II. Completing the Capital Markets Union and its impact on economic resilience in the euro area

This section examines how the deepening of the single market for capital can contribute to strengthening economic resilience in the euro area. First, it argues that ongoing policy action to establish a Capital Markets Union (CMU) should continue to focus on lowering the corporate sector's heavy reliance on banks, correcting the "home bias" of credit and capital markets, strengthening market transparency and reducing differences among regulatory and institutional frameworks. Next, the section describes the transmission channels through which a well-functioning CMU could reduce euro area Member States' vulnerability to shocks and increase their capacity to absorb and recover from those. For instance, a well-functioning CMU could help stabilise national income, strengthen the pass-through of policy interest rates, support banks' lending capacity via well-designed securitisation, facilitate the reallocation of resources and support aggregate demand. Finally, the CMU project should not be seen in isolation, but as part of the broader set of policies and reforms for completing the EMU architecture, notably the completion of the Banking Union and the setting up of macroeconomic stabilisation function. ([44])

II.1. Introduction

The Capital Markets Union (CMU) plan is a combination of legislative and non-legislative initiatives aimed at mobilising capital in the European Union with a view to strengthening allocative efficiency, the diversification of capital flows, household and business liabilities, and facilitate private risk-sharing. ([45]) It aims to develop a more diversified financial ecosystem, by complementing traditional credit markets with deeper, more developed and more integrated capital markets. ([46]) The CMU could unlock a sizeable pool of capital around Europe that is currently allocated to cash and bank deposits. Unlocking this capital and making it work for the economy would give savers more investment choices while offering businesses a greater choice of funding sources at lower costs. This requires establishing a genuine single capital market in the EU where investors do not face barriers to cross-border investments and businesses can raise funding from a wide range of sources, irrespective of their location. ([47]) Notably, while delivering a well-functioning CMU requires more harmonised and simplified rules, and more consistent and efficient supervision, it does not require that all financial structures across Member States converge into a common one. ([48])

The Five Presidents' Report ([49]) identified the convergence towards more resilient economic and social structures across Member States as an essential element for a successful Economic and Monetary Union (EMU). This section outlines why a well-functioning CMU is a crucial component of efforts to strengthen the resilience of Member States to economic shocks. ([50])

The rest of this section is organised as follows: the second sub-section provides a brief overview of economic resilience in the euro area and its key elements. The third sub-section summarises the state of play of the CMU project as of late-2018, highlighting the elements that are especially

([44]) This section was prepared by Eric Meyermans (DG ECFIN), Christopher Uregian (DG ECFIN), Geert Van Campenhout (DG FISMA and KU Leuven) and Diego Valiante (DG FISMA and Bologna University). The paper represents the authors' views and not necessarily those of their respective affiliation. The authors gratefully acknowledge the comments of an anonymous referee and data support from Raluca Maran (DG FISMA).

([45]) For example, cross-border holding of assets such as equity and fixed income instruments (but not cross-border bank financial flows). This may then lead to further convergence of prices and returns for financial assets and services as the cost for arbitrage comes down.

([46]) The capital market provides longer-term financing and includes equity markets, corporate bond markets, as well as crowdfunding and securitisation markets.

([47]) See https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union/what-capital-markets-union_en

([48]) See, for instance, European Commission (2015), 'Action Plan on Building a Capital Markets Union – Economic Analysis', SWD(2015) 183 final.

([49]) Juncker, J-C, in close cooperation with Tusk, D., J. Dijsselbloem, M. Draghi and M. Schulz (2015), The Five Presidents' Report: Completing Europe's Economic and Monetary Union. See also, Buti, M., S. Deroose, J. Leandro, and G. Giudice (2017), 'Completing EMU', at https://voxeu.org/article/completing-emu

([50]) Economic resilience can be broken down into three main aspects: i) reducing economies' vulnerability to shocks; ii) increasing their shock-absorption capacity; and iii) increasing their ability to reallocate resources and recover from the shocks. See, for instance, Giudice, G., Hanson, J. and Z. Kontolemis (2018), 'Economic Resilience in EMU', Chapter 1 in *Quarterly Report on the Euro Area*, Vol. 17 No 2, pp. 9-15. See, also, *Box II.1*

relevant to strengthen resilient economic structures across the euro area. The two following sub-sections describe in further detail the transmission channels through which the further completion of the CMU may affect economic resilience. In particular, the fourth sub-section explores how a well-functioning and integrated CMU may reduce the vulnerability of economies to shocks and may cushion their impact on output and employment by promoting private risk-sharing. The fifth sub-section discusses how the CMU may accelerate the recovery towards a sustainable growth path after a shock has taken place by facilitating the reallocation of resources and stimulating aggregate demand. The last sub-section concludes and presents the policy implications of the analysis.

The analysis in this section is based on a literature review and is of a qualitative nature, as it covers new structural changes for which not enough historical data is available to infer definitive conclusions. It lays out the conceptual framework and analytic elements for a better understanding of the role of the CMU project in the context of the reform of EMU.

It should be noted that an economy's resilience is also closely related to its growth potential. Capital markets have an impact on both resilience (through the risk absorption channel) and potential growth (through the innovation and productivity channel). On the one hand, economic resilience is a precondition for potential growth as, for example, it mitigates adverse hysteresis effects in both labour and capital markets.([51]) It also fosters the macroeconomic stability required for private sector innovation and investment intermediated by the financial sector. On the other hand, strong sustainable growth fosters economic resilience as it facilitates the build-up of fiscal buffers to absorb shocks and the implementation of structural reforms that promote resource reallocation, for instance. This section will focus on the impact of the CMU on economic resilience and only briefly touch upon its implications for potential growth.

II.2. Weak economic resilience in the past

The large downturn that many euro area economies experienced following the global financial crisis that started in 2008 revealed their significant vulnerabilities that made them ill-prepared to smoothly absorb and adjust to the economic shocks that followed. Certain Member States were not only highly vulnerable — due, in particular, to accumulated current account imbalances, housing bubbles and high private indebtedness — but also had limited capacity to absorb shocks. This resulted in large and persistent drops in output (relative to the size and complexity of the shocks themselves). Unwinding these imbalances led to sharp increases in sovereign debt via in particular the sovereign-bank feedback loop. It also created spill-over effects across Member States that endangered the stability of the euro area as a whole and marked a period of economic and financial divergence among Member States.

The risk of growing economic divergence among Member States called into question the sustainability of the single currency. More resilient euro area economies will be less likely to develop vulnerabilities and better equipped to absorb and recover from shocks (see Box II.1).This will reduce economic divergence among Member States and also mitigate the strong spill-over effects across the euro area witnessed especially through the national retrenchment of financial flows during the crisis.

More resilient economic and financial structures may also play an important role in synchronising business and financial cycles across Member States. Business cycles of euro area Member States have become increasingly synchronised over the last decades due to monetary unification, policy convergence and trade integration.([52]) However, the recent crisis showed that the amplitude of business cycles still differs across Member States, reflecting critical weaknesses in both domestic and European-level economic and financial structures.

([51]) Hysteresis effects refer to economic events that persist despite the factors that led to them eclipsing. For example, an increase in unemployment may persist even after a fall in aggregate demand that caused it has been reversed. Such labour market hysteresis effects can be triggered by deteriorating employee employability (e.g. skills erosion), availability (e.g. early retirement) or bargaining power (e.g. increasing insider bargaining power), as well as changes in labour market structure (such as increased labour market polarisation) and macro-economic conditions (such as secular stagnation). In capital markets, hysteresis effects may be caused by a lack of investments embedding the latest innovations and technological advances and an underuse of the exiting capital stock, as well as sunk costs that make, for instance, firms' entry and exit conditions asymmetric over the business cycle.

([52]) On the impact of monetary policy unification, see Bayoumi,T. and B. Eichengreen (2017), 'Aftershocks of Monetary Unification: Hysteresis with a Financial Twist', *IMF Working Paper* No. 17/55. On the impact of trade integration, see Jolles, M. and E. Meyermans (2018), 'Economic resilience, the Single Market and EMU: a self-reinforcing interaction', *Quarterly Report on the Euro Area*, Vol. 17, No. 1, pp. 7-22.

Box II.1: **Economic resilience**

Economic resilience is defined as the ability of a country to avoid or withstand a shock and for output to recover quickly to its potential level after the onset of the recession and has thus three main aspects: (i) the vulnerability to shocks; (ii) the shock absorption capacity; and (iii) the ability to recover quickly after a shock. ([1])

Vulnerability refers to whether and how strongly a shock hits the economy. It reflects exposure to shocks, their frequency and intensity. Given that a country's vulnerability depends on a number of parameters that vary from country to country (such as the structure of the economy, various policy settings, the financial sector and asset markets, and the state of the non-financial sector), some countries will be more exposed than others to the same shock.

Absorption capacity reflects the ability of an economy to cushion the direct impact of a shock and thus minimise immediate output and job losses. A shock can be absorbed by spreading its effects across the economy –to other variables than employment and output – and over time, for example through automatic stabilisers, responsive wages and prices, as well as via credit and financial risk sharing.

The ability of an economy to recover affects the extent to which a shock has persistent effects on the economy. It reflects a country's capacity to ensure a swift return to the previous status in case of a temporary shock or the smooth reallocation of productive resources. ([2]) The necessary adjustment or reallocation depends on the type of shock, with permanent shocks requiring a more significant reallocation of resources. The speed of the adjustment or reallocation also matters: faster processes lead to stronger recoveries.

Hence, resilient economic and financial structures can be defined as those which prevent economic shocks from having significant and persistent effects on income and employment levels, and thus are able to reduce the impact of economic fluctuations. This is particularly relevant in a monetary union where the policy instruments to address asymmetric negative economic events are more limited. In addition, inflation differentials in a monetary union can exacerbate real interest rate differentials, which in turn can magnify shocks by fuelling economic booms.

([1]) The concept of resilience has attracted considerable attention recently at research and policy level. In September 2017, the Eurogroup discussed a note prepared by DG ECFIN with the theme of "Economic Resilience in EMU". In March 2017, the German Presidency of the G20 issued a set of "resilience principles" for the G20 countries; "Note on Resilience Principles in G20 countries". The OECD has undertaken further work in this area, building on its early research showing that shocks are more persistent in countries with rigid product and labour markets (see: https://www.oecd.org/eco/growth/economic-resilience.htm and in particular Duval, R. and L. Vogel (2008), Caldera-Sanchez, A., A. de Serres, F. Gori, M. Hermansen and O. Röhn (2016). Important contributions to this debate have also been provided by the IMF and ECB, as summarized in IMF (2016), 'A Macroeconomic Perspective on Resilience', Note to the G20.

([2]) On the impact of the Single Market on resilience, see for example, Jolles, M. and E. Meyermans (2018), 'Economic resilience, the Single Market and EMU: a self-reinforcing interaction', Quarterly Report on the Euro Area, Vol. 17, No. 1, pp. 7-22.

Preventing such boom-bust cycles and reducing the impact of economic shocks will help Member States' business cycles synchronise further, ensuring better transmission of the single monetary policy and strengthening the capacity of the euro area as a whole to withstand shocks.([53])Finally, the real convergence during the first decade of EMU largely coincided with *structural divergence*, with the economies at the core relying more on tradeables, while those of the periphery were increasingly dominated by non-tradable sectors.([54]) Since then, structural reforms at national level, supportive monetary policy and reforms at the EMU level, including the CMU, will help promote *structural convergence.*([55]) Several factors shape a Member State's economic resilience, including the working of markets, structural characteristics such as trade openness and the quality of institutional frameworks. ([56]) The following sub-sections focus on the building of a CMU and its impact on economic resilience.

([53]) Remarks by Vítor Constâncio (2017),'Growth, adjustment and resilience in the euro area,' available at: https://www.ecb.europa.eu/press/key/date/2017/html/ecb.sp170901.en.html.

([54]) See Buti, M. and A. Turrini (2015), 'Three waves of convergence. Can Eurozone countries start growing together again?', Vox, April 2015, and Marelli, E and M Signorelli (2005), 'Institutional, nominal, and real convergence in Europe', Banks and Bank Systems Vol. 5, pp. 140-155.

([55]) See Buti, M. and A. Turrini (2015), *op cit.*

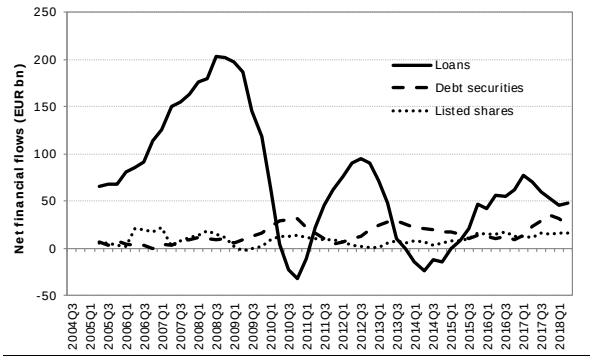
([56]) See Box II.1 and references therein.

II.3. State of Play: Towards a More Resilient European Financial Structure

II.3.1. The Challenges Facing Europe's Financial Structure And Capital Markets

In the run-up to the global financial crisis, financial integration in the EU was mainly characterised by an increase in interbank lending that led to excessive pro-cyclical credit flows, later subject to an extreme sudden stop in 2009 (Graph II.1). The subsequent severity of the crisis in the euro area and the sluggish economic recovery led some to argue that Europe's bank-reliant financial structure was associated with greater systemic risk and worse growth performance than if its structure were more balanced. ([57]) At the very least, the banking crisis and its macroeconomic consequences highlighted that the European financial structure faced a number of important challenges.

Graph II.1: **Net financial flows to EA non-financial corporations (EUR bn)**



(1) Moving average over previous four quarters.
Source: ECB and European Commission calculations.

The first major challenge is that most of the corporate sector in Europe lacks access to market-based finance and therefore remains heavily reliant on banks, even after the financial crisis. Notwithstanding the contraction in bank lending after 2008 shown in Graph II.1, bank loans respectively represented 14% of the total stock of liabilities of EU companies in 2013, as opposed to 3% in the US, while conversely corporate bonds represented 4 % of total liabilities for EU companies, compared with 11% for US firms. ([58])

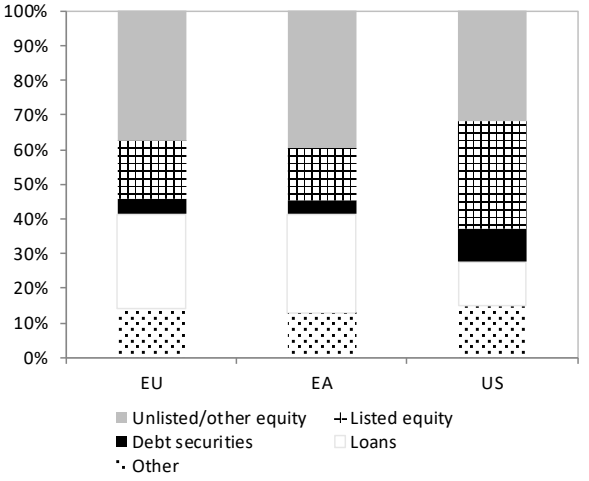
([57]) See, for instance, Langfield, S. and M. Pagano (2016), 'Bank bias in Europe: effects on systemic risk and growth', *ECB Working Paper Series* No. 1797.

([58]) European Commission estimates based on ECB euro area accounts.

Thus, while bank credit was three times larger than corporate bond financing in the EU, it is smaller than bond financing in the US.

What is also apparent is that (even by 2016) listed equity is much more important as a source of financing for non-financial corporations in the US than in Europe (see Graph II.2): In the US around 31% of outstanding financial liabilities are accounted for by listed shares, while in the euro area the share was less than half (15.1%). This also reflects in part the much larger share of SMEs in Europe compared to the US, as SMEs are structurally less prone to listing on public markets.

Graph II.2: **Financial liabilities of non-financial corporations in 2016 (% of total)**



Source: Eurostat, European Commission calculations.

The reliance on bank financing in the EU and the euro area weighed on growth and recovery post-crisis as the banking sector was considerably less supportive of economic activity than in past recoveries ([59]) due to two main factors:

- Pre-crisis bank lending had contributed to the accumulation of debt among private households and firms, part of which became unsustainable with the economic downturn and imposed significant losses and deleveraging pressures on banks. This held back credit provision to the economy, in a context where capital markets

([59]) See Allard, J. and R. Blavy (2011), 'Market Phoenixes and Banking Ducks, Are Recoveries Faster in Market-Based Financial Systems?', *IMF Working Paper No.* 11/213. and Grjebine, T., Szczerbowicz, U. and F. Tripier (2014), 'Corporate debt structures and economic recoveries', *CEPII Working Paper* No. 19 for empirical comparisons of how cyclical recoveries depend on financial structure.

were underdeveloped and could therefore not offer funding alternatives. ([60])

- EU banks reduced their cross-border activities, ([61]) particularly in EU Member States heavily exposed to stress in sovereign bond markets. Capital flows reversed, despite the anchor offered by a common currency area. The worsening in funding conditions and the instability in financial markets contributed to deepening the recessions, increasing the share of non-performing loans in banks' balance sheets, and further reducing their capacity to supply new loans. ([62])

With bank lending curtailed after the financial crisis, viable enterprises, and particularly SMEs had difficulties accessing alternative funding sources, especially in vulnerable Member States where alternative channels via capital markets remain under-developed.([63])

Notwithstanding bank deleveraging in certain Member States, as shown in Graph II.1, bank loans still represent as large a share of net financial flows to non-financial corporations in the euro area as bonds and listed shares in 2017. This lack of financial diversification, notably the low recourse to equity, poses a systemic risk caused by the volatility of non-equity financial flows when there is a structural shock. ([64])

The second major challenge is that the banking sector and, more acutely, capital markets still show a strong "home bias" rather than being integrated across Member States. Economic theory has long conjectured a link between cross-border financial integration (via the capital and bank credit market channels), risk-sharing and higher economic growth through a "risk-amelioration" channel. ([65]) By giving access to foreign assets, capital markets provide stable revenues to investors when domestic income sources deteriorate. The bank credit market channel assumes that cross-border banks with diversified asset pool would be more able to provide funding to an economy with weakening economic activity than domestic banks with concentrated exposure to the local economy.

In practice, however, both market and bank-based financial channels remain underdeveloped in the euro area and broke down during the financial crisis, reducing significantly the cushioning effect of diversification and cross-border risk-sharing. First, the decline in lending by the domestic banking sector during the crisis in vulnerable Member States was not compensated by increased lending by EU-wide banks, resulting in an overall credit supply decline for the economy. ([66]) This is in contrast to the US and Japan, where cross-regional banks have had an important role in smoothing the impact of local recessions. ([67])

Secondly, a review of the crisis literature suggests the low degree of private risk-sharing in the EU and the euro area during the crisis reflected particularly weak capital markets and related factor income flows. ([68]) In fact, studies have found that the capital market channel amplified output shocks during the financial crisis in the euro area, ([69]) reflecting the strong fragmentation and home bias effects.

([60]) See IMF Global Financial Stability Report 2014 and IMF Global Financial Stability Report 2015.

([61]) See Reinhart, C. M. and Rogoff, K.S. (2009), 'The Aftermath of Financial Crises', *American Economic Review* Vol. 99, No. 2, pp. 466-72 and Reinhart, C. M. and Rogoff, K.S. (2010), 'Growth in a Time of Debt', *American Economic Review* Vol. 100, No. 2, pp. 573–78.

([62]) See Al-Eyd, A. and S. Pelin Berkmen (2013), 'Fragmentation and Monetary Policy in the Euro Area', *IMF Working Paper* No. 13/208, and Balduzzi, P., Brancati, E. and F. Schiantarelli (2013), 'Financial Markets, Banks' Cost of Funding, and Firms' Decisions: Lessons from Two Crises', *IZA Dicussion Paper* No. 7872.

([63]) See European Commission (2013a), Ex ante assessment of the EU SME Initiative, Staff Working Document SWD(2013)517. This is also documented through the semi-annual surveys on the access to finance of enterprises (SAFE) and the quarterly ECB Bank Lending Survey. For an economic analysis of the issue, see also Hoffmann, M. and Sørensen, B. E. (2015), 'Small firms and domestic bank dependence in Europe's Great Recession', *DG ECFIN Discussion Paper* No. 12.

([64]) See, for instance, Langfield, S. and M. Pagano (2016), 'Bank bias in Europe: effects on systemic risk and growth', *ECB Working Paper Series* No. 1797 and European Commission (2013b), 'Green Paper on the Long-term Financing of the European Economy', COM/2013/0150 final.

([65]) See Obstfeld, M. (1994), 'Risk-taking, global diversification, and growth', *American Economic Review*, Vol. 84, NO. 5, pp. 1310-1329.

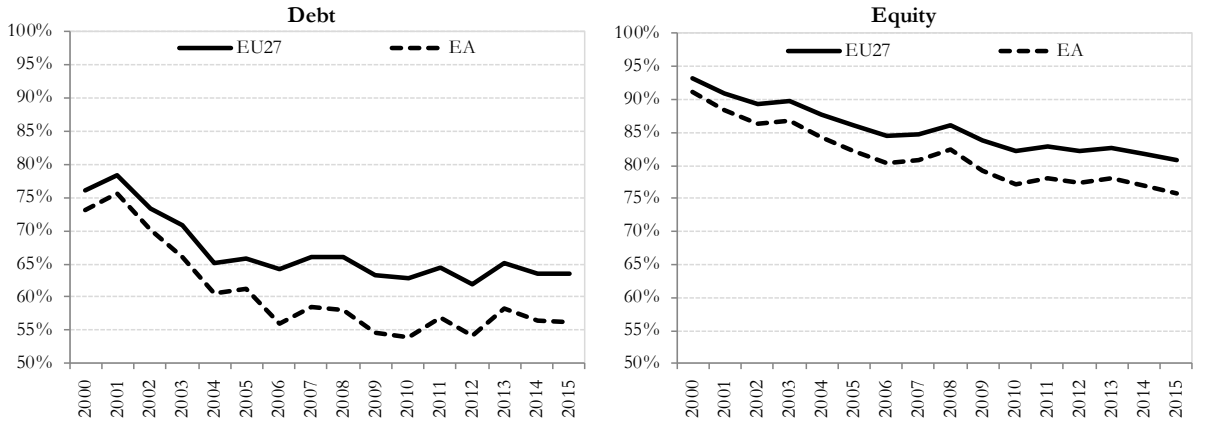
([66]) See Demyanyk, Y., Ostergaard, C. and B. Sørensen (2008), 'Risk sharing and portfolio allocation in EMU', *DG ECFIN Economic Paper* No. 334.

([67]) See Hoffmann, M. and B. Sørensen, (2015), 'Small firms and domestic bank dependence in Europe's Great Recession', *DG ECFIN Discussion Paper* No. 12.

([68]) See Anderson, N, Brooke, M, Hume, M. and M. Kürtösiová (2015), 'A European Capital Markets Union: implications for growth and stability', *Bank of England Financial Stability Paper* No. 33. and the studies quoted therein

([69]) See Furceri and Zdzienicka (2013), Bijlsma and Zwart (2014).

Graph II.3: **Quantity-based financial integration (home bias) in Europe**



(1) The graphs above show home bias measured as the holding of domestic assets versus their optimal intra-EU allocation in investment portfolios. 100% implies full holding of domestic assets while 0% implies the optimal intra-EU allocation. (2) No data for Croatia.

Source: European Commission (JRC) calculations using National Accounts data from Eurostat for equity and BIS debt securities statistics (no selection is made on the issuer sector) for debt. The bilateral foreign portfolio size is from the FinFlows database.

Home bias - measured as the holding of domestic assets versus their optimal intra-EU allocation - remains very high even after the crisis, especially in equity instruments as shown in Graph II.3. Despite a slightly declining trend in the two previous years, in 2015 domestic equity investments in the EU and the euro area were over 85 % overweight in domestic investment portfolios vis-à-vis the average weight of domestic equity markets in the EU total. Other research has also corroborated that home bias in equity holdings in the EU remains very high after the financial crisis. ([70]) For bond holdings, the home bias was lower than for equity holdings for both the EU and the euro area (around 64 % and 56 % respectively) but still pronounced. In effect, the geographical diversification of the financial system in Europe is still far from optimal and there are only timid signs in the post-crisis period that the financial integration process is moving towards a more diversified path. Overall, euro area Member States have the lowest home bias within the EU-28, some 20 percentage points lower than in the Central and Eastern Europe (CEE) countries. After 2008, home bias in the euro area core countries has been stable at around 70 %, while home bias for CEE countries has been falling over time to 88 % in 2015. CEE countries' debt home bias felt after the crisis as their search for less risky debt investment drove them towards core euro area debt investments. ([71])

As a consequence of this limited cross-border financial integration in banking, and capital markets in particular, significant differences in financing conditions between EU and especially euro area countries arose during the crisis, slowing the recovery and undermining economic convergence. ([72])

The third big challenge that emerged after the crisis was the lack of transparency of financial institutions, especially when dealing with capital markets instruments (such as over-the-counter derivatives), and the shortcomings in a fragmented regulatory and supervisory oversight. Under the G20 guidance, major reforms in EU capital markets were introduced, with a view to (i) ensuring market transparency and restoring investor confidence; (ii) providing more options for funding and easier access to capital markets especially for retail investors, entrepreneurs and companies in all stages of their business development, as well as (iii) fostering financial stability.

In particular, actions, such as the "Markets in Financial Instruments Directive (MiFID 2)" ([73]),

([70]) See Schoenmaker D. and C. Soeter (2014), 'New evidence on the Home Bias in European Investments', *DSF Policy Briefs* No. 34.

([71]) European Commission (2018), Commission staff working document on the movement of capital and the freedom of payments, SWD(2018) final, pp. 70.

([72]) See Anderson et al. (2015), op cit. and the studies quoted therein.

([73]) Directive 2014/65/EU repealing Directive 2004/39/EC.

the associated regulation (MiFIR) ([74]) and the European Markets Infrastructure Regulation ([75]), increased the transparency of capital market instruments, improved market structure rules and strengthened the investor protection regime.

The European Union also created a set of regulatory agencies, called the European Securities and Markets Authority (ESMA), ([76]) the European Insurance and Occupation Pension Authority (EIOPA) ([77]) and the European Banking Authority (EBA), ([78]) to promote greater regulatory and supervisory convergence among Member States on macro prudential surveillance, as well as micro prudential and conduct supervision.

Despite these reforms, European capital markets remain largely fragmented, as businesses and firms are unable to access funding and investment products on equal terms. For example, there is a wide divergence in the retail investment product market, where the median entry fee for equity funds across Member States ranges from as low as 0.30 % to as high as 5 %. ([79])

II.3.2. The Capital Markets Union Action Plan

In light of these ongoing challenges facing the European financial architecture, the European Commission adopted the Capital Markets Union (CMU) action plan ([80]) in September 2015, setting out a list of actions to establish the building blocks of more integrated capital markets in the EU. ([81]) This action plan was subsequently reviewed in June 2017 and March 2018. ([82])

The key objectives of the CMU action plan are to:

- Support private and public investments that can fund innovation and boost jobs and growth via the productivity channel; and
- Promote a more sustainable financial integration process via the greater stability offered by more diversified capital flows and the development of a capital market architecture that connects all European capital markets on equal terms for businesses and citizens.

At a pan-European level, the CMU action plan promotes greater cross-border:

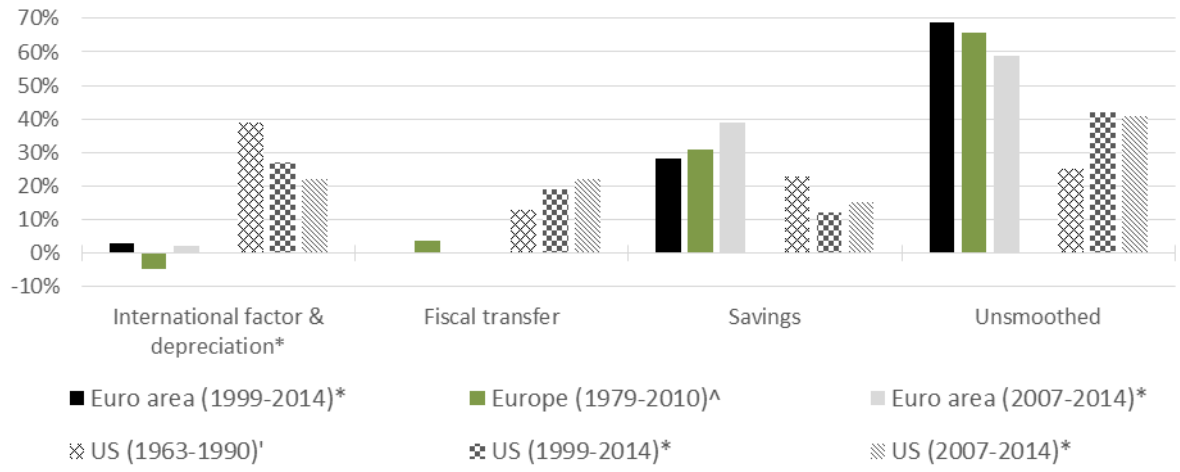
- Data availability and comparability ;
- Accessibility to markets and products (with fair access);
- Enforcement of rules and procedures to ensure legal certainty and investor confidence.

To operationalise these objectives, the CMU action plan has identified six sectorial areas for intervention, including actions to promote financing for innovative start-ups and scale ups, start-ups and unlisted companies, to support fund raising on public markets, to strengthen the banking sector capacity via capital markets tools, to remove barriers to cross-border investments and to promote long-term investments and retail investor participation.

Finally, it is important to stress that the CMU action plan complements the G20 financial reforms introduced at European level, as well as the Banking Union reforms. The Banking Union reforms, inter alia, was launched to increase banking sector resilience and to break the bank-sovereign feedback loop, exacerbated by the euro are sovereign debt crisis, by creating a common safety net for deposits, common bank supervision and a single resolution mechanism. By developing European capital markets and related non-bank funding for the economy, the CMU is truly complementary to Banking Union reforms.

([74]) Regulation (EU) n. 600/2014.
([75]) Regulation (EU) n. 648/2012.
([76]) Regulation (EU) n. 1095/2010.
([77]) Regulation (EU) n. 1094/2010.
([78]) Regulation (EU) n. 1093/2010.
([79]) See Deloitte Luxembourg (2018), 'Distribution systems of retail investment products across the European Union', Final report
([80]) European Commission (2015), Action Plan on Building a Capital Markets Union, COM (2015) 468 final.
([81]) An up-to-date overview of progress achieved and next steps for each area of intervention in the CMU action plan are readily available on the FISMA website at https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union/capital-markets-union-action-plan_en
([82]) Communications on the mid-term review (COM(2017) 292 final),on accelerating reforms (COM (2018) 114 final) and financing sustainable growth (COM(2018) 97 final) introduced new priorities, but without changing the spirit of the action plan. In June 2017, a mid-term review of the CMU action plan found that 20 (out of the 33) policy actions had been delivered. Another 38 actions, including 9 priority actions were identified in the mid-term review while eight actions were identified in the Communications on accelerating reforms and financing sustainable growth . See the reference in the previous footnote for the latest state of play.

Graph II.4: **Risk-sharing in Europe and US: 1963-2014 (% of shock absorbed)**



(1) The absorption of a shock is measured based on the methodology developed by Asdrubali et al. (1996). (2) "Fiscal transfer" does not include crisis intervention via intergovernmental agreements, like the European Stability Mechanism (ESM).
Source: Valiante (2018) based on Furceri & Zdzienicka (2013), Asdrubali et al. (1996) and Milano & Reichlin (2017).

II.4. How can CMU reduce vulnerability and strengthen shock absorption

An economy's absorption capacity reflects its ability to cushion the direct impact of any shock on output and employment by spreading its effects across the economy to other variables, such as (financial and non-financial asset) prices and wages, as well as over time (via consumption) or over borders by risk-sharing via financial markets. ([83])

International capital markets (as market-based funding) allow for private (cross-sectional) risk-sharing in the face of permanent shocks, such as an adverse productivity shock that lowers GDP levels via lower returns on capital (as production factor). ([84]) As a result, while shocks will be still transmitted to the economy via firms (e.g. higher corporate spreads) and investors (e.g. capital losses), risk dispersion in capital markets provides a spatial redistribution of risk to a larger set of actors, so reducing its systemic implications (e.g. knock-on effects on specific parts of the financial sector).

International credit markets (as institution-based funding) also allow for the risk-sharing of temporary shocks, such as consumption smoothening in the face of a temporary demand shock. In effect, risk concentration via a banking institution provides a temporal redistribution of risk, which is very effective when the shock is temporary and allows for recovery over a relatively short timeframe (compared to a structural shock).

Public (fiscal) risk-sharing, in some instances, supplements private risk sharing via capital and credit markets, as there are limits to the shock absorption that can be provided by Banking Union and Capital Markets Union. There is evidence that suggests that while in moderate downturns private financial markets can provide sufficient shock absorption, in times of acute market stress they have to be complemented by a credible central fiscal capacity to limit the risk that they would behave pro-cyclically. ([85]) For example, the credit channel froze during the recent euro area crisis and

([83]) See, for instance, Giudice et al. (2018), *op cit.*

([84]) See, for instance, Valiante, D. (2016), *Europe's Untapped Capital Market: Rethinking financial integration after the crisis*, CEPS Paperback, London: Rowman & Littlefield International, Valiante, D. (2018), 'Risk sharing and financial integration: how can the Capital Markets Union deliver?', in Andritzky J. and J. Rocholl (eds.), Towards a more resilient Euro Area, ebook available at https://www.ceps.eu/publications/towards-more-resilient-euro-area and Martinez, J. and T. Philippon (2014), 'Does a Currency Union Need a Capital Market Union?', 15thJacques Polak Annual Research Conference, International Monetary Fund, 13–14 November 2014.

([85]) Buti, M. and N. Carnot (2018), 'The case for a central fiscal capacity in EMU' Vox, 8th December 2018.

actually worked in reverse. ([86]) Some studies also find that financial markets are not Pareto-efficient as private agents fail to hold the kinds of portfolios ensuring proper risk sharing in large shocks. ([87]) Nevertheless, as CMU promotes private risk-sharing, the need for using public stabilisation tools to cushion local shocks may decrease. ([88])

The available empirical research summarised in Graph II.4 suggests that financial markets absorbed only a minor fraction of the shock in the euro area in the period 2007 to 2014, and actually amplified the shock (negative absorption) in the European Union over the period 1979 to 2010.

This is particularly true for euro area countries where other factors, such as market concerns about public debt sustainability, not only limited their fiscal capacity to act counter-cyclically but also hampered the liquidity of local financial markets, resulting in a further reduction of the private risk-sharing channel. ([89]) Moreover, in the euro area, most of the absorption via financial markets was carried out by credit markets rather than capital markets. ([90]) The empirical analysis summarised in Graph II.4 shows that although the fiscal channel's contribution to absorption tends to increase in systemic crises, it has never exceeded the contribution of private risk-sharing channels. The analysis also shows that most of the structural shocks in the euro area remained unsmoothed and thus drastically reduced consumption levels. ([91])

A well-functioning, diversified and integrated CMU increases an economy's absorption capacity via direct channels, like cross-border interest and dividend payments or capital gains/losses, as well as indirect ones, such as supporting a more resilient banking system and a more effective monetary policy function.

While more integrated banking and capital markets do provide broader protection from shocks and support capital mobility in a single currency area, Banking Union and CMU have complementary stability implications for the risk absorption capacity of the Euro Area. The Banking Union strengthens the intertemporal risk-sharing channel, which is very effective against temporary shocks that do not affect permanent income and the capacity to service loans. CMU's cross-sectional risk-sharing capability, instead, facilitates the absorption of structural shocks that affect permanent income and helps to minimise impact on national income via risk dispersion and diversification that follow from the cross-border holding of assets. As a result, market-based funding (which is promoted by CMU) is anti-cyclical as it absorbs shocks through instant market evaluation via secondary markets. By contrast, bank lending is strongly pro-cyclical: credit rationing during shocks occurs in order to allow for the gradual (intertemporal) absorption of losses, making bank lending more susceptible to sudden stops.

A well-functioning CMU also strengthens the effectiveness of a single monetary policy ([92]) because it reduces financial market fragmentation and frictions on policy transmission to the banking and non-banking sector, ([93])) which in turn strengthens the pass-through of the policy interest rate to market interest rates. ([94]) This mechanism is

([86]) Furceri and Zdzienicka (2013), 'The euro area crisis: Need for a supranational fiscal risk sharing mechanism? ', *Open Economies Review* Vol. 26, No. 4, pp. 683-710.

([87]) Fahri E and I Werning (2017), 'Fiscal Unions', *American Economic Review*, Vol. 107, No 12, pp.3788-3834.

([88]) See, for instance, Draghi, M. (2018), 'Hearing of the Committee on Economic and Monetary Affairs of the European Parliament', Introductory statement at the ECON committee of the European Parliament.

([89]) See Kalemli-Ozcan et al. (2014) and, Alcidi et al. (2017).

([90]) See, for instance, Furceri, D. and M. Zdzienicka (2013), 'The Euro Area Crisis: Need for a Supranational Fiscal Risk Sharing Mechanism?', *IMF Staff Discussion Note* No. 13-198.

([91]) Another study comparing risk-sharing in the euro area (1999-2015) and US (1964-2013) not summarised in Graph II.4 had similar findings. In particular, it found that: (i) close to 80% of shocks were unsmoothed in the euro area as opposed to just 20% in the US; and (ii) the share of shocks absorbed by the cross-border capital and labour income channel was much lower in the Eurozone than in the US (6% versus 40% respectively). See European Commission (2016) "Cross-border risk sharing after asymmetric shocks: evidence from the euro area and the United States", Quarterly Report on the Euro Area 15(2).

([92]) On the transmission of single monetary policy, see, for instance, https://www.ecb.europa.eu/mopo/intro/transmission/html/index.en.html

([93]) Fragmentation may arise from differences in tax treatment of debt and equity or legal definitions across Member States, as well as other factors (see European Commission Staff Working Document (2015) 183 final). Abascala, M., Alonsoa, T. and S. Mayordomob (2013), 'Fragmentation in European Financial Markets: Measures, Determinants, and Policy Solutions', *BBVA Working Papers* No 13/22, apply an econometric analysis to find that counterparty risk and financing costs, as well as banking sector openness, debt-to-GDP and the relative size of the financial sector were the most significant determinants of inter-bank fragmentation observed during the crisis.

([94]) In turn, a well-designed common monetary policy may improve the functioning of CMU. For instance, Roberto A. De Santis, André Geis, Aiste Juskaite and Lia Vaz Cruz 'The impact of the corporate sector purchase programme on corporate bond markets and the financing of euro area non-financial corporations', ECB Economic Bulletin, Issue 3 / 2018 report that the ECB's corporate sector purchase programme (CSPP) which started on 8 June 2016 and whereby the Eurosystem purchases securities issued by non-bank corporations in both the primary and the

especially important to absorb temporary idiosyncratic shocks. ([95]) By promoting convergence towards a more resilient and consistent financial structure across the euro area, a single monetary policy becomes even more appropriate for all euro area Member States, reducing the probability that country-specific pockets of vulnerability emerge. ([96])

Moreover, the CMU can facilitate the functioning of the banking sector that in turn may stabilise the supply of credit following a shock to smoothen aggregate demand. For example, the CMU mid-term review includes a number of actions to develop secondary markets for non-performing loans, facilitating their gradual disposal by banks, thus strengthening the latter's balance sheets and lending capacity.

Lastly, cross-border equity investment and foreign ownership of financial institutions — facilitated by the further deepening of the CMU — may work as shock absorber. For example, some argue that the large degree of foreign ownership of domestic banks was shown to act as a loss absorber in Bulgaria and the three Baltic Member States following the sudden stop in capital flows at the height of the global financial crisis. ([97]) However, if foreign banks experience adverse shocks in their home country, they may start pulling back capital from their foreign subsidiaries, resulting in negative spill-over effects. ([98])

secondary market, improved considerably corporate bond market functioning and liquidity conditions.

([95]) Of course, this does not mean that for instance interest rates will be the same across euro area Member States as such differences may also reflect differences in country risks.

([96]) See, for instance, Cœuré, B. (2017), 'Convergence matters for monetary policy', speech delivered at the Competitiveness Research Network (CompNet) conference on 'Innovation, firm size, productivity and imbalances in the age of de-globalisation'.

([97]) Gros, D. and C. Alcidi (2015), 'Country adjustment to a 'sudden stop': Does the euro make a difference?', International Economics and Economic Policy, Vol. 12, No. 1, pp 5-20. Here it should also be noted that, for instance, De Haas, R., Korniyenko, Y., Loukoianova, E. and A. Pivovarsky (2017), 'Foreign Banks and the Vienna Initiative: Turning Sinners into Saints?', *IMF Working Paper* WP/12/117 argue that with the Vienna Initiative inaugurated on January 23rd 2009 17 parent banks pledged to maintain their exposures to Central and Eastern European banks and to recapitalise subsidiaries for the duration of the IMF-EU programs - thereby overcoming the fear that while it would be in the collective interest of banks to roll-over debt, the absence of a coordination mechanism could lead individual banks to withdraw.

([98]) Alcidi, C. and G. Thirion (2016), 'Assessing the Effect of Shocks in the Euro Area's Shock Absorption Capacity - Risk-sharing, consumption smoothing and fiscal policies', *CEPS Special Report* No. 146.

II.5. How can CMU contribute to economic recovery

Policies that support economic recovery matter given that financial crises, and banking crises in particular, have a negative and rather persistent effect on output. ([99]) More broadly, a recovery involves closing the output gap by reallocating resources and raising aggregate demand. ([100])

A well-functioning CMU would facilitate resource reallocation by stimulating cross-border investment and by facilitating firms' entry and exit. In addition, it will help correct the pro-cyclical bias in credit supply of the banking sector.

First, banks may deleverage by reducing credit to the private sector, thereby slowing economic recovery. By allowing banks to sell some of their assets to investors, securitisation provides them with a tool to deleverage without cutting credit provision to the private sector. ([101]). Well-designed securitisation ([102]) may thus make the credit supply less pro-cyclical by allowing banks to generate new lending to households and SMEs while avoiding the pitfalls of the US experience .

Secondly and more importantly, CMU can help viable credit-constrained firms diversify their funding. Many European firms, and especially SMEs, were credit constrained during the crisis, ([103]) and in the absence of well-functioning financial markets, SMEs in particular lack sufficient access to diversified sources of finance to realise

([99]) See, for instance, Cerra, V. and S.C. Saxena (2008) 'Growth dynamics: the myth of economic recovery', *American Economic Review*, Vol. 98, No. 1, pp.439-457 and Reinhart, C.M. and K.S. Rogoff, (2014) 'Recovery from financial crises: Evidence from 100 episodes', *American Economic Review*, Vol. 104, No. 5, pp.50-55.

([100]) Additionally, avoiding a decrease in potential output due to hysteresis effects is a relevant concern. For instance, Mourougane, A. (2017), 'Crisis, potential output and hysteresis', *International Economics*, Vol. 149, No. C, pp. 1-14 concludes for a panel of 34 OECD countries that hysteresis amplifies the effect of financial crises on potential output.

([101]) For details on (barriers to) the European securitisation market, we refer to European commission (2015), 'Impact Assessment accompanying the Proposal for a Regulation laying down common rules on securitisation and creating a European framework for simple and transparent securitisation', 185 final.

([102]) Under CMU, Securitisation Regulation (published in December 2017) introduces a uniform regulatory regime for securitisation and set out criteria for simple, transparent and standardised (STS) securitisation.

([103]) See, e.g. Artola, C. and V. Genre (2011), 'Euro Area SMEs Under Financial Constraints: Belief or Reality?', *CESifo Working Paper Series*, No. 3650.

their full growth potential during a recovery. ([104]) Banks that are in the process of deleveraging might refrain from extending new credit to SMEs. A credit crunch for SMEs is particularly harmful to an economic recovery because they are labour intensive and account for a large part of the European economy: About 99.8 % of all European non-financial firms operating in the European Union in 2016 were SMEs and they accounted for 67 % of total employment and 57 % of value added in the non-financial business sector. ([105])

Thirdly, well-developed financial markets support the recovery by ensuring that financial resources can be reallocated towards the most productive and viable firms. For instance, high stocks of NPLs are often associated with credit being locked up with non-viable firms. If banks refinance non-viable firms at the expense of the supply of credit to healthy firms capital is misallocated. ([106]) The package of measures to tackle high NPL ratios will, among others, support the development of secondary markets where banks can sell their NPLs, thereby mitigating the negative effect of high NPLs on credit provision and economic recovery. ([107])

In addition, the initiative on business insolvency promotes early restructuring of firms to preserve jobs and to increase the efficiency of insolvency, restructuring and discharge procedures. ([108]) The harmonisation of insolvency frameworks will directly impact recovery dynamics. It improves the exit of insolvent firms and tackles inefficiencies and differences in national insolvency frameworks that generate legal uncertainty, and create obstacles to recovery of value by creditors, and barriers to the efficient restructuring of viable companies. Nevertheless, while such reforms are necessary, they may call for appropriate flanking policies, as experience from many crisis countries shows that it takes years to change insolvency practices due to e.g. the operational workings of the courts and judges. As such, promoting initiatives enhancing institutional frameworks to ensure an efficient functioning of insolvency procedures, such as on out-of-court collateral enforcement prior to insolvency, could also be helpful to speed-up reallocation. ([109])

At the same time, several actions in the CMU action plan and mid-term review aim to make it easier for start-ups and high-growth SMEs to get the funding to expand. For instance, the initiative to introduce a more proportionate regime for SMEs trying to list and issue securities on SME Growth Markets should facilitate EU growth companies to tap market-based funding. ([110]) This may then speed up resource reallocation and positively affect growth. Even so, the funding choices available to firms should be sufficiently diverse to ensure that existing firms do not refrain from accessing new markets and introducing new products because their specific funding needs cannot be met. ([111]) Alternative sources of finance could alleviate this problem: the initiative to create a European license for crowdfunding may facilitate the entry of new firms that need start-up capital or complement firms' traditional sources of

([104]) In May 2018, the Commission put forward a proposed regulation on Promoting SME growth markets in order to improve SMEs' access to market-based finance. For further details, see https://ec.europa.eu/info/publications/180524-proposal-sme-market-abuse-prospectus_en.

([105]) See, Muller, P., J. Julius, D. Herr, L. Koch, V. Peycheva, and S. McKiernan (2017), 'Annual report on European SMEs 2016/2017: Focus on self-employment', EU Publications.

([106]) Bricongne, J.-C., M. Demertzis, P. Pontuch and A. Turrin. (2016), 'Macroeconomic Relevance of Insolvency Frameworks in a High-debt context: an EU Perspective', European Commission, Discussion Paper, No. 32.

([107]) See, https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/managing-risks-banks-and-financial-institutions/non-performing-loans-npls_en for more detail

([108]) The Commission has made two proposals. In November 2016, the Commission proposed rules on preventive restructuring, to avoid the liquidation of viable companies with financial difficulties and give entrepreneurs a chance to re-enter business life after bankruptcy. The proposal also lays down rules to enhance the efficiency of insolvency procedures, to make them more predictable, less costly and speedier. In March 2018, the Commission published a proposal for a regulation on the law applicable to the third-party effects of assignments of claims to provide legal certainty as to which national law as to which national law applies when determining who owns a claim after it has been assigned in a cross-border case. The proposal will promote cross-border investment and access to cheaper credit. See, http://ec.europa.eu/information_society/newsroom/image/document/2016-48/proposal_40046.pdf for further details.

([109]) See, for instance, Macroeconomic Relevance of Insolvency Frameworks in a High-debt Context: An EU Perspective Bricongne, J-C, M. Demertzis, P. Pontuch and A. Turrini (2016), Suropean Economy Discussion Paper No. 032 for a comprehensive discussion of design issues of insolvency regimes and the main features of insolvency frameworks in selected EU Member States.

([110]) See, http://europa.eu/rapid/press-release_MEMO-18-3728_en.htm for more details.

([111]) See Archibugi, D., M. Filippetti, and M. Frenz (2013), 'Economic crisis and innovation: Is destruction revailing over accumulation?', *Research Policy*, Vol. 42, No. 2, pp. 303-314, D'Este, P., S. Iammarino, M. Savona, and N. von Tunzelmann (2012), 'What hampers innovation? Revealed barriers versus deterring barriers', *Research Policy*, Vol. 41, No. 2, pp.482-484, and Lee, N., H. Sameen, and M. Cowling (2015), 'Access to finance for innovative SMEs since the financial crisis', *Research Policy*, Vol. 44, No. 2, pp. 370-380.

financing. ([112]) In addition, revamped rules on European venture capital funds may also make it easier for high-growth SMEs enterprises to obtain risk capital. ([113])

Fourthly, the smooth functioning of financial markets is enabled by predictable, efficient legal and institutional frameworks. The initiative on the harmonisation of insolvency frameworks cited above is a good example of the possible benefits of such harmonisation for the smooth functioning of markets and economic recovery.

Fifth, a well-functioning CMU may also support aggregate demand via several channels. For example, structural policies that successfully increase long-term GDP will have positive wealth effects on aggregate demand in the short run if well-functioning capital markets help to bring forward investment and consumption. ([114]) In addition, it might to some extent reduce the need for precautionary savings (in view of increased portfolio diversification opportunities) and promote the accumulation of wealth via private pension provisions. This is one of the objectives of the Pan-European Personal Pensions Product (PEPP) initiative ([115]) that enhances the cross-border provision of complementary pension schemes. This initiative has the additional advantage that it may strengthen cross-border labour mobility, which is key to speed up the recovery.

Finally, over the longer-term, the importance of CMU for economic resilience and recovery also follows from the importance of market-based finance to stimulate economic growth (cf. section I). ([116]) Recent research has shown that market-based finance is better at stimulating innovation and productivity than bank financing. ([117]) This is particularly true with respect to equity financing as a recent analysis of 21 EU countries finds evidence that sectors with better global growth opportunities grew faster in countries with relatively bigger equity markets. ([118]) Although the relative importance of market-based finance in non-financial companies' (NFC's) total finance has increased moderately in the EU27 in the last decade, it was still more than three times less than for NFCs in the United States in 2017. ([119])

II.6. Conclusions

The under-development of European capital markets prior to 2008 meant that private risk-sharing in the euro area was grossly insufficient and much lower than in the US and other economies in the aftermath of the global financial crisis. In turn, the lack of adequate private risk-sharing channels via financial markets strongly limited the euro area Member States' capacity to absorb and recover from adverse shocks.

The three main structural barriers hampering the development of a well-functioning financial architecture in the euro area are (i) the corporate sector's over-reliance on bank financing; (ii) the strong "home bias" of credit and capital markets (exacerbated by fragmented sovereign bond markets); which in turn are to a large extent explained by (iii) the lack of transparency of European capital markets and the prevailing fragmented regulatory and institutional frameworks. The Capital Markets Union action plan adopted in 2015 and subsequently reviewed in 2017 and 2018 is a first attempt to overcome these structural barriers.

([112]) In March, the Commission adopted a legislative proposal for an EU framework on crowdfunding and peer-to-peer lending. For more details, see https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5288649_en

([113]) Equity markets provides venture capitalists a viable exit option for their early-stage investments (See Allen, F. and L. Pastor (2018), 'The Capital Markets Union: key challenges', *CEPR Discussion Paper Series* No. 12761).

([114]) Buti, M., Turrini, A, Van den Noord, P. and P. Biroli (2018), 'Defying the 'Juncker Curse': Can Reformist Governments Be Re-elected?', European Economy, Economic Papers No. 32.

([115]) In June 2017 the Commission adopted a proposal for a regulation on a pan-European personal pension product (PEPP). For further details, see https://ec.europa.eu/info/business-economy-euro/banking-and-finance/insurance-and-pensions/personal-pension-products_en

([116]) A market-based system also contributes to the other phases: it reduces vulnerability (see, e.g., Bats, J. and A. Houben (2017), ' Bank-based versus market-based financing: implications for systemic risk', *De Nederlandse Bank Working Paper* No. 577) for a discussion on how market-based systems contribute more to financial stability than a bank-based one); and stimulates the absorption capacity via better cross-sectional risk sharing (Allen, F. and Gale, D. (1997), 'Financial Markets, Intermediaries, and Intertemporal Smoothing', *Journal of Political Economy*, Vol. 105, No. 3, pp. 523-46.). Note that bank-based and market-based systems complement each other (see section II.4).

([117]) Hsu, P.-H., T. Xuan and Y. Xu. (2014) 'Financial development and innovation: Cross-country evidence.' *Journal of Financial Economics*, Vol. 112, No..1, pp.: 116-135.

([118]) Kremer, M. and A. Popov (2018), 'Financial development, financial structure and growth: evidence from Europe', in: European Central Bank, *Financial integration in Europe*, pp. 66-97.

([119]) European Commission, European Financial Stability and Integration Review (EFSIR), various editions and AFME, (2018), Capital Markets Union. Measuring progress and planning for success, pp. 52.

Once these barriers have been overcome, the most direct positive effect of a well-functioning, diversified and integrated CMU on resilience will come via the strengthening of countries' absorption capacity through a number of channels: First, the cross-border holding of assets in a CMU will provide diversified capital income (interest, dividends or capital gains) from across the euro area for households, financial institutions and corporates, allowing them to cushion the impact of domestic shocks. Moreover, a well-functioning CMU will strengthen absorption capacity by reducing the financial market fragmentation and frictions that hamper the transmission of the single monetary policy to the banking and non-banking sectors. Lastly, higher cross-border equity investments into corporates and financial institutions in a well-functioning CMU will also act as a shock-absorber as such inflows tend to be less likely to reverse in a crisis (particularly foreign direct investment) than credit flows due to their higher cost of liquidation.

In the long-run, a well-functioning CMU is expected to reduce the vulnerability of the EU and the euro area to idiosyncratic and structural shocks in three ways. First, it promotes convergence towards a more resilient and consistent market-based financial structure that promotes innovation and so boosts productivity. Secondly, it improves the efficiency of the banking sector with knock-on stabilising effects on the supply of credit (not necessarily increasing the availability of credit) and aggregate demand over the business cycle. For instance, it may facilitate the disposal of non-performing loans on banks' balance sheets via specialised investment funds on secondary markets.

Finally, building a CMU should not be seen in isolation, as it is complementary to a broader set of policies and reforms aimed at completing the EMU architecture and the functioning of the EU as a whole. Such measures include bringing down the remaining barriers in the Single Market to exploit fully the benefits of further integration in goods and services markets, fostering well-functioning labour market along "flexicurity" principles, creating a common stabilisation mechanism, as well as completing the Banking Union and strengthening the institutional framework. At the same time, due regard should be given to the fact that structural reforms that increase for instance product and labour market flexibility may face less resistance if accompanied by reforms that help to bring forward some of the benefits of these reforms via the further development of a CMU.

Looking forward, there are two broad avenues of potential research on CMU. First, a more detailed analysis of the transmission channels through which a well-functioning, diversified and integrated CMU could increase potential growth in the euro area, and in particular the role of equity financing that is relatively low in the euro area. Secondly, as more data becomes available, an empirical analysis of the interactions between CMU implementation, financial integration and economic resilience could be undertaken.