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Capital markets union: a deep dive

Five measures to foster a single market for capital

No 369

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Abstract

The European Union requires a single market for capital. Well-developed and integrated capital markets support economic growth and resilience across the region, offering benefits for businesses, households, and financial stability. This paper examines the importance of CMU in achieving five strategic objectives: supporting innovation and productivity, financing the twin transition, shoring up pension savings, strengthening alternatives to bank financing, and fostering convergence and inclusion. It highlights the progress made over the past decade, the challenges encountered, and the renewed impetus behind the CMU initiative. The paper proposes concrete steps to move forward, building on long-standing priorities supported by the ECB and the current policy debate on CMU. First, it suggests facilitating access to capital markets, via the creation of a new standard for a European savings and investment product. Second, it emphasises the importance of expanding capital markets across-borders which would be facilitated by improvements towards a more integrated supervisory ecosystem, an integrated trading and post-trading landscape leveraging on the potential benefits of digitalisation, and a more active securitisation market that does not compromise on financial stability. Third, the paper highlights the need to channel capital towards innovative and competitive firms by increasing opportunities for equity and venture capital financing. These actions should be complemented by longer-term initiatives, including continuing to address barriers stemming from the lack of harmonisation in insolvency, corporate and taxation regimes, designing a safe asset for Europe, completing the Banking Union, and promoting financial literacy and inclusion.

JEL codes: E61, F36, G18, G24, G51, O16

Keywords: Capital Markets Union, Financial integration, Convergence, Savings, Innovation financing

Non-technical summary

Europe needs well-developed and integrated capital markets to support economic growth and resilience. The capital markets union (CMU) project will be one component of the expected new strategy by the Commission for Europe's Savings and Investment Union (SIU) following the strategic guidance set in the Competitiveness Compass.[1] A more integrated capital market allows for a more efficient allocation of resources, connects savers with investment opportunities, and provides businesses of all sizes with access to diverse funding sources. Stronger, safer and more integrated markets can support innovation and productivity, while reducing reliance on bank lending and enhancing financial resilience. Deeper markets are also essential to finance the investment needed for the green and digital transitions and put households and governments on better footing for the demographic changes ahead. Finally, by fostering risk diversification, CMU can promote convergence and strengthen economic stability across the EU.

Over the past decade, the European Commission has put forward a wide range of legislative proposals and other initiatives to establish a single capital market, including three CMU Action Plans. The EU has made significant progress – such as in sustainable finance, improving SME listings, and creating secondary markets for non-performing loans. Yet progress in capital markets development and integration has been limited, impacted by the insufficient advancement of the most ambitious reforms needed to transform capital markets. Key actions, such as aligning insolvency procedures and tax laws, have faced challenges, as have efforts to boost retail investment. Despite broad consensus on the benefits of integration, political will has been insufficient to overcome barriers.

In recent years, momentum around the CMU project has grown, driven by a shift in its overarching narrative. Initially, the focus was on integrating and developing national capital markets to complement bank lending and enhance risk diversification, to strengthen the Economic and Monetary Union—much like the banking union. The rising financing needs of the green and digital transitions, coupled with limited fiscal space following the COVID-19 pandemic, have made deepening capital markets a renewed priority. Mobilising private capital for productive investment is now seen as essential to easing the fiscal burden of these transitions. These needs have become even more urgent due to geopolitical uncertainties and the EU's declining competitiveness compared to other major economies. As a result, a deep, integrated capital market is now a strategic objective for enhancing Europe's open strategic autonomy and resilience.

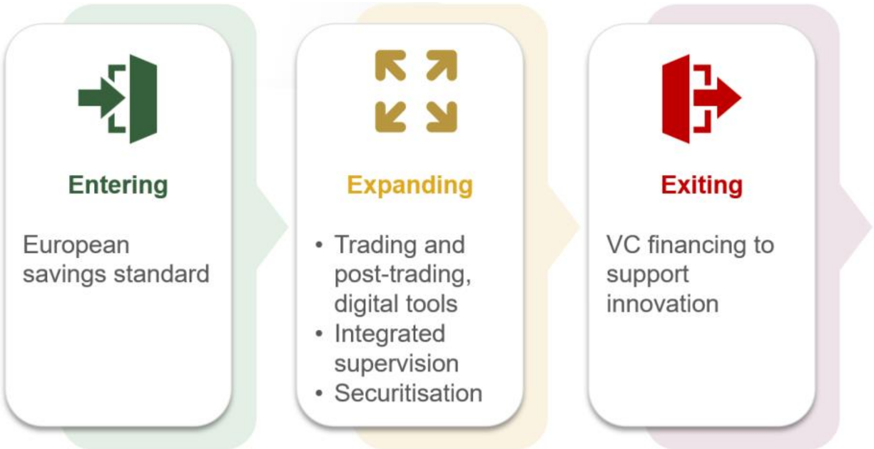
The intensification of the policy debate around CMU has led to a number of proposals and recommendations, from landmark EU reports by Enrico Letta and Mario Draghi to the many stakeholders with an interest in capital markets.

[1] See Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on A competitiveness Compass for the EU, Brussels, 29 January 2025.

Political engagement has also increased, as seen in the Eurogroup's March 2024 statement on European capital markets, which outlined finance priorities agreed amongst ministers. The CMU now stands at a crossroads: political pledges must be translated into concrete policy actions, despite differing perspectives among stakeholders and Member States.

CMU can move forward by focusing on a clear set of potentially impactful priorities that can feasibly be delivered over the coming legislative term.[2] This paper proposes concrete steps to move forward along five key actions: i) a new savings and investment standard, ii) a more integrated supervisory ecosystem, iii) an integrated trading and post-trading landscape supported by efficiency advances offered by digitalisation, iv) a more active securitisation market that does not compromise on financial stability, and v) more opportunities for equity financing, especially venture capital. These proposals aim to address bottlenecks at three stages: to facilitate access to capital markets (entering), to expand capital markets across-borders (expanding) and to channel capital towards innovative and competitive firms (exiting).

Chart 1
Five high-impact priorities for CMU



The area of retail savings and investment offers one of the most promising ways for CMU to move forward. The proposal for a European savings and investment product aims to leverage successful national initiatives while addressing common EU challenges such as low retail financial investments in market-based products. Key policy levers for this proposal include tailored tax incentives, flexible and easy-to-access product design, and the balance between EU centralisation and national flexibility. Tax incentives can encourage households to increase their participation in capital markets, boosting both individual wealth and broader economic growth. The design of the savings product should prioritise accessibility, transparency, portability and low fees, making it appealing to a diverse range of savers, with also different levels risk tolerance. The implementation could build upon

[2] See Lagarde (2024), "Follow the money: channelling savings into investment and innovation in Europe", Speech at the 34th European Banking Congress "Out of the Comfort Zone: Europe and the New World Order", November, Frankfurt am Main.

existing products, aim at minimizing bureaucracy and could take a host of different forms depending on the level of ambition, starting with a European label that receives harmonised treatment across the single market, to a fully-fledged European savings product. While centralising certain features can ensure a level playing field and ease cross-border investment, maintaining flexibility allows Member States to adapt the product to local tax regimes and consumer preferences. This approach would foster broader adoption across the EU, while ensuring the savings product meets the unique needs of different markets.

The fragmented European trading and post-trading landscape should progressively evolve towards more integration, leveraging on legal harmonisation and new technologies. This will require moving towards a more harmonised framework for corporate and securities law, starting with targeted improvements and possibly a 28th regime before moving towards full harmonisation. The EU should also move towards a pan-European pool of liquidity, through a full comprehensive consolidated tape and more inclusive European equity indices. In the longer term, market participants could reap the benefits of legal harmonisation and new technologies to achieve a fully integrated – and consolidated – trading and post-trading landscape. Distributed ledger technology and other financial innovations can also enhance the securities ecosystem by enabling faster and safer transactions, thereby increasing financial systems' resilience.

The EU will also need to move toward a more integrated supervisory ecosystem. Enhanced supervisory convergence, through more centralised EU supervision, would support uniform implementation of rules, increase market confidence, and promote cross-border investments. While different models can be envisaged for a more integrated supervisory ecosystem, the aim of a coherent and ultimately integrated supervisory ecosystem should be maintained. Steps should already be taken to further harmonise capital market rulebooks, strengthen the role of the ESAs, and improve the consistency of EU-level regulation across market sectors. European supervisors should have the adequate resources and powers to improve and harmonise the functioning of EU capital markets, including direct supervision when relevant.

Securitisation can enhance bank balance sheet utilisation while regulatory and prudential adjustments should continue to adequately reflect underlying risks. In the short term, fine-tuning some elements of the regulatory and prudential framework can support supply and demand of securitisation, while maintaining prudent requirements is key to guarantee the resilience and transparency of the market. In that regard, loosening capital rules does not seem to be a promising avenue to increase overall risk transfer. Streamlined due diligence and reporting requirements can help reduce the administrative burden for both originators and investors without compromising on the progress achieved towards more transparency in the market. To have a lasting impact, these initial actions should be combined with longer-term efforts toward standardisation and simplification to scale up and integrate the market. The EU should also explore potential designs for platform for securitisation markets, in particular for green securitisations potentially also alongside the use of dedicated public funds for green securitisations.

Venture capital and equity markets will need to scale up for EU firms to have access to adequate financing sources at all stages of their life cycle. Developing venture capital should be a short-term priority to channel funding to promising innovative companies and sectors to help the EU close its productivity gap. This would help addressing the current gap in late-stage financing that often leads European startups to seek funding outside the EU and leads them to list or relocate elsewhere. Established public investors such as the European Investment Fund (EIF) could be further mobilised towards venture capital to crowd in private investors, ensure strategic investment in key sectors, and provide stability in volatile times. At the same time, further efforts should be made to expand the investor base. Institutional investors that have the means to invest in venture capital whilst diversifying risk over a long-term horizon seem particularly well suited to play a more active role in the market. By developing policies that incentivise these investors to diversify their portfolios and include more VC investments, the EU can unlock significant new funding for start-ups. The same goes for lowering the entry barriers for retail investors to participate in equity and bond markets. Furthermore, initiatives are needed to connect research, funding and support for commercialising ideas throughout the Single Market. Over the medium term, making listing in Europe more attractive and efficient would help to develop the equity market and would contribute to enhancing the depth and liquidity of listed equity in Europe – further facilitating firms to start new businesses and develop into successful companies.

Implementing these five measures is critical but does not complete the CMU agenda: other important proposals should supplement them but may take longer to implement. The five proposals elaborated upon in this paper have been chosen for their potential to make a significant impact while being feasible to implement in the short term. They are also widely debated among stakeholders with diverse objectives. Longer-term, they should be complemented by policies to address structural weaknesses in European capital markets, requiring strong political commitment and cultural shifts. These include continuing to address barriers stemming from the lack of harmonisation in insolvency, corporate and taxation regimes, designing EU bonds as a safe asset for Europe, completing the banking union and promoting financial literacy and inclusion. This should go hand in hand with renewed efforts to remove barriers within the Single Market, policies that support the necessary restructuring of European economies, and projects that promote European innovation to provide opportunities for this funding to be used in productive ways.

This Occasional Paper is part of an ongoing effort by the ECB to lend support to the CMU agenda with analytical contributions to policy discussions. Proposals included in this paper build on long-standing priorities supported by the ECB as outlined in numerous publications (such as public ECB contributions to the CMU-related consultations, statements by the Governing Council on priorities for CMU and regular publications such as the Report on Financial Integration and Structure in the Euro Area). It will be followed by additional technical work to further detail the proposals.

1 A capital markets union to support EU objectives

There is no single solution to get to a true single market for capital. Instead, the EU will require a coherent set of measures to address the three pillars that have emerged from the CMU project thus far: better options for savers and investors; more support for businesses and entrepreneurs; and more efficient and effective oversight for market stakeholders.

CMU has the potential to enhance growth, competitiveness, and strategic autonomy. Well-functioning financial and capital markets are directly relevant to the ECB's mandate – a topic we explore in section 1.6. More broadly, CMU can be seen as a general policy to pursue the following objectives:

- **Financing innovation to foster economic growth and competitiveness**. By expanding financing options, CMU can support a more dynamic industrial landscape, driving productivity and economic growth.
- **Financing the twin transition.** A broader range of funding sources will accelerate investments in sustainability and digitalization.
- **Shoring up pension savings**. With aging populations, CMU can enhance retirement planning and financial security for citizens.
- **Promoting private risk sharing**. Strengthening equity markets and alternatives to bank loans will improve economic resilience and cross-border investment, reinforcing financial stability.
- **Fostering convergence and inclusion**. CMU can help citizens in all Member States and from all levels of society access financial products that meet their needs. Better capital allocation will help with economic convergence throughout the EU.

Achieving these objectives requires targeted tools and concrete policy proposals to advance the CMU debate in the relevant EU fora. This paper maps out 5 proposals that seek to address the priorities outlined above: a new savings and investment product; measures to support the integration and digitalisation of the trading and post-trading ecosystem; an active and sustainable market for securitisation; more opportunities for equity and venture capital; and steps towards a more integrated supervisory ecosystem.

Chart 2
CMU objectives

1.1 Financing innovation to foster economic growth and competitiveness

Europe's reliance on bank lending has not delivered the potential integration of markets and limits the financing of innovative firms and the productivity of the European economy. ECB analysis shows that market integration via cross-border lending remains limited.[3] Furthermore, the high dependency of companies on bank lending (see Chart 3, lhs) has shaped Europe's economic structure while equity financing, and in particular listed equity, comprises a minority share of the euro area financing mix.[4] Bank lending is also not the most appropriate tool for financing innovation, in particular for high-risk, high-reward ventures like startups and technology companies. These firms generally have limited tangible collateral on offer and given their age cannot build on a proven track record of free cash flows making it costlier and more difficult for banks to assess and monitor their performance. Their activities also do not fit well with banks' business model: fast growing but initially unprofitable firms are held back by debt service and loan maturity requirements, and exposures to such firms are capital intensive in banks' risk models.

Capital markets are better equipped to support high risk-taking activities and could play a more prominent role in financing the European economy and delivering benefits for retail investors. Banks have a mixed track record when it comes to distinguishing between more and less productive firms and often channel significant resources into sectors that contribute less to long-term economic growth,

[3] "Intra-euro area cross-border bank lending: a boost to banking market integration?", Box 5 in the ECB Report on Financial Integration and Structure in the Euro Area, June 2024.

[4] Chapter 4.3.2 of the ECB Report on Financial Integration and Structure in the Euro Area, June 2024.

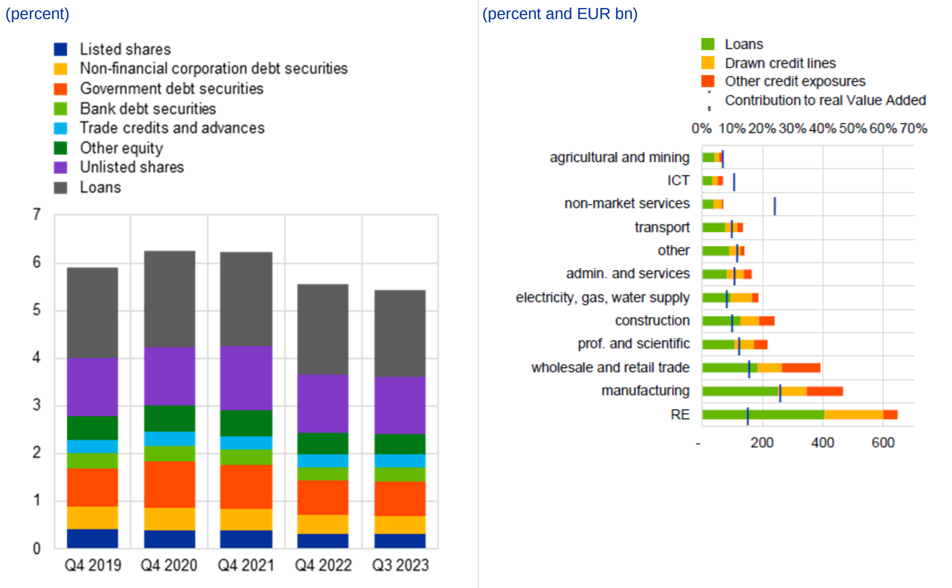
such as real estate (see Chart 3, rhs).[5] These sectors represent a larger share of banks' corporate loan portfolios than their contribution to gross value added would suggest. This imbalance raises concerns about the allocation of funds and underscores the need for more diversified investments and financial intermediaries to enhance productivity and competitiveness across the European economy. In addition, households could participate more actively in capital markets and take advantage of increased returns over the long periods of time relevant for retirement savings. Euro area households keep on average one-third of their financial assets in the form of currency and deposits and are significantly less invested in capital markets than their US counterparts.[6]

Chart 3

Financing of the real economy and the role of banks

Stock of euro area economy external financing outstanding relative to GDP (2019–2023)

Sectoral contributions to GDP and to banks' corporate exposures in the euro area



Source: Low firm productivity: the role of finance and the implications for financial stability, ECB Financial Stability Review (November 2024)
Notes: In panel a) the chart displays the ratio of outstanding financing of real economy activities relative to nominal GDP. For the years 2019-2022 data refers to Q4, while for 2023 data refers to Q3.

Risk capital, particularly equity and venture capital, is associated with increased entrepreneurial activity and development of disruptive technologies which can foster innovation and drive economic growth. Equity financing allows companies to raise funds without the immediate pressure of debt repayment, enabling them to invest in long-term, high-risk projects that have the potential to generate significant returns. Venture capital, a subset of equity financing, is particularly vital for start-ups and early-stage companies. It provides not only

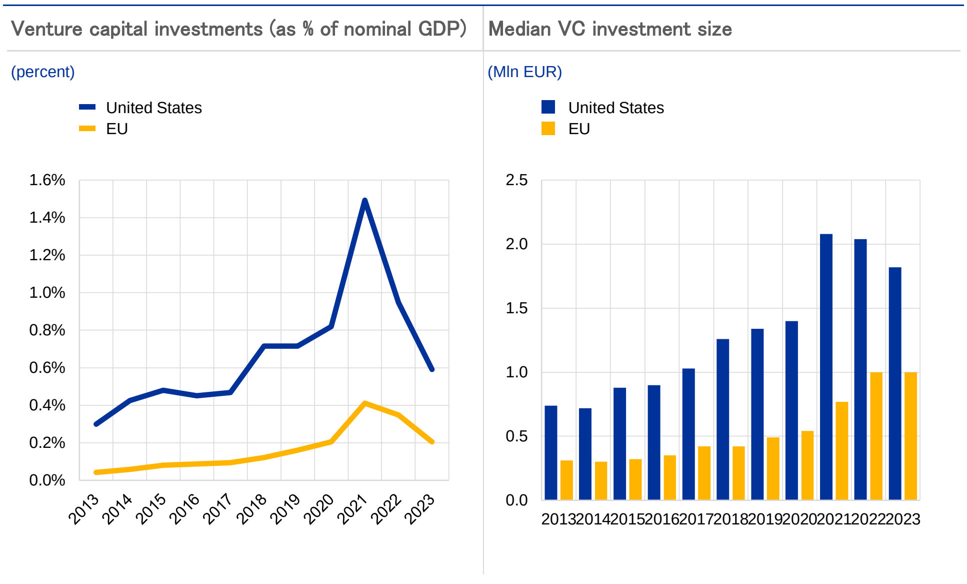
5 ECB (2024) "Low firm productivity: the role of finance and the implications for financial stability", Financial Stability Review, November.

6 To illustrate this, see Chart 22 in chapter 4.3.2 of the June 2024 ECB Report on Financial Integration and Structure in the Euro Area, which illustrates the development of euro area household financial assets in absolute terms as a share of GDP (chart 22 a) and in relative terms compared with the US (chart 22 b).

necessary capital but also strategic guidance, industry expertise and networks, which are essential for the growth and success of innovative firms (Gompers and Lerner, 2001). Venture-backed companies also tend to be more innovative, with higher rates of patenting and R&D spending compared to non-venture-backed firms (Kortum and Lerner, 2000; Gornall and Strebulaev, 2021). This form of financing is thus key for industries characterized by high uncertainty and significant upfront investment needs, such as biotechnology, information technology, and clean energy.

Venture capital (VC) is less accessible to European firms than to their US counterparts due to fragmented markets and a narrower investor base. While European VC markets have grown over the past decade, they remain underdeveloped. Chart 4 shows that VC availability in the US is three times higher than in Europe, with the gap widening over time. The graph also illustrates a high volatility over the last decade.[7] In terms of median investment, US companies receive nearly twice as much VC funding as their European peers. Several factors explain these discrepancies. On the demand side, the lack of VC market development may be explained by a shortage in the EU of potential start-ups turning to VC investment as a source of funding for scaling up (see Box 1). On the supply side, EU VC funds are smaller and more fragmented than in the US, therefore unable to serve the needs of European firms in the late stage of their growth. In addition, EU VCs do not benefit from a similar investor base as the US.[8]

Chart 4
VC financing of EU and US companies



Sources: Pitchbook data and ECB calculations

[7] 2021 was a particularly high activity year mainly driven by a few VC backed unicorns with important capital needs for growth to subsequently publicly list in private markets, supported by the low interest environment ant favourable credit conditions.

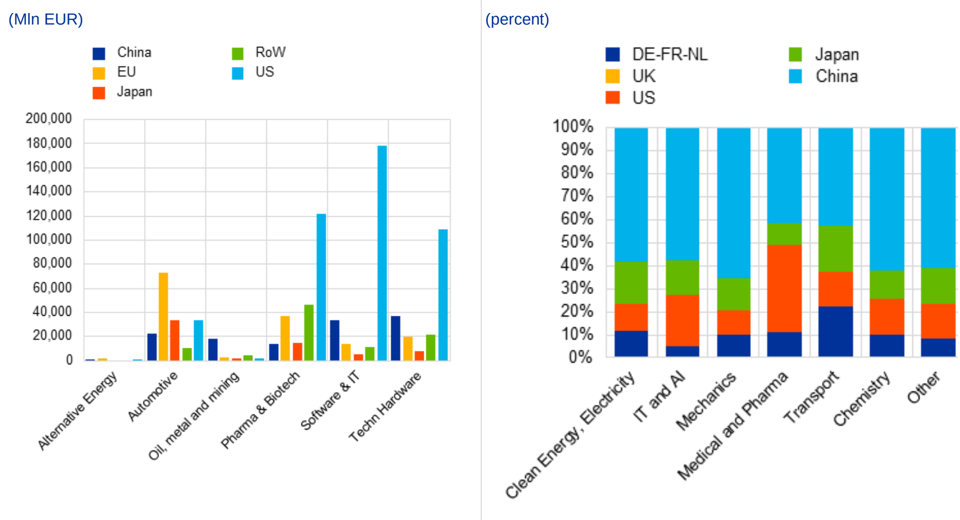
[8] Data from the industry indicates that institutional investors play a marginal role in VC. Atomico reported that just 0.01% of pension fund assets under management were invested into European VCs in 2023, in line with the average of the last five years (Link). According to the IMF, in the US, private long-term financial investors make up most of the investor basis for VC funds (72% vs 30% for the EU) followed by other Limited Partners (17% - 30% for the EU), Family offices and private individuals (7% vs 9 % in the EU) and public entities (4% vs 31% in the EU) see IMF 2024 (Link).

Notes: Panel a) displays annual venture capital investments as percentage of GDP for the US and EU. Panel b) displays the median size of venture capital deals in the US and EU.

These trends contribute to the significant productivity gap between Europe and the US, which consistently outpace Europe in terms of economic dynamism. Europe's productivity gap with the US stems from lower total factor productivity, not just weaker capital deepening (see Box 1). The US fosters high-risk investments, enabling the rise of major tech firms, while Europe struggles to mobilise capital for startups, limiting innovation and growth. As a result, European tech companies remain smaller, with fewer unicorns.[9] Many startups seek funding abroad or relocate. Regulatory, fiscal, legal and other barriers further hinder scaling across Member States, preventing full use of the EU single market.

Chart 5
R&D spending by private companies, and patent applications

R&D by the biggest 2500 companies worldwide, by sector	Patents applications by sector and jurisdiction, 2022



Sources: 2023 EU industrial R&D investment scoreboard, World Intellectual Property Organisation (WIPO), and ECB calculations
Notes:

The productivity gap is further driven by a lack of R&D spending by European firms compared to other jurisdictions, and a focus of innovation outside of the high technology sectors, ultimately impacting the demand for risk capital (Chart 5). In 2021, the combined spending by the public and private sectors in the euro area reached EUR 265 billion (2.3% of its GDP)[10], a positive trend but still below levels in the US, Japan, and now China.[11] This is mostly explained by an underinvestment by European firms in "high tech" sectors such as software, computers and biotechnologies, and a concentration of R&D in "middle tech" sectors

[9] "Unicorn" is a term coined by investor Aileen Lee in 2013 to describe a privately held start-up company valued at $1 billion or more.

[10] See Bergeaud, A., (2024) "Monetary policy in an era of transformation, The past, present and future of European productivity", ECB Forum on Central Banking, European Central Bank, July.

[11] Ibid. China caught up with the EU in 2019, while the US, followed by Japan, spent slightly above 3% in 2021.

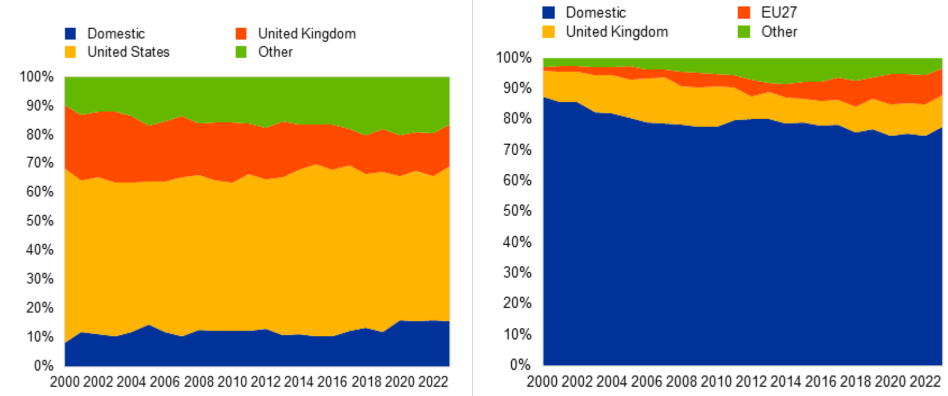
such as automobile, chemical and transportation.[12] Meanwhile, public investment in research in the euro area reached 0.8% of GDP in 2021, which is on a similar scale as in the US. Similar considerations arise when examining patent applications,[13] where Europe generally lags behind other jurisdictions, particularly in high-tech sectors.

Europe's weak productivity growth is a critical challenge for open strategic autonomy. Chart 6 shows that European companies in the tech sector significantly rely on US venture capital financing while tech companies in the US rely on domestic sources.

Chart 6

Geographical coverage of investments in the technological sector

Share of capital invested into European tech companies by geography	Share of capital invested into US tech companies by geography
(percent)	(percent)



Sources: Pitchbook and ECB calculations
Notes: Sectors considered as technology include 3D Printing; AdTech; AgTech; Artificial Intelligence & Machine Learning; AudioTech; Augmented Reality; B2B Payments; Big Data; CleanTech; Climate Tech; CloudTech & DevOps; Cryptocurrency/Blockchain; Cybersecurity; Digital Health; E-Commerce; EdTech; Esports; FemTech; FinTech; FoodTech; Gaming; HealthTech; HR Tech; InsurTech; Internet of Things; Legal Tech; Marketing Tech; Mobility Tech; Mortgage Tech; Nanotechnology; Real Estate Technology; Ridesharing; Robotics and Drones; SaaS; Supply Chain Tech; TMT; Virtual Reality; Industries: Information Technology; Keywords: digitalisation technology. Only completed deals considered.

Box 1

Productivity growth in the EA and the role of innovation

Prepared by Marinela-Daniela Filip, Daphne Momferatou and Susana Parraga-Rodriguez

Productivity growth in the EA has been decelerating for decades, with the productivity gap between EA and the US consistently widening since the 1990s, leading to a loss of competitiveness for the euro area economies (Chart A.1). This discrepancy in productivity growth can be attributed to several factors, including differences in market structures, innovation ecosystems, regulatory environments, and business dynamism. Underlying data suggests that both

[12] Fuest, C., Gros, D., Mengel, P., Presidente, G. and Tirole, J. (2024) How to Escape the Middle Technology Trap, A Report by the European Policy Analysis Group.

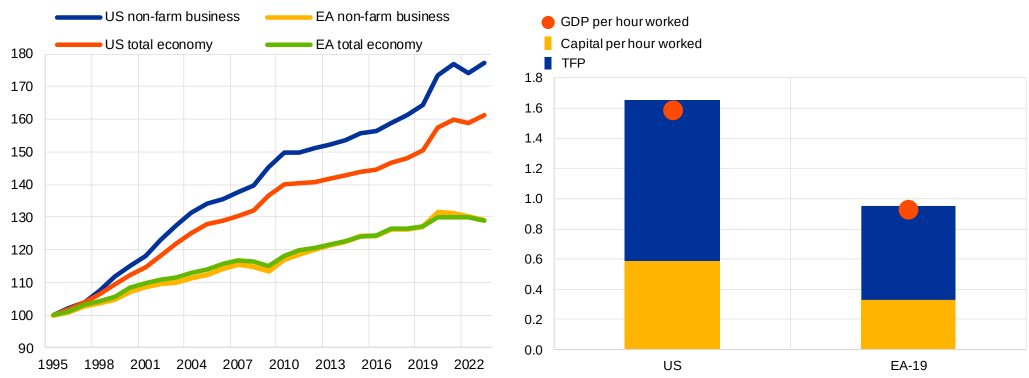
[13] Patent applications include both direct applications and applications under the Patent Cooperation Treaty (PCT). The latter are administered by the World Intellectual Property Organisation (WIPO). An applicant is able to file a single "international" patent application, which can then be pursued in any of the PCT member countries. However, many countries, including China, primarily apply for patent protection under national legal framework rather than under the PCT.

lower total factor productivity (TFP) and lower capital deepening in the EA is behind this divergence (Chart A.2). The prominent role of TFP as a driver for productivity differences suggests that EA competitiveness is hurt not only by the quantity of invested capital but also by how that capital is allocated and by how efficiently all available factors of production are used.

Chart A

1: Productivity gap between the US and EA   2: Productivity gap decomposed by region

(1995=100)   (Average annual growth over the period 1995-2023)



Sources: Chart A.1: Bureau of Labor Statistics (US) and Main National Accounts (EA) and ECB staff; Chart A.2: AMECO data and ECB calculations.

Declining business dynamism explains part of these trends. While business dynamism (generally the rate at which firms enter, grow and exit the market) has declined over the long run in both regions[14], the US has consistently experienced relatively more new firms' formation and lower bankruptcy declarations compared to the EA in recent years.[15] ECB research (ECB, 2021) finds that in Europe the average age of firms at the frontier, that is, the most productive firms in any given sector, has increased substantially over the recent decades. In the early 2000s, frontier firms in manufacturing were on average 14 years old, compared to over 20 years old today. This is concerning, as labour productivity growth tends to decline with the age of firms (Chart B.1), and it might point to a lack of churning at the productivity frontier in the euro area. The fact that new firm entry in Europe has been on a downward trend (Chart B.2) seems to confirm this diagnosis. European firms are also less digitised, which may in part be related to their relatively smaller size (Dias da Silva et al., 2024). Overall, the EU corporate ecosystem of relatively small[16] and ageing firms is less able to compete globally (ECB, 2024).

[14] Some of the drivers behind the long-run slowdown of the business dynamism could be cyclical (e.g., level of uncertainty) and/or structural (e.g., population ageing or insufficient competition). For further details, see: Bundesbank (2024). "Developments in euro area business dynamism." Monthly Report, March.

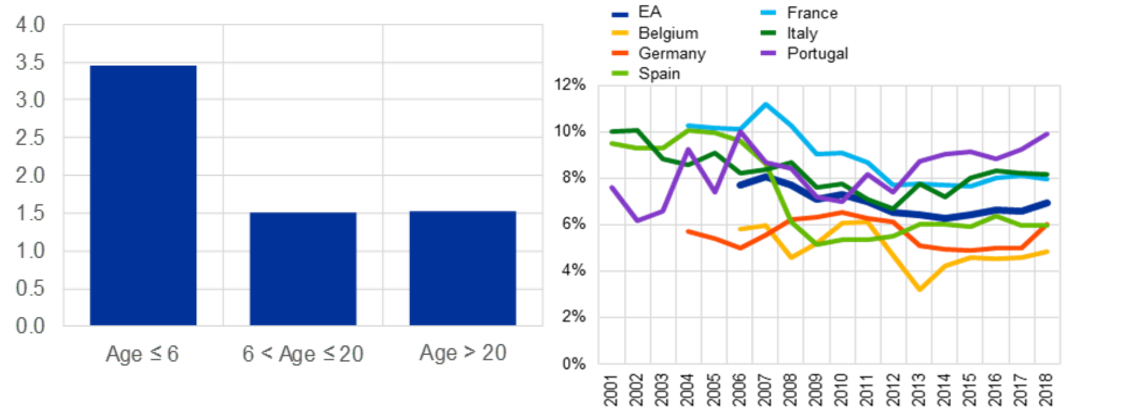
[15] De Soyres, F., Garcia-Cabo Herrero, J., Goernemann, N., Jeon, S., Lofstrom, G., and Moore, D., (2024). "Why is the U.S. GDP recovering faster than other advanced economies?", FEDS Notes, May.

[16] As also noted in Draghi's report "there is no EU company with a market capitalisation over EUR 100 billion that has been set up from scratch in the last fifty years, while all six US companies with a valuation above EUR 1 trillion have been created in this period". See Draghi, M., (2024), "The future of European competitiveness", September.

Chart B

1: Labour productivity of firms by years in operation 2: Entry rate of corporations, business economy

(median, in percentages) (percentage of active firms)



Sources: Chart B.1 from ECB Economic Bulletin, "Firm productivity dynamism in the euro area", Issue 1, 2022; Chart B.2 from ECB Occasional Paper Series, "Key factors behind productivity trends in EU countries", No 268, 2021.

Other major factors contributing to the EA-US productivity growth gap are the divergences in investment, innovation, and digital diffusion. Europe lags behind in creating the framework conditions necessary for the development of breakthrough innovations and their diffusion, focusing instead on marginal improvements in already mature technologies and thus being stuck in the so-called 'middle-technology trap' (Fuest et al. 2024). Financial constraints faced by small and young firms—start-ups, which are more likely to introduce radical innovations in the market—exacerbate this problem. These firms often face more severe financial constraints than established ones due to investor risk aversion, lack of established trust relationships and reliance on intangible assets, which are more difficult to collateralise (Farre-Mensa and Ljungqvist, 2016). The data on private sector R&D spending clearly point to a considerable gap vis-à-vis the US, with European spending at about 1.3% of GDP compared to 2.4% in the US.

At the sectoral level, Europe's disadvantage can be pinned down to lower productivity in the information and communications technology (ICT) sector. This is then amplified by the lower technology utilisation across other sectors of the economy.[17] Current data suggests that 24% of the EU's total economic output is produced in sectors with low labour productivity, compared to only 4% in the US. Even more worrisome, just 10% of EU output stems from high-productivity sectors, 34 percentage points less than in the US (Arnold et al., 2024). The skills gap, including lack of managerial skills in small-medium enterprises, as well as burdensome and largely non-harmonised regulatory frameworks further add to Europe's competitiveness challenges including the research and innovation gap, as also diagnosed in the recently published Draghi report on the future of European competitiveness.[18]

Ultimately, and again in line with the proposals in the Draghi report, addressing these issues requires a multi-faceted and multi-level approach that includes EU initiatives combined with

[17] The efficiency gains from implementing a more productive ICT equipment were not limited only to the ICT sector, but also spilled over to other sectors that heavily used the new communication technologies. See Stiroh, K.J., and Botsch, M., (2007). "Information technology and productivity growth in the 2000s", German Economic Review, 8 (2), pp. 255-280.

[18] Draghi, M., (2024), "The future of European competitiveness", September.

coordinated national policies across Europe. Successful policies should set clear and ambitious goals, such as enabling the allocation of resources towards radical innovation and its diffusion (Mazzucato, 2024). This needs tangible steps to deepen the Single Market[19] and allow firms to leverage their potential for scaling up, while directing public and private financing towards investments that contribute most to competitiveness gains. Increased, more flexible and diversified access to capital, combined with less burdensome regulation at the EU and national levels can further support innovation and the diffusion of new technologies.[20] In addition, policies should be geared towards ensuring adequate labour force skills to develop and deploy new technologies. This should help closing the existing innovation and productivity gaps in Europe compared to its global competitors, as well as sustaining growth and improving living standards over time.[21]

1.2 Investment needs for the green and digital transition

Estimates of what it will cost to finance the twin transition vary but are in any case daunting. [22] ECB work has already pointed towards the need for massive investments to meet the EU ambitious targets in this field.[23] Panel A in Chart 7 presents green investment needs from various sources, showing both past annual investments and projected shortfalls. Estimates range from EUR 400 billion to over EUR 700 billion per year. Recent evidence also suggests that annual investment in clean energy will fall significantly short of the target, given current forecasts. Meanwhile, estimates of necessary annual spending to meet the 2030 climate targets are also increasing over time. These continuous upwards adjustments reflect observed financing shortfalls as well as the lack of sufficient action to meet the final goals. This cycle puts even more pressure on future investment needs.

While public investment plays an important role, the private sector will ultimately need to finance a substantial share of the green transition. Though relevant, public investment alone cannot expand on the scale needed, even combining national and European efforts. Various EU facilities are contributing significantly: for example, the Multiannual Financial Framework (MFF) envelope, including the Recovery and Resilience Facility (RRF), allocates approximately EUR 660bn over the period 2021-2027 to Member States to support climate action. In terms of relative contribution, the RRF is the most prominent program, contributing about 42% of the total EU green funds or about EUR 275 bn (Chart 7 panel b). Yet this makes up only about a fifth of what is needed to meet the 2030 climate goals according to the European Commission. Recent ECB estimates find that almost 80%

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[19] The recent report by Enrico Letta highlights details on how to unleash the full potential of the Single Market. See Letta, E. (2024). "Much More Than a Market-Speed, Security, Solidarity: Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens", April.

[20] The use of Artificial Intelligence can help to boost firm productivity, as found in a recent study by Czarnitzki, D., G. P. Fernández, G. P., and Rammer, C., (2023), "Artificial intelligence and firm-level productivity", Journal of Economic Behavior & Organisation, Volume 211, pp. 188-205.

[21] For a detailed analysis on the role institutions play in supporting European competitiveness see: ECB Economic Bulletin, "European competitiveness: the role of institutions and the case for structural reforms", 2025 Issue 1.

[22] See "Massive investment needs to meet EU green and digital targets", published as part of the 2024 ECB Financial Integration and Structure in the Euro Area.

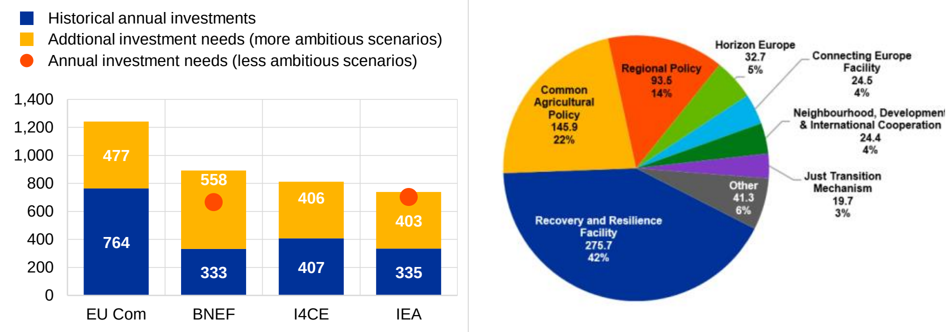
[23] See Nerlich et al (2025), "Investing in Europe's green future: Green investment needs, outlook and obstacles to funding the gap", ECB Occasional Paper Series.

of the cumulative investment needs will have to come from the private sector.[24] This is consistent with other studies which report a needed public-private ratio of 1:4 to 1:5.[25] The digital transition will also require substantial private investments, as EU public initiatives cover only a little of the needed financing.

Chart 7

Green investment needs and available EU funding

Estimated annual green investment needs until 2030	MFF and NGEU envelopes contributing to climate objectives, by programme
(EUR billion)	(EUR billion and percentage of total envelope devoted to climate mainstreaming)



Sources: Panel a) is based on data from the European Commission, IEA, BNEF, Institute for Climate Economics and ECB calculations. Panel b) is based on data from the European Commission Programme Performance Statements, Green Budgeting and ECB calculations. Both were published in the ECB Occasional Paper "Investing in Europe's green future: Green investment needs, outlook and obstacles to funding the gap" (2025).
Notes: Panel a) shows the annual estimates of green investment needs according to various institutions until 2030. Historical investment refers to annual averages: European Commission (2011-20), BNEF (2023), I4CE (2022) and IEA (2021-23). The IEA and BNEF estimates are adjusted for fossil fuel investments. For Bloomberg, the historical investment figure pertains to the EU-27 countries, whereas the estimates for additional investment needs include the EU-27 as well as Norway and Switzerland, as no EU average was available. The BNEF and IEA estimates in the more ambitious Net Zero Scenario are compared with the less ambitious scenario: the Economic Transition Scenario for BNEF and the Announced Pledged Scenario for the IEA. Panel b) shows the contribution of different EU programmes to climate mainstreaming objectives. The RRF is the centrepiece of NGEU. All other instruments are part of the MFF. Facilities contributing less than €10 billion to climate mainstreaming are included in "Other". They comprise: InvestEU, European Social Fund+, the International Thermonuclear Experimental Reactor and the European Maritime Fisheries and Aquaculture Fund. The chart does not include the Innovation Fund, which also contributes to climate mainstreaming but is a special instrument outside the MFF.

To mobilise private funds, it is key to have a well-functioning, deep and liquid capital market in Europe. Green investments can differ from other investments because of the higher risks associated with funding emerging and not yet mature technologies such as higher depreciation rates, technological volatility and significant long-term uncertainty. This affects the expected future value of underlying collateral, making traditional debt finance providers more hesitant or even unable to offer bank loans or other necessary funding. As a result, while banks will play a key role in providing financing for investments needed for the transition (e.g. loans for home renovations), there is a growing need to also develop alternative financing sources that are better suited to finance riskier investments and that can provide scale and liquidity: these include venture capital, listed equity markets, and other sources of risk-bearing investment. Also measures which allow to categorise, structure and distribute risks from banks' green portfolios to a broader investor base can increase the available funding capacity and reduce costs for those financing the transition.

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[24] See Bouabdallah et al. (2024), "Mind the gap: Europe's strategic investment needs and how to support them" The ECB Blog, ECB, 27 June 2024.

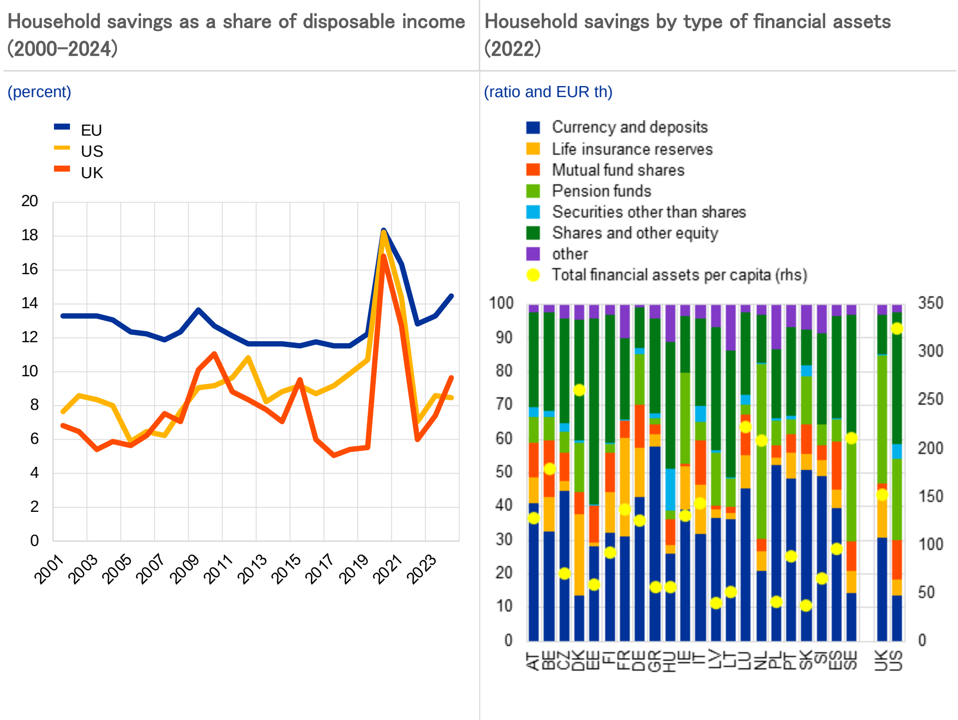
[25] See Darvas, Z., and Wolff, G., (2021), " A green fiscal pact: climate investment in times of budget consolidation" Policy Contribution, Issue No 18/21, Bruegel.

1.3 Facilitating access to capital markets for retail savers

European households' savings rate is elevated, providing a strong basis for deepening capital markets and financing strategic priorities. According to ECB data, household financial assets in the EU amounted to approximately EUR 34.5 trillion at the end of 2023, with approximately one-third (around EUR 11.5 trillion) held in cash and deposits.[26] In addition, the savings rate in the EU stood at around 15% of disposable income at the end of 2024 (Chart 8), compared to approximately 8% in the United States and 10% in the UK. When considering household savings per year in Europe, they stood at approximately EUR 1.4 trillion at the end of 2022.

Chart 8

Household savings in the EU, US and UK



Sources: LHS: Haver Analytics, based on Eurostat, the Bureau of Economic Analysis, and the Office for National Statistics. RHS: OECD.
Notes: The savings rate for the EU is calculated as gross saving divided by gross disposable income adjusted for the change in net equity in pension fund reserves and includes nonprofit institutions serving households (NPISH). The US savings rate is calculated as gross personal saving as a percent of gross disposable income. The UK savings rate is household saving as a percentage of total available households' resources.
The EU saving rate is calculated as gross saving divided by gross disposable income adjusted for the change in net equity in pension fund reserves. Includes nonprofit institutions serving households (NPISH).

Most of these savings are allocated to products such as bank deposits and sovereign bonds, while equity ownership is low. Chart 8 shows the allocation of households' savings according to different types of assets and compares European countries with the US and the UK, with two key insights: first, EU savers' share of listed equity investments is on average much lower than for their US counterparts; second, the US is the jurisdiction with the highest amount of financial assets per

[26] ECB Statistical Data Warehouse, Quarterly sector accounts (financial accounts (ECB) and non-financial accounts (Eurostat, ESA2010 TP, table 801)

capita.[27] Together, these factors create a significant gap in private investment, limiting support for companies as they scale and compete globally.

This allocation of savings has three important consequences: it limits individual savers' potential to achieve higher returns, strains state-funded pension systems, and it is a missed opportunity to boost Europe's competitiveness by channelling savings into more productive investments. First, when households lack long-term investment plans, they tend to favour short-term savings or low-risk, low-return financial products. In contrast, long-term planning enables savers to take advantage of tax-efficient vehicles (where available) and capitalize on market fluctuations, optimizing returns. The Draghi report highlights that while EU households saved more than US counterparts, their wealth grew only 55% between 2009 and 2023, compared to 151% in the US. This points to a missed opportunity for retail investors. Second, when individuals fail to plan for retirement or rely excessively on low-return savings, they often face insufficient personal savings to support themselves in retirement. This leads to increased dependence on state-funded pension systems, which are already under pressure higher dependency ratios in many countries.[28] As more citizens rely on state-funded systems for financial security in retirement (as also illustrated by the structure of households' asset portfolios in Europe), governments may face funding shortfalls, leading to higher taxes or reduced pension benefits. Third, a shift in household savings behaviour could unlock substantial financial resources for the European economy. When more resources are allocated to capital markets (in particular to finance firms' equity), companies gain additional capital to expand and become more profitable. This increased profitability could result in higher cash flows, which companies could deposit back into banks as corporate deposits, providing banks with more funds to lend.

CMU can also help reduce differences across Member States when it comes to market-based savings and investment opportunities. While savers in some countries already benefit from a wide range of equity offerings, such as in Sweden where more than 40% of households hold financial instruments, such options are less widely available in other parts of the EU due to for example regulatory barriers but also differences in risk appetite and financial literacy. European policy should work to reduce this gap and make market-based savings an accessible and achievable option in all Member States – also incorporating best practices that have proven effective in certain EU countries.

1.4 Fostering private risk-sharing

CMU's early goals were to strengthen the EU's resilience and to provide additional private risk-sharing mechanisms within the euro area. In the aftermath of the global financial crisis (GFC) and the euro sovereign debt crisis,

[27] See also section "4.3.2 Mobilising funding and increasing demand" of the 2024 ECB report on Financial Integration and Structure in the Euro Area.

[28] The dependency ratio in the EU is projected to rise from 31% today to 52% by 2050 (Eurostat data): see Pinkus et al. 2024) (Link).

European policymakers have sought to ensure the resilience of Economic and Monetary Union (EMU). These crises exposed vulnerabilities in Europe's bank-centric, fragmented economy, where systemic banking risks can trigger negative output shocks.[29]

Developments in the integration of Europe's financial markets have however remained disappointing. Although European financial markets have proven resilient despite recent crises, cross-border financial market activities and risk sharing have not grown, pointing to untapped benefits of capital markets for enhancing risk sharing in the EMU.[30]

Three main channels come into play to smooth out the impact of economic shocks on disposable income and consumption.[31] First, asymmetric shocks may be smoothed through public intervention, such as a shift of resources from unaffected countries or regions or by using direct transfers from a central or federal budget. Second, households and firms may mitigate the impact of the shock by drawing on their savings or by borrowing to maintain their level of consumption. Third, capital markets offer a diversified portfolio of financial assets (both in terms of instruments and geographical dispersion) offering returns that are less volatile and less correlated with domestic income.

European capital markets have untapped potential to help the economy absorb shocks without relying too heavily on national public finances. Fuentes et al. (2023) estimate the share of idiosyncratic shocks absorbed by the different risk sharing channels in the euro area. The authors show that credit channels have historically been the most important mechanism for cross-border risk sharing in the euro area.[32] In contrast, international transfers have consistently played a very limited role (around 3%), and the capital channel has only absorbed between 5 and 10% of idiosyncratic shocks to GDP since the creation of the eurozone, on average.[33] Market-driven income smoothing continuously increased until the global financial crisis, but significantly declined during the turmoil and has not recovered since (Chart 9). This has two consequences: first, private and public risk sharing mechanisms often have to step in when capital channels do not work as intended. Second, most of the shock is actually not smoothed out, with inevitable repercussions on consumption. The euro crisis showed that the lack of shock absorption can destabilise the monetary union's resilience.

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29 See Bats, J. V., & Houben, A. C., "Bank-based versus market-based financing: Implications for systemic risk" Journal of Banking & Finance, p. 114, 105776 (2020) and the references contained within.

30 See developments in the price and quantity-based indicators developed as part of the regular monitoring of European financial integration in the ECB report on Financial Integration and Structure in the Euro Area. See in particular the Statistical Annex to the report for more details on results and methodology.

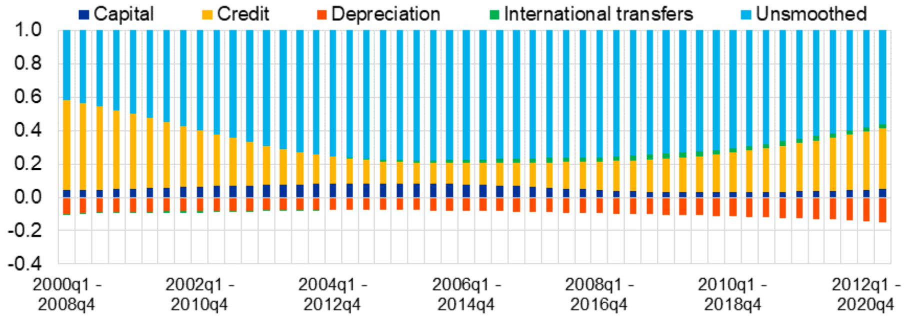
31 See for example A. Giovannini, D. Ioannou, L. Stracca "Public and private risk sharing: friends or foes?", ECB Occasional Paper No 295 / June 2022.

32 The credit channel significantly collapsed during the GFC but resumed an upward trend, partially supported by the activation of supranational public loans to some euro area economies, such as the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM).

33 See for example Martín Fuentes, N., ,Born, A., Bremus, F., Kastelein, W., Lambert, C., (2023), "A deep dive into the capital channel of risk sharing in the euro area", Working Paper Series, No 2864, ECB.

Chart 9

Contribution of the various channels to the absorptions of idiosyncratic shocks



Sources: A deep dive into the capital channel of risk sharing in the euro area, Natalia Martín Fuentes, Alexandra Born, Franziska Bremus, Wieger Kastelein, Claudia Lambert (Link). Authors' calculations based on Eurostat quarterly national accounts data.
Notes: The bars indicate the share of total idiosyncratic shocks that is smoothed out via each of the channels for risk sharing in the euro area sample of 10 countries. The shares are computed on the basis of the cumulative impact of the shock on the variables capturing each channel for the two years after the shock. The contributions of the channels are computed using a country-specific vector-autoregression (VAR). Parameters are estimated over a nine-years rolling window of quarterly data. We compute the results for each country and average over the cross-section using real GDP weights.

Deepening and integrating capital markets would increase private risk-sharing, helping stabilise growth when countries are hit by local shocks. This is especially relevant for the euro area, in the absence of a common fiscal policy to respond to output asymmetric shocks. A more integrated and diversified financial system would also help mitigate financial fragmentation. It would protect the transmission of monetary policy to all parts of the euro area. More broadly, boosting cross-border risk-sharing is essential for the EU as a whole, especially where national fiscal space is limited. Key measures to spread risks and expand funding options include reducing home bias in investment portfolios, increasing cross-border ownership of stocks and debt, and providing alternative funding sources for businesses across the EU.[34]

1.5 Leveraging CMU to promote inclusiveness and cross-border convergence

EU capital markets face challenges not only from fragmentation but also from uneven development across Member States. Some Member States have established themselves as "euro area financial centres." For example, investment funds domiciled in Luxembourg and Ireland hold around 40% of the euro area's cross-border equity and debt securities, while 33% of all intra-euro area cross-border holdings of corporate bonds are in securities issued in "euro area financial sectors".[35] Therefore, while some Northern EU countries benefit from highly developed capital markets comparable to other advanced economies like the UK, Member States in many Southern, Central and Eastern Europe, especially smaller countries, are

[34] CMU initiatives promote equity markets for private risk-sharing, as they absorb shocks more effectively than debt. While equity investors face higher risk, they benefit from dividends and gains in unaffected economies (inter-spatial smoothing). In contrast, debt smoothing is temporary and can reverse when repayments are due. See Beck, R., Dedola, L., Giovannini, A., and Popov, A., (2016). "Financial integration and risk sharing in a monetary union" Financial Integration in Europe, ECB, April.

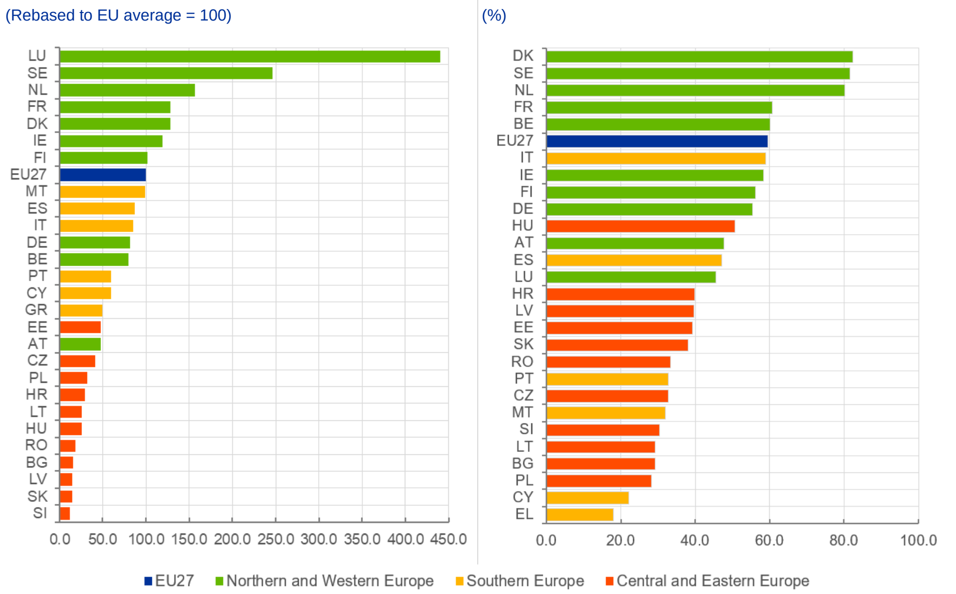
[35] See "Reassessing euro area financial integration: the role of euro area financial centres" published as part of the 2024 ECB Financial Integration and Structure in the Euro Area.

comparatively less developed (Chart 10, lhs)[36]. This underdevelopment results in bank-dominated economies with limited domestic investment in capital markets.[37] For instance, the share of household investments in bonds, shares or investment and pension funds reached more than 80% in countries like DK, NL and SE in 2021. By contrast, this share was less than 40% in 14 countries, all of which are Southern, Central or Eastern European and 12 of which are "new" EU Member States, i.e. joined in 2004 or later (Chart 11, rhs).[38] This lack of development has been linked to a lack of scale and of market liquidity: this is illustrated for instance by higher bid-ask spreads for listed equity in these markets, with median spreads reaching 2.4% or more of the mid-price in 10 EU countries in 2022, including 9 "new" Member States, compared with an EU median of 1.6%.[39] Smaller, less liquid markets struggle to attract international investors, reinforcing the gap in capital market development.[40]

Chart 10

Discrepancies in the level of capital market development across the EU

Average depth of capital markets across 27 sectors (2020–2023) | Direct and intermediated investment by households as a share of cash holdings and deposits (2021)



Sources: New Financial and European Commission based on Eurostat Annual Sectoral Accounts
Notes: Panel a) shows the average depth of capital markets in each EU Member State and the EU as a whole, based on a composite index built by New Financial based on data from 27 different sectors of capital market activity over a period of three years between 2020 and 2023, rebased to an EU average of 100. Panel b) shows the share of direct and intermediated investment by households, i.e. the sum of values of bonds and listed shares, investment funds, claims against insurance and pension funds held by households, relative to the sum of values of these items and cash holdings and deposits, in each EU Member States and the EU as a whole in 2021, based on Eurostat Annual Sectoral Accounts data. EU Member States are colour-coded based on their subregion as defined in the EuroVoc thesaurus, except for EE, LT and LV which are reallocated from Northern Europe to Central and Eastern Europe as they are also considered CEE countries.

[36] See Asimakopoulos, P., Friis Hamre E., and Wright, W., "A New Vision for EU Capital Markets", New Financial report, February 2022, p. 15.

[37] See Lehmann, A., (2020), "Emerging Europe and the capital markets union", Policy Contribution, Issue No 17/2020, Bruegel.

[38] See European Commission, "Overview of CMU indicators – 2023 Update", Staff Working Document, 16 August 2023, indicator 22..

[39] Ibid., indicator 8.

[40] See e.g. Heilbronn, P., (2020) , "CEE capital markets in the post-crisis environment", Eurofi Magazine, April .

To some extent, this situation is a vicious circle. For instance, listed shares from these countries are often excluded from Western European indices due to a lack of scale and liquidity, but in turn this exclusion prevents them from accessing greater demand. On the one hand, further capital market integration and an influx of private investment from other EU countries could support emerging national markets and promote convergence across the EU. On the other hand, national policymakers whose countries have smaller or less advanced capital markets are often reluctant to accept structural changes that could lead to further financial sector concentration in the EU's major financial centres, as this could come at the expense of national or regional actors.[41]

An inclusive CMU that drives convergence and growth across all Member States is essential for its success. CMU initiatives should promote private investment EU-wide, including in smaller markets, ensuring better returns for investors and expanded financing options for companies. Greater integration would allow firms in emerging EU markets - currently reliant on moderate-sized national capital markets – to access EU-wide financing more easily. EU and national policies should also develop capital markets in these regions by providing attractive long-term investment products, enabling savers to benefit from integration. National policymakers need to recognize that scale and liquidity are key to capital market development—achievable only through integration, even at the cost of some national control. A defensive stance protecting domestic market incumbents may ultimately harm both national and EU-wide economic growth and might be alleviated by appropriate governance structures.

1.6 Relevance of CMU for the ECB and its mandate

Well-functioning financial and capital markets are directly relevant to the ECB's mandate, with the CMU and a unified capital market shaping financial intermediation in the euro area.[42] This section outlines four key channels, though the list is not exhaustive.

A shift toward market-based financial intermediation could impact monetary policy transmission. It is well established that the monetary transmission mechanism is subject to variable and relatively uncertain time lags. One reason is that it takes time for financial intermediaries to fully pass on changes in interest rates to lenders and borrowers. Recent evidence suggests that, for example, banking sector concentration matters for the speed through which changes in unexpected

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41 For instance, finance ministers from Austria, Croatia and Slovenia published a joint letter on 28 May 2024 arguing that "the developments in larger and smaller financial centres and capital markets should take place in parallel and complementary to another", "the debate on whether we need to centralise supervision should come at a later stage", and "[market consolidation] should not be forced top-down through centralising regulation but as a natural consequence of decisions by individual market participants".

42 This has led the Eurosystem to play an active role in the CMU debates, starting with a contribution to the 2015 Commission's Green Paper on CMU (Link). Financial market integration and capital markets developments for CMU is furthermore a key topic analysed in the regular ECB reports on Financial Integration and Structure in the Euro Area (Link). Several of the themes explored in this Occasional Paper have been subject of analysis that can be referred to in ECB reports on Financial Integration and Structure in the Euro Area (Link).

monetary policy shocks are transmitted to deposit rates.[43] Similarly, capital market deepening causes a larger share of financial intermediation to take place via markets instead of banks, with an impact on the transmission of monetary policy. This could be either because market rates change more rapidly than intermediated rates, or because capital markets serve as competition for intermediated finance, expediting the need to transmit changes in financial conditions.

Deepening financial integration and in particular the presence of a safe asset could benefit the uniformity of monetary policy transmission in the euro area. In the EMU, financial conditions in different jurisdictions are closely linked to the borrowing rates of the sovereign. This implies possible imperfections in the homogeneous transmission of monetary policy signals, particularly in times of stress in government debt markets. The presence of an appropriately designed euro area safe asset[44] could make funding conditions in the economy less dependent on sovereigns and thus improve the uniform transmission of monetary policy in the euro area. Moreover, it could facilitate further capital market integration as there would be a single term structure that could serve as the basis for the pricing of other securities. It should be noted that the introduction of a safe asset in isolation is likely insufficient to bring about the above. In absence of the completion of the banking union, banks and sovereigns remain interwoven due to substantial sovereign portfolios. As a result, banks and thus funding conditions via the bank lending channel remain vulnerable to sovereign risk.

Capital markets deepening and associated diversification of asset holdings can increase private risk sharing and thus lighten the burden on other macroeconomic stabilisation tools such as monetary policy. Capital market fragmentation also has led to low levels of geographical diversification of asset holdings in the euro area. This means that cross border private risk sharing is limited. Reduced risk sharing in turn means that a larger part of asymmetric shocks needs to be absorbed by other means, including macroeconomic stabilisation tools such as monetary policy. This mechanism is potentially amplified by a high dependency on bank financing in euro area economies. Not only are banks closely linked to the sovereign, but the leveraged nature of bank loans can lead to softening of credit standards and excessive risk taking in good times. Pro-cyclical deleveraging in economic downturns in turn can overtighten credit supply amplifying economic downturns.

Finally, the creation of a genuine single market for capital could have substantial implications for longer term potential growth and thus long-term monetary policy. A more detailed discussion on these potential implications is beyond the scope of this paper.

[43] See Kho, S., (2024) “Deposit market concentration and monetary transmission: evidence from the euro area”, Working Paper Series, No. 2896, ECB.

[44] See for instance “How could a common safe asset contribute to financial stability and financial integration in the banking union?” Published as part of Financial Integration and Structure in the Euro Area, March 2020.

2 CMU developments over the last 10 years: key lessons learnt

To pinpoint the crucial areas for advancing the CMU project in the upcoming legislative term, it is important to draw lessons from previous actions. The European Commission has put forward a large number of legislative and non-legislative proposals over the last decade, building on earlier efforts like the 1992 Single Market Programme and the 1999 Financial Services Action Plan, which aimed to integrate financial markets. However, progress in the development and integration of financial markets (as exemplified in the progress of key indicators of financial integration and cross-border market activities) has been disappointing overall.[45]

Political resistance and divergent national interests have prevented reaching consensus on the level of ambition. While many of the Commission proposals have been successfully implemented and have advanced the CMU agenda, several others have either not been agreed, or didn't meet the intended expectations under the CMU Action Plans. Where these initiatives did not yield results, there is often a history of political obstacles resulting in watered down measures and long implementation timelines. The following sections aim to take stock of the latest CMU actions before setting on to propose new measures.

2.1 Summary of key policy developments since 2015

Since 2015, the European Commission has presented CMU action plans, resulting in more than 55 regulatory proposals and 50 non-legislative actions and policy initiatives. The 2015 CMU Action Plan, based on the Five Presidents' Report[46] aimed to create a single capital market, boost investment, and support SMEs while enhancing cross-border risk-sharing to absorb economic shocks. It[47] outlined 33 actions, including regulatory proposals to help European venture capital funds; harmonise, modernise and simplify the issuance of prospectuses; relaunch securitisations and develop covered bonds; promote long-term investments in infrastructure through adjustments to Solvency II and CRR; and facilitate the cross-border distribution of investment funds. The Commission also called for non-legislative actions regarding tax incentives on venture capital and on a roadmap for Member States to remove national barriers to the free movement of capital.

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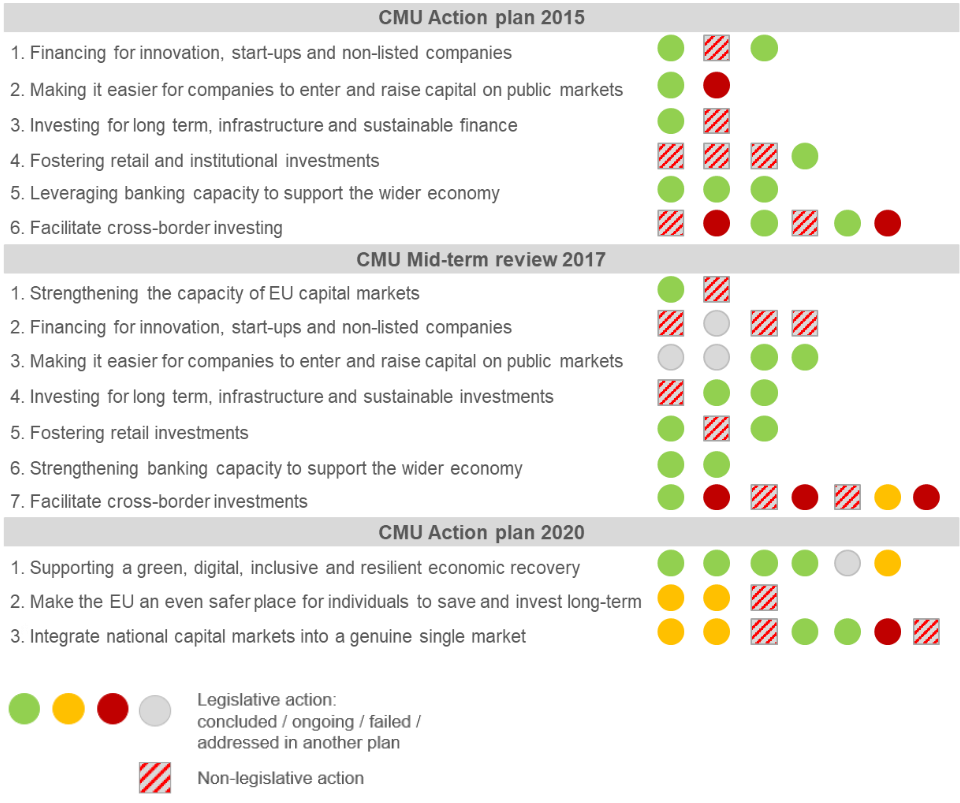
[45] See for instance the indicators of financial integration and structure in the euro area, which are updated on a biannual basis and can be found at the following Link.

[46] European Commission, (2015), "Completing Europe's Economic and Monetary Union", 22 June.

[47] See European Commission (2015), "Action Plan on Building a Capital Markets Union", 30 September.

Chart 11
CMU legislative overview



Source: ECB elaboration on information from the European Commission
Note: Each numbered bullet identifies a priority, which includes several legislative and non-legislative actions. Concluded legislative action (green bubble) means that the file was agreed in trilogue and implemented. Ongoing legislative action (yellow bubble) means that the file is still under discussion in the relevant legislative bodies. Failed legislative action (red bubble) means that the file didn't reach a consensus and was thus not agreed by the co-legislator, nor implemented. Annex 1 includes a more detailed table, listing and describing all legislative and non-legislative initiatives undertaken by the Commission from 2015 until today to advance the CMU project.

The 2017 CMU midterm review introduced nine new priorities, shaped in part by Brexit.[48] Key measures included enhancing ESA powers, facilitating SME listings, and developing secondary markets for non-performing loans. The plan also reinforced commitments to the Pan-European Personal Pension Product (PEPP), sustainable finance, and fintech regulation.

In 2020, the European Commission published a new CMU action plan[49]**, with 16 legislative and non-legislative steps.** The new Action plan was designed against the backdrop of the post-COVID-19 recovery and a stronger commitment to financing the green and digital transitions, and was based on CMU High-Level Forum recommendations. It aimed to revitalize CMU through three pillars: strengthening the single market, reducing administrative burdens for SMEs, and

[48] See European Commission (2017), "Mid-Term Review of the Capital Markets Union Action Plan", 8 June.

[49] See European Commission, (2020), "A Capital Markets Union for people and businesses-New Action Plan", 24 September.

enhancing supervision[50]. This included giving investors access to a range of corporate financial disclosures through the European Single Access Point (ESAP) and creating a "consolidated tape" of pre- and post-trade data for equity, bond and derivatives markets. The proposals also sought to simplify the rules for public listing with the Listings Act, coupled with the goal of facilitating retail investments; and improve the rules of the investment funds through the review of the Alternative Investment Fund Managers Directive (AIFMD 2.0). [51] This plan set out stronger ambitions for integration than previous versions by offering a targeted way to tackle the fragmentation of insolvency regimes in the EU (insolvency law proposal). It also offered non-legislative tools to improve pension savings, touching on issues such as pension auto-enrolment, pension dashboards and best practices for the enhancement of pension systems.

2.2 Interim insights into the CMU Action Plans

Despite three CMU action plans, EU capital markets remain fragmented, and CMU's core goals remain unrealized. While many measures since 2015 have improved regulation, transparency, and market access, full integration and efficiency remain elusive. Notably, many proposals on structurally challenging actions – such as taxation, insolvency, pensions and supervision – were either stalled in the legislative process or saw progress only in the form of non-binding actions.

A notable achievement is the EU's sustainable finance framework, which has effectively fostered a market for sustainable finance products, despite some initial shortcomings. [52] The design of a comprehensive framework for sustainable finance has led to substantial growth in ESG markets, such as ESG funds and green bonds, although they still represent a small fraction of euro area capital markets.[53]

Other actions under the CMU agenda have led to mixed outcomes. While several initiatives have improved the existing regulatory framework, their impact on capital market development has been moderate, often taking years to show results. For example, the subsequent reviews of the European Venture Capital Fund (EuVECA) Regulation tried to increase economies of scale on venture capital and widen investor choice; however, they produced modest results and did not contribute

[50] For example, the CSDR review proposal aims to facilitate the cross-border provision of CSD services and improve certain requirements notably by simplifying the CSD passporting regime and improving the settlement discipline regime.

[51] Other notable proposals in 2021 and 2022 included the revision of the Markets in Financial Instruments Regulation (MiFIR 2.0), the review of the review of the Central Securities Depositories Regulation (CSDR) and of the European Market Infrastructure Regulation (EMIR 3.0). In May 2024, the Commission presented a Retail Investment legislative package, which is made up of an omnibus directive amending the Markets in Financial Instruments Directive (MiFID II), Insurance Distribution Directive, Solvency II, AIFMD and the Undertakings for Collective Investment in Transferable Securities (UCITS) Directive.

[52] Born, A., Giuzio, M., Lambert, C., Salakhova, D., Schölermann, H. and Tamburrini, F. (2021), "Towards a green capital markets union: developing sustainable, integrated and resilient European capital markets", ECB Macroprudential Bulletin, Issue 15, October.

[53] Assets under management of ESG funds and institutional investors with an explicit green/sustainable mandate have almost tripled in the euro area since 2015 (from €0.5 trillion in 2015 to €1.3 trillion in 2021). Importantly, 51% of the global volume of green bonds is issued in the EU. Promisingly, green bonds are roughly twice as likely as other European bonds to be held cross-border.

to filling the gap with the US due to bigger capital market challenges, such as limited market exit opportunities[54], differing national tax treatments, and the low-risk appetite in some EU institutional investors. Similarly, the introduction of the European Long Term Investment Fund (ELTIF) framework in 2015 have struggled due to high costs, restrictive redemption policies, and unattractive fund regulations. While the 2023 revision ("ELTIF 2.0") introduced broader marketing rules and relaxed requirements, its impact will take time to be assessed.

Progress has been slow on structural capital market challenges, particularly in areas tied to national prerogatives. Key proposals – such as taxation, insolvency, and ESA framework reform – have been watered down or stalled in the legislative process. Others, like PEPP, faced demand- and supply-side barriers.

Taxation continues to pose a significant challenge for CMU, with progress being notably limited. The European Commission's legislative initiatives have largely stalled in the Council, and non-legislative actions have not seen substantial follow-up. Since tax rules are closely linked to national budgets, they require unanimous approval, which complicates reform efforts. The differing tax treatments across Member States lead to inefficiencies, impose high costs on non-resident investors, and create barriers to cross-border investment. These disparities also impede equity financing and deter long-term and venture capital investments, such as European Long-Term Investment Funds (ELTIFs) and the Pan-European Personal Pension Product (PEPP).[55][56]

Efforts to address the "debt-equity bias" to support equity financing also encountered significant setbacks. The proposed Debt-Equity Bias Reduction Allowance (DEBRA) sought to rebalance the costs of debt and equity financing for non-financial corporations and encourage equity financing. However, negotiations were suspended by the Council in December 2022 and have yet to resume. Similarly, the longtime effort to overhaul the corporate tax base system through the Common Consolidated Corporate Tax Base (CCCTB) was withdrawn in 2023 due to persistent lack of agreement among Member States, and its successor proposal has not yet advanced.[57] Non-legislative attempts to promote tax incentives for venture capital and streamline withholding tax procedures also lacked measurable follow-up. The Commission's report on best practices for tax incentives[58] for venture capital and business angel investments aimed to help Member States develop local capital markets, including through the European semester, but resulted in no concrete actions[59]. Similarly, the 2017 Code of Conduct[60] for simplifying withholding tax

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[54] See European Investment Bank, (2024), "Investment barriers in the European Union 2023 Report".

[55] See European Commission, (2015), "Action Plan on Building a Capital Markets Union", 30 September..

[56] See European Commission, (2016), "Capital Markets Union - Accelerating Reform", September.

[57] On 18 May 2021, the European Commission presented a renamed and revised the CCCTB proposal with the proposal "Business in Europe: Framework for Income Taxation" (BEFIT).

[58] See European Commission report on best practices for tax incentives.

[59] See European Court of Auditors, (2020), "Capital Markets Union – slow start towards an ambitious goal", Special Report, No 25/2020, November.

[60] See European Commission Code of Conduct on withholding tax.

procedures relied on voluntary commitments from Member States, making success difficult to measure[61].

A step forward came with the Faster and Safer Tax Relief of Excess Withholding Taxes (FASTER) Directive[62]. FASTER sought to make withholding tax procedures in the EU more efficient for cross-border investors and financial intermediaries such as banks and investment platforms. Although the agreed compromise text by the Council waters down the original proposal and will be applicable only in 2030, it represents a positive development in reaching consensus on a challenging tax issue.

Despite broad recognition that harmonised insolvency frameworks would improve the investment climate, no significant progress has been made. Insolvency laws remain under national jurisdiction, deeply tied to company, labour, and property law, complicating EU-level harmonisation. At EU level, while finance ministries have recognised the need for harmonisation to enhance financial integration,[63] the legislative process for insolvency files necessitates the involvement and agreement of justice ministries, which has proven challenging. Key EU efforts include the 2015 Recast Insolvency Regulation, which clarified cross-border insolvency rules but did not harmonise substantive aspects, and the 2019 Preventive Restructuring Directive, which introduced minimal harmonisation but suffered from divergent national implementation. In 2022, the Commission proposed an Insolvency Law Directive to establish common insolvency rules (excluding financial institutions). While initially supported, strong concerns over the application to micro and small companies, court led processes, role/primacy of creditors, application to natural persons, mandatory bankruptcy filing and directors' liability stalled progress, leaving its adoption uncertain. Therefore, despite the potential of harmonising insolvency laws and making them more efficient in improving the business environment and in providing more certainty for cross-border investors– there has so far not been enough political will to make progress on these files. In the Competitiveness Compass, the European Commission has nevertheless signalled its intention to try again to tackle the issue of the continued fragmentation in insolvency frameworks, including by harmonising the ranking of claims and insolvency triggers or the rules for financial collateral and settlement.

Other notable initiatives that failed to meet expectations include the Pan-European Pension Product (PEPP - box 2), **where several key elements of the Commission's original proposal were watered down in the final legal texts.** The limited success of the PEPP can also be attributed to product design complexities introduced by the co-legislators in the regulation to accommodate for often diverging

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[61] See European Banking Federation letter to the European Commission, (2018), "EBF comments on the EU Code of Conduct on Withholding Tax Procedures", 23 July.

[62] Based on information available in September 2024, the Council reached a compromise in May 2024 and the European Parliament will be consulted again on the agreed text. The Council needs to formally adopt it before entering into force. European Council, "Taxation: Council agrees on new rules for withholding tax procedures (FASTER)".

[63] See for example the Council Conclusions on the 2020 CMU Action Plan, which "encourage the Commission to "to look at the more complex and time consuming structural reforms and to deliver the respective initiatives in the medium term, notably […[assess legislative or non-legislative initiatives to increase convergence of the outcome of insolvency procedures in different Member States […],

views and objectives, which strongly limited both the demand and supply of PEPP. Low consumer uptake was influenced by issues related to the product's rollout and the lack of harmonised tax treatment, while on the supply side, distribution encountered regulatory and distribution barriers.

Box 2
Pan-European Personal Pension Product

The Pan-European Personal Pension Product (PEPP) is a voluntary third-pillar pension product, introduced to expand pension options, encourage long-term savings, and support CMU objectives. Designed as a portable, transparent, and consumer-friendly product, it became applicable in March 2022 under Regulation (EU) 2019/1238.

Providers are required to offer a default investment option, known as the Basic PEPP, which has a capped fee and comes with risk mitigation to protect the saver's capital. In addition to the Basic PEPP, providers can offer other investment options with different risk-reward profiles. The PEPP allows for flexibility in contributions, with savers being able to adjust the amounts and frequency of their payments. Savers also have some choice in how they receive benefits at retirement, whether as a lump sum, an annuity, or in regular payments.

While the PEPP is a European product, taxation remains squarely under the purview of Member States. The European Commission encourages harmonised tax treatment for PEPPs and published a Recommendation[64] document, but it is up to each country to decide on the tax incentives for PEPP contributions and benefits, including the relative fiscal treatment compared to existing national or occupational pension systems. Additionally, national competent authorities have to approve PEPPs before they can be offered in their respective jurisdictions.

Despite its potential, PEPP uptake has been minimal. The potential for market for PEPP is substantial. Eurobarometer results from 2023 show that 23% of respondents are enrolled in pension schemes and that 19% own personal pension products (PPPs), meaning that most Europeans rely fully on statutory pensions. At the same time, only 42% of respondents feel that they will have sufficient means to enjoy a comfortable retirement[65]. However, only eight products were registered by a single provider that proposes a basic PEPP product and a variant with alternative investment options, with an estimated EUR 11 mn assets under management. These products are offered in four different EU countries, namely the Czech Republic, Croatia, Poland and Slovakia and are thus available to only 10% of the EU population. The CEO of the firm in question indicated[66] to reporters that as of March 2024, the firm had 5000 clients and a total of EUR 11mn assets under management. In these four countries where PEPP is available it has seen an uptake of 0,2 % of the labour force and the average person in the labour force has invested about 40 cents in a PEPP product. While this may be partly due to the relative novelty of the product, several private sector reports suggest that uncertainties about tax treatment, regulatory approvals by national competent authorities are obstacles to the development of a sizable PEPP market. Another often raised factor behind the limited private sector participation is the mandated fee cap, especially given

[64] See European Commission Recommendation on the tax treatment of personal pension products, including the pan-European Personal Pension Product, June 2017.

[65] See EIOPA, (2023), Consumer Trends Report 2023, November.

[66] See Euronews report: "Hype over hit: Brussels pensions plan is not working" on 7 March 2024: https://www.euronews.com/business/2024/03/07/hype-over-hit-brussels-pensions-plan-is-not-working

requirements to provide financial advice and check for suitability. A fee cap might be impairing the ability of companies to offer PEPP products while the market is still in its infancy.

The above figures suggest that the rollout of PEPP has fallen short of expectations, likely both driven by supply and demand side factors as well as delays in the implementation. EIOPA's 2024 Eurobarometer survey found that 76% of Europeans have not heard about PEPP which in light of the still limited availability might not be surprising.[67] The same survey suggests that only 18 percent of EU citizens owns a personal pension product.

The complexities introduced by the co-legislators in the regulation strongly limit both the demand and supply of PEPP. Several key elements of the Commission's original proposal for a fully European product were watered down in the final legal texts.[68] Moreover, market participants that want to offer PEPPs in different Member States are dependent on different NCA provision requirements and have to apply for different national tax incentives. Portability is substantially less ambitious than the original Commission proposal, as sub-accounts have to be offered in at least two Member States instead of all.

The final PEPP framework was weakened in the legislative process, with reduced portability (requiring sub-accounts in just two Member States) and unclear tax incentives. An impact assessment estimated the market could reach EUR 0.7 trillion if tax benefits matched the most successful EU private pension schemes—yet current rules only ensure equal treatment, not additional incentives.

To improve PEPP's market viability, EIOPA staff have called for a framework revision. The European Commission is set to evaluate the regulation in 2027, with EIOPA developing proposals to address supply, demand, and implementation issues. Enhancing PEPP could broaden access to quality pension products and boost EU capital markets.[69]

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[67] See EIOPA, (2024), "A simple and long-term European savings product: the future Pan-European Pension Product", EIOPA Staff Paper, September.

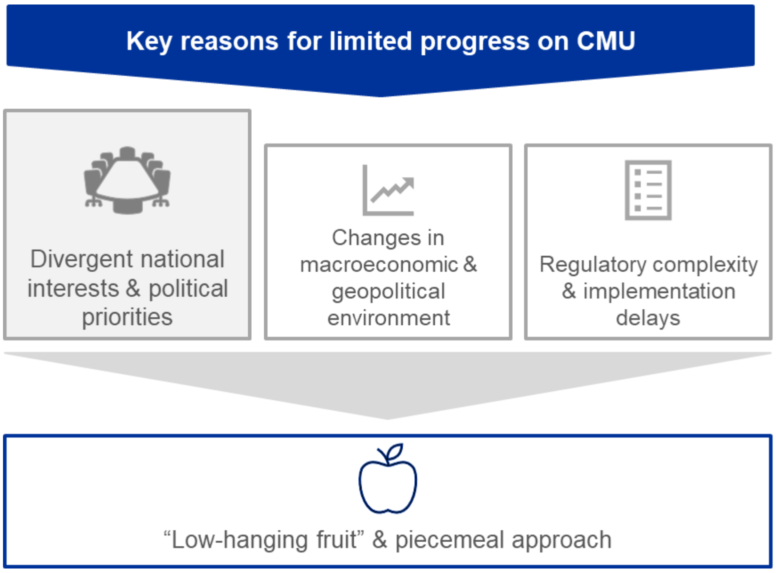
[68] See Regulation (EU) 2019/1238 of the European Parliament of the Council on a pan-European Personal Pension Product (PEPP), 20 June 2019.

[69] Ibid.

2.3 Diagnosing the lack of progress in capital markets union

Chart 12

Diagnosing the lack of progress on CMU



Despite the Commission's intensive regulatory efforts over the past decade, the CMU initiative has not yet yielded the expected outcomes.[70] While strides have been made in areas such as transparency, sustainable finance and market accessibility for investors, achieving fundamental transformation of EU capital markets remains an ongoing challenge. The complexity of capital market reforms, long implementation timelines, and diverging national interests have slowed progress.[71] In addition, reforms have by and large focused on supporting the supply side of capital markets – whilst improvements in the general business environment are also needed to incentivise the establishment of firms that need finance and would bolster demand for capital.

The momentum behind CMU led to numerous political statements and agreements on key legislative proposals while making limited progress on more sensitive structural reforms.[72] Reforms have focused on "low-hanging fruit" rather than deeper integration.[73] As a result, the CMU agenda has only made

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[70] See also the Special Report of the European Court of Auditors No 25/2020: "Capital Markets Union – Slow start towards an ambitious goal" publishes in 2020.

[71] See e.g. Véron, N., (2024), "Capital Markets Union: Ten years later", European Parliament, March 2024.

[72] See e.g. ECOFIN meeting conclusions on 19 June 2015, 10 November 2015, 11 July 2017, 2 December 2020 on Commission's Action Plan on Building a Capital Markets Union, Council Conclusions on the Deepening of the Capital Markets Union of 5 December 2019 (Doc. 14815/19), Special European Council conclusions on CMU 9 February 2023 and 17-18 April 2024, Euro Summit conclusions on 11 December 2020, 25 June 2021 24 March 2023, 27 October 2023, 22 March 2024, Eurogroup statements in 2023 and 2024 etc.

[73] See Heider, F., Krahnen, J-P., Langenbucher, K., Lindner, V., Schlegel, J., Tröger, T., (2024), "The Geopolitical Case for CMU and Two Different Pathways Toward Capital Market Integration", White Paper No 102, Leibniz Institute for Financial Research, Sustainable Architecture for Finance in Europe.

incremental progress, which has not been sufficient to significantly deepen and integrate EU capital markets.[74]

The CMU agenda has also been shaped by shifting priorities and external crises, including the eurozone debt crisis, the COVID-19 pandemic, and geopolitical tensions. These events have continuously redirected attention away from long-term CMU goals, leading to fragmented actions rather than comprehensive reforms. Even Brexit, which underscored the need for a more integrated European financial market, was not fully leveraged to advance CMU.

Regulatory complexity further hampers progress. Since CMU's launch, over 60 legislative proposals have been introduced, but the preference for directives over regulations allows Member States flexibility in transposition, leading to fragmentation. National gold-plating, exemptions, and lengthy transitional periods have delayed regulatory convergence, adding layers of complexity rather than fostering integration.[75]

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[74] See Véron, N. (2024), "European capital markets union: make it or break it", Bruegel.

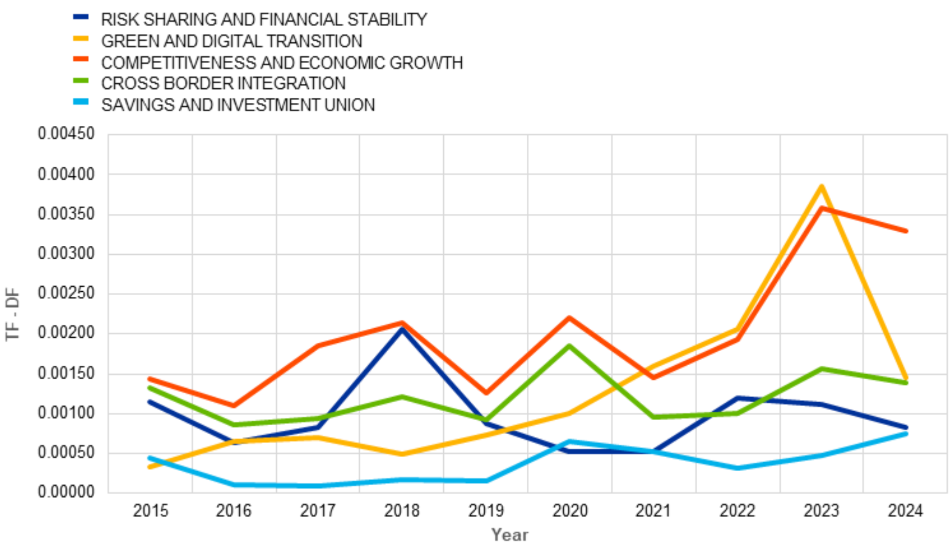
[75] See European Parliament, "Further development of the CMU: improving access to capital market finance, in particular by SMEs, and further enabling retail investor participation", Report No A9-0155/2020, September.

3 A new paradigm: the evolving CMU narrative

This short section, which can be found in more elaborate form in Annex 2, employs advanced text analysis to track how the CMU narrative has evolved from 2015 to 2024, analysing 202 papers from academia, institutions, and the private sector. The findings highlight shifts in focus, influenced by macroeconomic conditions, EU policy priorities, geopolitical events, Brexit, and COVID-19. It documents how early CMU discussions (2015) centred on banking, financial stability, and investor topics, with terms like "banking" and "crisis" dominating the discourse. By 2024, the focus shifted towards market integration, with terms like "single," "member," and "states" reflecting an emphasis on a unified financial framework.

Chart 13

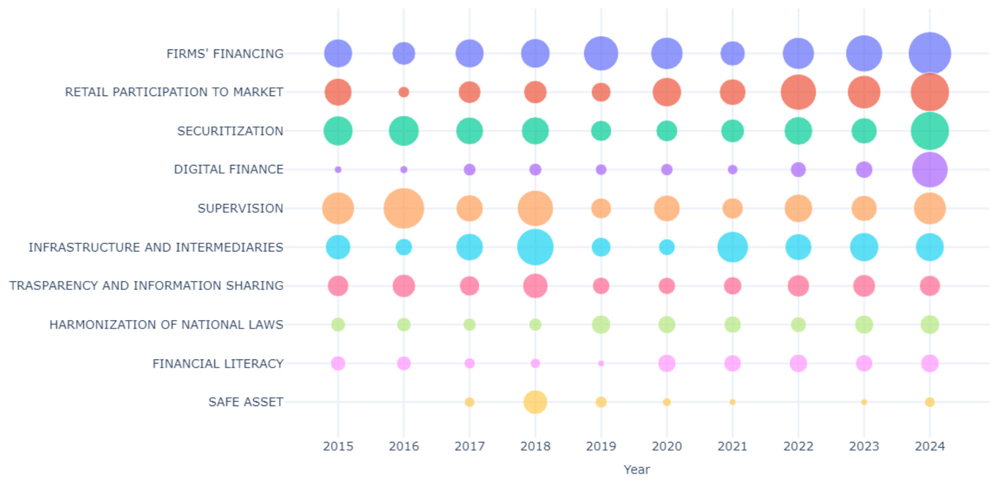
CMU narrative over time



Source: ECB calculations
Note: Annex 1 includes a description of the papers selected via webscraping, as well as the list of keywords used to define the narrative.

Analysis furthermore shows that interest in economic growth, competitiveness, and the green transition surged post-2021, while risk-sharing and financial stability declined in relevance. Policy proposals have also shifted from technical financial sector reforms to measures supporting business financing and household savings. From 2020 onward, themes such as retail market participation, digital finance, and firm financing gained traction (See Chart 13). Securitisation resurfaced in 2024, reflecting renewed private-sector interest. AI-assisted analysis classified stakeholder positions, revealing broad support for supervisory reforms among public institutions, while the private sector prioritised securitisation.

Chart 14
CMU proposals over time (2015-2024)



Source: ECB calculations
Note: The values of the Term Frequency- Document Frequency (TD-DF) of the macro categories is normalized with respect to the maximum level in the years, e.g the TF-DF of the firms' financing in 2024. For a methodological details see Annex II.

More broadly, text scraping confirms that the last two years have seen renewed political momentum and growing awareness among EU institutions[76], ministers and even heads of states and governments[77] that deepening and integrating EU capital markets is critical. This led the Eurogroup in inclusive format, which gathers all 27 EU finance ministers, to agree on a roadmap for CMU, set out in a statement identifying measures "to be taken forward during the next legislative term", which was adopted in March 2024.[78] In addition, the Letta, Noyer, and Draghi reports (2024) provide policy blueprints for CMU's next phase. Overall, the latest focus on CMU in the context of calls for increasing Europe's competitiveness and productivity seems to be at the core of a change in paradigm.[79]

The ECB has consistently supported the CMU project and called for further ambition and political commitment.[80] The ECB Governing Council published a statement welcoming the Eurogroup's work and highlighting key priorities for CMU.[81] This broad consensus among EU institutions and Member States provides a sound basis – and is a necessary condition – for effective progress over the new institutional cycle.

[76] See "Capital Markets Union: EU renews commitment to integration and development of capital markets", Statement, European Commission, 28 April 2023.

[77] See e.g. Macron, E. and Scholz, O., "Macron and Scholz: we must strengthen European sovereignty", Financial Times, 27 May 2024.

[78] See Statement of the Eurogroup in inclusive format on the future of Capital Markets Union, 11 March 2024 .

[79] See Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on A competitiveness Compass for the EU, Brussels, 29 January 2025. See Lagarde, Von der Leyen, "Europe has got the message on change", Financial Times, 31 January 2025.

[80] See e.g. Lagarde, C., "A Kantian shift for the capital markets union", speech at the European Banking Congress,, , Frankfurt am Main, 17 November 2023.

[81] See Statement by the ECB Governing Council on advancing the Capital Markets Union, 7 March 2024.

Box 3
CMU-related recommendations in the Letta, Noyer and Draghi reports

Throughout 2024, the debate on CMU has been informed by several landmark reports aiming to formulate a policy agenda for the new institutional cycle. In April 2024, former Italian Prime Minister Enrico Letta published a report on the future of the Single Market[82], as requested by the European Council in June 2023 to provide recommendations for the European Council's 2024-2029 strategic agenda. This report identifies key areas where the Single Market remains fragmented, including financial services, and advocates in favour of a "savings and investment union". On 25 April 2024, a task force of French public- and private-sector leaders mandated by the French finance ministry and chaired by former Banque de France governor Christian Noyer published a report[83] setting out four key recommendations on CMU, detailing the priorities identified by the French government for CMU. On 9 September 2024, former ECB President Mario Draghi published a report requested by Commission President Ursula von der Leyen on the future of competitiveness, which includes proposals on supporting private investment and financing innovation. The table below provides a comparison of the CMU-related recommendations in the three reports and maps them with the priorities identified in the Eurogroup statement.

These reports focus on similar priorities, with the Letta and Draghi reports generally more wide-ranging and more high-level in their proposals. Overall, the reports have a large degree of overlap but differ significantly in their levels of detail and ambition. The Letta report is more cautious on securitisation, supervision, and the consolidation of the trading and post-trading landscape, reflecting the policy sensitivities in some Member States on these issues. By contrast, the Noyer report develops detailed and ambitious proposals, especially on securitisation, a priority for the French government. The Draghi report shows the highest level of ambition, especially in creating a single capital markets architecture, but without discussing feasibility considerations. The Letta and Draghi report touches upon a wider range of issues, including harmonising insolvency frameworks and improving prudential and tax incentives for equity investment, without detail on technical implementation. The Draghi report places special emphasis on enhancing financing for innovation via venture capital and listed equity markets. Both reports also make recommendation on related issues beyond the scope of the current CMU discussions, such as on the role of public investment and public guarantees, and the creation of an EU safe asset. Taken together, these reports show a high degree of consensus on where further work is needed.

82 Letta, E. (2024). "Much More Than a Market-Speed, Security, Solidarity: Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens", April.

83 Noyer Committee, (2024), "Developing European capital markets to finance the future Proposals for a Savings and Investments Union", French Treasury, April .

Table A

Comparison of the Letta, Noyer and Draghi recommendations on CMU with the Eurogroup priorities

Eurogroup priorities	Letta report recommendations	Noyer report recommendations	Draghi report recommendations
1. Develop the securitisation market	Reforms in the European securitisation framework to enhance its accessibility and effectiveness.	Fast-tracked review of the prudential framework for banks and insurers and of the transparency rules for securitisation. Establishment of a European platform for securitisation to standardise EU securitisations by structuring the tranches and managing national public guarantees for the senior tranches.	Enable the European securitisation market by adjusting prudential requirements for securitised assets, reviewing transparency and due diligence rules, setting up a securitisation platform to deepen and standardise the market and consider targeted public support (e.g. public guarantees for the first-loss tranche).
2. Further supervisory convergence	Gradually enhance the direct supervisory powers of ESMA, and give it more supervisory responsibilities for major entities, such as trading venues, issuers, asset managers. Strengthen the governance and decision-making processes of ESMA.	EU-level supervision of the most important cross-border trading venues, CCPs and CSDs, with the possibility of an opt-in for asset managers. Enhance ESMA's governance with an executive board and joint supervisory teams with NCAs. Develop ESMA's 'no-action letter' powers.	Transform ESMA into a regulatory and supervisory agency like the SEC, directly supervising large multinational issuers, major regulated markets and CCPs. ESMA should have a more European governance based on the ECB model and cooperation with national supervisors based on the SSM model.
4. Targeted convergence of national corporate insolvency frameworks	"Urgent need to take action" on harmonising insolvency regimes.	N/A	Harmonise the insolvency framework.
6. Better integrated market infrastructure	Create an EU stock exchange for "Deep Tech" to provide firms with equity funding at the IPO stage. Implement a single access point for public capital markets for smaller firms. Consolidation in the post-trading landscape to overcome barriers to cross-border investment, combined with harmonisation of rules and practices.	Convergence in national securities law to foster the possible consolidation of CSDs. Pursue reforms of T2S to (i) extend its remit to additional CSD functions and (ii) support the settlement of financial instruments on DLT.	Foster centralisation in clearing and settlement. Create a single central counterparty platform (CCP) and a single central securities depository (CSD) for all security trades. Increase the appeal of European stock markets for IPOs and for companies after going public.
8. Improve conditions for investment in equity	Combine the European long-term investment funds (ELTIF) scheme with national tax incentives. Harmonise prudential frameworks for large insurance groups to tailor capital requirements to the risk profile of each entity.	N/A	Expand incentives for business 'angels' and private/public seed capital investors. Eliminate taxation obstacles to cross-border investment. Assess need to further reduce the Solvency II capital charges on equity investments held for the long term.
11. Wider use of longer-term savings and investment products, incl. pension schemes. **13. Develop attractive investment/savings products for retail investors.**	Launch an EU-wide auto-enrolment Long-Term Savings Product in order to stimulate retail investments, leveraging tax incentives from Member States and enhancing the Pan-European Personal Pension Product.	Creating a European long-term savings product based on a decentralised "label" approach allowing Member States to create national products under this label based on certain criteria, including a long-term horizon, at least 80% allocation to European assets, a role for employers (e.g. auto-enrolment and co-investment) and an attractive tax regime.	Encourage retail investors through the offer of second pillar pension schemes, based on successful examples in NL, SE, DK.

Note: Selected Eurogroup priorities, numbered according to the Eurogroup statement, are mapped to the relevant recommendations made in each of the three reports. Recommendations on increasing retail investment in capital markets are assigned to both priorities 11 and 13, as they may address more one or the other depending on policy design.

4 Five measures to foster a single market for capital

This chapter puts forward five proposals to contribute to fostering a single market for capital.[84] The analysis in the previous chapters highlights that Europe's capital markets are not functioning efficiently at three key points: market participation and equity ownership by retail investors is low; national markets remain fragmented, which prevents the circulation of capital across Member States; and some market segments which are key to supporting innovation are underdeveloped. To address these three blockages, the following priorities could be pursued. First, EU households need better options to invest for retirement and benefit from potentially higher returns. Second, EU's trading and post-trading infrastructure should be better integrated and modernised to facilitate cross-border issuance and investment to create unified, deep and liquid markets for shares and bonds. Third, the supervisory architecture should be strengthened through harmonised regulation, practices and a more integrated supervisory ecosystem, to catalyse a single market for capital. Fourth, the securitisation market could be mobilised to free up banks' lending capacity which could help fund the investment in the green and digital transitions. Fifth, we need to better channel investments to innovative and competitive firms. To this aim, firms' access to finance and in particular to equity and venture capital markets should grow to ensure they can find EU financing throughout their lifecycle.

4.1 A new approach, a renewed set of goals

The renewed impetus behind CMU provides the opportunity to design an effective and pragmatic agenda for the coming years. Finance ministers in the Eurogroup outlined key priorities in a statement published in March 2024 and are committed to monitor progress on an ongoing basis. The last months have demonstrated vibrant policy debates and proposals from various stakeholders, including industry practitioners, think tanks and academia. The proposals in this chapter build on the emerging consensus arising from these debates.

A small number of priorities can help focus on initiatives that have the most transformative impact. The measures put forward in this chapter are organised in a stepwise approach by focusing in the short term on measures which can be adopted and implemented during the new legislative cycle – or in the medium term on measures where political consensus can realistically be built during that period. For instance, the creation of a savings product seems feasible in the short-to-medium term, if based on a combination between EU-centralised features and national implementation. More structural initiatives aiming at capital market integration would more realistically be advanced with a stepwise approach to recognise the difficulty to

[84] The proposals follow the approach put forward by ECB President Lagarde (2024), "Follow the money: channelling savings into investment and innovation in Europe", Speech at the 34th European Banking Congress "Out of the Comfort Zone: Europe and the New World Order", November, Frankfurt am Main.

address long-standing barriers or time for policy measures to deliver structural changes. This explains why potentially transformative measures, such as harmonising insolvency laws (see Box 4) or creating a benchmark safe asset are not listed as priorities, given the expected difficulty to make progress in the short term but remain essential to build a truly single market for capital. Likewise, the proposed initiatives do not cover areas where there is more consensus but where results require transformation of mindset – such as actions to improve financial literacy and a shareholder culture among EU citizens. Finally, beyond the idea of developing a savings product, this paper does not directly address the structure of national pension schemes which is a key determinant for capital development (the equity share of private pension investment is particularly low in countries with large pay-as-you-go systems, for instance). Designing national pension systems entails profound socioeconomic choices which go beyond the scope of this paper. On many of these priorities, the proposals outlined in this paper present a starting point for debate, with the ECB and other stakeholders having to conduct further work to underpin and develop them.

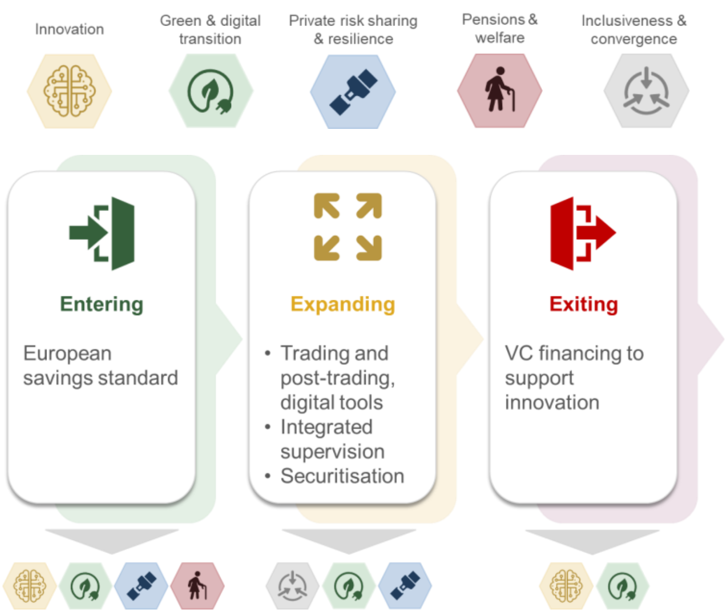
The proposed priorities align with strategic objectives outlined in Chapter 1 (Chart 19). Mobilising private investments is essential to grow EU capital markets in a way that can increase innovation and productivity and finance the green and digital transition. By channelling more household savings to higher-return, long-term investments, a savings product can also complement the role of pension funds in capital markets while providing additional pension financing in an era of demographic change and fiscal constraints. Enhancing the resilience of the European financial sector requires improving cross-border convergence and risk-sharing. Securitisation can also be a tool to transfer risks to a wider investor basis and could improve market integration if used across the market as opposed to in a limited number of countries today. An integrated supervisory ecosystem as well as a consolidated trading and post-trading landscape aim at improving the EU's capital market architecture and create a genuine single market. The integration of national capital markets, if well executed, will support their convergence towards a similar level of capital markets development. It will also generate the market scale and depth needed to finance the EU's priorities and compete internationally, as well as improve risk-sharing and pensions system, thus eventually contributing to all the CMU objectives.

The proposed framework also combines elements of a 'bottom-up' approach – based on national measures aimed at growing domestic markets – and a 'top-down' approach – centred on EU initiatives to create a single market for capital. The advocates for a bottom-up approach argue that national capital markets should develop first before consensus can be reached on more ambitious EU-level measures, especially due to concerns that further integration will benefit established financial centres and market players. Initiatives implemented at national level or by groups of Member States can play a significant role, especially in areas where progress is difficult, such as taxation. For instance, reducing the debt-equity bias could be achieved individually by each Member State, as proposed by the

Eurogroup[85] rather than based on an EU initiative.[86] However, such initiatives would need to go beyond the exchange of best practices to achieve tangible impact. Monitoring by the Commission and regular follow-up by the Eurogroup would be key to ensure implementation and coordination of national initiatives. In this regard, it is welcome that the Commission has used the European Semester process to encourage Member States to improve capital market financing conditions for firms[87] and that the Eurogroup has committed to establish a structured monitoring process on CMU.[88] A further step could be to embed capital markets measures in the reforms Member States must agree to in their medium-term fiscal-structural plans. At the same time a top-down approach is the only way to achieve a true single market for capital by harmonising regulatory frameworks, supervisory approaches and market practices to effectively enable cross-border activity. As we have witnessed, without EU-level action, national capital markets will likely develop in silos, with idiosyncratic national rules and practices that hinder cross-border investment. This fragmentation would eventually hamper their development, as most national markets are too small and will likely remain too small and shallow to compete internationally. EU capital markets must integrate to achieve a level of depth and liquidity comparable to their international peers. For this, EU measures that are developed strategically and implemented thoroughly are key.

Chart 19

Mapping of proposed priorities to the CMU strategic objectives



85 See Eurogroup statement, measure 7.

86 See Commission proposal for a Council Directive on laying down rules on a debt-equity bias reduction allowance and on limiting the deductibility of interest for corporate income tax purposes.

87 See Commission press release on the Spring Package, 19 June 2024: in the country-specific recommendations, Member States are invited to "facilitate access to finance by improving savings allocation and capital financing and facilitating capital market and alternative forms of financing, especially for SMEs".

88 See the Eurogroup "Common understanding on the format and frequency of the structured monitoring process on CMU" (Link).

Box 4

28th regime, enhanced cooperation, “two-tier approach”: pathways to partial harmonisation to foster cross-border integration in politically sensitive areas

Policy options that aim to achieve partial regulatory harmonisation in certain areas have recently received increased attention as a way around political roadblocks. Recently, the idea that a smaller group of willing Member States should forge ahead with measures to deepen capital markets integration has been put forward by some Member States. Enrico Letta also suggested establishing a European Business Code as a 28th regime for EU companies to opt into**,** to provide a unified legal framework for businesses operating within the Single Market. This idea was taken up as part of the Commission Competitiveness Compact where the Commission states its intention to put forward a 28th legal regime for innovative companies to benefit from a single, harmonised set of EU-wide rules wherever they invest and operate in the Single Market and would address relevant aspects of corporate law, insolvency, labour and tax law. The various available paths have benefits and drawbacks, which should be carefully assessed.

The term "28th regime" refers to a legal framework established in EU law and designed to operate as an available option alongside existing national legal frameworks, especially in areas where harmonisation does not seem reachable across the EU. Such a framework allows private entities, often subject to certain criteria, the option to choose the EU regime instead of the national regimes to which they would otherwise be subject. Opting for a 28th EU regime typically provides advantages such as better access to the Single Market, as participants do not need to comply with the patchwork of individual national regulations. This can take the form of a supranational corporate structure or legal instrument that private parties can select to govern their legal relations. It can also refer to an optional regime that firms can opt into (subject to specific requirements) and which provides a “passport” for operating or distributing products across borders. The 2015 Commission Green Paper on building CMU[89] advocated for this approach in the area of pensions, leading to the creation of the Pan-European Personal Pension Product. Successive CMU Action Plans have led to other frameworks based on a 28th regime, including the EuVECA Regulation and the European Social Entrepreneurship Fund (EuSEF) Regulation. These have however seen only moderate take-up, often due to remaining national obstacles or because their design includes requirements that make them relatively less attractive to potential participants (see Box 2 on PEPP).

“Enhanced cooperation” is a pathway built into the European Treaties for a subset of Member States to pursue deeper integration as a group. The Treaties allow a minimum of nine Member States to advance in a particular field when it has become clear that the EU as a whole cannot achieve the goals of such cooperation within a reasonable period. This can therefore be understood as a “two-speed” approach, where a limited number of countries spearhead integration with the option for others to join at a later stage. This mechanism has been used successfully in a few instances, typically when only a few Member States were unwilling to participate (e.g. for the Schengen *acquis*, family law, patent regulation, or the European Public Prosecutor). It has also been invoked for areas that failed to make progress, such as a proposed financial transactions tax. To be successful, such an initiative should achieve a critical step forward in terms of harmonisation and integration and involve a critical mass of willing Member States. It should also be set up in such

[89] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52015DC0063

a way that it minimises governance complexity and incentivises other EU Member States to join, in order to avoid entrenching divisions between participating and non-participating Member States.

A "two-tier approach" is another model for partial harmonisation in which only the most important actors in a given market are required/allowed to follow an EU-level framework, while smaller players remain under national rules or supervision ("two-tier approach"). This pathway has been used several times in the area of supervision, for example where an EU-level authority directly supervises "significant" or "critical" entities[90], and other entities are supervised by national authorities. The Noyer report suggested applying this model to "the most systemically important CCPs and CSDs", which would be directly supervised by ESMA. A two-tier approach can also be used in the regulatory framework itself: for instance, banks who meet certain conditions and whose failure can affect the real economy or financial stability are subject to the harmonised EU resolution framework, while others are left to insolvency proceedings under national law.[91] Such a regulatory model applies a consistent and fully integrated framework to a critical mass of the most important actors, supporting market integration, while embedding an element of proportionality for smaller firms. This can make policy proposals more acceptable politically, but it still requires a sufficiently wide consensus that a harmonised EU approach is warranted.

Model	28th regime	Enhanced cooperation	Two-tier approach
Benefits	- More politically feasible than mandatory framework - Can incentivise improvements to national frameworks - Facilitates cross-border activity where needed - Gives leeway to entities to opt for harmonisation	- Can overcome lack of consensus among Member States - Can achieve full harmonisation and deeper integration, albeit within a smaller group	- Harmonised framework for a critical mass of important entities which can facilitate cross-border activity - Integration based on objective criteria - Proportionality
Drawbacks	- Limited effectiveness without broad adoption - Political constraints and preference for national control can limit attractiveness	- Can lead to entrenched division between Member States, where cooperation does not expand to others - Economic benefits of integration limited due to narrower scope	- Requires sufficiently broad political consensus - Criteria can be based on political considerations rather than policy needs
	- Adds complexity to institutional and regulatory frameworks		
Use cases	- if there is a lack of consensus among Member States, where other options are also not feasible - If there is a clear business case for an attractive framework for a subset of interested entities	- If progress is held back by a small group of Member States - If an initiative by a small group of at least 9 Member States would achieve a significant leap in market integration, which others could join later	- If building consensus requires carving out smaller entities - If case for harmonisation can only be agreed for major cross-border and systemic actors

Overall, partial steps towards harmonisation may improve the status quo and should be further analysed. At the same time, pursuing integration on a voluntary basis requires building sufficiently attractive frameworks to eventually broaden the scope of harmonisation. Creating a mandatory two-tier approach also requires sufficient consensus. Policymakers should not underestimate the amount of political capital needed to adopt such proposals, which are often treated as precedents for full harmonisation and thus subject to similar resistance and scrutiny in

[90] Examples include (i) the Single Supervisory Mechanism, where "significant" banking union banks are directly supervised by the ECB; (ii) the Market in Crypto-Assets Regulation, under which issuers of "significant asset-referenced tokens" or ARTs fall under direct supervision of EBA, while significant "e-money tokens" or EMTs (where issued by electronic money institutions) are subject to dual supervision by the EBA and the respective home competent authority; and (iii) the Benchmark Regulation, under which administrators of "critical" benchmarks are directly supervised by ESMA.

[91] In the area of Banking Union, the Draghi report recommended that a minimal step towards completing the Banking Union would be to create a separate jurisdiction for European banks with substantial cross-border operations that would be "country blind" from the regulatory, supervisory and crisis management viewpoints.

the legislative process. Still, these options should be explored where they are the best politically feasible option at the current juncture, and where the proposed framework has sufficient prospects of reaping tangible economic benefits. It might also be possible to combine a partial harmonisation mechanism with other measures that support consistent implementation of EU rules, administrative simplification, and incentives for cross-border activity. In this context, lessons can be learned from the "unitary patent system" which consists of a combination of elements: (i) enhanced cooperation to establish a unitary patent protection; (ii) an international agreement committing participating Member States to establish a common Court with exclusive jurisdiction; and (iii) the principle of a one-stop shop for obtaining and enforcing patents with a single request. While not perfect, this approach represented a step forward given the need for a multi-faceted approach to tackling harmonisation. Building on this example, linking a 28th regime with a legal tool that anchors the political commitment of Member States (such as enhanced cooperation or an intergovernmental agreement) could increase the chances of success of creating an attractive regime as opposed to a 28th regime alone.

4.2 Encouraging capital market investment through savings

Existing national initiatives offer an opportunity to understand the features of a possible EU savings product to encourage higher-return and longer-term household investments. National frameworks in several EU countries have already demonstrated success in mobilising savings toward long-term, higher-yield products as alternatives to bank deposits. However, European-level efforts, such as the Pan-European Personal Pension Product (PEPP), have encountered notable challenges (see Box 2). By exploring national success stories, we aim to identify the key levers that may help shape the future of EU-wide savings and investment initiative.

Successful national initiatives share key elements: appropriate tax incentives, flexibility and choice in product selection, and rebalancing strategies that cater to differing risk preferences. France, Sweden, the Netherlands, and Denmark offer attractive tax frameworks for Pillar II and III retirement savings[92], with features like low management fees and flexible options for liquidity and investment choices including asset allocation. In contrast, less successful national initiatives often have complex rules, barriers to entry, a focus on low-risk guaranteed returns, and limited tax benefits. For example, Germany's Riester Rente prioritises loss limitations, which has increased costs, restricted risk-taking, and capped returns.[93]

Building on the lessons learned, several important features emerge that should be discussed to maximise the potential impact of a European savings and pension initiative. While Member States already have diverse systems in

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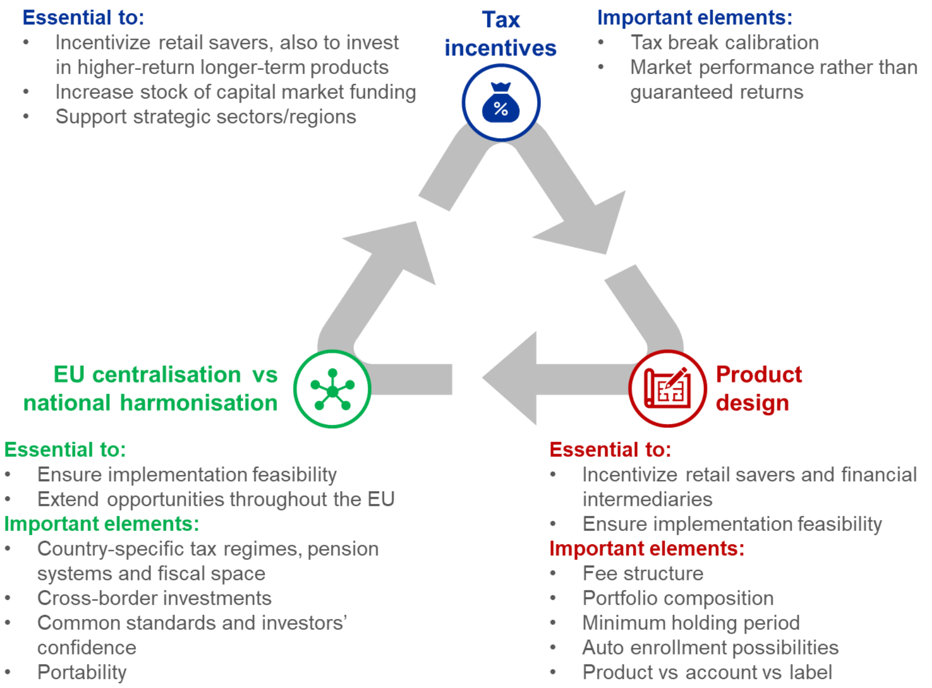
[92] The three-pillar model of retirement provision consists of state pensions, occupational pensions, and private pension schemes.

[93] A 2021 assessment of the German Riester system pointed to the low take-up (only 25% of working-age population have a contract) and refers to criticisms such as the fact that many products generate positive returns exclusively through government funding, which amounted to around four billion euros in 2018, or the restrictive guaranteed returns which were particularly hard to meet in a low-interest environment. See Geyer, Johannes; Grabka, Markus M.; de Haan, Peter W. (2021) : 20 years of the Riester pension: Personal retirement provision requires reform, DIW Weekly Report, ISSN 2568-7697, Deutsches Institut für Wirtschaftsforschung (DIW), Berlin, Vol. 11, Iss. 40, pp. 307-312, https://doi.org/10.18723/diw_dwr:2021-40-1

place, EU-level action could strengthen the single market for savers, allowing countries with lower household market participation to catch up to more advanced peers. Three key policy levers are central to designing new EU savings and investment initiatives: (i) tax breaks and incentives, (ii) product design features, such as fees, eligibility and access, and the trade-offs between label, product and account types, (iii) EU centralisation versus national harmonisation.

Chart 20

Levers for a possible savings product



Tax policy is a critical tool for encouraging households to save and invest. As such, tax incentives play an important role by offering individuals tangible financial benefits to incentivise particular investment behaviour. By offering tax relief on contributions, favourable tax treatment during the investment period, or deferral of taxes until funds are withdrawn, governments can encourage more households to participate in market-based investments. Well-designed tax incentives not only promote personal financial security, but they also drive greater capital flow into productive sectors of the economy, supporting growth and innovation.

Existing examples point to market-performance products as a best practice – while policy makers have in some cases sought to guarantee returns to protect investors. This is a key consideration for retail investors. Products with guaranteed minimum return provide a safety net, ensuring that investors do not suffer losses and can rely on a predictable, albeit lower, return on their investments. This can be particularly appealing to investors who prioritize capital preservation over growth and has been a policy preferences in some case to protect vulnerable consumers (as for the German Riester pension). On the other hand, a market-based return offers investors to benefit of higher returns, greater compound gains, but also exposes investors to the inherent volatility and uncertainties of risk assets and the risk of potential losses. Insofar as savings initiatives are designed to incentivise longer-term investments, greater gains in a market-based return scenario should be preferable to limit the use of fiscal means while maximising capital gains. For capital preservation purposes, consumers always have the option of keeping (part of) their portfolio in the form of bank deposit that are protected under Deposit Guarantee Schemes.

One of the challenges in designing appropriate tax incentives is the lack of harmonisation of tax benefits across Member States. Tax benefits are essential to encourage retail savers to shift from low-yield, short-term savings to higher-return, long-term investment products. By making such investments more attractive, tax incentives help mobilize private capital into capital markets, increasing the overall pool of funding available for businesses and infrastructure projects. This, in turn, supports strategic economic sectors by providing them with stable, long-term financing, fostering innovation, job creation, and sustainable economic growth. Importantly, while full tax harmonisation across Member States would be challenging, the EU may benefit from convergence toward best practices in this area as a lack of commonality reduces the cross-border portability of individual savings.

Product design features – such as eligibility, access, and the trade-off between product, label and account types – will determine the success of any new EU savings initiative. Designing offerings that cater to diverse needs while offering transparency and the right incentive structures will encourage wider participation, especially among retail investors. Elements include:

1. **Transparent fee structure.** A clear fee structure is crucial to attract retail investors while appealing to financial intermediaries. Lower fees make investing more accessible, while intermediaries need revenue that aligns with their service requirements. A trade-off is needed to ensure intermediaries can offer affordable but attractive services, including commissions, management fees, and consumer protection costs.

2. **Portfolio composition.** Providing a range of investment choices, from low-risk products (such as bonds and insurance) to higher-return equity funds, would give savers the flexibility to choose based on their financial goals, risk appetite and investment strategies. Rebalancing strategies should also be considered, to minimise risks for investors nearing retirement, while offering higher-return, equity-heavy portfolios to younger investors.

3. **Minimum holding period.** A flexible savings product that allows retention before maturity is important to accommodate savers' needs for early access under special circumstances. At the same time, a trade-off should be considered between early withdrawal options and returns, as the need to maintain liquidity limits the ability to invest in longer-term and higher-yields assets.

4. **Portability** across Member States. Ideally, accounts would be fully portable with uniform tax treatment across borders. In practice, interim solutions may

include simplifying tax filing obligations, encouraging Member States to review how their tax systems interact with other jurisdictions, and offering streamlined EU requirements for certain investments to reduce administrative burdens.

5. **Inclusiveness and accessibility**. Policies should offer flexible, easily accessible products that cater to diverse income levels and employment patterns to encourage widespread participation, including for self-employed workers. **Auto-enrolment** could be encouraged for workplace-linked or other savings programs, so that individuals are automatically signed up for savings programs unless they actively opt out. **Consumer protection and standards** encourage trust and participation in EU investment products. These include clear disclosures, transparent fees, regulations, standards for financial products, combined with financial education efforts.

6. **Label, product or account?** Investors need a product to invest in and an account to hold it. A one-stop-shop approach for accounts, products, and financial advice is appealing, but as seen with PEPP, integrating this across national tax systems while keeping fees low is challenging. One option could be to focus on labelling products for general retail suitability and cross-border availability, that could then be included in national tax-advantaged savings accounts. This type of structure could be designed to adapt elements of the existing investment marketplace, such as the Undertakings for Collective Investments in Transferable Securities scheme.

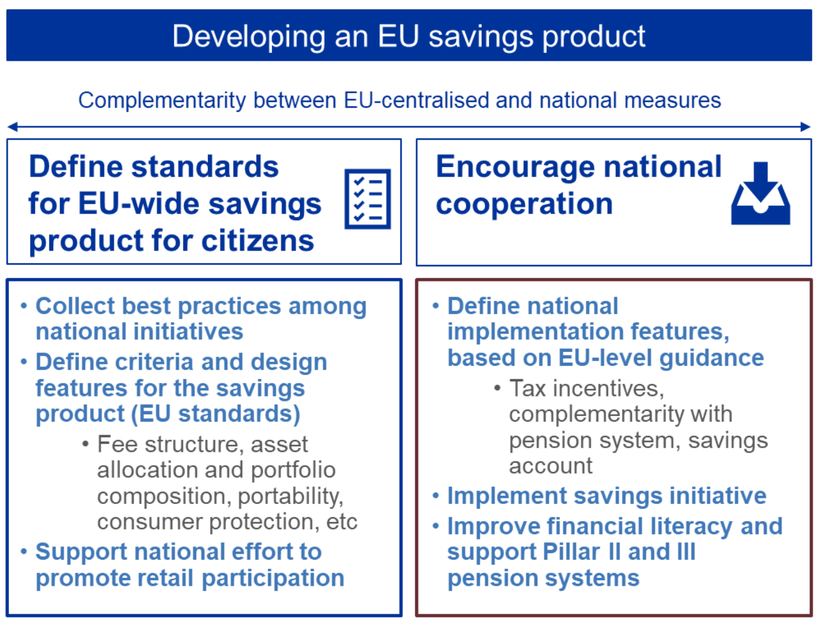
7. **Targeted investments for sustainability and other goals.** Investors and policy makers may wish for financial products that explicitly support the green transition and technology innovations to be offered.

One of the central challenges in designing an EU-wide savings and investment strategy is the balance between centralising policy at the EU level and implementing them according to national specificities. This trade-off between harmonised standards and national implementation requires stakeholders to balance cross-border convergence with local legislative and economic conditions. On the one hand, centralisation offers a level playing field and would ensure the portability of the product across borders. Centralisation also could simplify compliance for financial institutions. On the other hand, the complexity of national tax and pension systems may require a more customisable set of policies.

In conclusion, a combination of EU and Member States' leadership may be most fruitful to promote retail participation in equity markets. One approach might be to offer EU-level guidelines on the overarching framework and main features of the savings product, while allowing other aspects to remain under national control. This would ensure that any new product is consistent with EU legislation, whilst being compatible with national systems, and aligned with financial education efforts. Such standards would also offer retail investors greater transparency and assurance that their holdings are safely regulated, no matter where they invest within the single market. EU-level efforts could help to remove barriers that currently deter market participants, such as complex cross-border regulations or concerns over product risks. Member States could then complement these efforts by tailoring their own policies to foster a more inclusive investment culture.

Further work on the possible design of EU savings products is needed. One clear question in that respect is for example the identification of the universe of products that could fall under the initiative, and its potential impact.

Chart 21
Developing an EU savings product



4.3 Integrating the EU's trading and post-trading infrastructure

The EU's trading and post-trading landscape remains fragmented, mainly along national lines, which limits the depth and liquidity of EU capital markets. As of March 2023, there were 295 trading venues in the EU – not counting systematic internalisers[94] – as well as 14 CCPs and 32 CSDs.[95] Securities trading, especially equity trading, remains very fragmented along national lines, with the majority of on-venue trading in each country taking place in the domestic exchange. To the extent that pan-European trading happens, it is mainly provided by relatively newer entrants that are not listing venues, such as multilateral trading facilities (MTFs) or systematic internalisers. For instance, for the five major Western European equity indices (AEX 25, CAC 40, DAX 40, IBEX 35 and MIB 40), 56-68% of on-venue trading in 2023 took place on the domestic exchange (e.g. Euronext

[94] Article 4(20) of Directive 2014/65/EU on markets in financial instruments (MiFID II) defines a systematic internalise as "an investment firm which, on an organised, frequent systematic and substantial basis, deals on own account when executing client orders outside a regulated market, an MTF or an OTF without operating a multilateral system".

[95] See ESMA, (2024), "Statistics on securities and markets", Report, May.

Amsterdam for AEX 25), while 3% or less took place on other exchanges and the remainder (30-44%) took place on MTFs. While pan-European exchange groups have emerged – most prominently Euronext and Nasdaq Nordic – this has not significantly reduced trading fragmentation, as national exchanges remain separate, despite technical synergies such as consolidating orderbooks[96].

This fragmentation has a significant adverse impact on market depth and liquidity, especially at smaller exchanges[97], which in turn reduces the attractiveness of EU stock markets for EU firms. EU trading markets, for instance, are significantly less liquid than their US counterparts, even accounting for the overall higher depth of US markets and the larger size of US companies (see Table 1). Ultimately, lower liquidity affects capital market development, as shown by the comparison in the total value of securities issued in CSDs, which increased by 51% in the EU between 2009 and 2023, compared with a 125% increase in the US. Likewise, fragmentation in the post-trading landscape has held back cross-border settlement, with cross-CSD settlement remaining at a very low level of about 4% of the total volume of transactions as of 2024. This results in frictions and thus allocative inefficiencies, including higher home bias.[98]

Table 1

Statistics on EU and US securities market depth and liquidity

	European Union	United States
Average daily trading volume per company (in € million)		
For large-caps (market capitalisation between €5 and 100 billion)	116	146 (x1.3)
For mid-caps (market capitalisation between €1 and 5 billion)	12	23 (x2.0)
Monthly turnover velocity (ratio of monthly turnover to market capitalisation)		
For equities	52%	145% (x2.8)
For bonds	21%	39% (x1.9)
Total value of securities issued in CSDs (in € trillion)		
2009	31.2	79.4
2023	47.2	178.6
% increase	51%	125%

Sources: Euronext, Oliver Wyman, Fedwire Securities Service Statistics.
Notes: the average daily trading volume per company for large and mid caps allows for a comparison between market segments for the average individual firm, thus accounting for the overall higher depth of US markets and the larger average size of US firm market capitalisations (see Euronext, (2024), "Demystifying the liquidity gap between European and US equities", April). The monthly turnover velocity is another measure of the liquidity of securities, adjusting for the market capitalisation of a given market or security (see Oliver Wyman, (2024), "The Capital Flywheel: European Capital Markets Report", May). The total value of securities issued in CSDs provides an indication of the overall size of capital markets.

Further integration of the EU's trading and post-trading infrastructure would enhance cross-border investment and liquidity. This would be particularly important in those smaller Member States where capital markets are currently

[96] For instance, Euronext has consolidated the order books from the national regulated markets within the group into a single order book on a single trading platform, Optiq, which means that all Euronext-listed securities have a single trading line and thus more market depth, even if they are listed on multiple Euronext markets. See information on the Euronext trading platform.

[97] See e.g. AFME, (2023) "Capital Markets Union: Key Performance Indicators, Sixth Edition", p. 57, November.

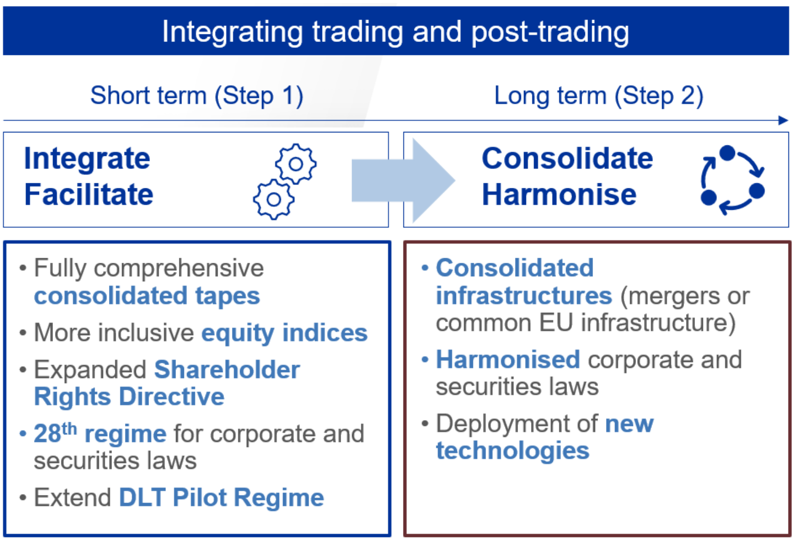
[98] See Born, A., Heymann, D., Chaves, M. and Lambert, C. (2022). "Frictions in debt issuance procedures and home bias in the euro area", Report on Financial Integration and Structure in the Euro Area.

underdeveloped, as it would stimulate cross-border investment. The EU's market structure should ideally evolve towards one where a few key pan-European infrastructure groups compete for issuances and trading flows. In that regard, the emergence of cross-border exchange groups and large pan-European MTFs is a positive step. Further cross-border consolidation between infrastructures will be the result of market decisions, which depend on the costs and benefits of consolidation as well as on the cooperation of national authorities – especially where key national infrastructures are wholly or partially publicly owned.[99]

Progress towards further integration in market infrastructure is limited by regulatory fragmentation, which has been difficult to overcome and requires a stepwise approach. Consolidation is often hindered, and its benefits reduced, due to the fragmentation of national legal frameworks, including gold-plating, and to divergent national supervisory approaches. This is particularly the case for central securities depositories (see Box 7 below). Overcoming these hurdles will be indispensable to facilitate consolidation and fully amplify its benefits, by allowing firms to also integrate their infrastructure into single platforms and thus reap synergies. Still, given the many complex areas of financial regulation and market standards that require harmonisation, and the sometimes-entrenched national preferences in these areas, this remains a long-term project which requires a stepwise approach.

Chart 22

Proposed measures for the integration of trading and post-trading landscape in the context of CMU



Initial steps should aim to push the EU's market structure towards a pan-European pool of liquidity. On the regulatory side, the supervision of exchange groups and pan-European infrastructures could be transferred to the EU level as a priority (see section 4.3), in order to avoid that divergent supervisory practices

99 This is the case for instance for the main domestic exchanges in Bulgaria, Cyprus, Luxembourg, Hungary, Malta, Poland, and Slovakia.

maintain undue obstacles to cross-border consolidation. As regards trading and data infrastructure, the creation of consolidated tapes for all major market segments will be a first important step in providing investors with price transparency across a broad range of venues, ultimately benefitting competition and liquidity. Further improvements to the tapes may be needed in the future to allow them to fully deliver on these aims, such as including all EU trading venues in the scope of the tapes and identifying the trading venue in the dissemination of pre-trade data.

Aiming for a pan-European pool of liquidity would also require further inclusiveness towards smaller, less liquid national markets, for instance through pan-EU equity indices. It could also be considered whether the structure of European equity indices could further evolve to include stocks from Central and Eastern European countries in pan-European indices: this would increase the depth and liquidity of these markets and ensure that a more pan-European market structure has clear benefits for these markets. A blueprint for this possibility was already developed in the past institutional cycle[100]: it suggested creating a "CMU Index Family" for equities across a range of sectors and firm sizes, which would include all relevant EU-headquartered, EU-listed firms. The study noted that while there was limited appetite from institutional investors, there was "some potential among domestic and regional investors (especially from the CEE region)" as exclusion from indicates puts these markets at a significant disadvantage due to being "less often considered by international institutional investors". The study noted that such a CMU Index Family could be implemented through a public-private cooperation, where "the private partner would be responsible for the creation, maintenance and exploitation of the CMU Index Family, while the public stakeholders could provide initial financial and marketing support".

The targeted harmonisation of company law and securities law at EU level is a long-term endeavour, which should be undertaken in a stepwise approach. The complexities of national company and securities law, including gold-plating and provisions specifically aimed at preventing cross-border activity (see Box 6), currently hinder the ability of exchanges and CSDs to integrate their national platforms, even within cross-border groups. These obstacles are however difficult to overcome given national political preferences and the technical complexity of harmonisation. A stepwise approach should therefore be used, with very targeted improvements in the first instance (see Box 6). In parallel, it could be considered whether national exchanges and infrastructures currently owned by national governments or public entities should be privatised so that they can be consolidated with those in other Member States – unless there is a political agreement that it would be more efficient for some post-trading services to be provided by an EU-level public entity, building on the example of T2S for securities settlement.

Digital ledger technology (DLT) and other financial innovations can play a key role in creating modern and more integrated market infrastructures. If implemented properly, these advances have great potential to facilitate a faster and safer end-to-end execution of transactions, by performing negotiation, settlement

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100 See De Groen, W.P. et al., (2020) "Feasibility Study for the creation of a CMU Equity Market Index Family", CEPS.

and custody functions on a single platform.[101] This would reduce transaction costs and make the financial system more efficient. The EU regulatory framework should therefore continue to facilitate the development of DLT-based market infrastructures, including through the review and extension of the DLT Pilot Regime. However, the development of platforms based on new technologies could fragment the market further, by creating infrastructures silos that are not interoperable; undermine clearing and netting procedures; or increase reliance on commercial bank money or e-money – unless infrastructure is developed to permit settlement in central bank money, including in tokenised form. The emergence of national law initiatives to enable and promote DLT-based assets could also fragment this growing market along national lines. In the short term, regulators should remain attentive to these risks as they adapt the regulatory framework to enable the development of platforms based on new technologies, especially to promote interoperability, and if possible, integration between these platforms and existing infrastructure. In the long term, settlement in central bank money on a Eurosystem platform could alleviate these risks and anchor the level of interoperability and common standard-setting needed. The ECB continues to work on proposals to further the integration of trading and post-trading landscape in Europe and is weighing the feasibility and desirability of a single shared European ledger as a long-term vision for securities markets, and what could be the necessary interim steps. In the meantime, policymakers should incorporate technological developments so that the digital aspects of CMU can take shape alongside other elements.

Box 5
Integrating the EU's post-trading landscape

Prepared by G. Koczan and C. Rouveyrol

Despite the introduction of TARGET2-Securities (T2S) and significant harmonisation efforts, the EU's post-trading landscape remains fragmented along national lines, mainly due to legal and regulatory constraints. While many central counterparties (CCPs) and central securities depositories (CSDs) belong to cross-border groups, market attempts to integrate or consolidate national CSDs in particular have failed due to divergences in national legal frameworks. For instance, national company laws and securities laws have different requirements for corporate events (e.g. dividend payments, stock splits, proxy voting, general meetings), custody, processes to record the ownership of securities, restrictions on stock ownership, or reporting. The definition of shareholders and bondholders (i.e. beneficial owners) is not harmonised, creating uncertainties in the identification of end-investors (who ultimately hold voting rights and receive notifications of corporate events) in cross-border situations, and thus in the exercise of investor rights. Some national laws mandate the use of the national CSD, for instance for the dematerialised issuance of securities issued under national law, or for the settlement of primary issuance transactions on sovereign bonds. Finally, diverging withholding tax procedures also hinder investors' ability to avoid double taxation on cross-border securities holdings, although this is expected to be mitigated partly by the recently adopted FASTER legislation. The fragmentation of the EU's post-trading

[101] See Cipollone, P., "Towards a digital capital markets union", speech at the Bundesbank Symposium on the Future of Payments, Frankfurt am Main, 7 October 2024..

infrastructure with a high number of financial market infrastructures (trading venues, CCPs, CSDs) is largely a symptom of these national differences.

The Eurosystem has contributed significantly to the integration of the post-trading landscape in the euro area, and continues to do so. The establishment of T2S connected 24 CSDs in 21 countries to a common securities settlement platform and fostered a high degree of standardisation in the settlement process specifically. It also facilitated cross-border settlement to some extent and allowed for liquidity savings for market participants. However, as T2S only handles settlement, it did not lead to significant harmonisation in other areas such as issuance, custody or asset servicing. In this regard, the Eurosystem is engaging with market stakeholders through its Advisory Group on Market Infrastructures for Securities and Collateral (AMI-SeCo) to promote harmonisation of market practices in these areas[102]. Still, the implementation of common market standards is better ensured when incentivised by European infrastructure projects – such as the Eurosystem Collateral Management System, the launch of which is planned for June 2025 – where participants must adapt to connect to the common infrastructure. Common market standards also cannot overcome national legal barriers. The EU's move to a shorter (T+1) standard securities settlement cycle by October 2027 may also present opportunities to strengthen compliance with common standards and to remove some of the existing barriers to post-trade integration.

A stepwise approach to addressing legal hurdles is needed to facilitate the integration of post-trading infrastructure, given the political difficulties and technical complexities involved. Regardless of the form of integration envisaged – whether cross-border consolidation or the development of a common European infrastructure – legal harmonisation is an essential prerequisite. This should be achieved through targeted harmonisation in specific areas of corporate and securities law, such as the harmonisation of definition of beneficial owners and removing provisions that create obstacles for the cross-border issuance, holding and settlement of securities[103]. In the first instance, this could focus on expanding the scope of the Shareholder Rights Directive to cover the full scope of processing of corporate events for both equities and debt instruments, by codifying into EU law the existing market standards which harmonise how corporate events are processed, thus removing national specificities that require the maintenance of individual national infrastructures. In addition, EU legislators could consider establishing a 28th regime for corporate law and securities law, allowing EU firms to opt into an EU framework that would facilitate the cross-border issuance, holding and settlement of the securities they issue across the EU..

As noted in the March 2024 Governing Council statement, the Eurosystem is also exploring the potential use of new technologies for issuance, trading and settlement to enhance efficiency and integration in EU financial markets. In 2024, the Eurosystem completed trials (real transactions) and experiments (test / mock transactions) using distributed ledger technologies (DLT) with over 60 key stakeholders in European post-trade services in two waves between May and November 2024.[104] The use cases focus on issuance and primary and secondary market delivery versus payment (DvP) settlement of securities but include also clean payments. The Eurosystem will expand this initiative in the coming months, starting with the development of a

[102] E.g. activities related to the use of T2S, corporate action processing, tri-party collateral management, CSD billing.

[103] This includes e,g, provisions which question the validity of claims to the securities if held via a holding chain including non-domestic account service providers, which tie issuance or the execution of corporate events to the domestic CSD by law, which allow dematerialised issuance only in the domestic CSD, or which restrict the location of settlement of domestic assets to the domestic CSD.

[104] See Eurosystem completes tests using DLT for central bank money settlement, 4 December 2024.

platform to settle transactions recorded on DLT in central bank money through an interoperability link with TARGET Services.[105] The application of new technologies, such as DLT, have the potential to increase efficiency of the securities ecosystem and to promote integration. Although many of the barriers described above do not stem from technology, the ‘green field’ approach adopted by many stakeholders in thinking about the application of these technologies provides an opportunity to remove or reduce several of these barriers. Their potential to decrease costs and complexity in exchanging information among the stakeholders, the opportunity their application provides to further standardise key pre- and post-trade activities and their potential to indirectly impact on regulatory policies are perceived by many stakeholders as an avenue to a more integrated capital market ecosystem.

4.4 Creating an effective supervisory ecosystem

The lack of a centralised supervisory ecosystem for financial markets was part of the shortcomings identified after the Great Financial Crisis (GFC). Member States established the European System of Financial Supervision (ESFS) as a response to shortcomings from the GFC. This was inspired by proposals in the De Larosière report to create a stronger, more coordinated supervisory framework for all financial actors. [106] It was a major improvement to the regulatory set-up at the time by complementing supervision at national level with an EU perspective, and the micro- with a macroprudential approach to the build-up of risks. This led to the establishment of the European Supervisory Authorities (ESAs) and the European Systemic Risk Board (ESRB). The proposal was to evolve in a stepwise approach towards a more centralised supervisory architecture, recognising the potential efficiency gains from simplifying the institutional landscape.[107]The report also emphasised the importance of maintaining a consistent set of technical rules – a single rulebook – applying to all financial firms as the necessary basis for effective harmonised supervision.

Amendments to the supervisory framework for EU capital markets have followed an incremental approach, which may not be the most conducive to a level playing field and the integration of markets. Significant progress has been made in harmonising capital market rules and establishing binding technical standards to ensure consistent supervision across the EU. In addition, the ESAs have gradually been granted more powers leading to an incremental (albeit differentiated) centralisation of supervisory tasks for certain cross-border players. For instance, ESMA has a mandate in the oversight of third country CCPs,[108] and the

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105 See Eurosystem expands initiative to settle DLT-based transactions in central bank money, 20 February 2025.

106 See High level group on financial supervision in the EU, Chaired by Jacques de Larosière report published on 25 February 2009.

107 The DeLarosière report proposed to ultimately moving towards a system composed of two authorities: one responsible for banking and insurance prudential issues as well as for any other issue relevant for financial stability; the second responsible for conduct of business and market issues.

108 The Review of the European Markets Infrastructure Regulation (EMIR 2.2) has established a progressive and risk-driven approach to the recognition of third-country CCPs which are categorised depending on the risks they pose to financial stability either as a Tier 1 or Tier 2. ESMA is in charge of supervising Tier 2 third country CCPs, while monitoring Tier 1 third country CCPs depending on the risks related to their EU activities.

EBA is responsible for conducting direct supervision of issuers of significant asset-referenced tokens (ARTs).[109] However, the 2017 reform to strengthen the ESAs' powers was only a modest step towards a single European capital markets supervisor,[110] leaving the overall framework largely decentralized. While maintaining proximity to local markets and national preferences can justify a decentralized approach, inconsistent application of rules hinders true European market integration.[111] Therefore, whilst substantial progress has been achieved in fostering a common legal framework (a single rulebook), further harmonising the application of law and supervisory practices would be supportive of the further development and integration of capital markets, while potentially reducing duplication and costs.

In contrast, greater centralization in enforcement and harmonization of the rulebook would enhance market confidence, ensure predictability, and facilitate cross-border activity by providing a unified supervisory framework across the EU. A more integrated supervisory ecosystem could reduce the costs for market participants for complying with different rules and their interpretation when operating cross-border and avoid the need for building up supervisory capacity and duplicating infrastructure (such as data and IT) in multiple jurisdictions.[112] Lessons can be drawn from the banking union model, where the ECB directly supervises large banks in an integrated Single Supervisory Mechanism with the aim to harmonise supervisory practices and ensure a level playing field.[113] The SSM illustrates that more centralised supervision – alongside appropriate resources, clearly defined powers and a strong governance – can lead to more effective supervision. For instance, a 2022 paper finds that the establishment of the SSM with a supranational supervisor led to an increase in the capital to cover specific exposures compared to the requirements for banks under the local supervisor – as the central supervisor removes preferential biases towards larger institutions and leads to a more harmonised approach.[114]

A more integrated supervisory ecosystem becomes all the more important to address potential risks as the role of non-bank financial institutions (NBFI) increases. The NBFI sector has been growing and became more diverse since the

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[109] Significant electronic money tokens (EMTs) issued by electronic money institutions are on the other hand subject to dual supervision by the EBA and the respective home competent authority.

[110] Steps towards a single supervisor were called for in the Five Presidents' Report, and in the Reflection paper on the deepening of the Economic and Monetary Union: "A more integrated supervisory framework ensuring common implementation of the rules for the financial sector and more centralised supervisory enforcement is key. […] the gradual strengthening of the supervisory framework should ultimately lead to a single European capital markets supervisor."

[111] This was highlighted in the Commission's proposals for the ESAs Review in 2017 and further recalled in the 2022 report on the operation of European Supervisory Authorities, where the Commission recalled that it "continues to believe that the governance system of the ESAs, with decisions being taken by the 27 national supervisors, may still give too much prominence to national interests and occasionally produce sub-optimal results. In addition, this governance system sometimes makes it difficult for the ESAs to use the convergence tools at their disposal in the most appropriate way".

[112] This was for example suggested in the Recommendations for a strong European Capital Markets Union put forward by De Nederlandsche Bank (DNB) and the Dutch Authority for the Financial Markets (AFM) in February 2024.

[113] See for example N. Véron, "Europe's banking union at ten: unfinished yet transformative", Bruegel books.

[114] See Haselmann, Singla and Vig, "Supranational Supervision", LawFin Working Paper No. 50 (2022).

global financial crisis.[115] This is in line with the CMU objective to reduce the dependency to the banking sector and can support innovation, productivity and economic growth for instance through increased intermediation of equity and credit funding in both public and private markets. Safeguarding the resilience of NBFI is therefore essential for capital markets to serve as a sustainable source of financing to EU firms, and more generally contribute to that of the whole financial system.[116] Resilience means that non-bank financial intermediaries are able to continue providing services to the broader financial system and economy when faced with adverse shocks and do not amplify or propagate shocks in times of stress.[117]

While enhancing the supervisory framework remains an important objective, targeted improvements can be achieved in the short term. As a first step, the ESAs have already focused on enhancing supervisory convergence with a view to delivering a common implementation and enforcement of rules. Going beyond convergence, a short-term approach would aim to:

- continue deepening the rulebook for capital markets by using more directly applicable Regulations guided by strategic objectives, while reducing national options and discretions;
- further reform the ESAs' governance to foster the consistent implementation of rules across Europe, including via increasing the resources available to the ESAs (in particular ESMA);
- reinforce the powers of the ESAs, which could be built upon over time when there is sufficient political consensus. Concrete areas for improving supervisory consistency among national authorities include the centralisation of supervisory data collection and processing, reinforcing the governance of the ESAs Boards of Supervisors by strengthening the role of the Chairperson and creating Executive Boards within the ESAs, and assessing the need for additional financial resources (e.g. through levies from indirectly supervised entities);[118]

Streamlining institutional complexities and improving coordination in sectoral legislation can also enhance supervision and market efficiency. The ongoing reviews of the NBFI and securitisation frameworks can be the occasion to improve some aspects of the existing framework in the short-term. For instance, the SSM

[115] Non-banks' total assets doubled since 2008 and are now comparable to 80% of banking sector assets. In the euro area, the role of NBFIs in financing the real economy has become more important over the past decade, despite a decline in their share of total credit granted since 2022. NBFIs accounted for 27% of outstanding credit to non-financial corporations as of the third quarter of 2023. See Financial Integration and Structure in the Euro Area report, 2024, section 4.1.3.

[116] The main sources of vulnerabilities in NBFI stem from: (i) excessive exposure to liquidity risk, including due to structural liquidity mismatches and/or a lack of liquidity preparedness for margin and collateral calls; (ii) excessive leverage; and (iii) interconnectedness across the financial system.

[117] See the Eurosystem response to EU Commission's consultation on macroprudential policies for nonbank financial intermediation (NBFI), November 2024.

[118] See Recommendation 18 in ESMA's position paper "Building more effective and attractive capital markets in the EU" .

Securitisation Hub[119] can serve as an example on how to pool common resources and expertise to deliver a more unified or greatly coordinated centralised supervision. This experience could be considered in the context of the review of the securitisation framework. The ongoing review of the macroprudential framework for NBFI also represents an opportunity to reflect on the potential for enhanced coordination in the application of tools which would strengthen risk monitoring, promote financial stability, and support CMU objectives by ensuring a more integrated and resilient EU financial system.[120] All these short-term improvements would provide a framework for supporting integration in the markets which would itself reinforce the case for a more integrated supervisory architecture in the long term.

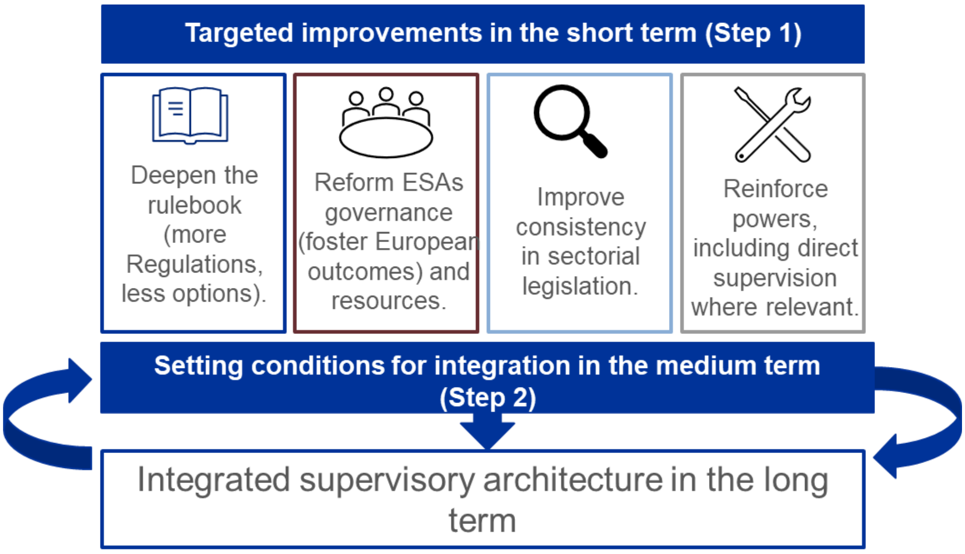
European supervision over certain categories of capital market actors could be considered, for instance (i) in market segments that are strategically important and European supervision could foster integrated, efficient, and well-functioning markets, (ii) in areas where common solutions in the application of the EU capital market rules are more efficient, or (iii) in areas where high integration or intense cross-border activity entail higher cross-border contagion risks to financial stability. The structure for exercising these central powers could follow different models which deserve further exploration. The institutional set-up of the Single Supervisory Mechanism, which consists of a two-tier structure with direct supervision for the largest institutions and a strong drive for harmonising practices for the supervision of smaller institutions by national authorities can serve as an example. Categories that could be considered for direct supervision include trading venues and central counterparties of systemic EU importance, international central securities depositories. ESMA could also eventually be conferred with powers to coordinate market abuse investigations.

In summary, beyond the near-term, CMU should go hand in hand with further integration of the supervisory infrastructure. First, the implementation of the single rulebook by a common authority would be more effective than a fragmented framework when it comes to promoting the CMU in the global market – thereby reinforcing the international standing of EU capital markets. Second, further centralisation of authorisation, supervision, and enforcement could leverage economies of scale and, at the same time, promote the necessary uniformity required for the formation of pan-European markets. Third, a one-stop shop would be more transparent, predictable and accessible for market participants – supporting the development of markets. Further work is necessary to identify the primary benefits of centralised supervision to support a Single Market for capital in Europe, and to determine the most suitable reforms of the supervisory architecture that could help achieve this.

[119] For more details, see, for instance, "Supervisory priorities and securitisation", keynote speech by Elizabeth McCaul, Member of the Supervisory Board of the ECB, at the 26th Annual Global ABS Conference, Barcelona, 14 June 2022.

[120] See Eurosystem response to EU Commission's consultation on macroprudential policies for nonbank financial intermediation (NBFI).

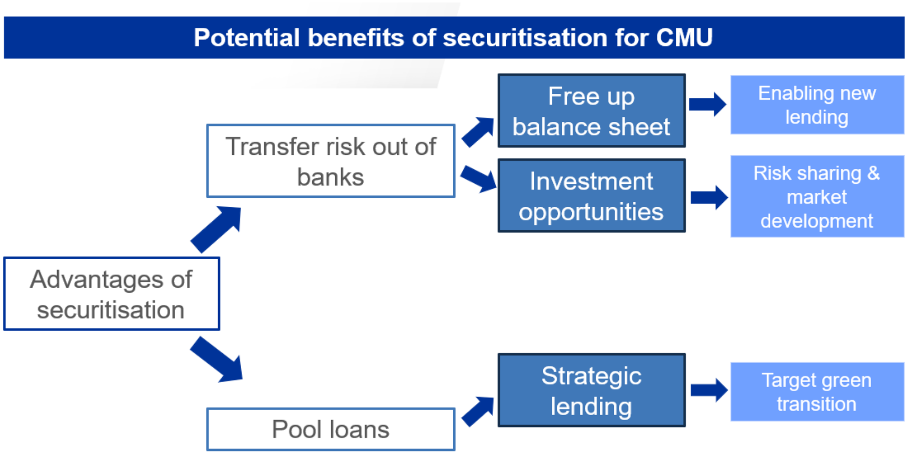
Chart 23
Proposed stepwise approach for supporting common supervision of capital markets



4.5 Mobilising the EU securitisation market for CMU

Securitisation can support some of the CMU objectives. From the outset, this tool has been a policy priority of the CMU and the object of several reforms in the CMU Action Plans put forward by the Commission. Its advantages include the potential to help transfer credit risk of the underlying assets to investors, which can lead to a more balanced distribution of risks across the financial sector. In addition, securitisation can be tailored to a wide range of asset types and sizes, offering flexibility to develop securitisation products for specific pools of loans. For instance, it can be used for loans to SMEs or to specific sectors or activities that in turn give new options to investors. In principle, securitisation can be a useful tool to create space on banks' balance sheets, which can then be mobilised towards financing productive activities or contribute to specific goals like financing of the green and digital transition. Finally, securitisation can be used by a broad base of originators and investors, including non-banks, making it a relevant tool for CMU.

Chart 24
Potential benefits of securitisation for CMU



To make a positive contribution, securitisation needs to be well regulated and supervised.[121] The run-up to the Global Financial Crisis (GFC) was characterised by a rapid growth in the issuance of "complex" structured and opaque products in a context of excessive risk taking, sub-prime lending in the midst of a real estate bubble, and credit ratings not reflecting the actual underlying risks. While these developments occurred primarily in relation to the US subprime mortgage market crisis, stress rapidly spread through the global financial system. Reforms since then at the international and European levels have sought to address harmful practices by introducing stricter requirements in terms of transparency (including loan level data availability) and due diligence as well as to increase standardisation in the markets. Securitisation has often been named as a priority in policy debates for CMU and it enjoys broad political support in that context, being part of the priorities put forward in most high-level reports on CMU. Maintaining a sound regulatory framework for securitisation and upholding the improvements that were adopted post-GFC, and linking potential reforms with the objectives of CMU will be essential to make a meaningful contribution. This also means that developments should be closely monitored to ensure that those buying securitisation products are indeed best placed to bear the underlying risks especially if complex products become more widely used.

Box 6
Assessing the EU's securitisation market – a brief overview

Prepared by C. Triandafil, C. Schlund, C. Moldovan, L. Andaloro, and J. Evrard

EU banks have a range of instruments at their disposal to fit their funding and risk transfer needs, such as securitisation and covered bonds. A general observation in the policy debate is that the European securitisation market has decreased and stabilised at lower levels than the Great

[121] See ECB staff response to the Commission targeted consultation on the securitisation framework, 3 December 2024.

Financial Crisis (GFC) peak. Other major jurisdictions have experienced similar trends.[122] This should however be put in perspective with the fact that, while the issuance of true-sale securitisation has remained flat post-GFC, the issuance volumes of synthetic securitisation and covered bonds have grown significantly over the past years.[123] In Europe, the Asset Backed Securitisation (ABS) market has proven to be resilient, whilst the issuance of Residential Mortgage Back Securities (RMBS) has declined as EU banks instead increased their use of covered bonds for the same range of underlying assets (see Chart A). At the same time, banks' use of synthetic securitisation has increased significantly in recent years – also helped by supportive changes in the regulatory framework.[124] Synthetics have become the main securitisation vehicle used by banks to free up regulatory capital.[125] European securitisation issuances therefore appear to be more dynamic than when assessed only for traditional, true-sale securitisations.

The introduction of more robust capital requirements in the aftermath of GFC does not seem to have negatively impacted the issuance of true-sale securitisations. The issuance of true-sale securitisation was not significantly impacted after the publication of the updated Basel standard for the regulatory capital treatment of securitisation exposures in July 2016. Rather, developments in the true-sale securitisation market were accompanied by an increased use in alternative instruments (such as covered bonds) as funding sources and risk transfer tools (synthetics). Indeed, covered bonds and synthetic securitisation provide banks with cheaper funding and risk transfer, respectively, alternatives than true-sale securitisations, which bundle the funding and risk transfer function. These developments are important to consider when assessing the need to review the prudential framework for incentivising issuances.

The current securitisation market is concentrated in a limited number of Member States. Major players are located in France, Ireland, Italy, the Netherlands, Portugal, Spain as well as Germany. A lack of harmonisation in the underlying loan portfolios prevents meaningful cross-border integration of the market, which is an important consideration from a CMU perspective. In addition, only larger institutions are able to make use of this technique, which is complex and requires technical capacity and back-office support.

An in-depth assessment of the functioning of EU securitisation markets is essential to identify the appropriate policy responses in the context of CMU. Understanding the drivers and dynamics of the market and the way that banks use securitisations for their funding and risk transfer needs on one hand, and banks' use of released capital on the other hand, highlights that amendments to the prudential framework alone are unlikely to deliver an increased scale of the securitisation market. It is furthermore important to consider whether banks are capital constrained or already have sufficient access to capital release instruments (e.g. in the form of synthetic securitisation) and whether further regulatory support will lead to an improved banking mix of

[122] For a deeper analysis of the EU (and other jurisdictions) securitisation market, see the FSB Consultation report "Evaluation of the Effects of the G20 Financial Regulatory Reforms on Securitisation" published on 2 July 2024.

[123] In synthetic securitisations, assets remain on the originators' balance sheet and the risk transfer is achieved via a credit protection agreement. In true-sale securitizations the risk transfer is achieved via a "true-sale" of the securitised assets to a securitisation Special Purpose Vehicle, which issues credit-tranched securities to investors. No risk transfer occurs via covered bonds, which are bank funding instruments only; this is due to the fact that the covered bonds are a bank liability and the covered pool serves only for collateralisation purposes.

[124] The Simple Transparent and Standardised (STS) securitisation label, introduced in 2019 for traditional securitisation, was expanded to on-balance-sheet synthetic securitisations in 2021 as parts of an effort from the Commission to support the market.

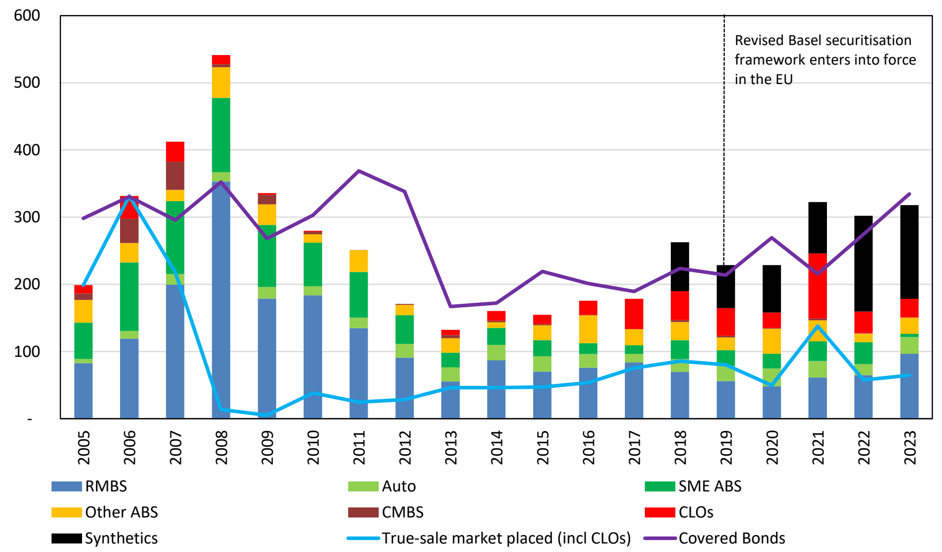
[125] See González, F., and Triandafil, C., (2023), "The European significant risk transfer securitisation market", Occasional Paper Series, No. 23, European Systemic Risk Board (ESRB) .

funding and risk transfer instruments.[126] These should rather aim to fine-tune the framework in a first step, whilst strategic considerations can be considered in a second step to scale-up and integrate the market (as proposed in the policy priorities below).

Lessons can be drawn from the United States, where public agencies play a key role in the securitisation market. US public agencies are the most important players in the US securitisation market, making it a very different market than in the EU, where such agencies do not exist. These were established with a clear mandate to support the housing market and buy ABS with specific characteristics or eligibility requirements as a tool to achieve this objective. The agencies play a key role in the standardisation of the underlying loans, supporting the market by buying mortgage-backed securities. This points to the importance of standardisation as a key driver for developing – and scaling-up - securitisation markets, which regulatory changes alone are unlikely to deliver. In addition, securitisation can indeed be used as a tool for reaching CMU objectives – such as strategically focusing on loans for the green and digital transition – which could strengthen the link between specific proposed policy reforms for securitisation and the broader goals of CMU. At the same time, the precedent of the US public agencies should also be kept in mind when assessing potential risks and fiscal implications of the public involvement, highlighting potential trade-offs to be avoided when considering the potential creation of a platform for securitisation in Europe.[127]

Chart A

Issuance of Euro Area true-sale and synthetic securitisation and of covered bonds (EUR bn notional)



Source: JP Morgan, European Covered Bond Council (ECBC), ECB Banking Supervision and ECB calculations

[126] From a risk transfer and financial stability perspective, true-sale securitisation has significant merits compared to synthetics. The transfer of risks in true-sale securitisation is permanent as opposed to temporary. Moreover. In true-sale securitisations, banks typically also sell senior tranches and overall retain less residual exposure to the securitised assets compared to synthetic securitisation; the retention of senior tranches in synthetic securitisation exposes originating banks to systemic risk.

[127] The bailout of Fannie Mae and Freddie Mac was linked to a Treasury loan of USD 200 bn. While this loan was fully repaid at the end of 2014 (as reported in 2024), both agencies remain under conservatorship from the US government. In addition to the moral hazard risks of providing government backing to a key sector of the economy such as mortgage lending, there also are risks if banks use their new balance sheet room to pivot to new sectors without the appropriate knowledge and risk management practices.

The potential benefits of securitisation as a technique could be further geared towards specific CMU objectives. For this, policy action should promote sustainable growth of the securitisation market and aim to support risk transfer outside of the banking sector. Securitisation can foster development of new market segments, attract a broader range of investors, and create financing opportunities. This would be all the more relevant if such benefits contribute to greater policy objectives such as the financing of the green and digital transition. To have a meaningful impact on the CMU environment, policy actions to support securitisation in the context of CMU should not focus solely on scaling-up the market but also seek to increase integration across borders, so that benefits extend to a wider range of market participants than are currently active in this sector. For this, a two-step approach is necessary to first fine-tune the prudential and regulatory environment whilst pursuing standardisation efforts to scale-up the market (see proposals below).

Relaxing prudential rules are unlikely to incentivise risk transfer in a significant manner. While reducing capital requirements for securitisation could increase incentives for banks to issue securitisation products in the form of synthetic structures, it would not necessarily foster higher issuance of higher quality (STS – Simple, Transparent and Standardised) true-sale structures and higher placement on the markets. It is also unclear whether cuts to capital requirements would be channelled into funding the real economy (and in particular towards productive sectors[128]) if not accompanied by specific measures to ensure this is the case. This would be the case if banks used capital savings for capital optimisation and window dressing purposes rather than for lending. In such cases, the potential benefits to the economy and to the CMU objectives from the increased risk transfer benefits would therefore not be achieved in full. Furthermore, reductions of capital requirements for securitisations would potentially weaken the prudential framework or lead to deviations from international rules. From a financial stability perspective, it is furthermore important to ensure that banks use a balanced and diversified range of instruments for their funding and risk transfer needs, and that the use of these financial instruments is responsible. All in all, while securitisation, when used responsibly, can have significant micro and macro benefits and positively contribute to the CMU objectives, care should be taken to ensure that developments in certain segments of the securitisation markets do not lead to excessive build-up of risks.[129]

A combination of short- and long-term measures would help to balance potential impact, political feasibility and implementation timelines. In a first step, a number of measures could be implemented within the existing regulatory framework that are quickly implementable, even if their economic impact on the development of the securitisation market is not expected to be significant. In a second step, further effort should be placed behind proposals that may have a larger economic impact and scale-up the market but require progress on technical issues or public resources and are therefore likely to take more time to be agreed and implemented.

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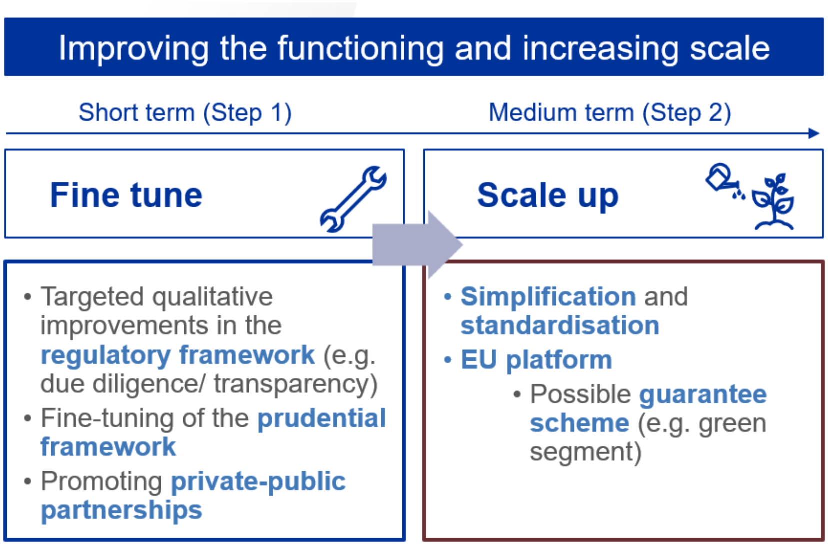
[128] See European Central Bank (2024): "Low firm productivity: the role of finance and the implications for financial stability" Financial Stability Review, November.

[129] See for example, European Central Bank (2019), "CLOs: a financial stability perspective", Financial Stability Review, November.

Chart 25

Proposed measures for supporting securitisation in the context of CMU



In the short term, improving the regulatory framework would enhance conditions for a more active securitisation market, even if they would fall short of meaningfully contributing to the objectives of CMU. This is especially the case if they are not accompanied by other measures to scale up the market, such as simplification and standardisation. Targeted improvements, such as streamlining reporting and due diligence requirements and fine-tuning the prudential framework, could incentivize securitisation issuance, simpler structures and attract new investors while maintaining prudential safeguards. Lower compliance costs and enhanced risk sensitivity in regulation would help differentiate underlying asset risks more effectively.[130] However, such measures alone are insufficient to scale up the market without broader efforts in standardisation going beyond the EU's Simple, Transparent, and Standardised (STS) label.[131]

An EU platform could significantly advance the securitisation market by addressing the lack of standardisation, reducing transaction costs and information asymmetries, thereby attracting a broader investor base. To limit financial stability risks, the design of such a platform should be carefully considered, particularly regarding its scope and the roles of public and private stakeholders. A European platform could act as both an issuer and standard-setter. An EU structure would also reduce transaction costs for issuers and information asymmetries.[132] A platform could bring benefits even without public support by improving

[130] See for example the proposals put forward in the ESAs Joint Committee Advice on the review of the securitisation prudential framework for banking, published on 12 December 2022 .

[131] STS securitisations were introduced in Europe to reflect the Basel-IOSCO international standards. STS securitisations have to comply with specific conditions in terms of simplicity, standardisation and transparency of the structure and of the underlying assets. These securitisations benefit from a preferential prudential treatment. STS developed to be a functioning market standard and was successful in avoiding the re-emergence of harmful past market practices, but it was not accompanied by a large take-up. The STS label was extended to synthetic securitisations in 2021 – which is not the case in international rules.

[132] See for instance: Fell, J., Grodzicki, M., Krušec, D. Martin R. and O'Brien, E.:" Overcoming non-performing loan market failures with transaction platforms" ECB Financial Stability Review 2017 (Link).

standardisation and fostering simple and robust structures. A targeted public guarantee could be considered, especially focusing on targeted segments such as green securitisation and alongside the use of dedicated public funds, and would align with the broader CMU goal of financing the green and digital transition. Implementing this at the EU level could encourage harmonisation, risk sharing, and pan-EU issuance, with the European Investment Bank providing examples of successfully channelling private capital towards EU policies using securitisation.

In the long term, the securitisation market would benefit from improvements in addressing the internal barriers to CMU. A platform could make a meaningful contribution in supporting true-sale issuance by fostering harmonisation of loans and pooling loans across borders, but it would not solve the underlying legal complexity for investors resulting from different national legal regimes. Harmonisation of contract and insolvency laws would support the standardisation of loan contracts. This would provide equivalent safeguards and predictability to investors across the EU and create more harmonised pools of assets. These asset pools would facilitate the scaling-up of securitisation, incentivise cross-border investments in securitised products and could also benefit the transmission of monetary policy.

The ECB will further contribute to the policy debate on securitisation. The Eurosystem is an important stakeholder in the market given that true-sale ABSs can be accepted as collateral for ECB credit operations,[133] and the Eurosystem purchased true-sale ABS as part of our asset purchase programmes.[134] ECB staff already contributed to the Commission consultation on the securitisation framework. The ECB will also issue an Opinion on the legislative proposal which is expected to be put forward by the Commission.

4.6 Promoting firms' access to finance

The EU's productivity gap with the US is partly due to a lack of private investment in R&D and a lack of focus on high-tech, an area where venture capital can finance technological innovation. The first chapter of this paper analysed the reasons for Europe's productivity gap with the US, which include an over reliance on bank lending and a lack of private investment in disruptive technologies. Risk capital, and venture capital in particular, is a more suitable financing instrument for such activities. ECB analysis also shows that the geographical proximity to financial sectors is a factor that guides firms' (in this case Fintech) decision to establish themselves in a particular location.[135]

A lack of adequate financing to support the different phases of a startup lifecycle can also affect firms' ability to grow. Each stage of a firm's development

133 https://www.ecb.europa.eu/mopo/coll/html/index.en.html

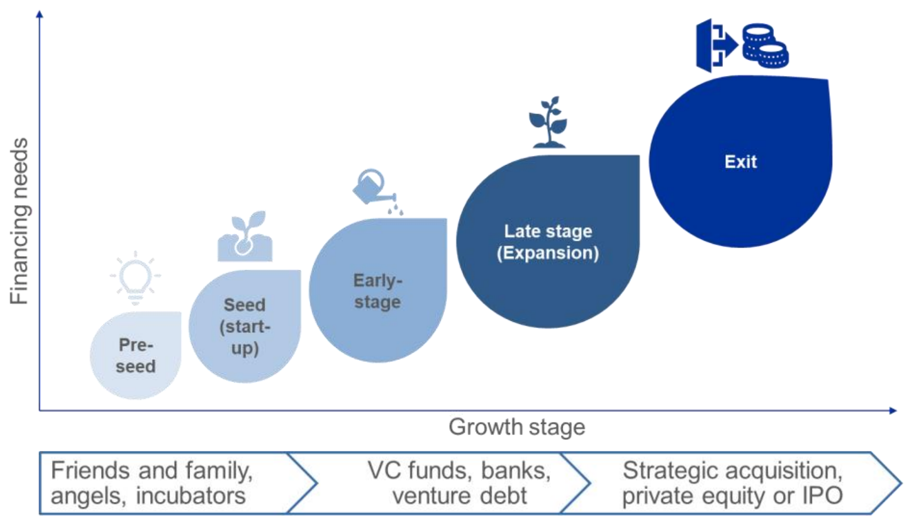
134 https://www.ecb.europa.eu/mopo/implement/app/html/ecb.faq_abspp.en.html

135 See "Rapid growth and strategic location: Analysing the rise of FinTechs in the EU" Box 8 of the 2024 ECB report on Financial Structure in the Euro Area.which shows that EU FinTechs have tended to establish themselves in the geographical proximity of financial centres to take advantage of access to equity financing, opportunities to tap into a diversified pool of fundings and the availability of institutional support schemes.

requires appropriate funding instruments as scale increases and risk decreases (Chart 26). Companies can then connect with investors that have appropriate risk appetite, available funding, knowledge and expertise, as well as a long-term perspective. The health of each piece of this financing system has an impact on the pipeline of firms that can reach a scaling phase. Several recent publications have pointed out that Europe's underdeveloped venture capital environment, alongside fragmented equity markets and heterogenous national markets, leads to higher financing costs and inefficiencies in the allocation of capital when compared with the United States.[136]

Chart 26

Evolution of the financing needs for innovative firms



As outlined in Chapter 1.1, European equity and venture capital markets are too small and fragmented to respond to the needs of European firms. The aggregate deal value of VC markets in Europe is significantly smaller. Annual VC financing in the EU averaged 0.2 percent of GDP in 2013−23, a fraction of the US average of 0.7 percent of GDP. There is a particular financing gap at the stage when companies want to scale up in order to expand their businesses into international markets or their product ranges.[137] This gap is filled by foreign investors (in particular US VC funds) which have more available resources to fund the late rounds of VC financing. For instance, more than 50% of late-stage investment in European tech comes from outside the EU.[138] Companies that source foreign funding in the later stages of their scaling-up may then be listed on foreign stock exchanges, further depriving Europe's equity markets of large and innovative firms that contribute to the markets' depth and liquidity. This in turns impacts the valuation of European listed equity markets.

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[136] This was for instance documented in the report from Draghi, M., (2024), "The future of European competitiveness", September, and IMF analysis "Stepping Up Venture Capital to Finance Innovation in Europe" IMF Working Paper 24/146.

[137] For an in-depth assessment, please refer to European Investment Bank (2024), *The scale-up gap: financial market constraints holding back innovative firms in the European Union*, July (Link).

[138] European Investment Fund (2023), *Scale-up financing gap*, 12 September (Link).

The urgency of channelling funds to the most innovative firms to boost Europe's productivity calls for short term action. The European Investment Fund, which is already active in the VC market, could be further mobilised to provide more funding and expertise. This would address two issues: first, it could provide the necessary impetus for firms to engage in innovative economic activity and invest in new technology.[139] Second, the public sector could play a catalytic role by crowding in large institutional investors, who tend not to invest in small and fragmented markets. For example, the EIB Group (European Investment Bank, European Investment Fund) and six EU Member States launched the European Tech Champions Initiative (ETCI), a Fund of Funds aiming to channel late-stage growth capital to promising European innovators by investing in private-sector venture capital and other investment funds.[140] This could be a blueprint for further initiatives to mobilise funding to strategic sectors. Scaling up the EIB Group's venture capital activities could help maximise the impact of available instruments.

Europe's innovation pipeline is also weak at the stage of commercialising research ideas into viable products. According to the European Patent Office, only about one-third of the patented inventions registered by European universities or research institutions are commercially exploited.[141] The Draghi report suggested that a key shortcoming in Europe was the lack of innovation "clusters" which connect networks of universities, start-ups, large companies and venture capitalists. Developing such clusters could facilitate the successful commercialisation of innovative ideas.

Widening the investor base should be a priority. The EU VC sector itself lacks a wide investor base that has the depth, risk profile and expertise necessary to bolster the market. Barriers in national regulatory and tax frameworks create frictions that prevent the development of deep capital pools. Since addressing these barriers will take time, providing adequate tax incentives at the national level to crowd-in investors could be envisaged and coordinated at the EU level as best-practices to foster a level playing field and cross-border investments. Whilst most of the demand should come from institutional investors that can responsibly take up risk, retail investors could also be brought to the market, perhaps by targeting some of the savings collected in a pan-European savings product. This would enhance cross-border integration and allow retail investors to reap some of the benefits from backing the most innovative firms across the EU. Tax incentives, such as those reducing the debt-equity bias for corporations and encouraging retail investors to invest in equity, could also contribute to deepening EU public equity markets. In addition, a key issue preventing retail investors from more actively participating in the

[139] For example, Aghion et al. (Link) showed that firms tend to follow a path dependency whereby they invest in technologies where they already have an advance, unless challenged by external shocks, or if incentivised by public intervention to do so.

[140] The ETCI initiative was launched in 2023 with EIB Group resources alongside contributions from Germany, France, Spain, Italy, Belgium, the Netherlands (Link).

[141] See European Patent Office (2020), "European patents preferred tool for the commercialisation of inventions developed by Europe's universities and public research organisations" (Link).

equity market is the cost. For example, European markets tend to have high brokerage fees.[142]

In parallel, progress should continue in increasing the attractiveness and depth of Europe's equity markets. ECB analysis found that the recent listing gap between the United States and Europe is due, at least in part, to the greater attractiveness of US stock markets for foreign firms. The percentage of foreign companies among all companies listed in the United States rose from around 18% in 2017 to 24% in 2022. By contrast, foreign listings in European markets have shown a slight downward trend over the same period.[143] So far, the EU Listing Act[144] has focused on reducing barriers for SMEs to list – which is welcome. It will remain important to assess whether the latest measures (adopted in December 2024) have reached their intended effect or if more action is needed to support SME listings. In addition, the Listing Act, as a Directive, can only lead to minimum harmonisation as it needs to be implemented into national law, and includes exemptions and national options which may hinder the level playing field. In the meantime, making it easier for larger companies to list in the EU could also be a priority. This would support the depth and liquidity of capital markets overall, a key pull factor for the funding escalator.

Further progress in the overall supervisory and regulatory frameworks should be geared towards promoting the integration of EU markets. Increasing the share of equity investments in funded pension systems, together with expanding auto-enrolment practices, would have mutually reinforcing benefits. It would give institutional investors, such as pension funds, a greater role in providing a large investor base for equity markets, similar to the role they now play in the United States. Ensuring the portability of pensions across borders, as envisaged when launching the Pan-European Personal Pension Product, will also be fundamental in supporting the single labour market by enhancing mobility for workers in Europe. Assessing the benefits of deep and well-functioning equity markets and developing potential policy proposals to deepen Europe's equity markets will therefore be a topic for further analysis.

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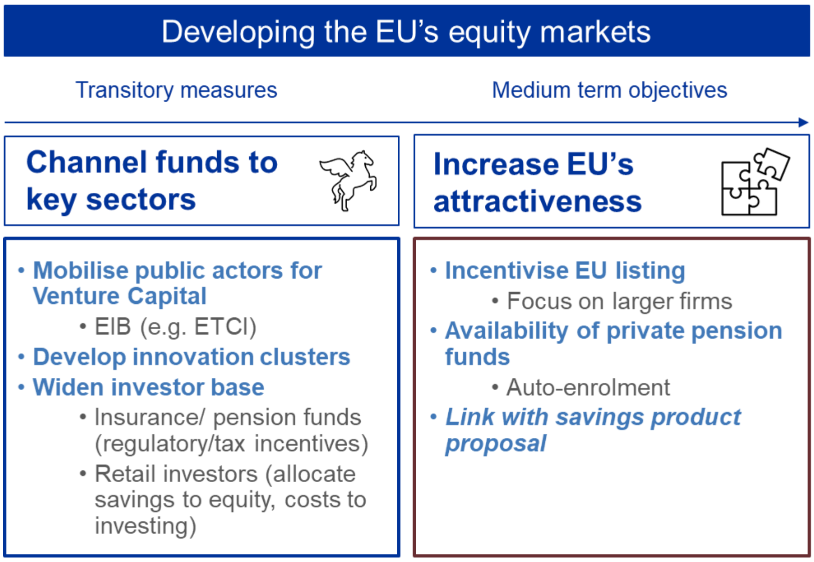
[142] The fees and commissions charged by product providers and distributors may have a negative impact on the potential return for retail investors. For example, in 2021, retail clients were charged on average around 40% more than institutional investors across asset classes see ESMA report on Performance and Costs of EU Retail Investment Products, 2022. The smaller size of EU UCITS (compared to the US) also limits their potential to leverage economies of scale and can, at least partially, explain the substantial differences in the fund cost levels observed between the EU and the US. See ESMA Market Report Costs and Performance of EU Retail Investment Products 2024.

[143] See "Examining the causes and consequences of the recent listing gap between the United States and Europe", published as part of the 2024 ECB Financial Integration and Structure in the Euro Area report,.

[144] https://finance.ec.europa.eu/news/listing-act-2024-03-15_en

Chart 27

Proposed measures for developing EU's equity markets



4.7 Further action to support progress on CMU

The development of deep and liquid capital markets hinges also on the availability of a safe asset. Historically, the most mature capital markets have been built around public safe assets, such as federal bonds in the US (Panetta, 2023). Safe assets play a critical role in financial transactions by serving as collateral, guiding derivatives pricing, and allowing market participants to transfer risk. They are essential for banks to meet liquidity requirements and for central banks to implement monetary policy by exchanging liquidity against non-cash safe assets (Bletzinger et al., 2023).

Currently, the EU lacks a permanent safe asset, which hampers its capital markets, making them less developed and more fragmented compared to other economies. The creation of a European safe asset could provide numerous benefits. As a common risk-free benchmark, it could stimulate the development of products such as corporate bonds or derivatives by facilitating their pricing. Importantly, it could decouple these assets from changes in domestic sovereign funding costs (Panetta, 2024; Mack, 2021). In addition, such asset tend to support the diversification of bond holdings from banks and non-banks, increasing their resilience to shocks. Lastly, a European safe asset is likely to support the international role of the euro, forming the basis of the euro-denominated reserves held by foreign central banks. However, the lack of highly-rated assets and centrally-issued debt has limited the euro's global appeal (Cipollone, 2024).

Several proposals for creating a European safe asset have been explored in the past. These options explored different levels and modalities of mutualisation of Member States' sovereign debts, such as red and blue bonds (Depla and von Weizsäcker, 2010), Eurobills (Philippon and Hellwig, 2011) or purple bonds (Bini

Smaghi and Marcussen, 2018). Some of these proposals faced legal hurdles as well as the difficult question of how to transition towards these degrees of mutualisation. Further ideas aiming to create a synthetic safe asset without risk sharing also emerged (see Gossé and Mourjane, 2021 for a detailed overview). Sovereign bond-backed securities (SBBS), where an intermediary would purchase euro area sovereign bonds by issuing securities of different seniority levels were examined by a report of the European Systemic Risk Board, which discussed their benefits and the regulatory constraints to be addressed (ESRB, 2018). In May 2018, the Commission presented a legislative proposal to enable the development of a market for SBBS by addressing these regulatory aspects. However, uncertainty about market interest for such an asset and limited political backing led to the proposal ultimately being set aside.

EU bonds have now taken the centre stage as the primary avenue to establish a genuine European safe asset. In response to the COVID-19 pandemic, initiatives such as the Support to mitigate Unemployment Risks in an Emergency (SURE) and NextGenerationEU (NGEU) significantly expanded the EU's bond market presence, issuing €98.4 billion and possibly up to €712 billion by 2026, respectively. These bonds have strong credit ratings due to the guarantee mechanisms built into their frameworks. However, their finite nature limits their potential to be universally recognised as safe assets (see **Box 8** for a more detailed discussion of EU bonds and the factors that could promote their role as a European safe asset). The possibility of establishing permanent EU issuance, which could also be used for emergency funding, might feature in the upcoming discussions on the next Multiannual Financial Framework (Buti et al., 2024). These discussions can also be expected take into account the path of national public debts, in particular considering the recent entry into force of the new fiscal framework, as well as the mechanisms to ensure that common issuance is only used for specific priorities and projects (Draghi, 2024).

Making progress towards completing the banking union would strengthen the EU's financial sector and improve its efficiency and resilience, all of which would support CMU. The banking sector is a critical actor in capital markets, especially in the EU's heavily bank-based economy, with banks providing a range of services to capital market investors and issuers. A more integrated banking sector and more cross-border lending[145] would therefore support the deepening and integration of capital markets. It would also make banks more efficient, more competitive, and more resilient to shocks, which would create a better environment for financing the EU's policy priorities. Once the reform of the crisis management and deposit insurance framework[146] is finalised, the Eurogroup should urgently return to the discussions to set up a European deposit insurance scheme, in tandem with measures to facilitate cross-border integration, including liquidity and capital

[145] See "Intra-euro area cross-border bank lending: a boost to banking market integration?" published as part of the 2024 ECB Financial Integration and Structure in the Euro Area.

[146] See European Commission (2023), Reform of bank crisis management and deposit insurance framework

waivers[147]. While significant political obstacles remain, the risks and costs that persistent fragmentation pose for the competitiveness of the EU's financial sector and real economy should instil a renewed sense of urgency in these discussions.

Improving financial literacy in Europe is also critical to advancing the Capital Markets Union, as it helps broaden participation in capital markets from both individual investors and SMEs. Financial literacy in Europe, while gradually improving, remains significantly lower than other jurisdictions like the United States or parts of Asia. According to the 2023 Eurobarometer survey results[148], only 18% of EU citizens have a high level of financial literacy, 64% - a medium level, and the remaining 18% - a low level. This indicates that Europeans often lack the essential knowledge needed to make informed financial decisions, which affects their ability to invest effectively, save for retirement, or understand risks in complex financial products: this becomes even more challenging when looking at cross-border differences within the EU, as certain regions lag even more behind. A higher level of financial literacy would foster a more active participation of individuals in capital markets, while also building trust in these markets as well-informed investors are better equipped to navigate risks. Member States with better scores on financial literacy (25% of citizens score high on financial literacy) include Netherlands, Sweden, Denmark[149], where retail investors participate and invest more actively in the local capital markets.

In turn, the Capital Markets Union holds significant potential to foster a more inclusive economy across Europe. By lowering barriers to market entry and simplifying access to capital, the CMU can enable firms of different sizes and from different regions to grow and innovate. This inclusiveness extends to individuals, allowing them to diversify their financial portfolios. Through enhanced access to financial products and broader participation in wealth generation opportunities (such as stock markets or bond investments), the CMU can contribute to producing wealth. Additionally, by fostering a stable and integrated financial environment, the CMU can contribute to a fairer distribution of prosperity across the EU. This more inclusive market structure can lead to an economy where opportunities for growth and investment are more evenly distributed across societies.

Box 7
EU bonds as safe assets

Prepared by Tilman Bletzinger and Johannes Groß

This box reviews the evolution of the market for EU bonds and assesses to what extent they can be considered as safe assets within the European financial landscape. The EU bond market has undergone significant transformation over the past few years, particularly since the onset of the COVID-19 pandemic due to a significant increase in the scale and scope of EU bond issuances. As

147 See Enria, A. and Fernandez-Bollo, E. (2020), "Fostering the cross-border integration of banking groups in the banking union", ECB Banking Supervision blog, and Enria, A. (2023), "The integration of the EU banking sector and the challenges of global competition", Eurofi Magazine.

148 See Eurobarometer (2023), "Monitoring the level of financial literacy in the EU", European Commission Report, April.

149 Ibid

a main result, the box argues that despite the high credit quality and growing market presence, EU bonds are not yet fully perceived as equivalent to the safest EU sovereign bonds. While the prospects for ultimately becoming a genuine euro-denominated safe asset have been increasing with every bond issuance, the largest impediment is the time-limited nature of the NGEU initiative.

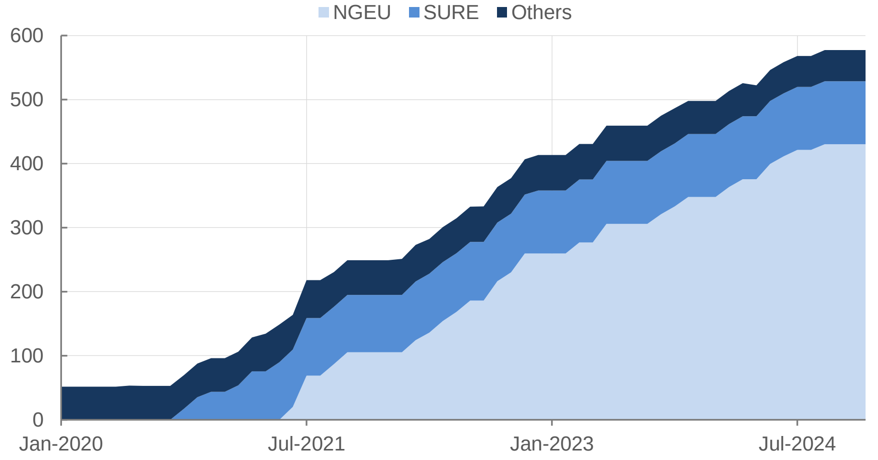
Stylised facts and evolution of the EU bond market

Historically, the European Commission's borrowing activities were relatively modest, primarily focused on funding targeted support programmes such as the European Financial Stability Mechanism (EFSM) for euro-area countries and for non-euro area countries the Balance of Payments (BoP) and Macro-Financial Assistance (MFA) programmes. These programmes were based on a 'back-to-back' funding approach, where the EU leveraged its favourable borrowing conditions by issuing bonds to finance loans for recipient countries. While under this funding approach the Commission remained responsible for repaying the bond principal and interest, the recipient countries were obliged to repay the loans under specific terms and conditions tied to the underlying programmes.[150] Overall, the EU played a limited role in capital markets as an infrequent issuer until 2020 with a volume of around €52 billion outstanding in early 2020 constrained.

Chart A

Evolution of outstanding nominal bond volumes by the EU

(in billion €)



Source: ECB calculations, Bloomberg and European Commission.
Note: Total outstanding debt by EU program in EUR bn between January 2020 and August 2024. NGEU and SURE are COVID-19-related recovery initiatives. Other includes bond issuances under the European Financial Stability Mechanism (EFSM), the Macro-Financial Assistance (MFA) and Balance of Payments (BoP). Latest observation: December 2024 (monthly data).

The onset of the COVID-19 pandemic in 2020 marked a turning point in the EU's borrowing strategy, leading to a significant increase in the scale and scope of EU bond issuance (**Chart A**). The introduction of two major funding programmes, the Support to mitigate Unemployment Risks in an Emergency (SURE) and NextGenerationEU (NGEU), substantially expanded the EU's presence in bond markets. Under SURE, which aimed to support short-term work schemes across Member

[150] The 'back-to-back' funding approach implied that bonds were typically issued such that their volumes and maturity would match those of the loans made to recipient countries. Under this approach, the EU was less prone to mismatches of its cash in- and outflows related to bond financing.

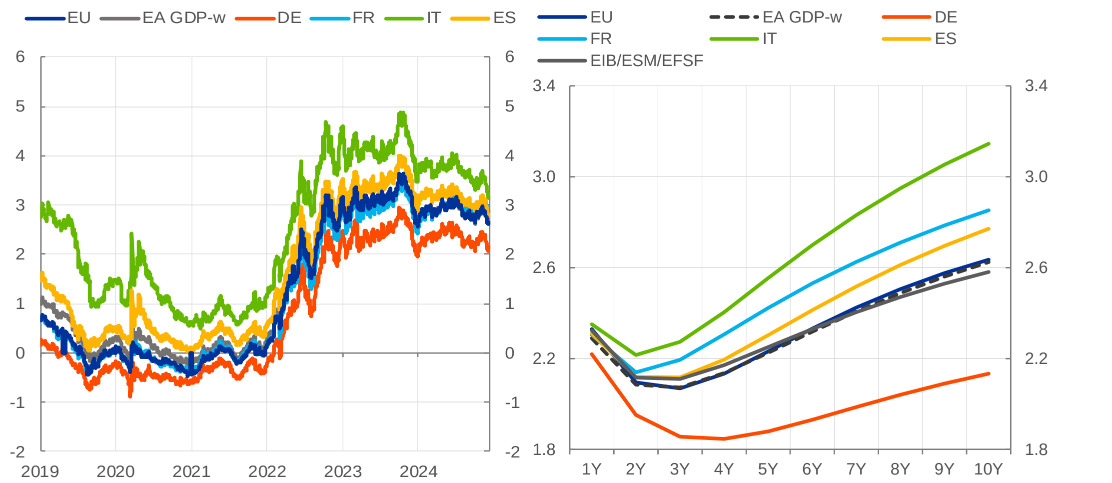
States, the EU issued €98.4 billion in social bonds[151], while NGEU, designed to bolster economic recovery after the pandemic, is expected to mobilise a bond volume up to €712 billion (out of a maximum programme envelope of €806.9 billion) by 2026.[152] The substantial increase in debt issuance has transformed the EU into a prominent and active borrower in international capital markets, operating under a more flexible debt management framework that decouples disbursements from funding operations.[153] This strategy has solidified the EU's market presence, with a total outstanding bond volume of €578 billion at the current juncture (December 2024).

Looking forward, together with the 2021-2027 multiannual financial framework, the total available amount of EU bonds is scheduled to be close to €1 trillion by 2026 corresponding to approximately 38% of Germany's public debt in 2023.[154] However, the time-limited nature of the NGEU programme for which issuances as of now will end in 2026 will drastically reduce new issuances in the EU bond market after 2026 (Claeys et al., 2023; Lindner and Mach, 2024).

Chart B

EU and sovereign 10-year bond yields and term structure

(percentages per annum)



Source: ECB calculations, Bloomberg and European Commission
Notes: The LHS chart shows the 10-year yield curve spot rates over time. The weights of the EA GDP-weighted series are based on member states' nominal GDP values for 2023. The EU series is derived from a Nelson-Siegel-Svensson (NSS) yield curve model based on bonds issued by the European Union, see Bletzinger et al. (2022). The RHS chart shows the term structure of spot rates across EA countries and EU bonds. The EIB/ESM/EFSF yield curve refers to the average of the institutions' individual yield curves. Last observation: 9 December 2024

Are EU Bonds Safe Assets?

Bond market prices reflect a combination of factors, including perceived credit risk, liquidity, and investor demand. As highlighted by Krishnamurthy and Vissing-Jorgensen (2012), investors value both the liquidity and risk-mitigation features of safe assets. The market pricing of EU bonds

[151] Social bonds are use of proceeds bonds that raise funds for new and existing projects with positive social outcomes. The Commission issued within the SURE program in total 9 social bonds between October 2020 and December 2022: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7713

[152] The NGEU program is time-limited and new issuances will end in 2026: https://commission.europa.eu/strategy-and-policy/eu-budget/eu-borrower-investor-relations/nextgenerationeu_en

[153] As of January 2023, the EU's debt management strategy is consolidated under a unified funding approach (single branded "EU bonds") rather than bond issuances being earmarked to a specific programme or purpose as before.

[154] See European Commission's 2021-2027 long-term EU budget & NextGenerationEU for more information about the 2021-2027 long-term EU budget plans.

suggests that, while they are recognised for their high credit quality, other factors, such as lower perceived liquidity, may contribute to the yield differences observed in **Chart B**. As shown in the left-hand side of **Chart B**, there is a time-varying yield difference between the 10-year EU zero-coupon yield and that of the 10-year Bund by around 30 basis points between 2019 and 2022, increasing to around 60 basis points since the start of the tightening cycle in the Eurozone in 2022. Looking at the recent yield differences across maturity (9 December 2024), the right-hand side figure in **Chart B** plots the term structure of the zero-coupon yields for EU bonds and various individual sovereign issuers. The EU curve is below its lower-rated member states like Italy and Spain and close to the GDP-weighted average of EA sovereign yields and close to yields of other European supranational institutions, however substantially above the German yields across all maturities.

The emergence of EU bonds as potential market-anchoring safe assets is a critical development for the deepening of European capital markets. Safe assets are essential for facilitating financial transactions, general aggregate macroeconomic activity, implementing effective monetary policy (Gorton, 2017) and for financial stability (FISEA, 2020, 2024). In the euro area, the need for euro-denominated safe assets has become more acute following the sovereign debt crisis. Brunnermeier et al. (2017) and others highlight the potential role of EU bonds in addressing this gap.

A "safe asset" typically possesses three key main attributes (Bletzinger et al., 2022; Gorton, 2017; Brunnermeier et al., 2017): high asset quality (low credit risk and high credit rating), robustness (stability of bond values and spreads during periods of market stress), and liquidity (the ease with which the asset can be bought or sold without causing significant price changes). Finally, in the literature safe assets are associated with convenience yields, the non-pecuniary return that investors receive from holding safe debt resulting in lower observed market yields (Gorton, 2017).

High Asset Quality

EU bonds are characterised by high credit quality, underpinned by high credit ratings and multiple layers of debt-service protection as stipulated by the EU Treaties.[155] Rating agencies, however, do not agree fully on the extent to which EU bonds are exposed to default risk. Fitch and Moody's keep its best long-term issuer rating (AAA/Aaa) for the EU while Standard & Poor's provides its second-best issuer rating (AA+).[156] Hence overall, the robust legal and institutional framework supports the market perception of EU bonds as low-risk assets, aligning them with the first criterion for safe assets.

Robustness

We use the spread between the 10-year EU zero-coupon yields and the overnight Index Swap (OIS) rates as a comprehensive sovereign risk measure (De Santis and Stein, 2014) to assess the robustness and information sensitivity of EU bonds.[157] The left-hand side of **Chart C** shows the stability of EU bond spreads (blue line) during the onset of the COVID-19 crisis. While EU bond spreads demonstrated resilience and stability, comparable to French bonds, and were substantially less reactive than spreads for Italy or Spain during periods of market volatility, they did not exhibit

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[155] The European Parliament, the Council and the Commission are legally bound by the Treaty on the Functioning of the EU (Article 323) to service the EU debt.

[156] The EU is rated AAA, Aaa, AAA (outlook stable) by Fitch, Moody's, Scope and AA+ (outlook stable) by Standard & Poor's, see EU's credit rating, while S&P rates several countries like Germany or Netherlands AAA.

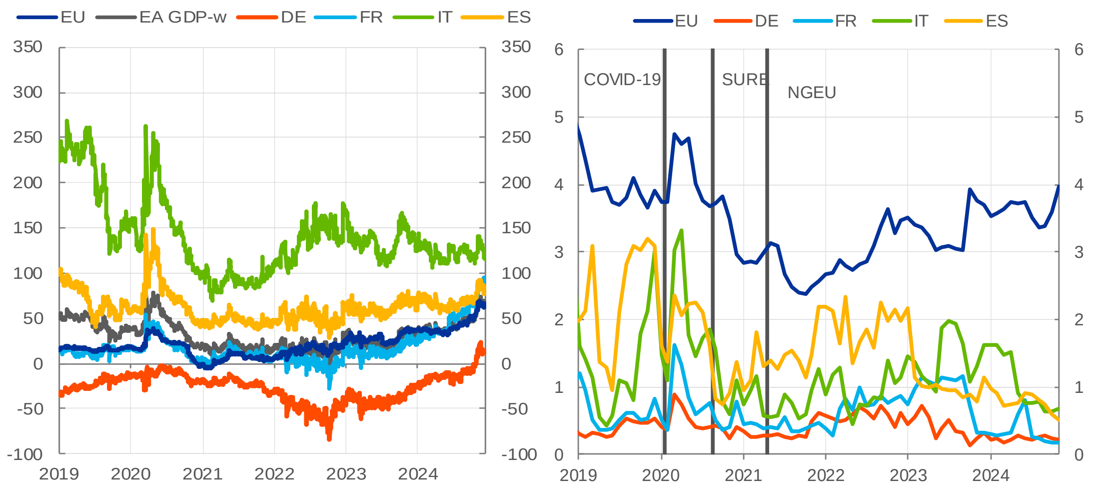
[157] See ECB (2014) for a discussion on the suitability of overnight index swap (OIS) contracts as complement to AAA-rated bond yields when reporting on euro area risk-free rates.

the same 'flight-to-safety' dynamics as observed for Germany, where dominant convenience yields during periods of stress drove Bund yields down. These dynamics indicate that there is a degree of robustness that is valuable for investors seeking stability, but not as much as for more established safe assets, such as German Bunds.

Chart C

Indicators for robustness and market liquidity

(basis points)



Source: ECB calculations, Bloomberg and European Commission.
Notes: The LHS chart shows the spread between the 10-year zero-coupon yield with respect to the 10-year OIS. The weights of the EA GDP-weighted series are based on member states' nominal GDP values for 2023. The EU series is derived from a NSS yield curve model based on bonds issued by the European Union, see Bletzinger et al. (2022). The RHS chart shows the time series of market liquidity (average bid-ask spreads in basis points). For single EA countries, we include the monthly average of the bid-ask spreads of the respectively benchmark bond yields. For the EU series, we compute the average bid-ask spread on the universe of EU bonds maturing 2030-2040.
Last observation: 9 December 2024

Liquidity

EU bonds have shown improving liquidity over time, as evidenced by narrowing bid-ask spreads illustrated on the right-hand side of **Chart C**, especially after the initiation of the SURE and NGEU programmes and repeated bond issuances ('taps') in the market. Bid-ask spreads are defined by the difference between the highest price a buyer is willing to pay (the bid) and the lowest price a seller is willing to accept (the ask) and are thus a popular and reliable indicator of market liquidity with narrower spreads generally reflecting more liquid market conditions (Fleming, 2003).[158]

Bletzinger et al. (2022) demonstrate that the initial taps by the EU were associated with a notable reduction in bid-ask spreads, while more recently this phenomenon becomes less pronounced, indicative of an overall improved EU bond market liquidity.[159] However, liquidity remains substantially lower compared to benchmark sovereign bonds, such as German and French bonds, potentially due in part to the relatively recent introduction and missing market features further explained below as well as the limited timeframes of the NGEU and SURE funding programs.

[158] Other common liquidity measures, include trading volume and turnover ratio for the secondary market, and the bid-to-cover ratio (the amount of bids received in primary market operations vs available bonds), confirm stable or improving liquidity conditions in the EU bond market.

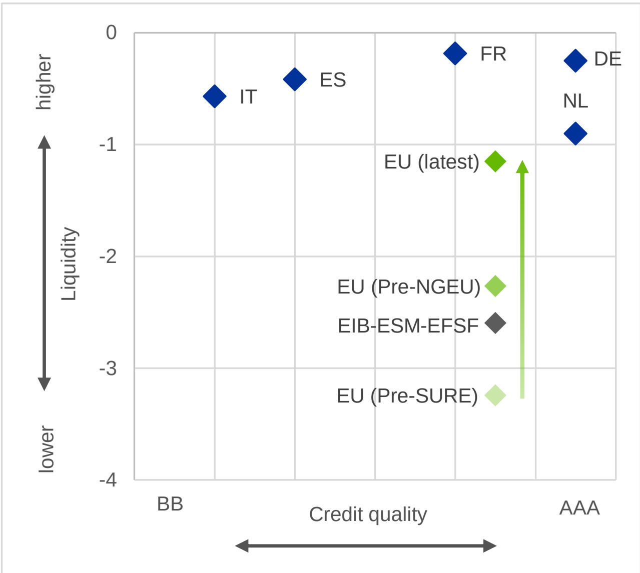
[159] Bletzinger et al. (2022) corroborate that tapping existing EU-bonds instead of new issuances appears to be an expedient way to raise EU funding in the future, in line with the EU's announced plans to make regular use of tapping.

Overall, despite the high credit quality, growing market presence and improving liquidity conditions, EU bonds are not yet fully perceived as equivalent to the safest sovereign bonds, such as German Bunds as illustrated in **Chart D**. The chart plots the minimal rating across four rating agencies on its horizontal axis and the evolution of EU's average bid-ask spreads compared to the liquidity conditions prevailing in its member states at the current juncture on the vertical-axis. In conclusion, EU bonds have changed profoundly in nature and in magnitude with the establishment of SURE and NGEU, helping to manifest their high credit rating and improve their liquidity. However, especially with respect to the latter criterion, EU bonds do not rank at par yet with the safest national government bonds in the EU. In comparison to other European supranational institutions (including EIB, ESM and EFSF), EU bonds share a similar credit quality but have been priced increasingly more favourable in terms of liquidity.

Chart D

Credit risk and liquidity indicators for EU bonds

(y-axis: bid-ask spread in bp, x-axis: credit rating)



Source: Bletzinger et al (2022), Bloomberg and ECB calculations.
Note: Scatterplot of market liquidity (average bid-ask spreads in basis points) vs. credit quality (minimum rating). For single EA countries, we compute the monthly average of the bid-ask spreads of the respective benchmark bond yields. For EIB-ESM-ESFS we compute the average across the three institutions. For the updated EU diamond, we are considering the monthly average bid-ask spread of a single ISIN with 10-year residual maturity of November 2024 (ISIN: "EU000A3K4D41"). Pre-SURE and Pre-NGEU diamonds refers to a different bond (ISIN "EU000A18Z2D4") with residual maturity of 10-year as of April 2021. For each of the EIB, ESM, and EFSF diamonds we are considering the monthly average bid-ask spread of a single ISIN with 10-year residual maturity as of November 2024 (ISIN: "XS0878008225", "EU000A1Z99U9", "EU000A1G0BJ5", respectively). Latest observation: 9 December 2024 for latest (EU latest, EIB, ESM, EFSF, DE, FR, IT, ES, NL), May 2021 for "Pre-NGEU" and September 2020 for "Pre-SURE".

Obstacles and Promoting Factors for EU Bonds' Status as Safe Assets

Despite their strengths, several challenges remain in establishing EU bonds as universally recognised safe assets. First and foremost, the limited timeframe for net new borrowing under the current EU funding programmes constrains the long-term availability of EU bonds. Second, the absence of a wider set of direct derivative hedging instruments and highly liquid repo markets for EU bonds restricts their appeal to a broader range of investors and market participants (Bletzinger et al., 2022; Claeys et al., 2023). Both aspects could be mitigated by the first EU bond futures contract offered by ICE in late 2024 and if the participation of the EU Commission in Eurex's repo market were revived. Third, due to the expected end of bond supply beyond 2026, the lack of a sovereign funding power and other factors, EU bonds are currently not included in major sovereign bond indices (such as MSCI and ICE), following consultations and rejections in 2024.[160] This exclusion limits their visibility and integration into global investment portfolios, which is crucial for their acceptance as core safe assets within the European financial system.[161]

To enhance the status of EU bonds as safe assets, several measures could be considered. Establishing a permanently bond-financed EU budget could first of all address public investment needs in strategic sectors such as green and digital transitions and defence.[162] Additionally, the inclusion of EU bonds in major sovereign indices would improve their marketability and attractiveness to global investors, further solidifying their status as a cornerstone of European safe assets. The evolving role of EU bonds as a potential European safe asset represents a significant opportunity for deepening and integrating European capital markets.

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160 ICE provides for investors supporting the inclusion of EU debt in their benchmarks an alternative index for euro-denominated debt issued by the European Union and its member (see Annual Index Rule Review, ICE August 2, 2024). See Ritchie, G. "ICE Rejects Proposal to Include EU Debt in Sovereign Indexes" BNN Bloomberg, 5 August 2024.

161 Another implication of the mentioned challenges is that EU bonds are typically traded like other supranational bonds (in a dedicated desk at banks and being priced off the swap curve) and not like government bonds.

162 For a discussion on the pros and cons of a permanently bond-financed EU budget, see European Commission (2016), 'Future financing of the EU' Final report by the high-level group on own resources (HLGOR).

5 Conclusion

In conclusion, the development and integration of EU capital markets remain critical to addressing the economic challenges and opportunities facing the EU. Despite past efforts, progress has been hampered by diverging national priorities, vested interests, complex regulatory landscapes and the necessary time needed for policy action to translate into changes in the functioning of markets. This paper proposes to focus on five policy priorities to overcome these barriers and better realise the potential of the CMU.

Firstly, facilitating access to capital markets is crucial, particularly through the introduction of a new European savings and investment product. This initiative aims to harness successful national efforts while addressing EU-wide challenges, such as low retail participation in market-based products. It would also have the benefit of increasing private retirement savings rates in response to demographic changes and could have a strong positive impact on European capital markets. Tailored tax incentives, flexible product design, and a balance between EU centralization and national flexibility are key levers to encourage households to shift savings towards higher-return investments.

Secondly, expanding capital markets across borders requires further legislative harmonisation and a more integrated supervisory ecosystem. This involves enhanced supervisory convergence and a more centralised EU supervision in some areas to ensure uniform rule implementation, increase market confidence, and reduce home bias among investors. Harmonising capital market rulebooks and strengthening European Supervisory Authorities (ESAs) are essential steps in this direction.

Thirdly, creating an integrated trading and post-trading landscape, supported by digitalisation, is vital for seamless capital flows across the EU. Progress towards legal harmonization, the development of a comprehensive consolidated tape, and leveraging on the potential of new technologies like distributed ledger technology can enhance the efficiency and resilience of the securities ecosystem.

Fourthly, as the European financial system will remain largely bank based, securitisation can improve bank balance sheet utilisation towards financing the real economy. The upcoming review by the Commission provides the opportunity for streamlined due diligence and reporting requirements which can reduce administrative burdens without compromising market integrity and stability while further standardisation efforts – including through potential platforms - would be necessary of further expanding and integrating the market.

Finally, channelling capital to support innovative and competitive firms through more opportunities for equity financing, particularly venture capital, is essential. Mobilising established public investors and incentivising institutional investors to diversify into venture capital can unlock significant funding for startups.

Reducing entry barriers for retail investors in equity and bond markets will further enhance access to capital for innovative companies.

Implementing these five measures has the potential to advance the CMU agenda and achieving deeper, more integrated capital markets in Europe. While these proposals are both potentially impactful and technically feasible, they should be complemented by longer-term transformative strategies addressing structural weaknesses in European capital markets. Such strategies include the development of EU bonds as a safe asset, completing the banking union, and promoting financial literacy and inclusion. By pursuing these initiatives with renewed political commitment, the EU can build a resilient, innovative, and inclusive financial system that supports sustainable economic growth and open strategic autonomy. This occasional Paper is part of an ongoing effort by the ECB to lend support to the CMU agenda. It will be followed by additional technical work to further detail the proposals.

Annex I

CMU Action Plans from 2015 onwards

CMU Action Plan - 2015	Main action & status
Key objective 1: Financing for innovation, start-ups and non-listed companies	
1. Support venture capital and equity financing	Amendments to the EuVECA and EuSEF legislation
2. Overcome information barriers to SME investment	Non-legislative action: i) Strengthen feedback given by banks declining SME credit applications - Report by the banking federations ; ii) Map out existing local or national support and advisory capacities across the EU to promote best practices – Commission staff working document
3. Promote innovate forms of corporate financing	Regulation (EU) 2020/1503 “on European crowdfunding service providers for business (…)” (ECSPR)
Key objective 2: Making it easier for companies to enter and raise capital on public markets	
4.Strengthens access to public markets	Proposal to modernise the Prospectus Directive
	Non-legislative actions: i) Commission organised workshops on fostering admission of SME shares to trading, solutions to regulatory issues and market failures, and barriers to SME growth markets; ii) Report from the Commission Expert Group on Corporate Bonds on Improving European Corporate Bonds Markets
5. Support equity financing	Address the debt-equity bias, as part of legislative proposal on Common Consolidated Corporate Tax Base - Proposal on debt–equity bias reduction allowance (DEBRA) temporarily 'suspended' in the Council, to be reassessed later in the broader context of other upcoming reforms (December 2022
Key objective 3: Investing for long term, infrastructure and sustainable finance	
6. Support infrastructure investments	i)Adjust Solvency II calibration for insurers investments in infrastructure – Commission Delegated Regulations 2016/467 and 2017/1542 ii)Amendments to CRR regarding infrastructure calibrations
7. Ensure consistency of EU financial services rulebook	Non-legislative action: Commission call for evidence on the cumulative impact of financial reform
Key objective 4: Fostering retail and institutional investments	
8.Increase choice and competition for retail	Non-legislative action: Commission Green Paper on retail financial services and insurance
9.Help retail investors get a better deal	Non-legislative action: Commission EU retail investment product markets assessment study
10. Support saving for retirement	Non-legislative action: Public consultation on a policy framework to establish European pensions
11.Expand opportunities for institutional investors and find managers	Assessment of prudential treatment of private equity and privately placed debt in Solvency II – Commission Delegated Regulation 2019/981 amending Solvency II
Key objective 5: Leveraging banking capacity to support the wider economy	
12.Strengthen local financing networks	Explore the possibility for all MS to authorise credit unions outside the EU’s capital requirements rules for banks (CRD/ CRR)
13.Build EU securitisation markets	Regulation on Simple, Transparent and Standardised (STS) securitisation
14.Support bank financing of the wider economy	Directive governing issuance of covered bonds and covered bond public supervision

Key objective 6: Facilitate cross-border investing	
15.Remove national barriers to cross-border investment	Non-legislative actions: i) report of expert group on national barriers to the free movement of capital; ii) joint roadmap of actions to address national barriers to capital flows
16.Improve market infrastructure for cross-border investing	Targeted action on securities ownership rules and third-party effects of assignment of claims - Trilogues stalled on Commission's proposal for a law applicable to the third-party effects of assignments of claims
17.Foster convergence of insolvency proceedings	Legislative initiative on business insolvency, addressing the most important barriers to the free flow of capital - Directive on restructuring and insolvency
18.Remove cross-border tax barriers	Non-legislative actions: i) European Commission best practice and code of conduct for relief-at-source from withholding taxes procedures; ii) European Commission study on discriminatory tax obstacles to cross-border investment results by pension funds and life insurance companies
19.Strengthen supervisory convergence and capital market capacity building	Develop a strategy for providing technical assistance to Member States to support capital markets' capacity - Regulation 2017/825 on the establishment of a Structural Reform Support Programme (incl. CMU support measures)
20.Enhance capacity to preserve financial stability	Review of the EU macroprudential framework - Commission launched i) public consultation (1 August 2016); ii) targeted consultation on improving the macroprudential framework for the banking sector (30 November 2021, postponed due to COVID); iii) consultation on macroprudential policies for credit institutions, the systemic risks relating to NBFIs (22 May 2024)
CMU Mid-Term Review - 2017	**Main action & status**
Key objective 1: Strengthening the capacity of EU capital markets	
1.Supervision	Propose amendments to the functioning of ESMA and the other ESAs to promote the effectiveness of consistent supervision across the EU and beyond (priority action 1)
2.Develop local and regional capital markets	Comprehensive EU strategy on local and regional capital market developments across the EU (priority action 9) Non-legislative action: Commission staff working document "Capital Markets Union: progress on building a Single Market for capital for a strong Economic and Monetary Union"
Key objective 2: Financing for innovation, start-ups and non-listed companies	
3.Innovative corporate finance platforms	Assess the case for EU licensing and passporting framework for FinTech activities (priority action 4) Non-legislative action: Commission public consultation on FinTech
4. Business angels and venture capital	Good practice on tax incentive schemes for venture capital and business angel investments No new action – follow up to 2015 action plan
5.Private placements	Non-legislative action: Commission study "Identifying market and regulatory obstacles to the development of private placement of debt in the EU"
6.Information barriers for SME finance	Non-legislative action: Selection of the proposals following the Call for proposals to fund capacity building projects under the Horizon 2020 programme
Key objective 3: Making it easier for companies to enter and raise capital on public markets	
7.Prospectus for public offerings	Implementing measures No new action – follow up to 2015 action plan
8.Corporate bond markets	No new action – follow up to 2015 action plan
9.SME listing package	Explore through an impact assessment whether targeted amendments to relevant EU legislation can deliver a more proportionate regulatory environment to support SME listing on public markets (priority action 2) - Regulation 2019/2115 as regards the promotion of the use of SME growth markets
10.Proportionate prudential requirements	Legislative proposal to improve the proportionality of prudential rules for investment firms (priority action 3) - Investment Firms Directive (IFD) and Investment Firms Regulation (IFR)
Key objective 4: Investing for long term, infrastructure and sustainable investments	
11.Long-term investment	Non-legislative actions: Commission study on assessment of the drivers of equity investments by insurance companies and pension funds ; ii) EFRAG Report on the potential effects on long-term investments in equity instruments of the requirements of IFRS 9
12.Infrastructure investments	Measures to review the calibration of risk charges for infrastructure corporates – see review of Solvency II

13.Sustainable investment	Decide on the concrete follow-up to recommendations by the High Level Expert Group on Sustainable Finance (priority action 6) - Sustainable Finance Disclosure Regulation (SFDR); Low Carbon Benchmarks Regulation; Regulation 2020/852 on the establishment of a framework to facilitate sustainable investment
Key objective 5: Fostering Retail Investments	
14.Personal pensions	Legislative proposal on a pan-European personal pension product - Regulation on a Pan-European Personal Pension Product (PEPP)
15.Retail investment product markets	Non-legislative actions: Follow-up to study on distribution systems of retail investment products across the EU. Recurrent reporting by the ESAs of cost and performance of the principal categories of long-term retail investment and pension products. Feasibility study on the development of a centralised hub for mandatory disclosure requirements and related services.
16.Retail investor engagement	Develop best practices based on Member States experience with Investment Savings Account and an existing study on employee share ownership schemes - Commission later published its Retail Investment Strategy (24 May 2023) See below
Key objective 6: Strengthening banking capacity to support the wider economy	
17.Market funding for banks	Amendments to Commission Delegated Regulation to introduce a specific prudential treatment of STS securitisation in Solvency II
	Legislative proposal for an EU framework on covered bonds - Covered bonds Directive; Amending CRR on exposures in the form of covered bonds
18.Secondary markets for NPLs	Present measures to develop a secondary market for NPLs and launch an impact assessment with a view to considering a possible legislative initiative to strengthen the ability of secured creditors to recover value from secured loans to corporates and entrepreneurs (priority action 5) - NPL Directive
Key objective 7: Facilitate cross-border investment	
19.Investment funds	Impact assessment with a view to considering a possible legislative proposal to facilitate cross-border distribution of UCITS and AIFs (priority action 7) – Amending UCITS and AIFM Directives
20.Post-trade market infrastructure	Legislative proposal specifying conflict of laws rules for third party effects of transactions in securities and claims – see action as part of 2015 Action Plan
21.Taxation	Non-legislative actions: i) Best practice and code of conduct simplification of withholding tax procedures with a focus on refunds; ii) Study on discriminatory tax obstacles to cross-border investment by pension funds and life insurers.
22.Corporate governance	Facilitate the cross-border exercise of shareholder rights including voting in the implementation of the Shareholders Rights Directive - Commission Implementing Regulation 2018/1212
23.National barriers to the free movement of capital	Inconclusive - Monitor the implementation of the roadmap on removing national barriers to free movement of capital and continue discussing with the Expert Group
24.Stability of the regulatory framework	Non-legislative: Interpretative Communication to provide guidance on the existing EU standards for the treatment of cross-border EU investments (priority action 8)
	Impact assessment with the view to setting out an adequate framework for the amicable resolution of investment disputes (priority action 8) - Commission work to establish a Multilateral Investment Court under the auspices of UNCITRAL Working Group III
25. Enhance capacity to preserve financial stability	No action - Ensure that the ESRB has the capacity to monitor potential risks to financial stability arising from market-based finance
CMU Action Plan - 2020	Main action & status
Key objective 1: Supporting a green, digital, inclusive and resilient economic recovery	
1. Making companies more visible to cross-border investors	Regulation establishing a European Single Access Point (ESAP)
2. Supporting access to public markets	Proposal package for a listing act: cut the red-tape, allow multiple voting
3. Supporting vehicles for long term investments	Amendments to the Regulation on ELTIF
4. Encouraging long term and equity financing from institutional investors	Amendments to CRD/CRR and Solvency II
5. Directing SMEs to alternative providers of funding	It was determined this was covered by Action 1
6. Helping banks to lend more to the real economy	Amendments to securitisation regulation – Commission consultation completed - no further action

Key objective 2: Make the EU an even safer place for individuals to save and invest long-term	
7. Empowering citizens through financial literacy	Retail investor strategy (RIS) includes provisions to support financial literacy
8. Building retail investors' trust in capital markets	Retail investor strategy (RIS) includes provisions to enhance financial advice to retail investor
9. Supporting people in their retirement	Non-legislative action: Work undertaken on (i) developing pension dashboards with indicators; (ii) develop best practices for national tracking systems
Key objective 3: Integrate national capital markets into a genuine single market	
10. Alleviating the tax associated burden in cross-border investment	Proposal for a Council directive on faster tax relief of excessive withholding taxes
11. More predictable cross-border insolvency proceedings	Proposal for a directive harmonising certain aspects of insolvency law
12. Facilitating shareholders engagement	Non-legislative action: ESMA & EBA report supporting potential review
13. Developing cross-border settlement services	Amendments to Regulation on central securities depositories
14. Consolidated tape	Consolidated data on prices and volume of traded securities at EU level
15. Investment protection and facilitation	No specific action taken
16. Supervision	Non-legislative action: Commission Report to the European Parliament and the Council on the operation of the European Supervisory Authorities (ESAs)

Annex II

Changes in the CMU narrative

The CMU narrative has evolved significantly over time, in tandem with shifts in the global economy and political landscape, to align with the changing needs to address macroeconomic challenges. Relevant factors underlying this change include different macroeconomic conditions, Commission's priorities, geopolitical events and related instability, as well as Brexit and the COVID-19 pandemic. The wordclouds for 2015 and 2024 displayed in Chart 28 underline this shift in the focus of CMU discussions over time. In 2015, key terms like "banking," "financial," and "investors" dominate the discourse, indicating an emphasis on traditional banking systems, financial stability, and the role of investors in the early stages of the CMU. The presence of terms like "Europe" and "crisis" suggests that the agenda was largely focused on addressing the financial crisis and the fragmentation in Europe's financial markets. By 2024, the focus has evolved, with terms like "single, "member" and "states" becoming more prominent, highlighting the push towards deeper integration and the development of a unified financial framework in Europe.

Chart 28

CMU Wordclouds for 2015 and 2024

2015 | 2024

Source: ECB calculations

Note: The Wordclouds are based on the absolute frequency of the words in the documents. A descriptive statistics of the documents is presented in Box 3.

Box 8

Web scraping and LLM tools to capture how the CMU narrative and related policy proposals have evolved over time

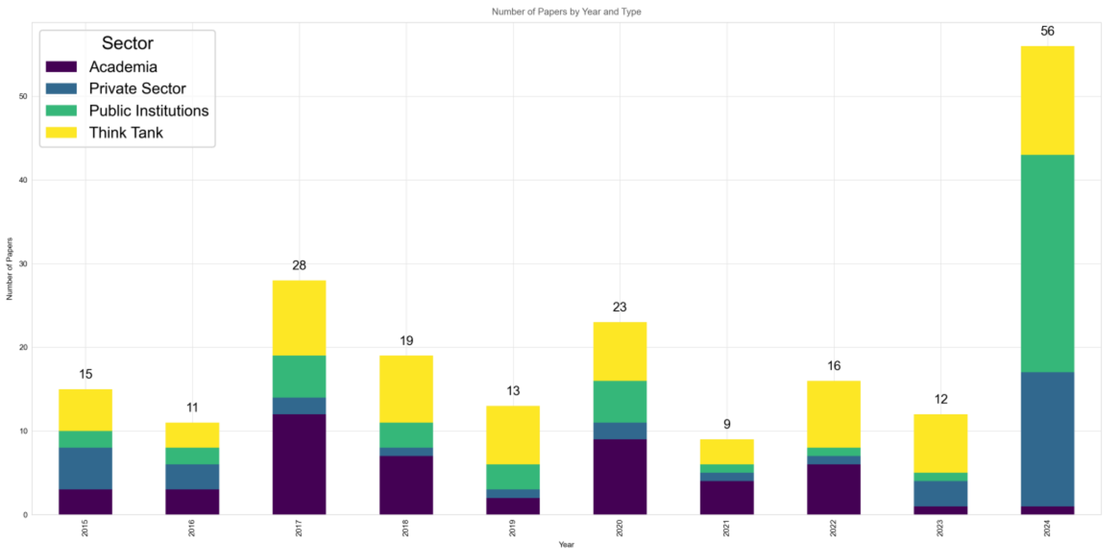
Prepared by R. Prioriello

Relevant literature on the Capital Markets Union over the last decade has been identified via web scraping from multiple academic sources, targeting academic search engines such as Google Scholar, SSRN, arXiv, and even bank websites to ensure comprehensive coverage. The program was designed to search for specific keywords like "Capital Markets Union", "CMU", and "European Saving and Investment Union". Upon detecting these terms, the Beautiful Soup library was used to parse HTML content, extract relevant links, and download the corresponding papers. By applying this process across multiple platforms, we ensured that the literature collection was as complete as possible, capturing a wide range of relevant publications.

A total of 202 CMU-related papers were identified, with significant yearly variation (see Chart A). Interest peaked in 2024 (56 papers), reflecting rising engagement, as also shown by increasing CMU-related Google searches. Peaks in 2017 and 2020 align with key European Commission announcements, signalling renewed focus. Chart A also highlights the diverse institutional contributors—academia, think tanks, public institutions, and the private sector—demonstrating broad, multi-sector interest, with academia leading but growing support from other sectors.

Chart A

CMU number of papers per sector over time



Source: ECB calculations
Note: Annex 1 includes a description of the papers selected via webscraping, as well as the list of keywords used to define the narrative.

After collecting the papers, key themes were identified using expert judgment and Structural Topic Modeling (STM) to create macro-categories for structured analysis. Their significance was tracked over time to observe trends in the literature. In the second phase, GPT-4o via OpenAI's API was used to analyse recent papers, enabling a more in-depth review of policy proposals. This approach allowed for simultaneous analyses, significantly reducing processing time and enhancing the efficiency of the review.

The frequency and prominence of a set of keywords was determined across selected publications from 2015 to 2024. The importance of each keyword was calculated using a modified version of the method proposed by Fortes and Le Guenedal (2020). This adjustment was necessary to account for how frequently a word appears across multiple papers, rather than its frequency within a single paper. Specifically, the importance of a word is derived from the following formula:

$$TF\_IDF(w, d, Cy) = |\, tf(w, d) * df(w, C)\, |$$

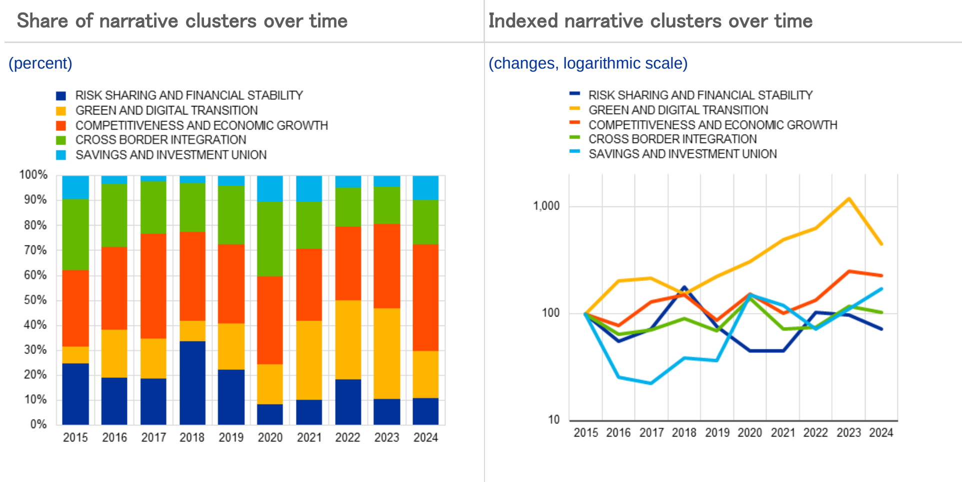
where $TF\_IDF(w, d, Cy)$ is the term frequency of word *w* in paper *d*, while *df* represents the natural logarithm of the document frequency, namely the natural logarithm of the number of papers containing word *w* divided by the total number of documents in the corpus *C* for the year y. In other words, a certain word is considered more important when it has higher frequency across papers of the same year rather than only within the paper itself. As a robustness check to validate the methodology, we conducted the same analysis without dividing the corpus by year, yielding smoother trends across keywords; the results reported in Annex II confirm that the trends observed are not sensitive to the specific year-based segmentation of the data.

We classified the stance of 68 papers from the past two years on core CMU policy themes using GPT-4o via API, guided by an expert-designed prompt. Robustness tests ensured reliability, with consistent results across temperature settings, ranging from 0.2 to 0.5. GPT-4o outperformed GPT-4 legacy and GPT-4o-mini in precision and versatility. A potential extension could involve real-time monitoring of CMU literature through automated web scraping and sentiment analysis, offering policymakers timely insights into evolving academic and policy discussions.

Chart 29 illustrates how the CMU narrative has undergone a significant transformation. While capital market scale and integration have remained key priorities, economic growth, competitiveness, and support for the green transition have gained prominence since 2021. When normalized with respect to 2015, themes concerning Green and Digital transition almost multiplied by a factor 10 in 2023 while "Savings and Investment Union", "Competitiveness and Economic Growth" duplicate in 2024. As CMU is less seen as a shock absorption tool, themes like risk sharing and financial stability have become less relevant. This reflects the evolution of policy proposals to advance the CMU project, as explained in Chapter 3 (Chart 14).

Chart 29

CMU narrative over time – Relative graph (2015 = 100)



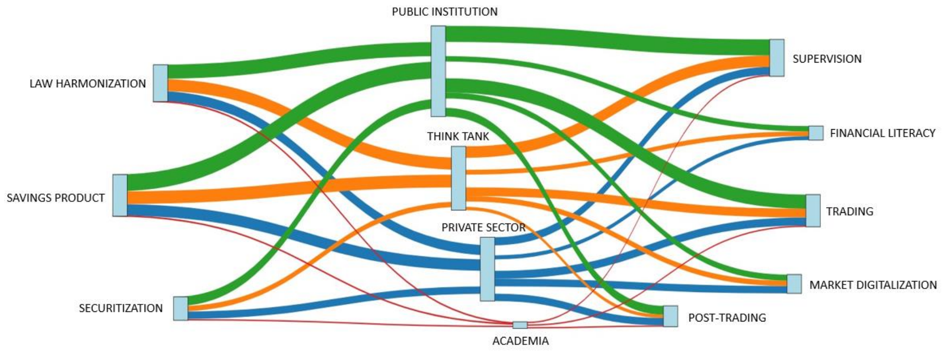
Source: ECB calculations
Note: The values of the TF-DF of the macro categories is normalized in order to be equal to 1 in 2015.

LLM-based analysis of most prominent CMU proposals

To map and assess the degree of support for the various policy proposals, a LLM was used to analyse stakeholder's papers published in 2023 and 2024. The LLM model GPT-4o was used, and a mix of closed (yes/no), multiple-choice, and open-ended questions was selected to thoroughly examine the stance of each paper on the different CMU proposals. By setting the model's temperature to a low value, we ensured that the responses were strictly based on the information available in the papers, reducing any randomness and enhancing the precision of the output. Chart 30 shows how different proposals were supported by different stakeholders, grouped in four categories: public institutions, think tank, private sector and academia.

Chart 30

Sankey diagram: Support for policy proposals by sector



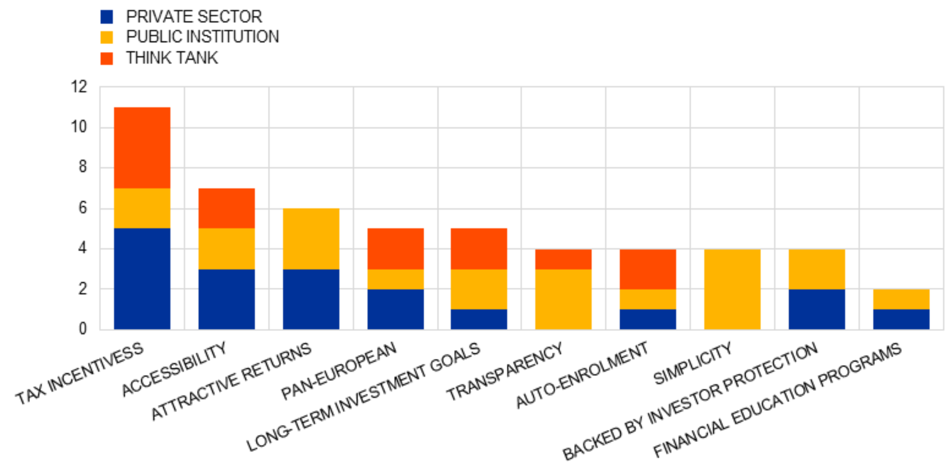
Source: ECB calculations
Note: The length of the stakeholder group bars is proportional to the number of publications in the last 2 years, while the thickness of the links is proportional to the number of times the given policy appeared in the top 3 most important policy proposals. As an example, the link Public Institutions to Supervision represents 24 papers while the line Academia to Post-Trading accounts only for 2 papers

Successful national savings initiatives are characterised by broad accessibility, tax incentives, and auto-enrolment, with Northern European models receiving the most recognition. Sweden's ISK account stands out as the most frequently cited best practice, while other notable examples include France’s Plan d'Epargne Retraite (PER) and the UK’s auto-enrolment pension plans, with fewer mentions for the Netherlands and Denmark. Despite individual savings plans in Italy and Spain, the focus remains on Northern European models. Key success factors include tax incentives and accessibility, widely supported across sectors. Auto-enrolment is particularly endorsed by the private sector and think tanks for increasing participation, while public institutions emphasise tax incentives as a driver of long-term savings (Chart 32).

National savings products benefit from pan-European integration, attractive returns, and accessibility, but retail investors face significant barriers that hinder participation. Public institutions and think tanks emphasise the importance of cross-border harmonisation, while the private sector prioritises strong returns to enhance competitiveness. Key success factors include long-term investment goals, investor protection, and ease of participation, while financial education receives less emphasis. However, high costs, complex tax procedures, and regulatory fragmentation create obstacles for retail investors. The private sector highlights fees and product complexity, while public institutions and think tanks stress inconsistent regulations and low financial literacy, ultimately limiting access to investment opportunities and financial inclusion.

Chart 32

Most commons Savings Product key features across stakeholders

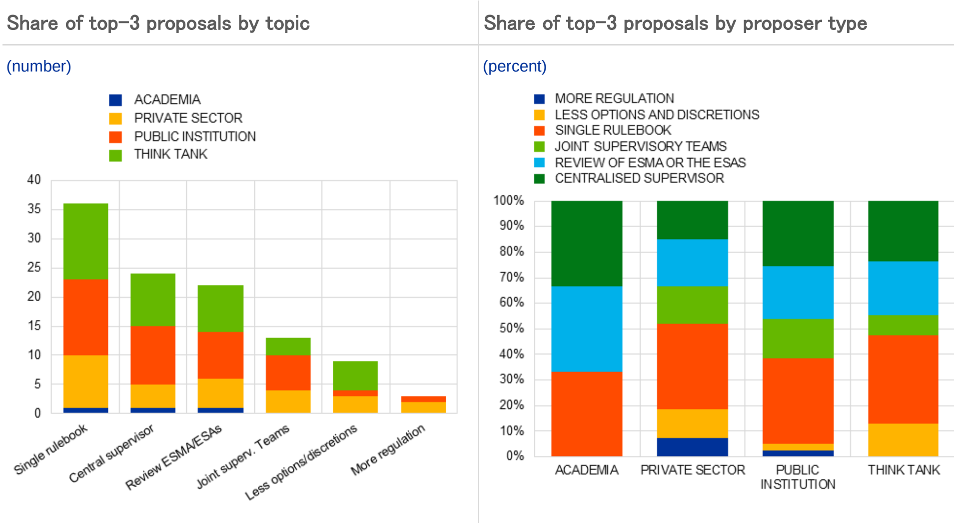


Source: ECB calculations
Note: The graph represents all the key features with at least 2 proposals. Academia is not included as the sample is too small to draw statistically significant conclusions.

There is broad agreement on the top three steps needed to close the gap in the current supervisory framework, which include a single rulebook, a review of ESMA and/or the ESAs and more centralised supervision (Chart 33). Among the key proposals, "Single Rulebook", "Review of ESMA and/or ESAS" and “Centralised Supervisor” emerge as top priorities across all sectors, especially endorsed by think tanks and public institutions. Additionally, the "Joint supervisory teams" also ranks highly, particularly in the private sector and public institutions suggesting centralised supervision might go hand in hand with decentralised implementation.

Chart 33

Analysis of supervision status – Steps to close the gap

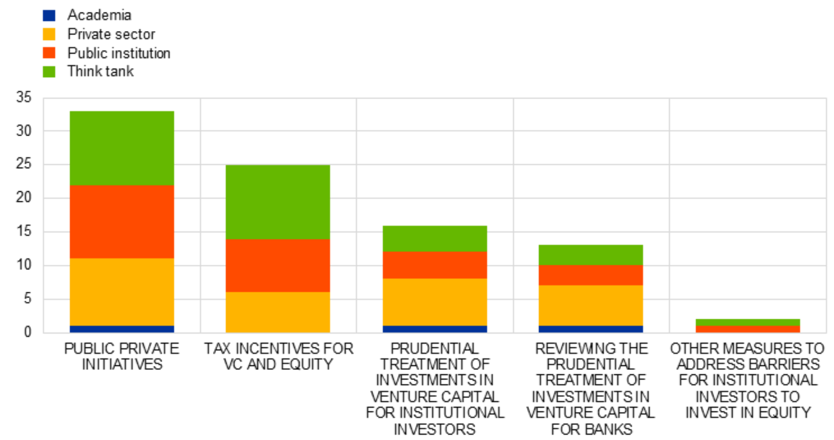


Source: ECB calculations
Note: The results are based on closed questions.

Public-private initiatives and tax incentives are the most supported proposals for enhancing the provision of venture capital and equity financing to firms in Europe. The strong support for public-private initiatives reflects a consensus on the need for collaborative efforts to boost the availability of risky capital to allow companies to grow and scale-up. Tax incentives for venture capital (VC) and equity also receive considerable backing across sectors, highlighting the role of fiscal measures in promoting investment in high-growth sectors. Additionally, improving the prudential treatment of investments in venture capital for institutional investors is seen as essential, particularly by the private sector, to encourage greater institutional participation in risk capital markets.

Chart 39

Top 3 proposals to improve scale-up financing for companies in Europe



Source: ECB calculations
Note: The graph represents all the key features with at least 2 proposals.

Webscraping and LLM analysis: robustness checks

As part of a robustness check, the Structural Topic Model (STM) was applied to check the expert-based selection of the key topics against an LLM-driven analysis of the corpus. We first created a list of relevant n-grams, such as "financial-market" and "safe-assets," to capture specific concepts that frequently occur together in the literature. By forming these n-grams, we enhanced the model's ability to recognize compound terms that represent distinct financial concepts, improving the accuracy of topic generation.

The result of the STM confirmed expert-judgement, as the main topics identified directly from the corpus prominently featured many of the terms 'manually' included in the list of topics. STM is a statistical model that identifies and groups recurring themes within a large set of documents based on word co-occurrences and latent topics. STM has the advantage of incorporating metadata (like publication year or document source) to observe how topics may vary across different subgroups or over time, making it particularly suitable for our corpus. In our case, we used STM to identify the main thematic areas across the documents, looking for patterns that would validate the selection of key topics. The alignment among topics suggests that our initial focus on themes such as financial regulation, capital markets, and risk management was indeed relevant to the literature, capturing the core subjects discussed within the corpus. The presence of these expected terms within the primary topics generated by STM demonstrates that our approach was well-targeted, confirming that our analysis concentrated on significant issues within the field. This robustness check through STM thus reinforces the validity of our thematic focus, providing an additional layer of confidence in the relevance of our findings.

Concerning the LLM prompt for the classification, we optimized the process by experimenting with various low-temperature settings (0.2 – 0.4), which improved the precision and consistency of our model's outputs. Lower temperature values reduced randomness in the classification process, permitting the model to focus on the most probable outcomes based on its training data. This approach proved particularly effective as higher temperatures might introduce noise or ambiguity.

Bibliography

AFME, (2023) "Capital Markets Union: Key Performance Indicators, Sixth Edition", p. 57, November.

Andersson, M., Nerlich, C., Pasqua, C., Rusinova, D., (2024), "Massive investment needs to meet EU green and digital targets", published as part of the Financial Integration and Structure in the Euro Area Report, ECB.

Asimakopoulos, P., Friis Hamre E., and Wright, W., "A New Vision for EU Capital Markets", New Financial report, February 2022, p. 15

Bakker, A.; Beetsma ,R. and Buti, M., 2024. "Investing in European Public Goods While Maintaining Fiscal Discipline at Home," Intereconomics: Review of European Economic Policy, Sciendo, vol. 59(2), pages 98-103, March.

Bats, J. V., & Houben, A. C. (2020), "Bank-based versus market-based financing: Implications for systemic risk", Journal of Banking & Finance.

Beck, R., Dedola, L., Giovannini, A., and Popov, A., (2016). "Financial integration and risk sharing in a monetary union" Financial Integration in Europe, ECB, April.

Berrigan, J., (2024), "Capital Markets Union: State of play – and looking forward to future priorities in the next political cycle", European Commission Newsletter, 10 April.

Bergeaud , A., (2024) "Monetary policy in an era of transformation, The past, present and future of European productivity", ECB Forum on Central Banking, European Central Bank, July.

Bini Smaghi, L. and Marcussen, M, 2018, "Strengthening the euro area architecture: a proposal for purple bonds", SUERF Policy Note, 24 May.

Bletzinger, T., W. Greif and B. Schwaab (2022), "Can EU bonds serve as euro-denominated safe assets?", Journal of Risk and Financial Management.

Born, A., Giuzio, M., Lambert, C., Salakhova, D., Schölermann, H. and Tamburrini, F. (2021), "Towards a green capital markets union: developing sustainable, integrated and resilient European capital markets", ECB Macroprudential Bulletin, Issue 15, October 2021.

Born, A., Heymann, D., Chaves, M. and Lambert, C. (2022). "Frictions in debt issuance procedures and home bias in the euro area", Report on Financial Integration and Structure in the Euro Area.

Bouabdallah, O., Dorrucci, E., Hoendervangers, L., Nerlich, C., (2024), "Mind the gap: Europe's strategic investment needs and how to support them" The ECB Blog, ECB, 27 June 2024.

Brunnermeier, Markus K., Sam Langfield, Marco Pagano, Ricardo Reis, Stijn Van Nieuwerburgh, and Dimitri Vayanos. 2017. ESBies: Safety in the tranches. Economic Policy 32: 175–219.

Bundesbank (2024) "Developments in euro area business dynamism", Monthly Report, March

Bundesministerium der Finanzen, (2023), "French-German roadmap for the capital markets union", 13 September.

"Capital Markets Union: EU renews commitment to integration and development of capital markets", statement, European Commission, 28 April 2023.

"Capital markets union: Presidency and Parliament reach provisional deal on clearing house rules", press release, Council, 13 March 2019.

Cimadomo, J., Gordo Mora, E. and Palazzo, A.A., "Enhancing private and public risk sharing: Lessons from the literature and reflections on the COVID-19 crisis", Occasional Paper Series, No 306, ECB, September 2022

Cipollone, P., 2024, "Why Europe must safeguard its global currency status", The ECB Blog, 12 June.

Cipollone, P., "Towards a digital capital markets union", speech at the Bundesbank Symposium on the Future of Payments, Frankfurt am Main, 7 October 2024.

Claeys, G., C. McCaffrey and L. Welslau (2023) 'The rising cost of European Union borrowing and what to do about it', Policy Brief, Issue No 12/2023, Bruegel.

Czarnitzki, D., G. P. Fernández, G. P., and Rammer, C., (2023), "Artificial intelligence and firm-level productivity", Journal of Economic Behavior & Organisation, Volume 211, pp. 188-205.

Darvas, Z., and Wolff, G., (2021), " A green fiscal pact: climate investment in times of budget consolidation", Policy Contribution, Issue No 18/21, Bruegel.

De Groen, W.P. et al., (2020) "Feasibility Study for the creation of a CMU Equity Market Index Family", CEPS

De Santis, R. A. and Stein, M. (2014), "Financial indicators signalling correlation changes in sovereign bond markets", Working Paper Series, No. 1746, ECB, December 2014.

De Soyres, F., Garcia-Cabo Herrero, J., Goernemann, N., Jeon, S., Lofstrom, G., and Moore, D., (2024). "Why is the U.S. GDP recovering faster than other advanced economies?", FEDS Notes, May.

Depla, J. and von Weizsäcker, J., “The Blue Bond proposal”, Policy Brief, Issue No 2010/03, Bruegel.

Draghi, M., (2024), “The future of European competitiveness”, September.

Duruflé, G., Hellmann, T., and Wilson, K., (2017) “From start-up to scale-up: examining public policies for the financing of high-growth ventures”, Working Paper, Issue No 04/2017, Bruegel.

ECB, Statement by the ECB Governing Council on advancing the Capital Markets Union, 7 March 2024.

EIOPA, (2023), Consumer Trends Report 2023, November.

EIOPA, (2024), “A simple and long-term European savings product: the future Pan-European Pension Product”, EIOPA Staff Paper, September.

Enria, A. and Fernandez-Bollo, E. (2020), “Fostering the cross-border integration of banking groups in the banking union”, ECB Banking Supervision blog.

Enria, A. (2023), “The integration of the EU banking sector and the challenges of global competition”, Eurofi Magazine

Ensache, C., Perez Weigel, C., (2023) , “Capital gains tax rates in Europe”, Tax Foundation, March.

ESMA, (2024), “Statistics on securities and markets”, Report, May.

Eurobarometer (2023), “Monitoring the level of financial literacy in the EU”, European Commission Report, April.

Eurogroup, Statement of the Eurogroup in inclusive format on the future of Capital Markets Union, 11 March 2024.

Euronext, (2024), “Demystifying the liquidity gap between European and US equities”, April.

European Banking Federation, (2018), “EBF comments on the EU Code of Conduct on Withholding Tax Procedures”, 23 July.

European Central Bank (2014), ‘Euro area risk-free interest rates: measurement issues, recent developments and relevance to monetary policy’, ECB Monthly Bulletin, July 2014.

European Central Bank (2024), Financial Stability Review, November.

European Central Bank (2019), “CLOs: a financial stability perspective”, Financial Stability Review, November.

European Commission, (2015), “Completing Europe’s Economic and Monetary Union”, report from the European Commission President in collaboration with the

Presidents of the European Council, Eurogroup, European Central Bank, and European Parliament, (Five Presidents report), 22 June.

European Commission, (2015), "Action Plan on Building a Capital Markets Union", 30 September.

European Commission, (2016), "Future financing of the EU'", Final report by the high-level group on own resources

European Commission (2017), "Mid-Term Review of the Capital Markets Union Action Plan", 8 June.

European Commission, (2017), "Creating a stronger and more integrated European financial supervision for the Capital Markets Union", 20 July.

European Commission, (2017), "Reflection paper on the deepening of the economic and monetary union", 31 May.

European Commission, (2020), "A Capital Markets Union for people and businesses-New Action Plan", 24 September.

European Commission, (2020), "Coronavirus response: Making capital markets work for Europe's recovery", 24 July.

European Commission, (2020), Final report of the High Level Forum on the Capital Markets Union "A new vision for Europe's capital markets", June 2020, p. 8.

European Commission, (2021), "Report from the Commission to the European Parliament and the Council on the functioning of the European long-term investment funds (ELTIF) framework", 25 November.

European Commission, "Overview of CMU indicators – 2023 Update", Staff Working Document, 16 August 2023.

European Commission, "Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on A competitiveness Compass for the EU", Brussels, 29 January 2025.

European Court of Auditors, (2020), "Capital Markets Union – slow start towards an ambitious goal", Special Report, No 25/2020, November.

European Investment Bank, (2024), "Investment barriers in the European Union 2023 Report"

European Parliament, "Further development of the CMU: improving access to capital market finance, in particular by SMEs, and further enabling retail investor participation", Report (A9-0155/2020), September.

European Parliament and Council of the European Union, Regulation (EU) 2019/1238 of the European Parliament of the Council on a pan-European Personal Pension Product (PEPP), 20 June 2019.

European Systemic Risk Board, 2018, "Sovereign bond-backed securities: a feasibility study", January

Fell, J., Grodzicki, M., Krušec, D. Martin R. and O'Brien, E. (2017):" Overcoming non-performing loan market failures with transaction platforms", ECB Financial Stability Review.

Financial Stability Board, (2024), "Evaluation of the Effects of the G20 Financial Regulatory Reforms on Securitisation", Consultation Report, July.

"Financial supervision: Council presidency and Parliament reach provisional deal on supervisory framework for European financial institutions", press release, Council, 21 March 2019.

Fleming, M. J. (2003), 'Measuring Treasury Market Liquidity', FRBNY Economic Policy Review, September 2003.

Fuest, C., Gros, D., Mengel, P., Presidente, G. and Tirole, J. (2024) "How to Escape the Middle Technology Trap", A Report by the European Policy Analysis Group.

Gati, Z., Lambert, C., Ranucci, D., Rouveyrol, C. and Schölermann, H.(2024) "Examining the causes and consequences of the recent listing gap between the United States and Europe", Financial Integration and Structure in the Euro Area report, ECB.

González, F., and Triandafil, C., (2023), "The European significant risk transfer securitisation market", Occasional Paper Series, No. 23, European Systemic Risk Board.

Gorton, Gary B. 2017. The history and economics of safe assets. The Annual Review of Economics 9: 547–86.

Gossé, J. and Mourjane, A. (2021), "A European safe asset: new perspectives", *Bulletin de la Banque de France*, No 234(6).

Haselmann, Rainer F. H. and Singla, Shikhar and Vig, Vikrant (2022), "Supranational Supervision", LawFin Working Paper No. 50

Heider, F., Krahnen, J-P., Langenbucher, K., Lindner, V., Schlegel, J., Tröger, T., (2024), "The Geopolitical Case for CMU and Two Different Pathways Toward Capital Market Integration", White Paper No 102, Leibniz Institute for Financial Research, Sustainable Architecture for Finance in Europe.

Heilbronn, P., (2020) , "CEE capital markets in the post-crisis environment", Eurofi Magazine, April.

Kho, S., (2024) “Deposit market concentration and monetary transmission: evidence from the euro area” Working Paper Series, No. 2896, ECB.

Krishnamurthy A, Vissing-Jørgensen A. 2012. The aggregate demand for treasury debt. J. Polit. Econ. 120:233–67

Lagarde, C., “A Kantian shift for the capital markets union”, speech at the European Banking Congress,, Frankfurt am Main, 17 November 2023.

Lagarde, C., (2024), “Follow the money: channelling savings into investment and innovation in Europe”, Speech at the 34th European Banking Congress "Out of the Comfort Zone: Europe and the New World Order", November, Frankfurt am Main.

Lagarde, C., Von der Leyen, U., “Europe has got the message on change”, Financial Times, 31 January 2025.

Lehmann, A., (2020), “Emerging Europe and the capital markets union”, Policy Contribution, Issue No 17/2020, Bruegel.

Letta, E., (2024) “Much More Than a Market-Speed, Security, Solidarity: Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens”, April.

Lindner, Johannes and Mach, Sebastian 2024, “Capital Markets Union: Europe must stop beating around the bush”, Hertie School policy brief.

Mack, S., 2021, “Don’t change horses in midstream – How to make NGEU bonds the euro area’s safe asset”, Jacques Delors Centre, Policy Paper, 23 August.

Macron, E. and Scholz, O., “Macron and Scholz: we must strengthen European sovereignty”, Financial Times, 27 May 2024.

Martín Fuentes, N., ,Born, A., Bremus, F., Kastelein, W., Lambert, C., (2023), “A deep dive into the capital channel of risk sharing in the euro area”, Working Paper Series, No 2864, ECB

McGuinness, M., keynote speech at the European Financial Integration 2024 joint conference of the European Commission and the European Central Bank, 18 June 2024

Nerlich, C., Köhler-Ulbrich, P., Andersson, M., Pasqua, C., Abraham, L., Bankowski, K., Emambakhsh, T., Ferrando, A., Grynberg, C., Groß, J., Hoendervangers, L., Kostakis, V., Momferatou, D., Rau-Goehring, M., Rariga, E., Rusinova, D., Setzer, R., Spaggiari, M., Tamburrini, F., Vendrell Simon, J., Vinci, F. (2025). ““Investing in Europe’s green future: Green investment needs, outlook and obstacles to funding the gap””, ECB Occasional Paper Series, forthcoming.

Noyer Committee, (2024), "Developing European capital markets to finance the future Proposals for a Savings and Investments Union”, French Treasury, April.

Oliver Wyman, (2024), "The Capital Flywheel: European Capital Markets Report", May.

Panetta, F., 2024, "Beyond money: the euro's role in Europe's strategic future", Address for the "Ten years with the euro" conference, Riga, January.

Philippon, T. and Hellwig, C., 2011, "Eurobills, not Eurobonds", VoxEU Column, 2 December.

Pinkus, D., Ruer N. (2024), "Beyond retirement: a closer look at the very old", Bruegel Analysis.

Scope Fund Analysis, (2024), "A new era Overview of the ELTIF market 2023/2024", 15 May.

Stiroh, K.J., and Botsch, M., (2007), "Information technology and productivity growth in the 2000s", German Economic Review, 8 (2), pp. 255-280.

Véron, N., (2024), "Capital Markets Union: Ten years later", European Parliament, March.

Véron, N., (2024), "European capital markets union: make it or break it", Bruegel, 19 March.

Véron, N. (2024), "Europe's banking union at ten: unfinished yet transformative", Bruegel books, 25 June.

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