could be partially offset by Spain's greater relative safety as a tourist destination amid high geopolitical tensions, which could drive visitor numbers. In addition,

strong momentum in Spanish exports of non-travel services and intangible investment could be constrained by a potential weakening of international trade, amid heightened global uncertainty.

Fiscal policy risks in advanced economies

Fiscal vulnerabilities in Spain and other advanced economies pose additional risks to macro-financial stability. A deterioration in agents' perceptions of these economies' fiscal sustainability – triggered by cyclical or structural shocks other than those discussed in Sections 5.1 and 5.2 (such as the sectoral growth shocks outlined above) – could likewise lead to an abrupt repricing of their risk premia. Tighter financing conditions and declining confidence would have a negative impact on public spending and economic growth. In the case of systemically important economies, such as the United States, the spillovers to the rest of the global economy would be more pronounced.

Real estate market

House price developments are a significant source of uncertainty for the Spanish economy. Although housing investment has followed a growth path in recent quarters, the mismatch between supply and demand will continue to exert upward pressure on house prices. Should these pressures intensify, housing affordability could deteriorate further, with potentially negative implications for well-being, labour mobility and medium-term economic growth.

5.4 Emerging risks

Cyber risks and ICT operational risks

The rise in cyber and information and communication technology (ICT) operational risks represents an increasing challenge to financial stability. In 2025 a total of 92 significant incidents related to information and communication technology[17] were reported to the Banco de España by institutions under its supervision (significant institutions, less significant institutions, payment institutions and electronic money institutions). External events and system failures were the most common incidents, while only nine were classified as malicious. There is evidence that cybercrime is becoming more professionalised and increasingly active within the crypto-asset ecosystem.[18] More broadly, the digitalisation of the financial sector heightens its exposure to various operational risks, including service disruptions and loss of access to data, even in the absence of cyber attacks.

17 The European Union's Digital Operational Resilience Act (DORA) defines an ICT-related incident as a single event or a series of linked events unplanned by the financial entity that compromises the security of the network and information systems, and has an adverse impact on the availability, authenticity, integrity or confidentiality of data, or on the services provided by the financial entity. Incidents meeting certain criteria and thresholds must be reported to the competent authorities.

18 See the 2025 Chainalysis report.

The current geopolitical environment also heightens these risks. The current more turbulent and fragmented global environment may increase their frequency and severity.[19] In addition, geopolitical conflicts could cause physical damage to key technological facilities, such as communication or computing hubs, with global repercussions.

Rapid technological innovation could see new vulnerabilities emerge. In particular, technological developments related to cybersecurity are evolving rapidly and in hard to anticipate directions, as is the case with generative AI[20] and quantum computing.[21] This may result in potentially critical imbalances between offensive and defensive capabilities. Indeed, some recent AI developments may already be driving up cybersecurity risks, making cyber vulnerabilities easier to detect and drastically shortening the time gap before they can be exploited (Box 5.3).

Advances in new technologies could result in the disappearance of some traditional providers of technology services to the financial sector. As discussed in Section 5.2, and illustrated in Chart 5.7, some business models, such as software development as a service, could be displaced by ongoing technological progress. This would also have implications for providers of technological services to the financial industry. Such developments could be disruptive, at least in the short term, for the sector. Financial institutions' capacity to adapt to this new environment and replace obsolete providers may vary. Those lagging furthest behind, particularly with regard to cybersecurity, could then be exposed to new operational risks.

Strengthening operational resilience and the ongoing identification of threats and vulnerabilities are key.[22, 23] Subjecting existing frameworks to cyber resilience stress tests or assessments can help to identify vulnerabilities.[24] It is also important to closely monitor the geopolitical and technological developments that shape the nature of such threats. More broadly, cyber and ICT operational risks should be viewed as a structural but evolving challenge, requiring stable resources that should not be scaled back in response to crises or lower profitability.

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19 See the box on geopolitically motivated cyberattacks in the ECB's *Financial Stability Review* of May 2025.

20 Generative AI is a type of artificial intelligence that can create new information, such as text, code or images, by extrapolating from patterns identified in other sources of information. Its capacity to convincingly replicate reality makes it susceptible to misuse for illicit ends.

21 Quantum computing uses the principle of quantum superposition to drastically reduce the computational cost of solving certain complex problems. Although it remains an emerging field, quantum computing has the potential to solve problems that were previously out of reach, which could compromise the security of certain processes, such as cryptography.

22 The Financial Stability Board's (FSB) Cyber Lexicon defines cyber resilience as the ability of an organisation to continue to carry out its mission by anticipating and adapting to cyber threats and other relevant changes in the environment and by withstanding, containing and rapidly recovering from cyber incidents.

23 For a broader discussion see Chapter 5 of the Spring 2025 *Financial Stability Report*.

24 The ECB conducted a cyber resilience stress test in 2024, while in 2025 the IMF published an assessment of the European cyber risk regulation and supervision framework.

Crypto-assets and stablecoins

The potential expansion of stablecoins[25] continues to pose significant financial stability risks. Although less volatile than unbacked crypto-assets,[26] stablecoins nevertheless entail specific risks stemming from their pegging to underlying reserve assets and their potential expansion as a means of payment or store of value. Widespread adoption of stablecoins could encourage bank disintermediation, eroding the deposit base, with implications for banks' funding structure and monetary policy transmission. Moreover, episodes of declining confidence could trigger large-scale redemptions, forcing stablecoin issuers to liquidate reserve assets under adverse conditions, with potential spillovers to other markets and financial intermediaries with similar exposures.

These risks could be further amplified in the case of global stablecoins,[27] which are designed for widespread use, including across borders. Dollar-denominated stablecoins currently dominate the market, while the US Administration's monetary sovereignty strategy encourages the development of global stablecoins denominated in US dollars. Widespread adoption of these instruments could intensify currency substitution, increase cross-border financial flows and amplify the international transmission of US monetary policy and, more broadly, cross-jurisdictional shocks. Against this background, multi-issuer arrangements,[28] with issuers subject to different regulatory frameworks, could concentrate stress in certain jurisdictions and hinder the orderly management of such episodes, thereby increasing the likelihood of systemic repercussions.

Limited and uneven progress in the international regulation of stablecoins, as well as in cross-jurisdictional cooperation and coordination, remains an additional source of vulnerability, particularly in cross-border contexts. Regulatory fragmentation could encourage regulatory arbitrage and weaken the impact of measures designed to mitigate the associated risks.

Climate risks

The physical and transition risks associated with climate change remain relevant from a financial stability standpoint. Evidence of the economic impact from the materialisation of

25 Stablecoins (or asset-backed crypto-assets) are backed by a reference asset, such as a currency (e.g. the US dollar) or other type of asset, via stabilisation mechanisms that seek to control their volatility. Stablecoin issuance is regulated and supervised, meaning issuers must comply with prudential capital and liquidity requirements. This distinguishes them from non-asset-backed cryptocurrencies, which are not subject to comparable controls.

26 See Box 4.1 of the Spring 2025 *Financial Stability Report*.

27 According to the FSB definition, a global stablecoin is a stablecoin with an existing or potential reach and use across multiple jurisdictions and that could become systemically important in and across one or many jurisdictions, including as a means of making payments and/or as a store of value.

28 Stablecoins issued by the same or affiliate entities (i.e. co-issuers) operating across different jurisdictions (see FSB Thematic Review). For such arrangements to be meaningful, each token must be fungible with all others within the same arrangement, such that, in principle, it is impossible to identify the issuer or the jurisdiction in which a specific token was issued. As a result, each co-issuer could bear liability for redeeming the entire stock of tokens issued, even while holding only a fraction of the overall reserve of assets.

these risks continues to accumulate. In Spain, literature on the deadly flooding of autumn 2024[29] documents the economic effects of such shocks, particularly through economic activity and credit quality. At the European level, recent ECB studies[30] integrating acute physical risks, such as floods, and transition risks into stress testing show that both types of risk can affect banks' profitability and capital through direct damage, business disruptions and macroeconomic spillovers.[31]

Against this background, it is vital that international cooperation on climate policy be maintained. Failure to do so could raise the associated costs, increase economic and financial uncertainty over the medium and long term, and hamper an orderly response to these risks. In particular, coordinated efforts must continue to improve data quality and data gathering efficiency, while avoiding unnecessary reporting burdens for firms and other agents. Additionally, methodologies should be developed to better understand and model how agents behave in response to these risks over the medium and long term, enabling the design and implementation of effective transition policies.

29 "The impact of the autumn 2024 flash floods in Spain from a financial stability standpoint". *Financial Stability Review - Banco de España,* 48, Spring.

30 European Central Bank. (2025). "Integrating climate risk into the 2025 EU-wide stress test: the effects of climate risks for firms". Macroprudential Bulletin 32. November 2025.

31 Physical risks arising from more frequent and intense extreme weather events can affect economic activity, the solvency of households and firms, asset values and insurance coverage. Meanwhile, transition risks linked to regulatory and technological changes, as well as shifting consumer preferences, could lead to valuation losses and a gradual – but potentially disorderly – reallocation of financial flows, particularly in the most carbon-intensive sectors.