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Quarterly Report on the Euro Area

Volume 18, No 2 (2019)

- **Financial Union: Integration & Stability.** Section prepared by Anna Grochowska and Alexandra Hild
- **Fiscal Policy.** Section prepared by Anton Mangov, Allen Monks, Gilles Mourre and Henk Van Noten
- **Imbalances & Adjustment.** Section prepared by Leonor Coutinho and Alessandro Turrini
- **Institutional Reforms.** Section prepared by Martina Krobath and Jakub Wtorek
- **Monetary Policy.** Section prepared by Anton Jevčák
- **Structural reforms for growth & resilience in the Euro area.** Section prepared by Erik Canton, Gaetano D'Adamo, Luis Garcia Lombardero and Plamen Nikolov

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The **Quarterly Report on the Euro Area** is written by staff of the Directorate-General for Economic and Financial Affairs. It is intended to contribute to a better understanding of economic developments in the euro area and to improve the quality of the public debate surrounding the area's economic policy.

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European Commission
Directorate-General for Economic and Financial Affairs

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Marco Buti
Director-General

This year we celebrate the 20th year of the euro. The euro, our common currency, is more than the coins and notes in our pockets. It is a symbol of our unity and of Europe's promise of prosperity and protection. Since its introduction in 1999, the euro is now the second most widely used currency for global payments. Its adoption has been crucial for the integration of the Single Market. Nonetheless, the financial crisis revealed that the EMU's architecture remains incomplete, in spite of a number of institutional reforms, preventing the full realisation of its potential in a sustainable way. As President von der Leyen stressed in her political guidelines we must never stop making it stronger. This is why we must prioritise the further deepening of the Economic and Monetary Union.

This issue of the Quarterly Report on the Euro Area (QREA) provides an overview of developments and achievements over the past 20 years both in terms of economic performance and institutional developments. It discusses some weaknesses in the EMU's initial construct, the important reforms undertaken since the European debt crisis, and the challenges still to be addressed in various policy domains directly affecting the functioning of the EMU.

This report was prepared in a context of weakening growth and increased uncertainty globally driven by trade tensions, geopolitical concerns and structural economic factors. Against the background of the financial crisis – the more recent interconnected threats to economic prosperity make it even more clear that completing the EMU's architecture with a view to shielding it better against adverse shocks remains a priority for the coming years. A complete EMU (i.e., full Banking Union, Capital Markets Union and stabilisation function) would definitely help smooth shocks, delivering better results in terms of growth, jobs and economic security to the people.

This report and its main findings can be summarised as follows. The first section provides a brief overview of financial market developments since the launch of the euro, with a focus on financial integration and stability. The creation of the Banking Union and of the Capital

Markets Union were two fundamental steps toward completing the EMU architecture. The overhaul of the regulatory framework for financial markets and institutions, partly due to the weaknesses revealed by the financial crisis, helped stabilise Europe's financial sector and enhance its robustness to future shocks. However, further efforts are needed, such as to set up a common deposit insurance scheme and a common backstop for the Single Resolution Fund.

The second section provides an overview of fiscal policy and fiscal surveillance over the last 20 years. The primary objective of the EU's fiscal rules has been to effectively ensure the sustainability of Member States' public debt. To that effect, the framework has provided valuable stability and maintained overall confidence, in particular by correcting excessive fiscal deficits. Nevertheless, the Stability and Growth Pact has become rather complex and the EU's ability to coordinate an appropriate fiscal stance for the euro area remains constrained. This calls for an assessment of what is needed to improve functioning of the fiscal framework also in light of recent experiences and potential institutional reforms more broadly.

The third section reviews the main facts and features affecting adjustment and macroeconomic imbalances since the adoption of the euro. It shows that the EMU's inception had major and long-lasting effects on interest rate spreads and capital flows, which triggered in some cases current account imbalances, strong credit growth and house price bubbles. The financial crisis was followed by the reversal of large current account deficits, protracted deleveraging and recessions in deficit countries, while current account surpluses grew and remained persistent in some large economies. Overall, these developments underscore once again the urgency of completing the EMU with stronger surveillance of macroeconomic imbalances.

The fourth section discusses the evolution of the EMU's institutional architecture. In the early years the focus was mainly on monetary policy and the functioning of the European Central Bank (ECB) and in parallel the fiscal surveillance framework. However, since the onset of the crisis, the focus has shifted to

EMU's institutional architecture, which – even if with an increasing recourse to intergovernmental solutions – has already been considerably strengthened. At the same time, the rule-based approach to governance may be reaching its limits in delivering optimal policy and a symmetric adjustment for the euro area as whole. Overall, to ensure a more resilient EMU governance, there needs to be a rebalancing towards stronger, more accountable institutions, complemented by a simpler, rule-based framework, as well as deeper reforms to the EMU's architecture.

This fifth section focusses on monetary policy. Up to October 2008, the ECB conducted monetary policy mainly by adjusting its key policy rates. Over the first decade, inflation averaged 2.2%, while interest rates declined significantly in the Member States that had experienced high interest rates before adoption of the euro. This has been a significant achievement considering the volatile history in the old European Monetary System. Furthermore, during the global financial crisis and its aftermath, the ECB introduced a number of non-standard measures including large-scale asset purchases to support monetary policy transmission in certain market segments and additional monetary stimulus once key interest rates approached their lower bound. These measures helped to stabilise the euro area economy but also revealed the weakness inherent in the broader EMU setup.

Finally, the sixth section discusses how structural reforms have contributed to economic growth and resilience, while also emphasising certain political-economy barriers to their implementation. Since the launch of the euro, several modes of EU governance

have been employed with a view to foster the implementation of structural reforms, including the open method of coordination, country-specific recommendations, the Structural Reforms Support Service (SRSS), benchmarking, National Productivity Boards, as well as the proposed reform delivery tool and the Budgetary Instrument for Convergence and Competitiveness. Progress with regard to the implementation of structural reforms is slow and uneven across Member States, which in turn calls for continued commitment to growth-enhancing economic reforms at national level and similar policies at EU level.

The euro has delivered tangible benefits such as stable prices, more transparent and competitive markets, as well as increased trade and capital flows. However, this issue of the QREA shows that the deepening of the euro area – which is high on the agenda of the new Commission – is still an unfinished business. The events since the inception of the euro underscore the urgency of completing the EMU with appropriate backstops to deal with major financial crises, a budgetary instrument for the euro area and a new scheme to help countries deal with potentially high unemployment, a genuine banking union to foster a genuine European banking sector and to break doom loops; a capital market union to enhance cross-border capital allocation; and strong and accountable institutions. Completing the EMU's architecture will allow its citizens to equally benefit from the single currency to its fullest extent.

I. Financial Union: Integration and Stability

Section prepared by Anna Grochowska and Alexandra Hild

The introduction of Europe's single currency 20 years ago was an important milestone for the integration of financial markets in the euro area. These markets integrated significantly in the first decade after the launch of the euro, but the integration process came to an abrupt halt with the outburst of the global financial crisis. Since then, the progress of financial and economic integration has slowed down significantly, and concerns about the stability of the overall financial system returned. The weaknesses of the regulatory and supervisory architecture that came to light during the crisis led to calls for comprehensive reforms to stabilise the EU's financial system and promote its integration. In addition to the ad hoc measures to address the crisis, these reforms included: (i) an overhaul of the regulatory framework for financial markets and institutions; and (ii) the creation of two crucial building blocks for a genuine financial union: the banking union and the capital markets union. These reform measures were very successfully designed, and, while not fully completed yet have contributed to the stabilisation of Europe's financial sector. However, further efforts are now necessary to reap the full potential of a true financial union. This section presents an overview of how the financial sector and its regulation have developed over the past two decades. It starts with a literature review on financial integration and stability, followed by an overview of trends in financial integration in the euro area. The subsequent chapters elaborate on the regulatory framework established before the crisis, the weaknesses of the financial system which were unveiled by the crisis, and the subsequent policy response. ⁽¹⁾

I.1. Introduction

The adoption of the European single currency initiated a long process of euro-area financial integration. That process of integration has waxed and waned over the past 20 years. In particular, the global financial crisis significantly interrupted the integration process, as can be seen in Graphs I.1 and I.2. Overall, however, the long-term trend towards financial integration has been maintained.

Almost immediately following the introduction of the euro, the financial services action plan (FSAP) became the key component of the EU's attempt to create a single market for financial services. However, a decade later, the financial crisis exposed several weaknesses in the European financial system and its regulatory and supervisory architecture. The crisis led to calls for more thorough reforms of the regulatory and supervisory framework. In order to achieve a true financial union, these reforms, including the creation of the banking union and the capital markets union (CMU), must be completed.

I.2. Theory and benefits of financial integration

Baele et al. (2004) define a fully integrated market as a market where all market participants face the same relevant characteristics, such as: a single set of rules when dealing with financial instruments and services; equal access to the same set of financial instruments and services; and equal treatment of participants in the market. ⁽²⁾ In other words, full financial integration requires the same access to banks for both investors (the demand side for investment opportunities) and firms (the supply side of investment opportunities), regardless of their region of origin. It also requires the same access to trading, clearing and settlement platforms for investors and firms. Liebscher et al. (2006) show that financial integration can take many forms, including: monetary integration, liberalisation of the capital account, subcontracting abroad of financial services or of financial infrastructure, foreign entry, regulatory convergence, and harmonisation. ⁽³⁾ The concept of financial market integration implies that the law of 'one price' holds, which means that assets with

⁽¹⁾ This section represents the authors' views and not necessarily those of their affiliation. The authors gratefully acknowledge the contribution by Emrah Arbak on access to finance based on SAFE data; support on the data and preparation of the graphs by Nicola Negrelli; and the comments by (in alphabetic order): Markus Aspegren, Elena Peresso, Jennifer Robertson, Emiliano Tornese, Geert Van Campenhout, Christoph Walkner and Corina Weidinger Sosdean (all European Commission, DG FISMA), Zenon Kontolemis (European Commission, DG ECFIN) and two anonymous reviewers.

⁽²⁾ L. Baele, A. Ferrando, P. Hördahl, E. Krylova and C. Monnet (2004), 'Measuring financial integration in the euro area', ECB occasional paper series no. 14, April 2004.

⁽³⁾ K. Liebscher, J. Christl, P. Moolslecher, and D. Ritzberger-Grünwald (2006), Financial development, integration and stability: evidence from Central, Eastern and South-Eastern Europe, Edward Elgar Publishing.

identical risks and returns are priced identically regardless of where they are transacted. ⁽⁴⁾

The economic literature ⁽⁵⁾ identifies several interrelated benefits of financial integration, including more opportunities for risk sharing and for risk diversification; better allocation of capital among investment opportunities; and the potential for higher growth. Some studies also consider financial development as a beneficial consequence of financial integration.

On risk sharing, Jappelli and Pagano (2008) show that integration into larger markets is beneficial to firms, financial markets and institutions. ⁽⁶⁾ In particular, financial integration facilitates the investment process. This is because entrepreneurs with little initial capital have access to more intermediaries that can mobilise savings to cover the costs of investment. In addition, the availability of risk-sharing opportunities improves financial markets and permits risk-averse investors to hedge against negative shocks. This allows higher-risk projects (potentially also with high returns) to be financed. Given that integrated financial markets and institutions are better able to handle credit risk, financial integration removes certain forms of credit constraints faced by investors.

An integrated financial market removes impediments to the trading of financial assets and to the flow of capital. This allows investors to allocate their funds to the most productive use, and at low operational cost. Kalemli-Ozcan et al. (2008) show that opening access to foreign markets gives agents a wider range of financing sources and investment opportunities, and permits the creation of deeper and more liquid markets. This allows for information to be pooled and processed more effectively, and for capital to be allocated more efficiently. ⁽⁷⁾

The economic literature also indicates a strong link between the development of financial structures and economic growth. ⁽⁸⁾ In the neoclassical framework, the opening of international capital markets generates flows from capital-abundant countries towards capital-scarce countries, and thus accelerates convergence (it therefore also accelerates medium-term growth) in poorer countries. Productivity may also increase in the countries receiving foreign capital, since capital flows relieve the economy of credit constraints and thus allow agents to make more productive investments. ⁽⁹⁾ Financial integration may also improve the functioning of domestic financial systems through the intensification of competition and the import of financial services. There is ample evidence in the literature ⁽¹⁰⁾ that financial integration leads to higher economic growth.

At the same time, increased cross-border financial activity creates challenges for financial regulators and supervisors seeking to maintain financial stability. Deeper financial integration requires closer regional financial policy cooperation, because shocks spread more widely in an integrated financial system. Sudden market volatility and abrupt reversals in capital flows across integrated markets may provoke financial crises. Appropriate legal frameworks and rules must therefore be put in place to take account of market circumstances where institutions are organised on a Pan-European, cross-sectoral basis. Possible regulatory safeguards to keep pace with new sources of financial risk and contain institutional and systemic risk include capital adequacy for banks and solvency margins for insurance companies.

Researchers have debated at length the extent of Europe's financial integration — and more specifically the extent of the euro area's financial integration. Their research is not entirely conclusive, as many researchers stress that even a fully integrated financial market may be subject to frictions. ⁽¹¹⁾ What remains unchallenged is the fact that financial integration has progressed in Europe

⁽⁴⁾ R. Feenstra and A. M. Taylor (2016), *International Economics*, Worth Publishers.

⁽⁵⁾ See for more details: *International Finance: A Survey*, H. Kent Baker and Leigh A. Riddick, Oxford University Press Online, 2012.

⁽⁶⁾ T. Jappelli and M. Pagano (2008), 'Financial market integration under EMU', *European Economy, Economic Papers* 312, March 2008.

⁽⁷⁾ S. Kalemli-Ozcan, S. Manganelli, E. Papaioannou and J. L. Peydro (2008), 'Financial Integration and Risk Sharing: The Role of the Monetary Union', working paper prepared for the 5th European Central Banking Conference on The Euro at Ten: Lessons and Challenges.

⁽⁸⁾ R. Levine (1997), 'Financial Development and Economic Growth, Views and Agenda', *Journal of Economic Literature*, 35(2), 688-726.

⁽⁹⁾ A. Bonfiglioli (2008), 'Financial integration, productivity and capital accumulation', *Journal of International Economics*, Elsevier, vol. 76(2), pages 337-355, December.

⁽¹⁰⁾ See e.g. Eichengreen, and Wyplosz (2001), Klein and Olivei (2008), and Quinn and Toyoda (2008).

⁽¹¹⁾ R. Matoušek and D. Stavárek (2012), *Financial Integration in the European Union*, Taylor&Francis.

since the Treaty of Rome (1957), which created the basic conditions for the creation of a single European market for financial services.

The adoption of the common currency in 1999 gave a major impetus to financial integration in the euro area. ⁽¹²⁾ As economists point out, a single currency is an important component of a common financial system and a strong promoter of financial integration. ⁽¹³⁾

I.3. Trends in euro-area financial integration

Euro-area financial integration began to increase after the inception of the euro, but stalled during the global financial crisis. Remarkably, integration in prices (where prices for — and returns on — similar investments in different euro-area countries converged) consistently outperformed quantity-based measures of integration (which cover interbank markets and which include the money and banking markets, bond markets and equity markets). After the acute phase of the crisis, the aggregate indicators of euro-area financial integration resumed their upward trend — strongly in the case of prices, but much less strongly in the case of quantities (see Graph I.1).

The main drivers behind the recent progress in price-based indicators of euro-area financial integration, whose level is still to reach pre-crisis levels, have been: (i) the convergence in equity returns; and (ii) the convergence in bond yields along with declining risk premia (see Graph I.2). In contrast, the slight decrease in the quantity-based indicator of integration over the past few years appears to result mainly from a decline in cross-border interbank lending. This decline in cross-border interbank lending may be linked to lower counterparties' needs to undertake transactions within the euro area money market given the ECB's loose monetary policy and in particular its sustained liquidity injections into the euro area banking system.

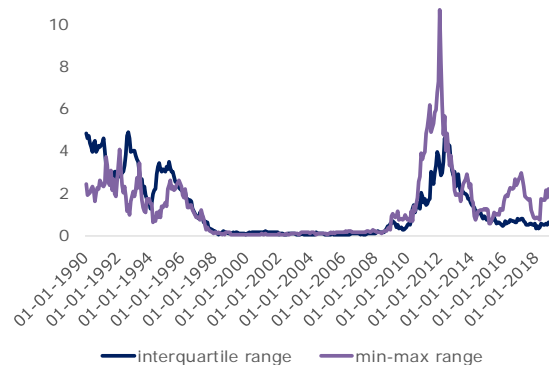
Graph I.1: Composite indicators of euro-area financial integration



Note: The price-based composite indicator aggregates 10 indicators that cover the four main segments, i.e. the money, bond, equity and banking markets. The quantity-based composite indicator aggregates 5 indicators, all covering various market segments. The indicators are bounded between 0 (full fragmentation) and 1 (full integration). See more details in ECB's Financial integration in Europe, May 2018, pp. 127-131.

Source: ECB

Graph I.2: Dispersion of euro-area ten-year sovereign-bond yields



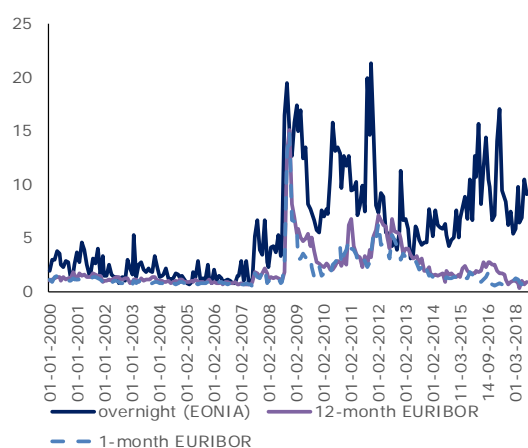
Source: ECB

Looking at specific market segments, money-market indicators of financial integration give a mixed picture. In the unsecured money market, the dispersion in interbank lending rates shows volatility in recent years. This volatility may be linked to declining transaction volumes on the back of greater excess liquidity injected through the Eurosystem's monetary policy operations (see Graph I.3). In this environment of lower turnover, outlier transactions, even at small volumes, have a pronounced impact on interest-rate dispersion.

⁽¹²⁾ Liebscher et al. (2006), op. cit.

⁽¹³⁾ Jikang, Z. and Xinhui, W. (2004), 'Financial Market Integration in Euro Area, Development and obstacles', in The 4th Meeting of the European Studies Centers in Asia: EU Enlargement and Institutional Reforms and Asia, China: European Studies in Asia.

Graph I.3: Dispersion in euro-area countries' unsecured interbank lending rates



Note: Dispersion is measured using the interquartile range of euro-area countries' average unsecured interbank lending rates.

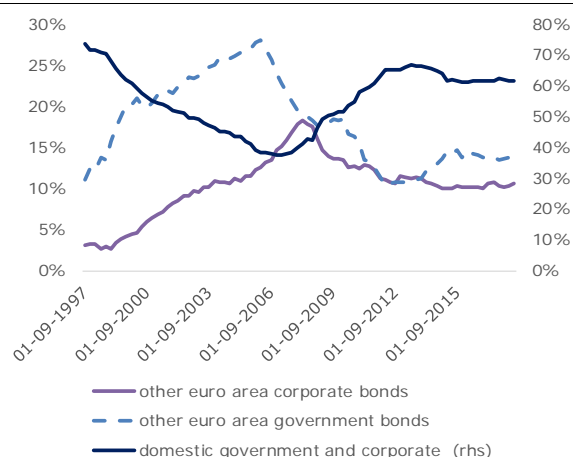
Source: GDP

A high level of interest-rate dispersion was also registered in the secured money market. This was linked to high demand for high-quality collateral amid the ongoing public-sector asset purchases by the Eurosystem.

In the securities market, euro area equity market integration, as measured by differences in returns between euro area countries, has recently reached again pre-financial crisis levels. In the sovereign bond segment, sovereign bond yields showed evidence of a return to cross-country convergence, following an increase in the dispersion rate during years 2015-2017. Convergence also continued in non-financial corporate bond yields while the measures of financial integration based on the portfolio structures of euro area securities investors showed mixed trends. The exposures of monetary and financial institutions (MFIs)⁽¹⁴⁾ to euro area sovereign and corporate bonds issued outside their domestic market increased during the first few years following euro inception but the trend reversed during the crisis (for corporate bonds) or even before (for government bonds) – see Graph I.4. More recently, both groups of exposures stabilised at levels exceeding those from approximately 20 years ago.

⁽¹⁴⁾ MFIs constitute one of the most prominent sub-sectors of euro area investors.

Graph I.4: Share of MFI cross-border holdings of debt securities issued by euro-area and EU corporates and sovereigns



Source: ECB

In banking, the convergence of several price-based euro-area banking-market indicators continued. This was partly due to support from the ECB's non-standard monetary policy measures. The narrowing dispersion in bank bond yields was helped in recent years by the positive market reaction to the resolutions, liquidations and recapitalisations of European banks and by the reduction in the stock of non-performing loans (NPLs — loans where the borrower is unable, or is deemed unlikely to be able, to make scheduled payments) (see Graph I.10).

Meanwhile, interest rates on lending to non-financial corporations and to households have continued to decline since the inception of the euro, amid falling cross-country dispersion. These developments indicate that access to finance improved for households and companies, including for small and medium-sized enterprises (SMEs) (see more details in Box I.1). The results of the bank lending survey⁽¹⁵⁾ show changing trends in credit supply and demand in the euro area over the last two decades. The period immediately following the inception of the euro was marked by significant supply constraints, as well as by weak demand for credit. These weaknesses gradually dissipated, but frictions started to rebuild, especially in stressed countries, during the global financial and euro-area sovereign debt crisis. In recent years, there have

⁽¹⁵⁾ The bank lending survey provides information on bank lending conditions in the euro area. It supplements existing statistics with information on the supply of and demand for loans to enterprises and households.

been consistent improvements in both credit supply and demand conditions throughout the euro area (see Graph I.5).

Graph I.5: Credit supply and demand conditions in the euro area



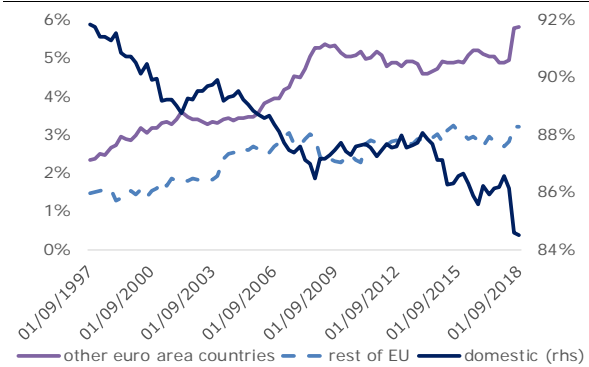
Note: For supply, values correspond to the net percentages of banks contributing to tightening credit standards. For demand, values correspond to the net percentages of banks reporting a positive contribution to demand.

Source: ECB

Despite gradual progress, quantity-based indicators continue to show that there is fragmentation in cross-border and retail banking. The share of outstanding cross-border bank loans provided to non-MFIs is currently at around 5%. The share of cross-border loans to non-financial corporates remains below 10% while the share of cross-border loans to households remains below 1%. However, euro area equity and bond investment funds remained diversified across euro area Member States and beyond. The combined share of their investments in other euro area Member States and outside euro area have been increasing (see Graph I.6).

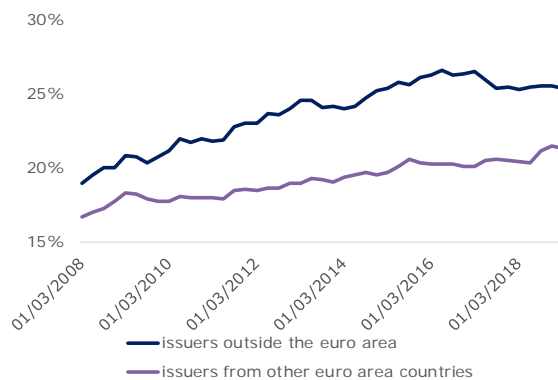
Further, there are signs that euro-area financial integration is becoming more resilient to shocks. This trend can be illustrated by foreign equity investments gaining ground over foreign debt investments, and by foreign direct investments strengthening relative to portfolio investments (see Graph I.7). Moreover, cross-border bank lending to retail customers has slowly increased over time in comparison to cross-border interbank lending. ⁽¹⁶⁾

Graph I.6: MFI loans to non-MFIs: outstanding amounts by residency of counterparty



Source: ECB

Graph I.7: Euro area cross-border equity holdings



Source: ECB

Overall, cross-border, private financial risk sharing, which refers to attempts by households and firms to smooth out their consumption streams against fluctuations in the business cycle of their country resulting from economic shocks, is still fairly limited. ⁽¹⁷⁾ ECB calculations show that, as of 2017, almost 80% of the idiosyncratic shocks to a country's GDP growth remain unsmoothed. According to the literature, better integration of capital and credit markets could make much larger contributions to risk sharing. ⁽¹⁸⁾

⁽¹⁷⁾ Idem.

⁽¹⁸⁾ Asdrubali, P., Sorensen, B., and Yosha, O., 'Channels of Interstate Risk Sharing: United States 1963-1990.' Quarterly Journal of Economics, Vol. 111, 1996.

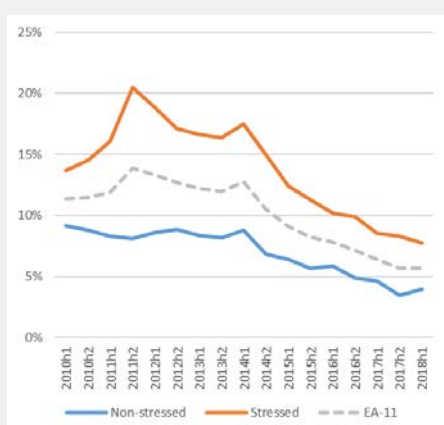
⁽¹⁶⁾ See more details in Financial Integration in Europe, ECB, May 2019.

Box 1.1: Developments in access to finance based on SAFE data

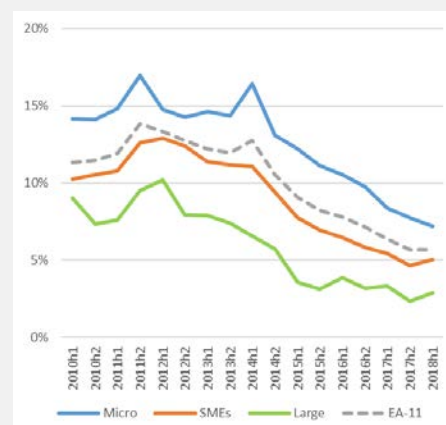
More than 10 years after the onset of the global financial crisis, the availability of bank financing has become a much less significant problem for firms within the euro-area¹. In particular, the results of the EU's survey on the access to finance of enterprises (SAFE) make it clear that the availability of external bank financing has improved greatly since 2010 in 11 euro-area countries for which data coverage remains comparable. Indeed, as of mid-2018, only 5.7% of sampled firms were deemed to be credit constrained, down from a peak of 13.8% in late 2011 (Graph 1a). Moreover, although credit constraints have eased for all firms, they continue to be much more significant for smaller firms, affecting nearly 7.2% of micro-sized firms in mid-2018 as opposed to 2.9% of larger firms in the same period (Graph 1b).

Graph 1. Credit-constrained* firms (% of sampled firms)

(a) by financial market conditions **



(b) by firm size ***



Source: Survey on the access to finance of enterprises (SAFE); European Commission.

Notes: Figures aggregate the share of firms facing problems in accessing bank loans or credit lines. *Credit-constrained firms are those firms that received less than 75% of the original amount sought, including a full rejection, or those that refused the bank's offer. **The EA-11 countries that have not experienced severe financial market stress are identified as Austria, Belgium, Finland, France, Germany, and the Netherlands. The stressed EA-11 countries are Greece, Ireland, Italy, Portugal, and Spain. *** Micro enterprises are enterprises with 1-9 employees, small- and medium-sized enterprises (SMEs) are those with 10-249 employees, and large enterprises have 250 or more employees.

The figures also make it clear that the availability of bank financing continues to be more difficult for firms in countries that have experienced a severe episode of financial market stress. This is especially the case for Greece (country-specific data are not shown here), where 17.1% of firms are credit constrained, and 31.3% of firms say that access to finance is their most pressing problem. A deeper analysis reveals that most of this cross-country variability can be explained by: (i) changes in business outlook (i.e. sales and profitability); (ii) future growth expectations; (iii) credit history; and (iv) financial and macro-economic conditions.

An arguably less positive development has been the declining share of firms that seek bank financing. As of mid-2018, 67.5% of all sampled firms have refrained from seeking financing, a percentage which has been continuously increasing since the beginning of the survey (Graph 2a).

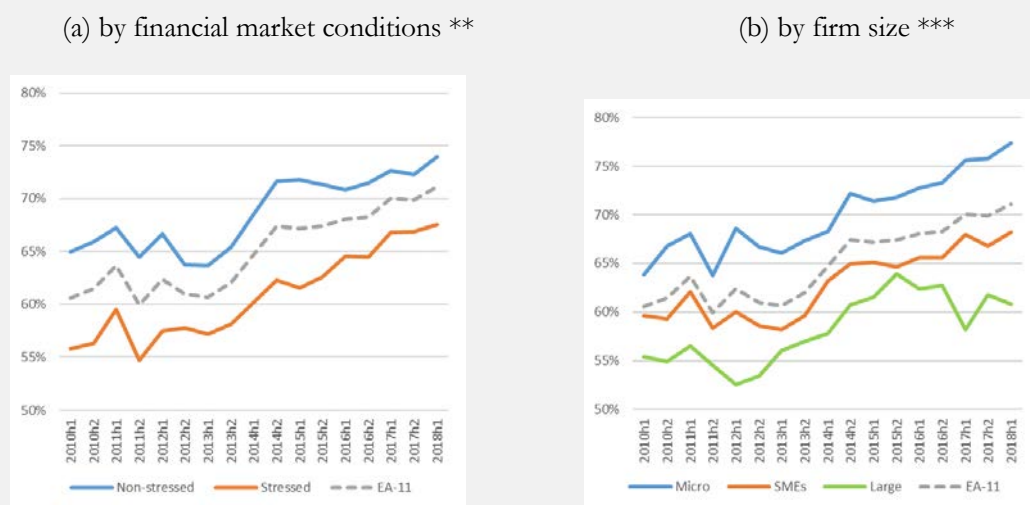
(1) The discussion in this box uses data from the EU's Survey on the access to finance of enterprises (SAFE) to assess both the availability of — and the need for — external bank financing by firms within the euro area since 2010. The analysis has been limited to 11 countries (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, and Spain) to ensure homogenous data coverage with the sample period.

(Continued on the next page)

Box (continued)

The figures also reveal that the share of firms not needing bank financing is much greater in countries that have not faced severe financial market stress. This tendency holds for micro-sized firms and SMEs (Graph 2b). However, larger firms appear to have been more likely to seek bank financing since late 2015, which may be a direct result of the ECB's expanded asset purchase programme. An empirical analysis reveals that an improving business outlook, and the corresponding ability of a firm to generate the needed funds internally, help to explain a relatively small part of the cross-country and intertemporal variability. The data do not highlight any increased use of alternative non-bank financing. Put together, these findings suggest that declining credit demand may be driven by reasons other than internal fund generation or alternative funding sources. These other reasons may include high levels of debt, economic and political uncertainty, and so on.

Graph 2. Firms that did not apply* for bank financing (% of sampled firms)



Source: Survey on the access to finance of enterprises (SAFE); European Commission.

Notes: Figures aggregate the share of firms facing problems in accessing bank loans or credit lines. *The figures exclude firms that refrained from applying for a bank loan or a credit line due to potential eventual rejection. **The EA-11 countries that have not experienced severe financial market stress are identified as Austria, Belgium, Finland, France, Germany, and the Netherlands. The stressed EA-11 countries are Greece, Ireland, Italy, Portugal, and Spain. *** Micro enterprises are enterprises with 1-9 employees, small- and medium-sized enterprises (SMEs) are those with 10-249 employees, and large enterprises have 250 or more employees.

I.4. From euro inception until the crisis

The first decade which elapsed since euro inception can be characterised by a significant growth of cross-border banking groups in Europe.⁽¹⁹⁾ While some general factors, such as the globalisation of financial markets fostered this process, also EU-specific drivers boosted cross-border financial activity. In particular, the legal and

regulatory convergence observed in the 1990s⁽²⁰⁾ and the elimination of the exchange rate risk through the introduction of the euro are two important factors that pushed cross-border financial activity.⁽²¹⁾

⁽¹⁹⁾ See F. Allen, T. Beck, E. Carletti, P. Lane, D. Schoenmaker and W. Wagner. (2011), 'Cross-Border Banking in Europe: Implications for Financial Stability and Macroeconomic Policies'. Centre for Economic Policy Research (CEPR).

⁽²⁰⁾ One milestone in this regard was the Second Banking Directive (No 89/646) which entered into force in January 1993 and introduced the Single Banking Licence.

⁽²¹⁾ See S. Kalemli-Ozcan, E. Papaioannou, and J.-L. Peydro, (2010), 'What lies beneath the euro's effect on financial integration? Currency risk, legal harmonization, or trade?', *Journal of International Economics*, 81, issue 1, p. 75-88.

In order to strengthen the emerging single market for financial services in Europe, the FSAP was the key action plan guiding the EU's attempt to create a single market for financial services. The plan was issued in May 1999 and it tackled three strategic objectives: (i) the creation of a single market for wholesale financial services; (ii) ensuring open and secure retail financial markets; and (iii) ensuring modern prudential rules and supervision. ⁽²²⁾

In order to complete the single wholesale market, the FSAP called for:

- the removal of outstanding barriers to raising capital (an update to the Directives on reporting requirements and prospectuses);
- a common legal framework for integrated securities and derivatives markets (amendment of the Investment Services Directive; Directive on market manipulation; and the Communication on clarification of protection rules for sophisticated and retail investors);
- a single set of financial statements for listed companies, and legal security to underpin cross-border securities trades (amendments to financial collateral arrangements);
- a secure and transparent environment for cross-border restructuring (agreement on proposals for a European company statute and takeover-bids directive; proposals for directives on cross-border mergers and transfers of company headquarters; requirement for disclosure of objective and stable criteria for the authorisation of restructuring in the banking sector);
- a sound framework for asset managers to optimise the performance of their portfolios in the interests of their investors (proposals for directives on: (i) prudential supervision of — and tax arrangements for — supplementary pensions; and (ii) closed-end collective investment funds).

To develop open and secure markets for retail financial services, the FSAP promoted better information, transparency and security for the cross-border provision of retail financial services

⁽²²⁾ See European Commission (1999), Financial Services Action Plan, COM(1999)232.

(Directive on distance selling of financial services; Recommendation on mortgage credit information; proposal for a directive on insurance intermediaries; action plan to prevent counterfeiting and fraud in payment systems). The FSAP also proposed the speedier resolution of consumer disputes through effective extra-judicial procedures (Communication on out-of-court settlements) and the balanced application of local consumer-protection rules.

To ensure the continued stability of EU financial markets, the FSAP proposed to bring banking, insurance and securities prudential legislation up to the highest standards. It proposed to do this via:

- the adoption of a directive on the winding-up and liquidation of banks and insurance companies;
- the adoption of a directive on electronic money;
- amendments to the Money Laundering Directive;
- proposals to amend the capital framework for banks and investment firms; and
- proposals to amend solvency margins for insurance companies.

The FSAP also proposed: (i) a directive on the prudential supervision of financial conglomerates; and (ii) specific arrangements to increase cross-sectoral discussion and cooperation between authorities on issues of common concern (creation of a securities advisory committee).

On mutual funds, several successive directives on undertakings for collective investment in transferable securities (UCITS) ⁽²³⁾ were adopted. Finally, the FSAP addressed broader issues on an optimal single financial market, including the elimination of tax obstacles and distortions. ⁽²⁴⁾

To support the development of the proposals and policies outlined above, the 'Lamfalussy process' was designed in March 2001. This process was composed of four 'levels', each focusing on a

⁽²³⁾ Including, Directive 2009/65/EC and Directive 2014/91/EU.

⁽²⁴⁾ See European Commission (2005), FSAP Evaluation, Part I: Process and implementation, <http://ec.europa.eu/smart-regulation/evaluation/search/download.do?documentId=447>.

specific stage of the implementation of legislation. At the first level, the European Parliament and Council adopted a piece of legislation, setting out the core values of a law and building guidelines on its implementation. The law then progressed to the second level, where sector-specific committees and regulators advised on technical details. At the third level, national regulators worked on coordinating new regulations with other countries. The fourth level involved compliance with — and enforcement of — the new rules and laws. The Lamfalussy process was a significant catalyst in delivering successful agreements on four key measures of the FSAP: the Market Abuse Directive, adopted on 3 December 2002; the Prospectus Directive, adopted on 15 July 2003; the Markets in Financial Instruments Directive (MiFID), adopted on 27 April 2004; and the Transparency Directive, adopted in 2004.

The Lamfalussy process strengthened the role, legal status and political accountability of what were known as Level 3 committees. These committees subsequently evolved into the three supervisory authorities constituting the European system of financial supervision: the European Banking Authority (EBA); the European Insurance and Occupational Pensions Authority (EIOPA); and the European Securities and Markets Authority (ESMA). These reforms set the ground for subsequent supervisory convergence at euro-area and EU level.

The Commission's White Paper on Financial Services Policy 2005-2010⁽²⁵⁾ presented the Commission's financial-services policy priorities for the period after the FSAP. The main objectives of the White Paper were:

- to strengthen the achievements made under the FSAP;
- to remove remaining inconsistencies in the regulatory framework;
- to further improve the supervisory architecture;
- to create more competition between financial services providers;

- to bolster the EU's position in global capital markets.

The FSAP was largely completed by its 2004 deadline (39 of the 42 measures adopted) and two further measures were adopted in 2005. Member States made considerable efforts to transpose FSAP directives into national law, albeit at different speeds. Still, the plan left a number of significant fiscal and legal obstacles to creating a truly Single Market in financial services unaddressed, for example as regards the treatment of pensions across Member States. An important remaining challenge was the even and full implementation and enforcement of the newly adopted rules and regulations.

During the first decade of the euro's existence, the financial services industry was actively involved in the rule-setting process. In particular, the Giovannini Group⁽²⁶⁾ produced reports on: (i) the re-denomination of bond markets into euro (1997); (ii) the EU repo market (1999); and (iii) coordinated issuance of euro-area government bonds (2000). The role of the Group was essential in the area of post-trading, where in 2001⁽²⁷⁾ it identified 15 barriers to efficient cross-border clearing and settlement. It categorised these barriers under three headings: (i) national differences in technical requirements/market practices (10 barriers); (ii) national differences in tax procedures (2 barriers); and (iii) legal certainty (3 barriers). In the subsequent report (2003)⁽²⁸⁾ the Group proposed actions to remedy the identified problems. These actions took the form of a set of technical standards, market conventions, rules, regulations, and laws that are consistent with a barrier-free environment for the provision of post-trading services. As a follow-up to these efforts, European securities exchanges, clearing houses and central securities depositories signed on 7 November 2006 the code of conduct on clearing and settlement. However, the scope and implementation of this code of conduct turned out to be insufficient.

⁽²⁵⁾ European Commission (2005), White Paper — Financial Services Policy 2005-2010, COM(2005) 629 final.

⁽²⁶⁾ Formed in 1996 to advise the Commission on issues relating to EU financial integration and the efficiency of euro-denominated financial markets.

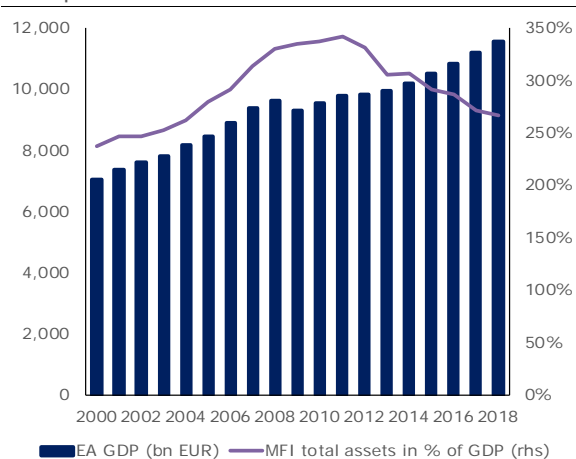
⁽²⁷⁾ https://ec.europa.eu/info/system/files/first_giovannini_report_en.pdf.

⁽²⁸⁾ https://ec.europa.eu/info/system/files/second_giovannini_report_en.pdf.

I.5. The crisis unveiled weaknesses

In the years preceding the global financial and economic crisis, the European financial sector experienced a boom. The financial system grew significantly in size during these years (see Graph I.8), and the operations of large financial institutions expanded, including across borders. These pre-crisis years also saw financial markets become increasingly integrated internationally. As mentioned at the beginning of section 4, this rapid growth of global banking groups, including those with headquarters in the EU, was fuelled by the introduction of the euro. However, other factors also played a role in this growth, such as the EU's enlargement, the US financial market boom, and the low interest-rate environment. ⁽²⁹⁾

Graph I.8: Total assets of euro-area MFIs



Source: ECB SDW, Eurostat

The global financial and economic crisis, which started in 2007-2008 in the US, exposed weaknesses in the European — and in particular the euro-area — financial system. Many challenges were imported, or reinforced, by financial imbalances elsewhere, and the FSAP had only addressed some of the financial stability challenges of the system. The large scale of banking losses globally and the failure of leading investment banks such as Lehman Brothers spurred uncertainty in the market and prevented banks from lending to each other restricting liquidity provision across financial markets and to the broader economy. The described problems in the banking system, coupled with existing vulnerabilities of some euro-area

Member States led to significant financial-sector disruptions and to the sovereign debt crisis in 2010.

Overall, this led to a return to fragmentation along national borders, first appearing in the banking sector and subsequently spreading to the sovereign sector. Some of the divergences resulting in fragmentation, were driven by country-specific differences in fundamentals and other factors (e.g. debt/GDP ratio, relative size of the financial sector, banking sector openness, national ring-fencing of financial markets).

At the peak of the financial crisis, the euro-area banking system became fragile. Stricter funding conditions meant that the flow of interbank funding decreased, and in some cases even came to a halt. This was particularly the case for cross-border, and unsecured, borrowing. This was because foreign lenders started charging larger premia or ceased lending altogether. At the same time, banks had limited ability to absorb losses, given their often-large expansion of balance sheets without provisioning sufficiently for the level of risk taken. Banks had also come to rely on relatively short-term wholesale funding to finance their balance sheets, and this wholesale funding proved unstable in the crisis. The resulting maturity mismatch between these short-term liabilities and longer-term loans or other assets, made them vulnerable to liquidity shocks. These liquidity shocks, combined with the solvency problems of some banks, led to calls for unprecedented state aid to support the euro-area banking system.

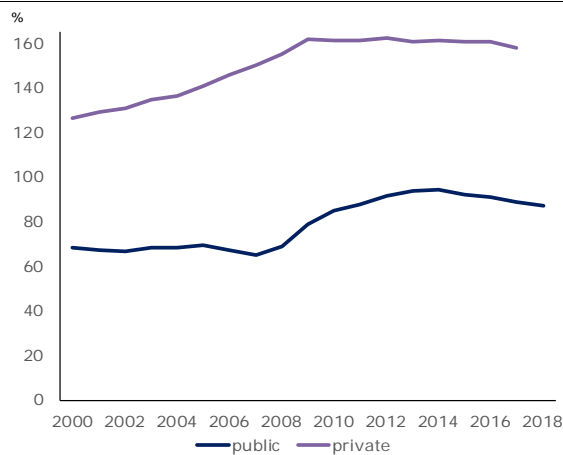
As a consequence of the financial crisis, bank lending to the economy dropped sharply. The heavy reliance on banks as a source of funding, and the relatively limited role of other sources of financing (such as equity markets) aggravated the problem. This seriously hampered the economic growth of the euro area. The financing conditions faced by companies very much depended on their geographical location.

The disproportionate growth of assets in the financial sector in the years preceding the crisis was accompanied by the accumulation of excessive levels of private- and public-sector debt (see Graph I.9). The low level of sovereign-bond yields created an environment in which governments were no longer subject to market pressure. The build-up of high levels of private (and public) debt hindered economic recovery, in particular in vulnerable Member States. At the same time, these

⁽²⁹⁾ See European Commission (2014), Commission Staff Working Document Economic Review of the Financial Regulation Agenda, SWD(2014) 158 final.

high debt levels exacerbated problems in the banking sector. The share of NPLs on the balance sheets of certain European banks increased significantly, as private-sector borrowers faced debt-servicing problems in the weak economic environment (see Graph I.10). The increased NPL levels diminished the capital position of many banks, and in some cases, reduced their profitability, thus hampering their ability to provide financing to the real economy. ⁽³⁰⁾

Graph I.9: Euro-area public and private debt (in % of GDP)



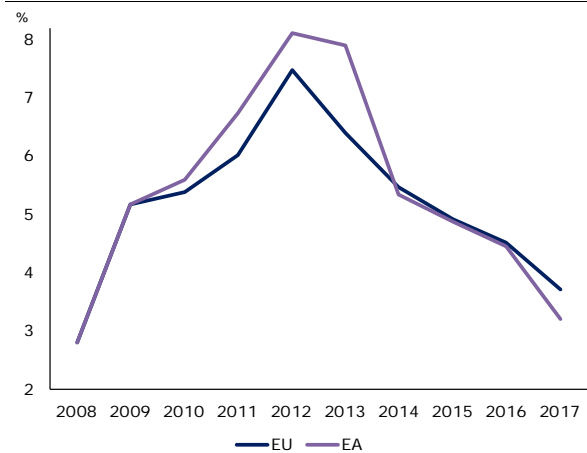
Note: Private-sector debt comprises debt of non-financial corporations, households and non-profit institutions serving households.

Source: Eurostat

The sovereign debt crisis also illustrated the risks emerging from banks' exposure to sovereign debt. In particular, it illustrated the systemic risk that can arise from banks' disproportionately large exposure to the sovereign debt of their 'home' sovereigns (i.e. the countries in which the bank conducted most of its business), referred to as the 'home bias' (see Graph I.11). The adverse bank-sovereign loop transmitted the turmoil on sovereign debt markets into bank funding markets. This in turn affected lending conditions to the real economy. As a consequence, the single market for banking services once more fragmented along national borders.

⁽³⁰⁾ See European Commission (2018), Commission Staff Working Document accompanying the document Communication from the Commission to the European Parliament, the Council and the European Central Bank 'First Progress Report on the Reduction of Non-Performing Loans in Europe', COM(2018) 37 final/2.

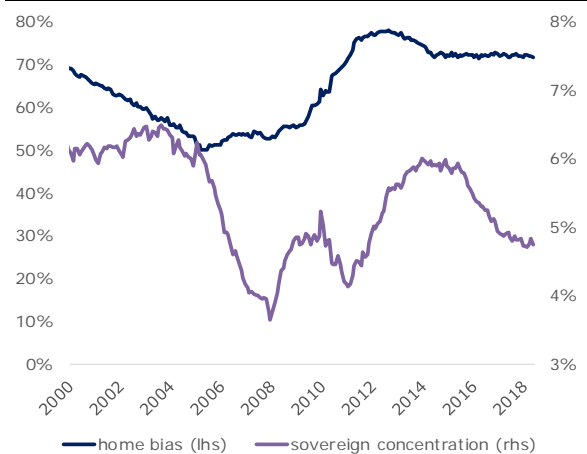
Graph I.10: EU and euro-area (EA) banks' total NPLs (in % of total gross loans, end-of-year values)



Note: data only available as of 2008

Source: World Bank - World Development Indicators

Graph I.11: Euro-area MFIs' home bias and sovereign concentration



Note: home bias = domestic (EA) sovereign bonds as a percentage of all EA sovereign bonds held by MFIs; sovereign concentration = EA sovereign bonds as a percentage of total MFIs' assets

Source: ECB SDW and own calculations

Another development observed since the global financial crisis is the retrenchment of cross-border banking in the EU. European banks cut down their cross-border bank claims by approximately 25%. In particular, intra-EU claims were sharply reduced, and also commercial presence in other Member States was reduced. This led to geographically little diversified balance sheets,

making banks more vulnerable to domestic shocks. ⁽³¹⁾

There were many causes of the crisis, and these causes were all intertwined. ⁽³²⁾ Although many factors — both European and global — played an important role, two of the key issues in the crisis were: (i) the inadequate supervisory and regulatory framework; and (ii) the absence of a framework to facilitate an orderly winding down of financial institutions. Rectifying these flaws was at the centre of reform efforts in the years following the crisis.

I.6. Policy response to the crisis and remaining factors that hinder financial integration

Given the weaknesses of the regulatory and supervisory framework, and the lack of crisis management tools available, the initial policy response to the crisis was based on ad hoc (and in some cases unconventional) measures to address the particularly urgent situation. To safeguard financial stability, Member States took timely and coordinated action at national level, and provided unprecedented public support to their banking sector within the EU State aid framework. That framework ensured an orderly and coordinated process to rescue certain banks. Overall, the total volume of State aid increased significantly in response to the financial crisis. In 2008, aid provided in the form of cash expenditure represented €671 billion or 5.4% of the EU GDP and €1.3 trillion or 10.3% of the EU GDP for contingent exposures. ⁽³³⁾ At the same time, the central banks of major economies coordinated their liquidity interventions, and the European Central Bank took a range of additional — in some cases novel — monetary policy measures, including the measure known as quantitative easing.

Although the 1999 legislative programme had been largely completed ⁽³⁴⁾ before mid-2007, the ad hoc measures taken during the crisis were not sufficient to resolve all the implications of the financial crisis or to prevent future similar crises from happening. A fundamental overhaul of the regulatory and supervisory framework in the financial sector was therefore necessary. ⁽³⁵⁾ Consequently, significant reform measures were taken or launched to stabilise Europe's financial system and to restore the confidence of markets and the general public ⁽³⁶⁾. More concretely, since the start of the crisis, the Commission proposed more than 50 legislative and non-legislative measures ⁽³⁷⁾ to build a safe, responsible and growth-enhancing financial sector in Europe.

In the context of the 1999 legislative programme, most EU financial market legislation had taken the form of directives, which had to be transposed into national law. To address some of the shortcomings of that approach, the Commission released a set of harmonised prudential rules in what was called the 'single rulebook' ⁽³⁸⁾, initiated in 2009 ⁽³⁹⁾. The Commission also ensured the consistent application of the regulatory banking framework across the EU. This completed the single market in financial services and ensured the uniform application of the Basel rules in all EU Member States.

⁽³¹⁾ See Emter et al. (2018), 'Cross-border banking in the EU since the crisis: what is driving the great retrenchment?', ECB Working Paper Series No 2130.

⁽³²⁾ The causes of the crisis have been assessed in various publications. See, for example, European Commission (2009) *Economic crisis in Europe: causes, consequences, and responses*, European Economy No 7, September 2009; High-level Group on Financial Supervision in the EU (2009); Claessens et al (2014); Reinhart and Rogoff (2009); Acharya and Richardson (2009); Acharya et al (2009); Roubini and Mihm (2010); Lo (2012); Gorton (2010); and Gorton and Metrick (2012).

⁽³³⁾ See Adamczyk G. and Windisch B. (2015), 'Competition State aid brief – State aid to European banks: returning to viability', http://ec.europa.eu/competition/publications/csb/csb2015_001_en.pdf.

⁽³⁴⁾ One exception was the Directive on insurance supervision (Solvency II). The proposal was only tabled in July 2007 and adopted in 2009. See Directive 2009/138/EC.

⁽³⁵⁾ For a holistic overview and assessment of the EU's financial services policy since mid-2007, see Véron (2018), 'EU financial services policy since 2007: crisis, responses and prospects', *Global Policy* Volume 9, Supplement 1, June 2018, available at <https://onlinelibrary.wiley.com/doi/full/10.1111/1758-5899.12564>.

⁽³⁶⁾ See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (2014), *A reformed financial sector for Europe*, COM(2014) 279 final.

⁽³⁷⁾ For an overview of the progress of financial reforms, see https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-reforms-and-their-progress/progress-financial-reforms_en.

⁽³⁸⁾ The most relevant legal acts of the Single Rulebook are the Capital Requirements Regulation (CRR) and the Capital Requirements Directive (CRD IV); the Bank Recovery and Resolution Directive (BRRD); and the amended Directive on Deposit Guarantee Schemes (DGSD). Other acts include the Payment Services Directive (PSD2); the Mortgage Credit Directive (MCD); the corresponding technical standards developed by the European Banking Authority (EBA) and adopted by the European Commission (RTS and ITS); and the EBA Guidelines.

⁽³⁹⁾ The de Larosière Report of 2009 laid down the vision for a European single rulebook. See European Commission (2009), *Report of the High-Level Group on Financial Supervision in the EU* chaired by Jacques de Larosière.

Policy efforts in the banking sector were complemented by reforms of the regulatory framework for selected financial institutions and parts of the financial infrastructure. One notable example was the revision of the Regulation on credit rating agencies (CRAs) ⁽⁴⁰⁾. In the period leading up to the financial and sovereign debt crises, CRAs failed to properly appreciate the risks in certain categories of financial instruments. In response, the Commission strengthened the regulatory and supervisory framework for CRAs. Another example is the strengthening of post-trade infrastructure. In this area, new rules were adopted in 2012 that required certain over-the-counter (OTC) derivative contracts to be cleared through central counterparties (CCPs). The aim of this reform was to mitigate some of the risks posed by the credit default swap market and other derivatives markets that were revealed by the crisis. In addition, the EU adopted in 2014 a regulation on central securities depositories ⁽⁴¹⁾ to strengthen, harmonise and streamline the settlement process across borders. Finally, the Securities Financing Transactions Regulation was adopted in 2015 to increase transparency and reduce risk around transactions in securities used by investors and firms to fund their activities.

Building and preserving financial stability in the euro area had been underway for more than 10 years. It had been significantly supported by the Lamfalussy process and the de Larosière report. However, some remaining gaps were identified and solutions had to be developed. Thus, two crucial building blocks were proposed to help achieve full financial integration within the euro area: the banking union and the CMU. The banking union was launched to further weaken the connection between banks and the governments of their home countries, thus strengthening the resilience of the European banking sector and ensuring that banks in difficulty are not ‘saved’ by taxpayers’ money. It also aimed at strengthening the crisis management and resolution framework. The CMU aimed to promote private risk sharing and improve access to funding by offering companies more diversified sources of funding.

All of these reforms were complemented by the adoption of: (i) an action plan on fintech in the

financial sector to harness the potential of financial technology, both for companies and for investors; and (ii) the sustainable finance action plan, to redirect capital flows towards sustainable investment and to manage financial risks stemming from environmental degradation and social issues (see more details below).

The banking sector and the banking union

The regulatory and supervisory framework for the financial sector was overhauled to safeguard financial stability and enable the EU banking sector to recover ⁽⁴²⁾. The following measures have all helped to create a more resilient banking sector in the EU:

- higher capital requirements;
- the introduction of liquidity requirements;
- the introduction of a macro-prudential dimension to bank regulation and supervision;
- reforms to remuneration rules to curb excessive risk-taking;
- rules to curb moral hazard in securitisation; and
- the creation of bank resolution frameworks to address the too-big-to-fail problem.

In addition, a new architecture was put in place for the supervision and resolution of large or systemic credit institutions in the euro area. The first two pillars of the banking union — the single supervisory mechanism ⁽⁴³⁾ and the single resolution mechanism (SRM) ⁽⁴⁴⁾ — have already been implemented and are operational. However, work remains ongoing on a common European deposit insurance scheme (EDIS) ⁽⁴⁵⁾ and the implementation of a common backstop to the single resolution fund (SRF). The creation of the banking union was preceded by the establishment of the European system of financial supervision,

⁽⁴²⁾ These reforms originated from reform efforts initiated at a global G20 level.

⁽⁴³⁾ The SSM performs prudential supervision of credit institutions in the banking union.

⁽⁴⁴⁾ The SRM ensures consistent implementation of the rules for orderly recovery and resolution of banks in the banking union that are failing or likely to fail. The SRF, which the SRB has at its disposal, has €24.9 billion in contributions from banks.

⁽⁴⁵⁾ The Commission made a legislative proposal on EDIS in 2015.

⁽⁴⁰⁾ The latest legislative package on CRAs consists of Regulation (EU) No 462/2013 and Directive 2013/14/EU.

⁽⁴¹⁾ Regulation (EU) No 909/2014.

which is a network of micro- and macro-prudential authorities supervising the implementation of financial regulations. The European system of financial supervision is now centred on the three European supervisory authorities (ESAs)⁽⁴⁶⁾ the EBA; the EIOPA; and the ESMA), along with the European Systemic Risk Board (ESRB)⁽⁴⁷⁾ and national banking supervisors.⁽⁴⁸⁾

The banking package, a set of measures proposed by the Commission back in 2016, introduced key amendments to the single rulebook's prudential and resolution provisions. It revised the rules on capital requirements (now laid down in CRR II/CRD V)⁽⁴⁹⁾ and resolution (BRRD/SRM⁽⁵⁰⁾), strengthened the prudential framework; and increased banks' ability to absorb losses in times of crisis. The banking package is — and will remain — an important milestone in the reduction of risks in the banking sector. It should also pave the way for further progress in the completion of the banking union. A political agreement on the banking package was reached in December 2018.⁽⁵¹⁾

The Deposit Guarantee Scheme Directive, adopted in 2014, improved protection for depositors based on harmonised rules applicable to: (i) the funding of national deposit-guarantee schemes; and (ii) the

level of guarantee that national deposit-guarantee schemes offer to depositors.⁽⁵²⁾

The adoption of International Financial Reporting Standard (IFRS) 9 improved the accounting treatment and valuation of financial assets and liabilities. This included improvements to the rules applicable to the impairment of financial assets, which is relevant for banks' non-performing exposures.⁽⁵³⁾

The Commission also proposed a package of measures to address remaining stocks of NPLs and prevent their possible build-up in the future. The package included:

- (i) a proposal for a regulation amending the capital requirement regulation and introducing common minimum coverage levels for newly originated loans that become non-performing⁽⁵⁴⁾;
- (ii) a proposal for a directive on credit servicers, credit purchasers and the recovery of collateral⁽⁵⁵⁾; and
- (iii) a Commission staff working document containing a blueprint for Member States that choose to set up national asset management companies (AMCs)⁽⁵⁶⁾.

This package played an important role in reducing risks in the banking sector. It aims to preserve the banking sector's ability to lend and finance the economy even in difficult times. In December 2018, the European Parliament and Council agreed on the prudential backstop regulation, which introduces minimum levels of coverage for future NPLs arising from newly originated loans.⁽⁵⁷⁾ However, the proposal for a directive on credit servicers, credit purchasers and the recovery of collateral is still under negotiation. Data suggest that measures taken by banks and by national and European policymakers, supported by the economic recovery, are delivering results. The latest figures for end-2018 indicate a further drop in the NPL ratio⁽⁵⁸⁾ to 3.3% for the EU at large,

⁽⁴⁶⁾ The ESAs are responsible for micro-prudential supervision, and work primarily on harmonising financial supervision in the EU.

⁽⁴⁷⁾ The ESRB, established in 2010, is a body responsible for macro-prudential oversight at EU level. It provides a coordination platform, monitors risk, and gives guidance to national authorities.

⁽⁴⁸⁾ Academics have also extensively studied the various elements of the Banking Union, see e.g. D. De Rynck (2016) *Banking on a Union: the Politics of Changing Eurozone Banking Supervision*. *Journal of European Public Policy*, Vol. 23, No. 1, pp. 119–135; C. V. Gortsos (2017) *A brief overview of the European Banking Union*, *L'Europe en Formation*, vol. 383–384, no. 2, 2017, pp. 61–83; D. Gros and D. Schoenmaker (2014) *European Deposit Insurance and Resolution in the Banking Union*. *JCMS*, Vol. 52, No. 3, pp. 529–546; D. Howarth and L. Quaglia (2013) *Banking Union as Holy Grail: Rebuilding the Single Market in Financial Services, Stabilizing Europe's Banks and "Completing" Economic and Monetary Union*. *JCMS*, Vol. 51, Issue Supplement S1, pp. 103–123; N. Véron (2015) *Europe's Radical Banking Union* (Brussels: Bruegel); Various authors (2018) *Special edition on constructing Banking Union: Introduction*, *Journal of Economic Policy Reform*, 21:2, pp. 99–101, DOI: 10.1080/17487870.2017.1412148.

⁽⁴⁹⁾ See European Commission (2019) *Factsheet on the adoption of the banking package: revised rules on capital requirements (CRR II/CRD V) and resolution (BRRD/SRM)*, http://europa.eu/rapid/press-release_MEMO-19-2129_en.htm; and EU Directive 2019/878 and Regulation (EU) 2019/876.

⁽⁵⁰⁾ BRRD: Directive 2014/59/EU 82; SRM: Regulation (EU) No 806/2014.

⁽⁵¹⁾ See European Commission (2019) *Fact sheet — Adoption of the banking package: revised rules on capital requirements (CRR II/CRD V) and resolution (BRRD/SRM)*, http://europa.eu/rapid/press-release_MEMO-19-2129_en.htm.

⁽⁵²⁾ Directive 2014/49/EU.

⁽⁵³⁾ Regulation (EC) No 1126/2008 codifies IFRS as adopted by the EU.

⁽⁵⁴⁾ COM(2018) 134 final.

⁽⁵⁵⁾ COM(2018) 135.

⁽⁵⁶⁾ SWD(2018) 72 final.

⁽⁵⁷⁾ Regulation (EU) 2019/630.

⁽⁵⁸⁾ EU total gross non-performing loans and advances, in % of total gross loans and advances.

compared to 6.7% since the end of 2014 (see Graph I.10).

The Commission also took action to tackle the bank-sovereign loop by proposing a regulation for an enabling framework for the securities known as sovereign bond-backed securities (SBBS)⁽⁵⁹⁾. SBBS are instruments that can be issued by private market participants. They entail two fundamental features: first, bundling of bonds issued by different euro area sovereigns in a single portfolio according to a pre-defined key; and, second, issuing two or more tranches against this portfolio with different seniority. SBBS could help banks diversify their sovereign exposures and weaken the bank-sovereign nexus and associated systemic risk. The European Parliament voted in favour of the proposal in April 2019, but the Council has not yet agreed on a common position.

Today, the EU banking sector is in much better shape than during or even before the financial crisis. Overall, banks are less leveraged and better capitalised and are thus better prepared to withstand economic shocks. In addition, liquidity provisions, which were a key issue during the crisis, have also improved materially. Today, the EU's large banks hold an average core capital ratio of 13%, which is a rise of 2.8 percentage points since the establishment of the banking union. The strengthening of capital positions is also reflected in higher leverage ratios, which improved from 4.0% at the end of 2014 to 5.3% at the end of 2018.⁽⁶⁰⁾

Nevertheless, some weaknesses and vulnerabilities remain. For example, the ring fencing of regulatory capital and liquidity to protect the domestic assets of a bank from cross-border contagion, by regulators turned out to bear some risks. While during the crisis, supervisors aimed at securing domestic financial stability, they neglected potential negative effects on other EU Member States.⁽⁶¹⁾

More importantly, the architecture of the banking union is not yet complete. Progress on the banking union is essential to guarantee that the overall framework is sufficiently robust in future episodes of financial stress. This progress requires: (i) the establishment of an effective and functional common backstop for the SRF to reinforce the credibility of the bank resolution framework within the banking union; and (ii) the setting up of a common European deposit insurance scheme (EDIS), which would equally and effectively protect depositors in the banking union from large financial shocks and thus reduce sovereign-bank links. The EDIS should also facilitate cross-border banking activities which play an important role in reducing risks through private risk sharing, and support continued improvements to the EU crisis-management framework, in particular for less significant financial institutions. The issue of euro-area banks still holding substantial amounts of sovereign bonds on their balance sheets, in particular sovereign bonds of their 'home country', continues to pose a barrier to financial sector integration and a risk to financial stability.⁽⁶²⁾ If a problem arises in either area, both public finances and the banking sector could be destabilised.

Therefore, as outlined in the Commission's 2017 reflection paper on deepening European monetary union⁽⁶³⁾ as well as the 2019 Communication⁽⁶⁴⁾, further measures could be considered in the medium-to-long-term to strengthen and deepen the financial union. For example, a joint political agreement could be taken on changing the regulatory treatment of sovereign exposures and introducing a European safe asset.

The side effects of national financial sector policies: framing the debate on financial protectionism, ECB Occasional Paper Series No. 166, European Central Bank.

⁽⁶²⁾ Also academics cite the bank-sovereign vicious circle as one of the main issues that need to be addressed. See e.g. A. Bénassy-Quéré, M. K. Brunnermeier, H. Enderlein, E. Farhi, M. Fratzscher, C. Fuest, P.-O. Gourinchas, P. Martin, F. Pisani, H. Rey, N. Véron, B. Weder di Mauro, J. Zettelmeyer (2018) Reconciling risk sharing with market discipline: A constructive approach to euro area reform, CEPR Policy Insight No 91.

⁽⁶³⁾ European Commission (2017) Reflection Paper on the Deepening of the Economic and Monetary Union. https://ec.europa.eu/commission/sites/beta-political/files/reflection-paper-emu_en.pdf.

⁽⁶⁴⁾ Communication from the Commission to the European Parliament, the European Council, the Council and the European Central Bank (2019), Deepening Europe's Economic Monetary Union: Taking stock four years after the Five Presidents' Report https://ec.europa.eu/info/sites/info/files/economy-finance/emu_communication_en.pdf.

⁽⁵⁹⁾ See European Commission proposal for a regulation of the European Parliament and of the Council on sovereign bond-backed securities, COM(2018) 339 final (May 2018).

⁽⁶⁰⁾ See e.g. Communication from the Commission to the European Parliament, the European Council, the Council and the European Central Bank (2019) Fourth Progress Report on the reduction of non-performing loans and further risk reduction in the Banking Union, COM(2019) 278 final, and 'Monitoring report on risk reduction indicators': https://www.consilium.europa.eu/media/37029/joint-risk-reduction-monitoring-report-to-eg_november-2018.pdf.

⁽⁶¹⁾ See e.g. R. Beck, D. Reinhardt, C. Rebillard, J. Ramos-Tallada, J. Peeters, F. Paternò, J. Wörz, J. Beirne and L. Weissenseel (2015)

The capital markets union (CMU)

As a continuation of the reform effort, and to better develop and integrate euro-area capital markets, the CMU action plan was launched in 2015. ⁽⁶⁵⁾ The CMU seeks to make progress on the functioning of the single market by ensuring that companies, in particular SMEs, from all Member States have better and equal access to capital markets across the EU. CMU improves private risk sharing and helps mitigate economic shocks in the euro area and beyond. More cross-border risk-sharing, bigger, deeper, more liquid and more competitive capital markets, a greater diversification of funding sources towards capital market funding, together with the progress and efforts made in the context of the Banking Union, should deepen the integration of financial markets and EMU at large and make the euro area more resilient and robust to shocks. ⁽⁶⁶⁾

The Juncker Commission has presented 13 CMU legislative initiatives, of which 10 have been agreed on by the European Parliament and the Council. ⁽⁶⁷⁾ These include measures that:

- (i) make it easier for start-ups and SMEs to access market finance and thus to diversify their funding sources, such as via the new prospectus regime;
- (ii) make it more attractive for institutional and retail investors to invest long-term and in a more cross-border way in the EU economy, such as the Regulation for a personal pension product;

⁽⁶⁵⁾ Academics have also extensively analysed CMU. See e.g. V. V. Acharya and S. Steffen (2017) *The Importance of a Banking Union and Fiscal Union for a Capital Markets Union*, European Economy Discussion Paper 062; A. Bley and J. P. Weber (2017) *Capital Markets Union: deepening the Single Market makes sense, but don't expect too much*; *Vierteljahrshefte zur Wirtschaftsforschung*, Vol. 86 (2017), Iss. 1: pp. 43–53; H.-H. Kotz and D. Schäfer (2017) *Can the Capital Markets Union deliver?*, *Vierteljahrshefte zur Wirtschaftsforschung*, Vol. 86 (2017), Iss. 2: pp. 89–98; A. Sapir, N. Véron and G. B. Wolff (2018) *Making a reality of Europe's Capital Markets Union*, Bruegel Policy Contribution, Issue no 7, April; N. Véron and G. B. Wolff (2016) *Capital Markets Union: A Vision for the Long Term*, *Journal of Financial Regulation*, Volume 2, Issue 1, March 2016, Pages 130–153.

⁽⁶⁶⁾ See Meyermans, Uregian, Van Campenhout and Valiante (2018), 'Completing the Capital Markets Union and its impact on economic resilience in the euro area', *Quarterly Report on the Euro Area (QREA)*, Vol. 17, No 4 (2018).

⁽⁶⁷⁾ See European Commission (2019), *Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions, Capital Markets Union: progress on building a single market for capital for a strong Economic and Monetary Union*, COM(2019) 136 final.

(iii) increase the integration of capital markets by strengthening the coordination role of the European supervisory authorities and by strengthening the supervisory framework in the area of anti-money laundering.

Another important policy objective is sustainable finance, for which a dedicated action plan was adopted in March 2018 ⁽⁶⁸⁾. This action plan lays the ground for redirecting capital flows towards sustainable investments, and also aims to improve the handling of climate change risks in the financial sector. As part of the action plan, three legislative proposals have been tabled on:

- developing an EU-wide taxonomy for sustainable economic activities in order to better identify how 'green' given investments or portfolios actually are. ⁽⁶⁹⁾
- disclosure requirements for asset managers, institutional investors and financial advisers;
- giving investors the tools to measure the carbon footprint of an investment strategy, by using financial benchmarks.

The disclosures and benchmarks proposal have been agreed by the European Parliament and the Council. On taxonomy, the European Parliament has already adopted its negotiation position.

As part of the European Commission's efforts to build a CMU, the European Commission also adopted an action plan on fintech to foster a more competitive and innovative European financial sector ⁽⁷⁰⁾. Under the fintech action plan, the European Commission intends to take 19 measures to: (i) boost innovative business models at EU level; (ii) support the uptake of new technologies, such as blockchain, artificial intelligence and cloud services in the financial sector; and (iii) increase

⁽⁶⁸⁾ European Commission (2018), *Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions — Action Plan: Financing Sustainable Growth*, COM(2018) 97 final.

⁽⁶⁹⁾ Proposal for a Regulation of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investment, COM(2018) 353 final.

⁽⁷⁰⁾ See *Communication from the Commission (2018), 'FinTech Action Plan: For a more competitive and innovative European financial sector'*, COM(2018) 109 final.

cybersecurity and the integrity of the financial system.⁽⁷¹⁾

The launched CMU initiatives now need to be followed up in order to ensure that they achieve their purpose. In particular, a further development of market-based financing possibilities for SMEs need to be ensured. Also, challenges relating to the green transition, digitalisation and changing trade patterns need to be addressed.

Fostering euro-area financial integration and stability via country-specific recommendations

In 2010, the European semester⁽⁷²⁾ was set up to improve economic governance and policy coordination between EU Member States. As part of the European semester, the European Commission presents and addresses country-specific recommendations (CSRs) for each EU Member State, which cover a broad scope of policies.

Some of these recommendations relate specifically to each country's financial sector, a sector that was of particular importance in the aftermath of the financial crisis. At that time, CSRs on the financial sector focused mainly on measures to stabilise the financial system in general. They targeted the restructuring and recapitalisation needs of the banking system or the quality of banking supervision. This emphasis has recently shifted more towards recommendations addressing some of the legacy issues of the financial crisis, such as the high levels of NPLs on banks' balance sheets, as well as access to finance for companies.

Overall, the CSRs related to the financial sector have contributed to improved financial-sector stability and to greater resilience of the banking sectors of EU Member States⁽⁷³⁾. For example,

Member States made progress — albeit to varying degrees — in: (i) addressing structural weaknesses in their banking systems; (ii) tackling high levels of NPLs and shortcomings of national insolvency frameworks; and (iii) improving access to finance for companies, including SMEs. Nevertheless, the implementation of key reforms on financial markets/sectors must advance further and remain a priority.

1.7. Conclusion

The euro-area financial system has completed a long path towards greater integration and stability since the introduction of the single currency. While the full potential of financial integration has yet to be realised, this goal is within reach if the effort continues. Although the past two decades have seen many difficulties, most of these difficulties have been turned into opportunities to thoroughly reform and improve the functioning of the system. The recent times are bringing new economic, environmental, technological and geopolitical challenges for the system. To name a few examples, the confirmation of growth concerns got amplified by mounting trade tensions; cyber-attacks increased in frequency and become more sophisticated; non-bank credit intermediation opened new channels for propagating systemic stress. All these issues should be carefully monitored and, if needed, followed with adequate policy responses. More importantly, the initiated projects such as the banking and capital markets union need to be completed so as to yield all their benefits for euro area financial integration and stability. Two important milestones in this context would be to reach an agreement on EDIS and further ease market-based financing possibilities for SMEs.

⁽⁷¹⁾ See also European Financial Stability and Integration Review 2019 for an overview of the main developments in EU financial services policies in 2018 and early 2019 (https://ec.europa.eu/info/files/european-financial-stability-and-integration-review-2019_en).

⁽⁷²⁾ The legal basis for the European Semester is the 'six-pack', i.e. six legislative acts that reformed the Stability and Growth Pact (Regulation 1175/2011 amending Regulation 1466/97, Regulation 1177/2011 amending Regulation 1467/97, Regulation 1173/2011, Directive 2011/85/EU, Regulation 1176/2011 and Regulation 1174/2011).

⁽⁷³⁾ See also Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank and the Eurogroup, 2019 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth

reviews under Regulation (EU) No 1176/2011, COM(2019) 150 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019DC0150&from=EN>.

II. Fiscal Policy

Section prepared by Anton MANGOVI, Allen MONKS, Gilles MOURRE and Henk VAN NOTEN ⁽⁷⁴⁾

The EU first established common fiscal rules in 1993, with the entry into force of the Maastricht Treaty. The operational details of these rules were subsequently formalised in 1997 with the adoption of the Stability and Growth Pact. Since then, the rules have evolved along a number of dimensions, not least with the adoption of the Six-pack and Two-pack reforms in the early years of the current decade. More recently, innovations have mainly come about through the interpretation of underlying legal texts, with the Commission placing an emphasis on making use of available flexibility in the rules. In the context of these changes, this section looks at fiscal developments in the EU over the last twenty years, with a focus on the most recent developments and the current fiscal positions of Member States. Some lessons are drawn from the experience of implementing the fiscal rules.

II.1. Introduction

This section provides an overview of fiscal policy and fiscal surveillance in the EU over the last 20 years. It aims to assess the performance of EU fiscal rules, with a particular focus on the period that followed the crisis. The first sub-section describes the development of the EU fiscal framework, in particular the Stability and Growth Pact. The second sub-section gives an overview of fiscal developments during this period and looks at the current fiscal situation in the EU. Recent experience and challenges with implementing the EU's fiscal framework are discussed in a third sub-section. A final sub-section draws some conclusions.

II.2. An evolving fiscal framework

This sub-section presents the Stability and Growth Pact as it has evolved, with an emphasis on the economic reasoning behind the need for fiscal rules in the EU. The legal development and evolution of the Pact is first presented, followed by a description of how interpretation of the underlying legal texts has led to recent changes in how these fiscal rules are implemented.

II.2.1. Development of the Stability and Growth Pact

The benefits of fiscal rules in ensuring sound fiscal outcomes are well established. A wide literature in this area documents a correlation between the introduction of fiscal rules and improved fiscal outcomes.⁽⁷⁵⁾ In particular, well-

designed fiscal rules can offset the deficit bias of governments.⁽⁷⁶⁾ Before the economic and monetary union (EMU) was created, it was feared (as reflected in the 1989 Delors report) that it would exacerbate this bias and that lax fiscal policy in some Member States – facilitated by weaker financial market scrutiny because of the common currency – would undermine price stability. This could result in an unbalanced mix between monetary and fiscal policy in the euro area.

EU fiscal rules were first set out in the Maastricht Treaty, which was signed in 1992.

This Treaty laid out the framework that would govern the EMU and sought to reconcile a common monetary policy with national fiscal policies. It included a provision that 'Member States shall avoid excessive deficits' (Article 104c) and empowered the Commission to 'monitor the development of the budgetary situation and of the stock of government debt in the Member States with a view to identifying gross errors'. Requirements for Member States to keep their headline deficits below 3% of GDP and their debt below 60% of GDP (or diminish their debt towards that threshold at a satisfactory pace) were included in a protocol annexed to the Treaty. The operational details of the EU's fiscal rules were subsequently developed in the Stability and Growth Pact adopted in 1997.⁽⁷⁷⁾

The primary goal of the Stability and Growth Pact (the Pact) is to ensure that public debt is sustainable. The Pact aims to prevent and, where

⁽⁷⁴⁾ This section represents the authors' views and not necessarily those of the European Commission.

⁽⁷⁵⁾ See an overview in, for example, IMF (2009), 'Fiscal Rules – Anchoring Expectations for Sustainable Public Finances', IMF Policy Paper.

⁽⁷⁶⁾ The existence of this bias is well established in the relevant economic literature. See, for example, Alesina, A. and Perotti, R. (1996), 'Income Distribution, Political Instability, and Investment', *European Economic Review*, Vol. 40 Issue 6.

⁽⁷⁷⁾ A summary of the challenges associated with designing supranational fiscal rules can be found in Yared, P. (2019), 'Rising Government Debt: Causes and Solutions for a Decades-Old Trend', *Journal of Economic Perspectives*, Vol 33 No 2.

necessary, correct excessive deficits as a means of keeping debt at sustainable levels. What is known as the ‘preventive arm’ of the Pact operationalises the first element, while the ‘corrective arm’ implements the excessive deficit procedure (EDP). Without prejudice to the sustainability objective, the rules of the Pact are also meant to allow for fiscal macroeconomic stabilisation. Differences in national preferences on the appropriate pace of debt reduction makes reconciling the sustainability and stabilisation objectives challenging.⁽⁷⁸⁾ Since the euro-area crisis, the focus has shifted to risks and spillovers arising from unsustainable levels of public debt and risks from possible debt crises, including contagion, possible monetary bailouts and even redenomination risks. The existence of such spillovers, together with the fact that markets tend to (over)react too late, provide an essential rationale for provisions on fiscal discipline to make national public debts safe in the EMU.

The Pact has developed considerably since its creation, largely in response to weaknesses that became apparent during crisis episodes.

The conceptual underpinning of the framework has been gradually developed and its scope broadened to make the rules ‘smarter’, i.e. better adapted to changing economic conditions. Successive reforms have made the preventive arm of the Pact more central, based on the observation that Member States fail to make the necessary fiscal adjustments when economic times are good.

The first reform of the Pact in 2005 aimed to better take into account the economic cycle and better consider specific features of individual countries. In the preventive arm, the medium-term budgetary objective (MTO) was redefined: the requirement that all countries have to achieve a budgetary position of close to balance or surplus in nominal terms was replaced by country-specific objectives set in structural terms (i.e. net of cyclically-driven expenditure and revenue and of one-off measures). Those objectives take account of Member States’ gross government debt levels and the magnitude of the fiscal challenges posed by population ageing. In the corrective arm, the possibility of extending the deadline for EDPs was introduced for Member States that had taken effective action but were

faced with unexpected adverse economic circumstances that were having a significant impact on their public finances. For both arms, the legislation indicated a benchmark annual adjustment for the size of the correction to be made for Member States. Furthermore, in order to enhance the growth-oriented dimension of the Pact, the adjustment path towards the MTO could take into account the implementation of major structural reforms, provided these reforms have a verifiable positive impact on the long-term sustainability of public finances. These impacts could be either direct (such as for pension reforms) or indirect via a related increase in growth potential (which would lower the level of public debt as a percentage of GDP).

Following the economic and financial crisis in 2008, and drawing on the experience of implementing fiscal surveillance, the Six-pack reform of 2011 amended the Pact for a second time.

The Six-pack introduced a greater emphasis on aggregate expenditure developments and revenue-increasing (or decreasing) policy measures, which are more directly under government control than other fiscal indicators. In addition, the reform sought to refocus fiscal surveillance on debt developments by making the Treaty’s debt criterion operational, notably by introducing a debt reduction benchmark that requires public debt to diminish (per year) by 1/20th of the gap to the reference value of 60% of GDP. The system of sanctions was made more automatic by applying reverse qualified majority voting (also introduced for other surveillance decisions) for Council decisions on Commission proposals in this area. These decisions are also now taken at an earlier stage of the non-compliance procedures. Finally, reflecting the experience of the Great Recession, a collective ‘escape clause’ was introduced, effectively allowing (but not prescribing) the rules to be suspended in case of ‘a severe economic downturn’ in the EU or the euro area as a whole.

The Two-pack reform of 2013 strengthened the surveillance framework for euro-area Member States.

This reflected the potential of stronger spillovers within monetary union. In order to achieve closer budgetary coordination, the reform obliged euro-area Member States to submit their draft budgetary plans to the European Commission and the Council before national parliaments adopted them. The reform also brought in the procedure of assessing the aggregate euro-area

⁽⁷⁸⁾ At the same time, safe levels of debt should allow automatic stabilisers to operate without leading to fiscal or financial market stress.

fiscal stance and stepped up surveillance for euro-area Member States under the EDP.

As the Pact has evolved, the EU has introduced requirements for national fiscal frameworks that have become increasingly precise. Protocol 12 of the Maastricht Treaty includes a broad requirement that national budgetary frameworks must enable Member States to meet EU fiscal rules. While the Pact's focus has been on supranational fiscal rules, there has been a growing recognition (in particular since the crisis) of the importance of national fiscal arrangements as a means of ensuring compliance with EU fiscal rules. In this respect, national frameworks are perceived as serving two goals: first, to provide the necessary setting for implementing fiscal policy in compliance with EU rules; and second, as a means of strengthening national 'ownership' of EU rules. Member States agreed a number of requirements for their fiscal frameworks to improve their quality and effectiveness and, therefore, support fiscal discipline in the EU context. Some of these requirements took the form of EU law, while more intrusive requirements were established in the intergovernmental Treaty on Stability, Coordination and Governance in the EMU. This Treaty, which included the 'Fiscal Compact', enshrined Member States' MTO into national law (preferably at constitutional level), with a stricter lower limit for the structural deficit.

The implementation of these EU requirements has seen national budgetary frameworks develop significantly in recent years. The progress is most noticeable in Member States that had no (or only rudimentary) domestic frameworks before the crisis. For those Member States, the EU requirements have served as a basis to construct a modern fiscal framework. In particular, national numerical fiscal rules have been growing in number and quality, dominated by the structural balanced budget rules required by the Fiscal Compact. Independent institutions have also been set up (or strengthened) in virtually all Member States with a mandate to monitor and assess public finances and (in particular) national fiscal rules. The scope of annual budgeting and medium-term fiscal planning has been widened, and the process has become more transparent. New streams of fiscal statistics have also been created, most notably on the contingent liabilities of Member States. This has helped to raise the attention of policy-makers and the general public to this issue. Requirements that macroeconomic forecasts have to be prepared or

endorsed by independent fiscal institutions appear to have led to slightly more prudent forecasting.⁽⁷⁹⁾

II.2.2. Recent innovations by way of interpretation

In the aftermath of the Great Recession, tensions arose between the need for a return to sustainable public finances and the need for economic stabilisation. Very strong market pressure between 2010 and 2012 forced some Member States to implement large fiscal adjustments, sometimes going beyond the requirements of the Pact (see below). This gave rise to fiscal fatigue in several highly-indebted Member States. Moreover, economic conditions after the Great Recession turned out to be worse than anticipated, with the euro area experiencing a second recession in 2012-2013. This was followed by a protracted period of low growth relative to the pre-crisis period and unprecedentedly low inflation, with monetary policy facing the zero lower bound and the European Central Bank introducing a number of non-standard monetary policy measures in an effort to foster the economic recovery.

In this context, the Commission put emphasis on a flexible interpretation of the EU's fiscal rules. At the beginning of 2015, the Commission described in a Communication how it intended to use the flexibility embedded in the EU's fiscal framework.⁽⁸⁰⁾ This approach took into account the need to foster the economic recovery, as well as the need for some high-debt Member States to implement reforms in labour and product markets. The flexible implementation also reflected a political economy reality: namely, that the Six- and Two-pack reforms had increased the Commission's decision-making responsibilities, such as the decision to impose sanctions, that could have far-reaching political implications in the Member States.

This approach allowed for flexibility for three elements: cyclical conditions, structural reforms and public investment. Since 2015,

⁽⁷⁹⁾ See Jankovics, L. and Sherwood, M. (2017), 'Independent Fiscal Institutions in the EU Member States: The Early Years.' European Economy Discussion Papers No. 67, European Commission.

⁽⁸⁰⁾ See European Commission (2015), 'Making the best use of the flexibility within the existing rules of the Stability and Growth Pact', COM(2015)12 of 13 January 2015.

flexibility has taken two main forms.⁽⁸¹⁾ Firstly, the adoption of the so-called ‘matrix of requirements’ in the preventive arm allowed the required annual structural adjustment to the MTO to be modulated according to a Member State’s position in the economic cycle. Secondly, the Commission allowed temporary deviations from required annual fiscal adjustments for Member States undertaking major structural reforms or public investment, provided they fulfilled certain eligibility criteria. Such ‘flexibility clauses’ built upon existing provision for temporary deviations from preventive arm requirements due to ‘unusual events’.

II.3. Fiscal performance in the euro area

This sub-section presents the performance of the EU’s fiscal rules, with a particular focus on the period since 2011. Performance is measured by comparing fiscal outcomes with the ultimate objectives and numerical thresholds set out in the Pact. This constitutes both unenforced compliance as well as actions taken by the Commission and Council to force Member States to comply with the rules.⁽⁸²⁾

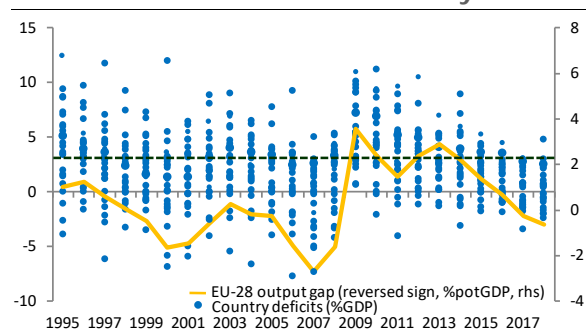
II.3.1. Have Member States avoided or corrected gross policy errors?

EU Member States are required to avoid gross policy errors. As discussed above, EU Member States must keep their headline deficits below 3% of GDP and their debt below 60% of GDP (or diminish their debt towards that threshold at a satisfactory pace). As long as a Member State fulfils the deficit and debt criteria, it remains in the preventive arm of the Pact. If it breaches one (or both) of the criteria, it is placed in EDP. While this gives rise to the possibility of sanctions being imposed, that has not been done since the adoption of the Six-pack and Two-pack reforms (see II.4.2.). Until the debt criterion became operational in 2011, EU surveillance mainly focused on the deficit criterion.

Developments in headline deficits

While there have frequently been breaches of the Pact’s deficit threshold of 3% of GDP since the euro’s creation, the Great Recession resulted in an exceptional situation in which almost all Member States breached this threshold. The 2008-2009 economic and financial crisis had a massive impact on Member States’ deficits, which in some cases reached double digit levels (see Graph II.1). Due to the depth of the recession and bank recapitalisation needs in some Member States, the deficit at the aggregate EU level exceeded 6% of GDP in 2009-2010. As a consequence, 24 out of the then 27 Member States entered the EDP for breaching the Treaty’s deficit criterion.⁽⁸³⁾

Graph II.1: Distribution of headline deficits and slack in the economy



Source: Eurostat, European Commission

The situation has gradually improved and all Member States had corrected their excessive deficits by 2018. All Member States have brought their headline deficits below the threshold of 3% of GDP and have become subject to the Pact’s preventive arm (see Graph II.2).⁽⁸⁴⁾ Since 2015, however, excessive deficits have mainly been corrected by improving macroeconomic conditions, which help to lower nominal deficits thanks to the reversal of automatic stabilisers (i.e. generating additional revenues and lowering unemployment expenditure). This has allowed some Member States to correct their excessive deficits without making any significant (or any) structural fiscal adjustments (the ‘nominal strategy’). Member States that lack a sufficient

⁽⁸¹⁾ Further details on the implementation of this flexible interpretation can be found in the Commission’s 2018 ‘Communication on the review of the flexibility under the Stability and Growth Pact’ and the European Fiscal Board’s 2018 annual report.

⁽⁸²⁾ Enforcement involves a clear act by the enforcer which (may) lead to a changed performance. However, the distinction between unenforced compliance and compliance through enforcement is often difficult to make, in the absence of a counterfactual.

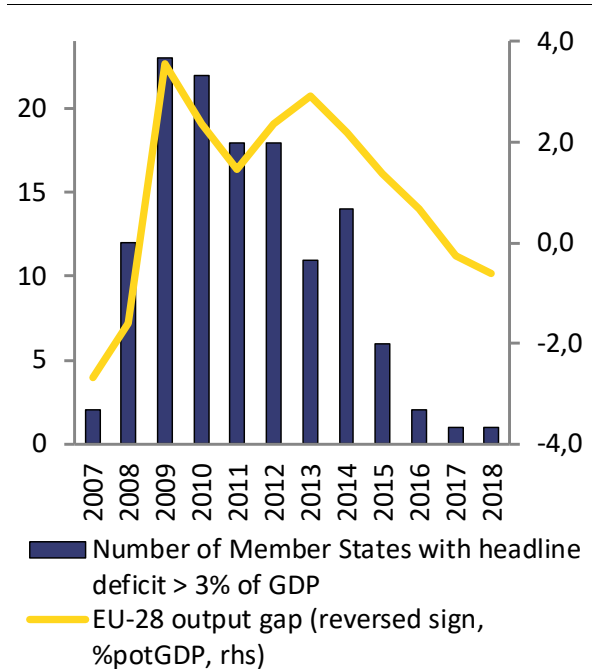
⁽⁸³⁾ Finland was put in EDP for a planned breach, although the deficit eventually stayed below 3%.

⁽⁸⁴⁾ With the exception of Cyprus, where there was a temporary peak in the deficit in 2018 (at 4.4% of GDP), due to the one-off support measures related to the sale of the Cyprus Cooperative Bank.

safety margin to the 3% of GDP threshold will have insufficient buffers if an economic downturn occurs (see below). Furthermore, maintaining a nominal deficit close to 3% of GDP may not be sufficient to avert unsustainable debt.

The reduction of headline deficits been broad-based and, in general, variation between countries has somewhat narrowed over time (see Graph II.1). In the pre-crisis period, Member States’ fiscal positions ranged from sizeable budget surpluses to equally sizeable deficits. Such differences subsisted throughout the crisis, with the range narrowing only in recent years.

Graph II.2: Number of Member States breaching the 3% of GDP limit and slack in the economy



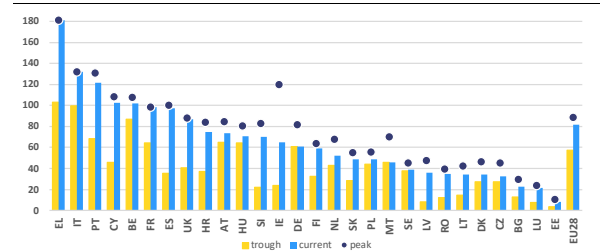
Source: Eurostat, European Commission

Developments in debt ratios

While the aggregate EU debt ratio remained around 60% of GDP in the pre-crisis period, it increased to almost 90% between 2009 and 2014, before starting to decline. Until 2008, the aggregate debt of the EU Member States remained relatively constant at around 60% of GDP. The economic and financial crisis led to higher cyclical and structural deficits, pushing debt ratios substantially upwards. This was further amplified by the impact of low economic growth on the ratio (through the ‘denominator effect’) and by direct intervention by some Member States in the

financial sector. The increase in debt levels was particularly high in Ireland, Greece, Spain, Cyprus, Portugal and Slovenia.

Graph II.3: Debt dynamics: 2018 debt levels versus pre-crisis low point and post-crisis peak



Source: Eurostat

Debt dynamics across Member States have been quite divergent. As shown in Graph II.3, there is little relationship between Member States’ debt-to-GDP ratios before the euro-area sovereign debt crisis and the subsequent change in those ratios in the years following the crisis. This reflects large differences between countries in the pace of fiscal consolidation, in the impact of the ‘snowball’ (or ‘ $r-g$ ’) effect⁽⁸⁵⁾ and in the idiosyncratic fiscal costs related to support measures for the banking sector. Of note, most Member States have benefited from a negative snowball effect since 2014, with the impact of low nominal growth (which delays the reduction in the ratio) offset by historically low interest rates on sovereign debt. This, of course, reflects the weak post-crisis recovery and the fact that euro-area inflation has remained low. Had economic dynamics after 2014 returned to the situation prevailing before the financial market crisis (proxied here as the average $r-g$ during the period 1999-2007), debt ratios would have now been even higher in those highly-indebted Member States (see Graph II.4).⁽⁸⁶⁾

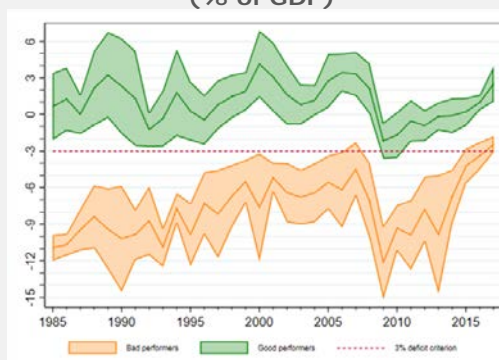
⁽⁸⁵⁾ The snowball effect is the impact on debt dynamics of the difference between the average interest rate charged on government debt and the nominal GDP growth rate multiplied by the debt-to-GDP ratio in the previous period. It is therefore often referred to as the ‘ $r-g$ ’ effect.

⁽⁸⁶⁾ Only in Spain is the ‘ $r-g$ ’ effect still less favourable than in the pre-crisis period. However, one could question whether the growth of the Spanish economy in the early and mid-2000s was sustainable.

Box II.1: Has the headline deficit ceiling of 3% of GDP improved fiscal outcomes in the EU?

Member States that had large headline deficits just before the Pact's launch have reduced their deficits significantly, although this was not the case during the Great Recession. In Graph A.1, the orange area shows the range of the deficits for the quarter of Member States with the highest deficits ('bad performers') for each year since 1985. Before the Pact's launch in 1998, several Member States had deficits exceeding 5% of GDP. The deficits then decreased slowly until the start of the Great Recession, so that only three Member States displayed deficits exceeding 3% of GDP in 2007. In the aftermath of the crisis, Member States' deficits rose significantly, with 24 out of the then 27 Member States having deficits above 3% of GDP and entering the EDP. Since then, all Member States have corrected their excessive deficits. Overall, these developments suggest that the deficit criterion of 3% of GDP has contributed to better fiscal outcomes, particularly in Member States with high public deficits before the launch of the Pact. At the same time, the deficit criterion seems to have acted as a target rather than a ceiling, since several Member States with a record of high deficits still have public deficits close to 3% of GDP, despite the current favourable macroeconomic conditions. By contrast, there seems to be no clear-cut impact of the 3% deficit criterion on Member States that had headline surpluses or low deficits before the Pact was introduced. The green area in Graph A.1 depicts, for each year, the range of the budget balances for the quarter of Member States with the lowest deficits or highest surpluses in that year ('good performers'). While the composition of the group varied, there have always been Member States recording, on average, surpluses since the launch of the Pact in 1998, with the exception of the years following the Great Recession. This suggests that there has been no downward convergence of the good performers towards the 3% of GDP deficit criterion, as has recently been argued in policy papers ⁽¹⁾.

Headline balances in EU Member States
(% of GDP)

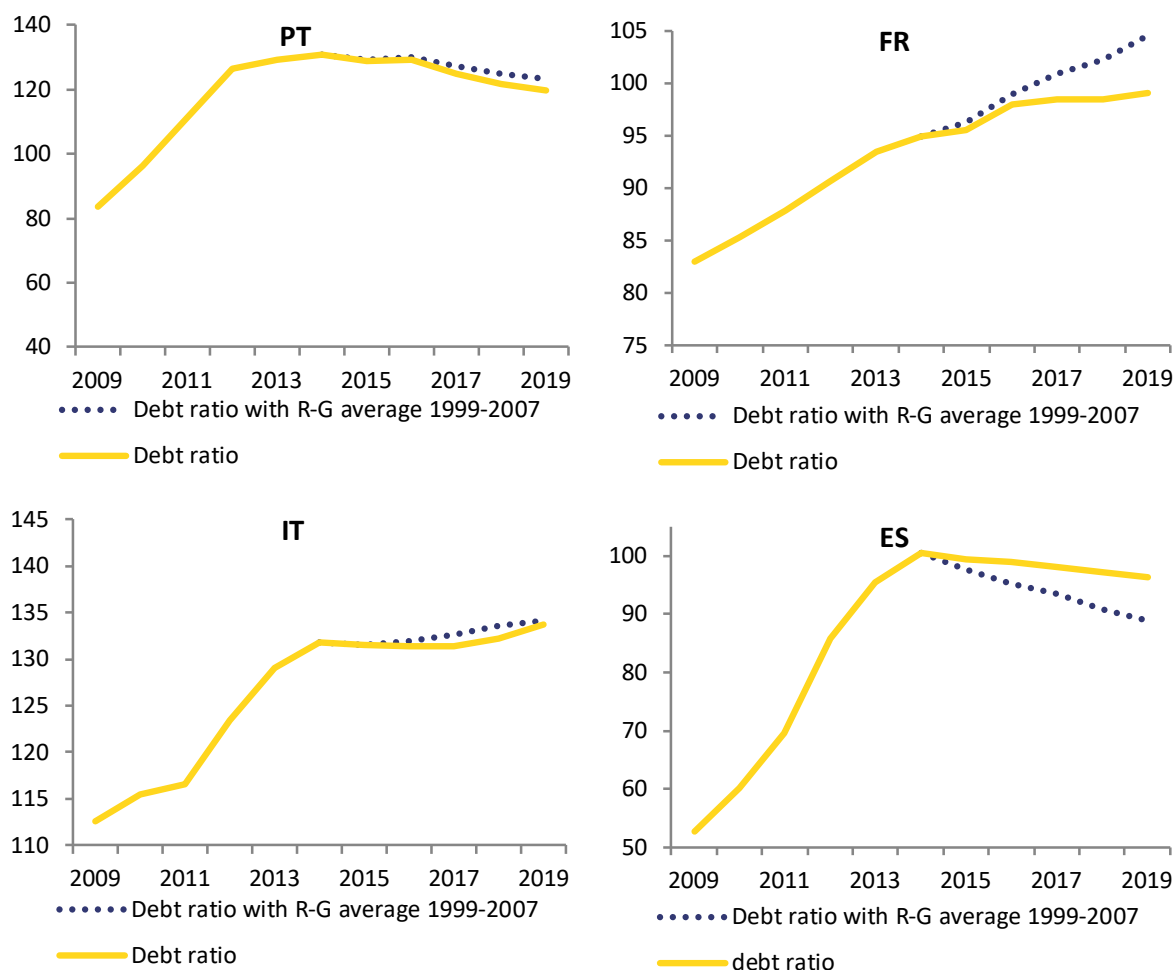


Note: Headline balance figures from 1995 are based on ESA 2010 while previous figures are back-casted according to the observed change in the ratio as from the series based on ESA 1995. As a consequence of the variable composition of the groups of 'bad performers' and 'good performers', some of the fluctuations could be the result of composition effects (i.e. Member States shifting categories).

Source: European Commission, Report on Public Finances in EMU 2018, based on the Commission's spring 2018 forecast.

⁽¹⁾ See Caselli, F. and Wingender, M. (2018), 'Bunching at 3 Percent: The Maastricht Fiscal Criterion and Government Deficits', IMF Working Paper 18/182.

Graph II.4: Debt: the r-g effect



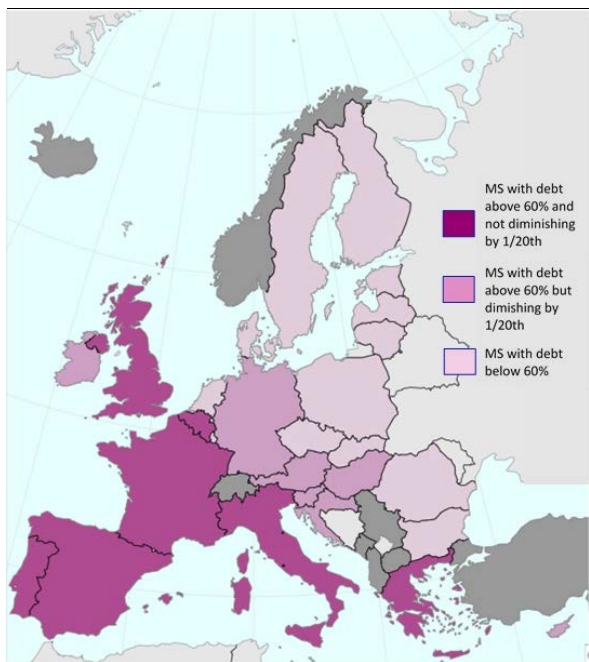
Source: Eurostat, European Commission

Despite recent improvements, all Member States (apart from Germany, Malta and Sweden) now have higher debt-to-GDP ratios than before the crisis. Around half of the Member States now have debt levels below 60% of GDP (see Graph II.5). Another group of Member States are above the threshold of 60% of GDP but their debt levels are diminishing by more than 1/20th of the gap to this threshold per year, in accordance with the debt reduction benchmark. Lastly, there is a group of Member States for which debt levels have hardly stabilised (Italy, Greece, France) or are not yet diminishing at a sufficient pace (Belgium and Spain). Compared to 2008, almost all Member States now have higher debt levels, especially some bigger Member States like Italy, France and Spain (See Graph II.6).

Graph II.7 shows the current situation with both the deficit and debt criteria. Over half of the Member States have brought their deficits

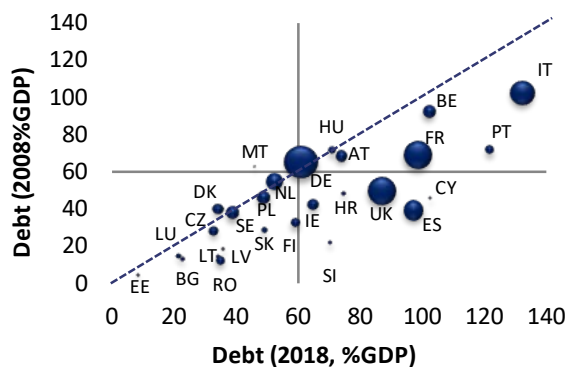
safely below the 3% limit and display debt ratios below 60% of GDP. Some of these countries now have budget surpluses. By contrast, other Member States, including some of the largest, still have sizeable deficits despite relatively favourable economic conditions in recent years. Debt in those Member States remains high, and in some cases very high. Those countries account for half of the EU's GDP.

Graph II.5: **Situation with the Treaty debt criterion in 2018**



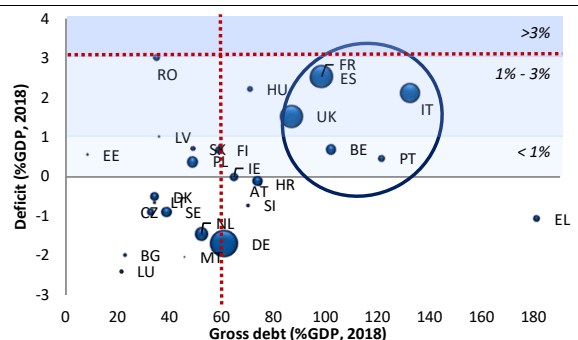
Source: European Commission

Graph II.6: **Comparison of debt levels in 2018 and 1999 (Size of bubbles is proportional to country shares in total EU-28 GDP)**



Source: Eurostat, European Commission

Graph II.7: **Where do Member States stand in relation to the Treaty criteria? (Size of bubbles is proportional to country shares in total EU-28 GDP)**

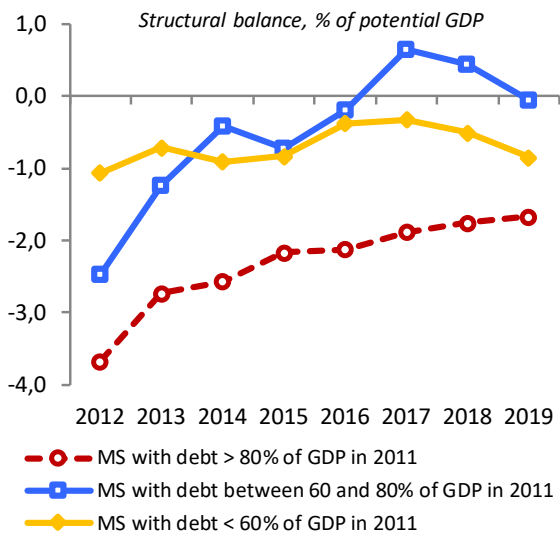


Source: Eurostat, European Commission

II.3.2. Have Member States ensured sound public finances?

All Member States have now moved to the preventive arm of the Pact and are required to make progress towards their MTOs. Graph II.8 shows developments in the structural balances of Member States, divided into three groups based on their debt ratio in 2011. The biggest structural adjustments took place between 2011 and 2013, when most Member States were still under the EDP. This partly reflected intense financial market pressure on some Member States during this period. Since 2014, the average fiscal effort of the Member States with the highest initial debt levels (Italy, Portugal, Ireland, Belgium, France, Austria, the UK and Hungary) has slowed down. This is partly explained by the fact that improvements in headline balances in some Member States have been achieved by relying on better cyclical conditions, thus allowing those Member States in the corrective arm to achieve their required adjustments without making a structural fiscal effort. It also shows that the preventive arm has had little traction on a number of Member States, despite the relatively high debt ratios of the Member States in this group. On the other hand, Member States with lower debt have continued to adjust, even when a structurally balanced budget or even a surplus was reached.

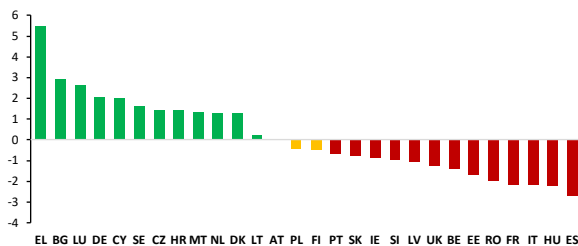
Graph II.8: Have Member States ensured sound public finances?



The composition of the three groups is fixed based on their debt levels in 2011:
 - MS with debt > 80% of GDP in 2011: IT, PT, IE, BE, FR, AT, UK, HU.
 - MS with debt between 60% and 80% of GDP in 2011: DE, MT, ES, CY, HR, NL.
 - MS with debt < 60% of GDP in 2011: PL, FI, SI, DK, SK, LV, CZ, SE, LT, RO, LU, BG, EE.
Source: European Commission, based on the European Commission's spring 2019 forecast.

As a result of uneven structural adjustments, Member States' current fiscal positions in relation to their MTOs vary widely. Graph II.9 shows the large differences between Member States. Around half of them have reached their MTOs, with some accumulating high surpluses that go beyond the requirements of the preventive arm. A few Member States are close to their MTOs. Lastly, a group of Member States remains far away from their MTOs and have not yet built sufficient buffers for the next downturn.

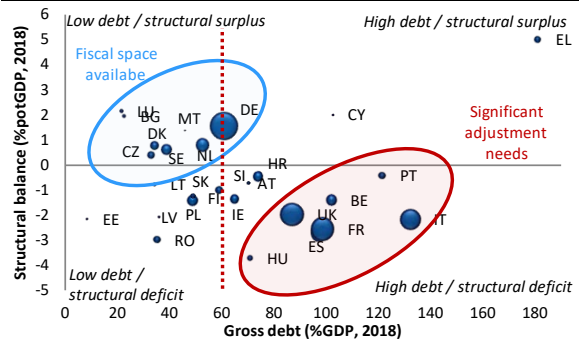
Graph II.9: How far were Member States from their MTOs in 2018?



Source: European Commission

There appears to be an inverse relationship between Member States' debt levels and budget balances. Some Member States that currently have structural (and headline) surpluses are also those with relatively low debt levels (Graph II.10). That is the case for bigger Member States like Germany and the Netherlands but also for Bulgaria, Czechia, Denmark, Luxembourg, Malta and Sweden. On the other hand, some of the most highly-indebted Member States still need to make significant adjustments (Belgium, Spain, France, Hungary, Italy and, to a lesser extent, Portugal). This has clear implications for the sustainability of those Member States' debt burdens.

Graph II.10: Structural balance and debt ratios across Member States with country sizes (Size of bubbles is proportional to country shares in total EU-28 GDP)

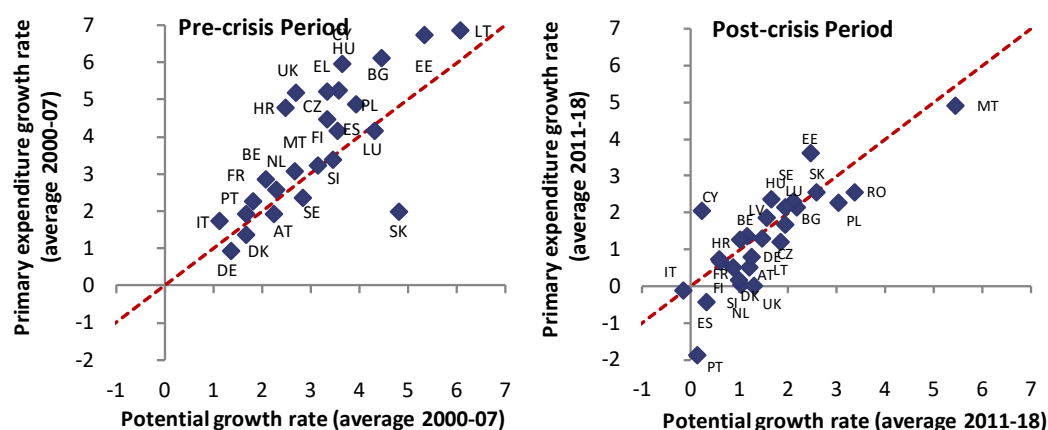


Source: Eurostat, European Commission

Expenditure dynamics now seem better controlled than before the crisis (Graph II.11). The pre-crisis period saw government primary expenditure in most Member States growing faster than potential output. Since the crisis, the growth rate of primary expenditure has slowed down in relation to potential output, with expenditure actually growing at or below the level of potential output in nearly all Member States. It is important to note that this assessment of expenditure dynamics does not take account of revenue measures, which on the whole have been revenue-increasing in the post-crisis period, thus partly neutralising the impact of expenditure increases on the deficit.⁽⁸⁷⁾ This contrasts with the pre-crisis period, which saw the majority of Member States cutting taxes. Expenditure dynamics net of revenue measures appear, therefore, even more contained in the post-crisis period compared with the pre-crisis period.

⁽⁸⁷⁾ Since 2016, the picture has been more mixed, with some Member States implementing new tax cuts.

Graph II.11: Controlling primary expenditure dynamics



Source: European Commission

The containment of expenditure growth in recent years is in line with the greater focus on expenditure developments in the preventive arm. As discussed in the first sub-section, the Six-pack reform led to a greater focus on aggregate expenditure developments. Indeed, since 2016, the Commission has given priority to the expenditure benchmark in its assessment of Member States compliance with the requirements of the preventive arm.⁽⁸⁸⁾ This is in line with the growing literature on the benefits of having binding ceilings on expenditure growth as a fiscal policy tool.⁽⁸⁹⁾ Research indicates that such rules can reduce the risk of excessive deficits and contribute to counter-cyclical fiscal policy. In contrast to rules based on estimates of the structural balance, they have the advantage of being easy to understand and therefore lead to greater transparency.

Despite recent innovations, the Pact has not improved the quality and composition of public finances. In principle, the Pact is neutral for the composition of public revenue and expenditure. However, in practice, it may be easier politically to raise certain taxes or to cut public investment rather than to cut current expenditure during a period of consolidation. For this reason, the Pact has often been used as a scapegoat for low levels of public investment in the EU. The negative impact of low public investment on potential

growth affects debt dynamics, which has led to criticism of the appropriateness of fiscal consolidation. The introduction of the investment clause in 2015 does not appear to have had a substantial positive impact on public investment. On the other hand, fiscal rules tend to reduce policy volatility, which is arguably also beneficial to long-term growth.⁽⁹⁰⁾

II.3.3. Fiscal stance and fiscal stabilisation

National fiscal stances have been largely pro-cyclical since 2011. Most Member States implemented sizeable fiscal adjustments (as measured by the change in the structural primary balance) in the period immediately following the crisis. This reflected a lack of fiscal buffers at the onset of the Great Recession, a need to correct excessive deficits and, in some cases, the need to restore market confidence. These fiscal adjustments took place in a context of very low or even negative economic growth in some Member States, which was most likely aggravated by a restrictive fiscal stance. In contrast, fiscal consolidation has ground to a halt since 2014 while economic growth has picked up. However, potential growth has declined substantially in most Member States compared to pre-crisis levels, which makes fiscal adjustments more demanding. Avoiding a pro-cyclical pattern of fiscal policy in good times has run counter to differing views among Member States about appropriate debt and

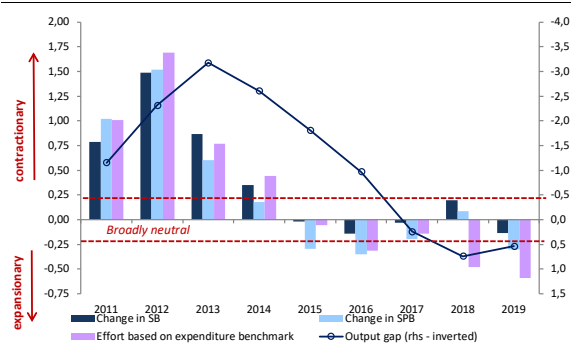
⁽⁸⁸⁾ See the Opinion of the Economic and Financial Committee of 29 November 2016 on 'Improving the predictability and transparency of the SGP: A stronger focus on the expenditure benchmark in the preventive arm'.

⁽⁸⁹⁾ For an overview of the recent literature in this area, see Bedogni, J. and Meaney, K. (2017), 'EU Fiscal Rules and International Expenditure Rules', Irish Government Economic & Evaluation Service.

⁽⁹⁰⁾ For a discussion of the interaction of fiscal rules and the composition of government expenditure, see Dahan, M. and Strawczynski, M. (2013), 'Fiscal Rules and the Composition of Government Expenditures in OECD Countries', Journal of Policy Analysis and Management.

deficit levels. For example, some Member States have remained just below the deficit limit of 3% of GDP in all but exceptionally bad times, instead of moving towards their MTOs. Empirical evidence suggests that compliance with the rules of the preventive arm would reduce pro-cyclicality, notably if debt is below 60% of GDP. Conversely, having high deficit and debt levels tends to amplify pro-cyclicality.⁽⁹¹⁾

Graph II.12: **Developments of key indicators for the fiscal stance in the euro area (% of potential GDP)**



Note: Several indicators are used in literature to assess the fiscal stance. The measures of the fiscal stance presented here are: the change in structural balance (SB), the change in structural primary balance (SPB) and a measure of the fiscal effort based on the expenditure benchmark methodology.

Source: European Commission 2019 autumn forecast.

The aggregate fiscal stance in the euro area was contractionary in 2011-2014, and broadly neutral overall in 2015-2018.⁽⁹²⁾ Graph II.12 presents the fiscal stance measured by: the change in the structural balance⁽⁹³⁾; the change in the structural primary balance; and the fiscal effort according to the expenditure benchmark methodology.⁽⁹⁴⁾ The change in the fiscal stance

has helped the economic recovery in the euro area since 2015, in a period when monetary policy has been constrained at the zero lower bound. However, as noted earlier, the fiscal stances of individual Member States were insufficiently differentiated and resulted in a situation where high-debt countries made limited or no fiscal adjustments while countries with fiscal space accumulated large surpluses. Since 2018, while the output gap in the euro area has been closed, the fiscal stance has become mildly expansionary, resulting in a pro-cyclical stance for the euro area as a whole.

The EU's ability to coordinate an appropriate fiscal stance for the euro area remains constrained. The Two-pack legislation requires the Commission to regularly assess the budgetary situation and prospects in the euro area as a whole. This allows the Commission to undertake a consistency check between individual Member States' policies and the appropriate policy stance for the euro area as a whole, with a view to balancing stabilisation and sustainability needs. However, there are strong limits in practice to achieving the appropriate aggregate fiscal stance based on the coordination of national budgets. Indeed, as a result of its prime focus on debt sustainability, the working of the Pact is asymmetric: it can *proscribe* high fiscal deficits but cannot *prescribe* lower fiscal surpluses. Therefore, the framework does not provide adequate tools to steer the aggregate fiscal stance in case the stances of individual Member States do not sum up to an appropriate aggregate fiscal stance.

A euro area fiscal stabilisation capacity would improve the EU's ability to coordinate an appropriate fiscal stance. Such an instrument would make it possible to supplement automatic stabilisers at national level in bad economic times. This would allow Member States to respond better to rapidly changing economic circumstances and stabilise their economies in the event of large economic shocks. In doing so, a fiscal stabilisation capacity would also contribute to the stability of the euro area, complementing other innovations in euro area institutional architecture that have been put in place since the financial crisis.

⁽⁹¹⁾ European Commission (2018), 'Fiscal outcomes in the EU in a Rules-Based Framework – New Evidence', Report on Public Finances in EMU 2018, 105-156.

⁽⁹²⁾ Given the uncertainty surrounding the measure of structural balance as an unobserved variable, an interval of the fiscal stance between -0.2% and 0.2% is considered to be broadly neutral.

⁽⁹³⁾ The change in the structural (primary) balance, although capturing the broad economic effects of fiscal policy, can be distorted by the following flaws: (i) swings in fiscal elasticities (i.e. tax windfalls or shortfalls); (ii) revisions in the estimations due to difficulties in measuring of the output gap in real time; and (iii) effects outside the control of governments (e.g. change in interest rates affecting the structural balance).

⁽⁹⁴⁾ The fiscal effort based on the expenditure methodology is based on the budgetary developments that are deemed to be under the control of governments. On the expenditure side, it looks at the increase in primary expenditure (net of one-offs, cyclical expenditures and EU-funded expenditure), relative to the 10-year average potential growth. On the revenue side, it only takes into

account discretionary revenue measures net of one-offs, as assessed in the Commission forecast.

II.4. Why has implementation of the Pact been insufficient in some cases?

As discussed above, the Pact appears to have been successful at correcting gross policy errors, in particular excessive fiscal deficits. At the same time, a number of highly-indebted Member States have undertaken little or no fiscal adjustment in recent years and remain far from their MTOs. Consequently, their debt ratios have continued to rise (or at best have stabilised), and they lack a sufficient safety margin to the deficit threshold of 3% of GDP, despite favourable economic conditions. These observations call into question the effectiveness of the preventive arm and the extent to which the reformed Pact has made a difference in those cases where fiscal discipline is most necessary. This sub-section offers some tentative explanations of why this has been the case, highlighting the idiosyncratic context of the post-crisis years.

II.4.1. A particular context: the sequence of austerity led by the debt crisis followed by an atypical recovery

Between 2010 and 2012, the need to restore market confidence forced some Member States to make large fiscal efforts in a difficult macro-economic context. Following the 2008-2009 crisis and the surge in headline deficits, a number of Member States were required to implement, over a period of 3 or 4 years, fiscal tightening of up to 6% of GDP, and even more in the cases of Ireland and Greece.⁽⁹⁵⁾ Market pressure forced some Member States to make even stronger adjustments than those set in the context of the Pact. That was the case of Spain and Portugal, and to some extent also of Italy. The large fiscal adjustment made at the height of the crisis was economically and politically difficult to sustain, and led those countries to significantly reduce, and even stop, adjusting afterwards, despite the persistent need to consolidate.

The modest pace of the recovery has also been given as a reason to slow down the pace of fiscal adjustment. In many Member States, economic growth remained subdued well after the peak of the crisis, and high unemployment rates

persisted. Inflation remained relatively low despite unprecedented monetary policy measures. Against that background and in order to prevent a lasting impact on employment, the Commission Communication ‘Towards a positive fiscal stance for the euro area’ of 16 November 2016 emphasised the need to strengthen domestic sources of growth, including through more supportive fiscal policy.⁽⁹⁶⁾ The Commission also considered the relatively low growth and inflation as a relevant factor for not opening debt-based EDPs for Italy and Belgium, despite non-compliance with the debt reduction benchmark in 2014, 2015 and 2016.⁽⁹⁷⁾ Lastly, the need to strike a balance between sustainability and stabilisation was taken into account when assessing Italy and Slovenia’s compliance with the preventive arm in 2018.

II.4.2. Reluctance to escalate surveillance procedures

The Commission and the Council have been reluctant to launch enforcement procedures envisaged by the Pact. As outlined above, the Commission has opted for a prudent and flexible approach in recent years, complemented by constant political dialogue with the Member States. In its 2017 annual report (and in IMF analysis), the European Fiscal Board confirmed that interpretation of the Commission’s approach, although in more critical terms. However, reluctance to fully exploit hard enforcement mechanisms provided by the legislation was already perceptible before 2014. For example, the two-year extension of the EDP granted to France in 2013 was at the time perceived and criticised as too soft a choice by some observers. Discussions on trade-offs between consolidation and reforms started in 2013-2014, with an investment clause introduced for the first time and a call by Member States, including those generally in favour of a strict interpretation of the EU fiscal rules, to consider structural reforms.

The draft budgetary plan process has proved useful for *ex ante* coordination and for fostering dialogue between euro area Member States and the EU. Before this process was

⁽⁹⁵⁾ For example, the Council on 2 December 2009 recommended that France, Spain and Portugal achieve average annual fiscal efforts of ‘above 1% of GDP’, ‘above 1.5% of GDP’ and ‘1¼% of GDP’ respectively over 2010-2013.

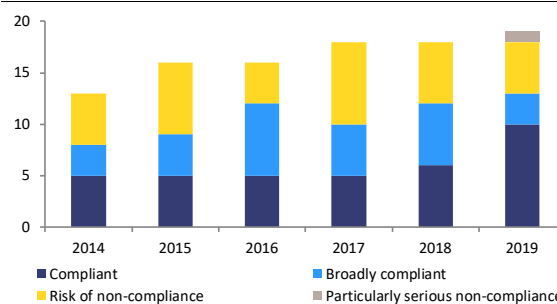
⁽⁹⁶⁾ European Commission(2016), ‘Towards a positive fiscal stance for the euro area’, COM(2016) 727.

⁽⁹⁷⁾ See subsequent Commission reports on Belgium and Italy prepared in accordance with Article 126(3) of the Treaty on the Functioning of the European Union

introduced, the Commission would mainly assess whether budgetary outcomes complied with the EU's fiscal rules, i.e. the Commission would do an *ex post* assessment. Examining the medium-term budgetary plans presented in the stability and convergence programmes carried (and continues to carry) little traction, given that these plans are mere commitments without the backing of a budget law to implement them. The draft budgetary plan process has been designed to strengthen fiscal surveillance up front, i.e. allowing the Commission to give its view on whether the draft annual budget was likely to comply with the EU's fiscal rules. This is meant to alleviate the burden of surveillance carried out *ex post*, which was perceived as more punitive and less efficient as it came too late in the process and offered less scope for timely corrective action. In practice, the process has turned out to be useful for setting up a dialogue between the EU and euro-area Member States, as well as fostering awareness among national parliaments and the public of Member States' obligations under the Pact. However, the focus of the assessment on annual changes in the (unobservable) structural balance hampered this dialogue.

At the same time, the draft budgetary plan process has underlined the difficulty of influencing national fiscal policy. Only once the Commission has requested a Member State to submit a revised draft budgetary plan, in the case of the Italian 2019 draft budgetary plan, despite numerous plans that were at risk of non-compliance (see Graph II.13) and despite the absence of any form of sanctions associated with such a request. The Commission has instead sent 'follow-up letters' in all rounds since 2014. However, Member States have taken limited corrective actions. This is partly due to the fact that the Commission opinions come too late to influence the national budgetary process. Despite this seemingly limited impact, the mere existence of the draft budgetary plan process may have encouraged Member States to take the Pact's requirements into account when preparing their draft budgets. This mixed experience with the draft budgetary plan process raises the question of whether *ex ante* coordination can effectively ensure that Member States respect the EU fiscal rules.

Graph II.13: Overall compliance of the Draft Budgetary Plans with the Pact



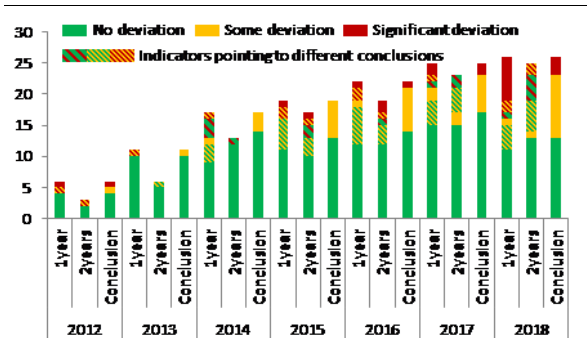
Note: This graph shows the number of Member States for which the draft budgetary plan (DBP) was found compliant, broadly compliant and at risk of non-compliance. '2014' refers to the assessment of the DBPs for 2014 carried out in autumn 2013. The number of countries submitting a DBP has increased over time, with Latvia and Lithuania joining the euro area in 2014 and 2015, respectively, and Ireland, Portugal, Cyprus and Greece gradually exiting the macroeconomic adjustment programmes. Portugal did not submit a DBP in autumn 2015.

Source: European Commission

While many Member States have achieved their MTOs, enforcing the preventive arm in some high debt countries has proven to be difficult. As shown in Section II.2.2, the pace of structural adjustment has been very uneven in the EU. The significant deviation procedure was introduced as part of the Six-pack as a means to enforce the Pacts' preventive arm. It aims to rectify significant deviations from the MTO or from the adjustment path towards that objective observed on an *ex post* basis. However, it has so far only been applied in the clear-cut cases of Romania and Hungary, with limited results. ⁽⁹⁸⁾ There have been a number of borderline cases but none of them has triggered a significant deviation procedure. In particular, in several instances the compliance indicators pointed to significant deviations from the adjustment requirements, while the overall assessments concluded that the deviations were not significant within the meaning of Regulation 1466/97 (see Graph II.14).

⁽⁹⁸⁾ Malta was found in significant deviation in 2012 but no significant deviation procedure was formally opened, as the country was also found to have breached the Treaty's deficit and debt criteria and was therefore put in EDP.

Graph II.14: Ex post assessment of compliance with the preventive arm of the Pact



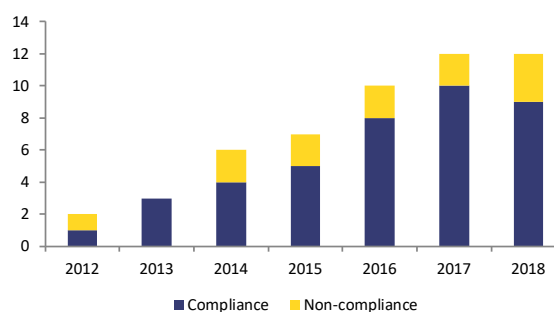
Note: This graph shows the number of Member States under the preventive arm where the compliance indicators pointed to no (green), some (yellow) or significant deviation (red) over 1 and 2 years, as well as cases where both indicators pointed to different conclusions. For each year, it also shows the conclusion of the overall assessment, for the Member States that were subject to the preventive arm in the concerned year. For example, in 2014, over 1 year, both indicators pointed to no deviation for 8 Member States, some deviation for 1 Member State, and different deviations for the remaining 8 Member States; over 2 years, both indicators pointed to no deviation for 10 Member States and different deviations for the remaining 3 Member States. Overall, no deviation was found for 14 Member States, some deviation was found for the remaining 3 Member States, while no Member State was found in significant deviation.

Source: European Commission

Enforcement is hampered by the fact that the framework relies heavily on unobservable and frequently revised variables. The output gap, which measures the amount of slack in the economy, is a key variable underpinning the Pact. It enters the Commission's assessments at different steps of the surveillance procedures and is a key element in calculating the structural balance. Since potential growth and output gaps are unobservable, they need to be estimated on the basis of economic data. This leads to unavoidable uncertainty and revisions of the estimates, for example between the ex ante policy guidance and the ex post assessment of compliance. This has allowed Member States to increasingly challenge the Commission's compliance assessments, especially when it comes to estimating Member States' precise structural balance position compared their MTOs. The use of a wider set of macroeconomic indicators to determine the cyclical position of a Member State and the use of the expenditure benchmark to assess compliance (introduced by the Six-pack) has had limited success in addressing Member States' concerns. Overall, the wide use of unobservable indicators has likely reduced ownership and political buy-in, especially in Member States subject to the preventive arm of the Pact.

Similarly, the operationalisation of the debt criterion did not lead to the opening of EDPs for insufficient debt reduction. The debt reduction benchmark was introduced in 2011 as an attempt to make the Treaty's debt criterion operational. However, so far no EDP has been opened on the basis of the debt criterion alone, despite breaches of the debt reduction benchmark (see Graph II.15).⁽⁹⁹⁾ The benchmark has proved challenging to implement as it is highly pro-cyclical and debt reduction is ultimately not directly in the hands of Member State governments. In this context, the Commission considers observance of the preventive arm requirements to be a key relevant factor when assessing compliance with the debt criterion, as it is supposed, under normal macro-economic circumstances, to ensure sustainability or rapid progress towards sustainability in the medium term. In turn, compliance with the preventive arm has been interpreted in an increasingly broad manner, notably because of the increased use of flexibility. Overall, successive breaches of the debt reduction benchmark by Belgium and Italy have not triggered the opening of 'debt-based' EDPs. While some have claimed that a relatively flexible interpretation of the rules has led to an insufficient reduction of debt, others have argued that the design of the debt rule is no longer fit for purpose in a context of protracted low nominal growth.

Graph II.15: Ex post compliance with the debt reduction benchmark including during the 3-year transition period



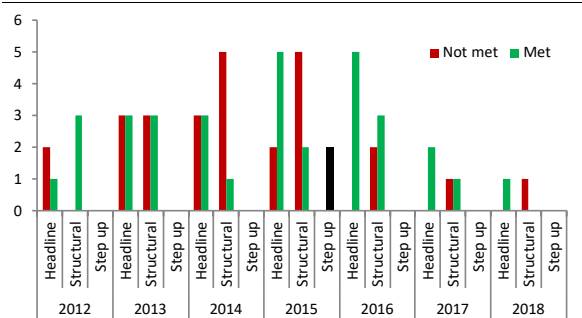
Source: European Commission

The implementation of the corrective arm also reveals some shortcomings. The 2011 reform aimed to address several weaknesses of the EDP. Introducing intermediate headline and structural

⁽⁹⁹⁾ The only debt-based EDPs so far were for Malta (2013) and Croatia (2014), but these were opened because they breached both the deficit and debt criteria.

balance targets was meant to prevent Member States back-loading fiscal consolidation and to make the assessment of effective action more transparent. Financial penalties kicking in earlier in the procedure and decisions on most sanctions being taken by reverse qualified majority voting were meant to ensure stricter compliance with the rules. In practice, the introduction of intermediate targets for both headline and structural balances has led to a situation where meeting the weakest of the two requirements *ex post* is sufficient to be considered compliant. At first, this meant that countries could miss headline targets while (just) meeting structural efforts and could benefit from deadline extensions. Then more recently, when economic conditions turned out more favourable than expected at the time of the EDP recommendations, the framework allowed instead for a nominal strategy, where Member States could meet their headline deficit targets without delivering (at all) the required improvements in the structural balance (Graph II.16). A direct and paradoxical consequence is that the actual fiscal adjustments implemented by EDP countries have in some cases turned out lower than those delivered by countries subject to the preventive arm of the Pact, thus affecting political ownership of the preventive arm (Graph II.17).⁽¹⁰⁰⁾

Graph II.16: Ex post compliance with headline and structural deficit targets under the EDP

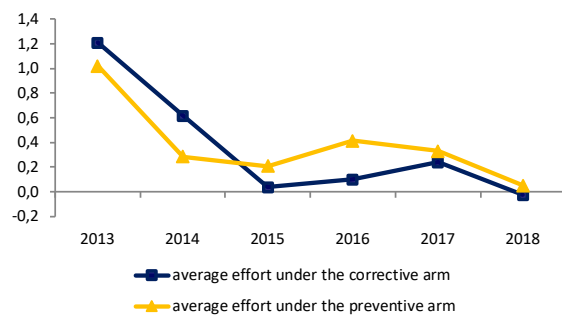


Note: Only post-Six-pack EDP recommendations and non-programme years are considered. The annual structural target is considered to have been met if at least one of the two compliance indicators (corrected change in the structural balance and bottom-up approach) was met. Decisions to step up the procedure refer to the year of non-compliance with the targets and not to the year when those decisions were formally taken.

Source: European Commission

⁽¹⁰⁰⁾ The Commission tabled a proposal to address that issue in 2016, in line with the commitment made in the Commission Communication of 21 October 2015 on ‘Steps towards completing Economic and Monetary Union’ (COM(2015) 600), but the Member States decided not to endorse the proposal.

Graph II.17: Observed Fiscal effort: corrective versus preventive arm



Note: “Preventive arm countries” in 201x comprises the countries that were in the preventive arm in 201x but not yet at their MTO at the start of 201x.

Source: European Commission

Similarly, the introduction of swifter sanctions and reverse qualified majority voting for Council decisions has proved challenging to implement. These reforms have shifted more responsibilities to the Commission for difficult decisions that are inherently political in nature. So far, the Commission has refrained from imposing financial sanctions, including in 2016 when Spain and Portugal did not fulfil their commitments under the EDP⁽¹⁰¹⁾. Paradoxically, while sanctions are sometimes milder than the cost of market pressure (increased spreads), they are more controversial because they are perceived as limiting national sovereignty by a supranational body.⁽¹⁰²⁾ In its assessment of the EU fiscal rules⁽¹⁰³⁾, the European Fiscal Board highlights how the introduction of reverse qualified majority voting has blurred the distinction between the analytical and (growing) political role of the Commission. In order to more clearly demarcate economic analysis from political considerations, the Board recommends the abandonment of reverse qualified

⁽¹⁰¹⁾ The Commission’s proposal to cancel the fines in view of Spain’s and Portugal’s reasoned requests, endorsed by the Council on 8 August 2016, was based on a number of arguments, in particular the implementation of structural reforms and the commitment to adopt deficit-reducing measures. The ‘challenging economic environment’ (in the case of Spain) and ‘the fiscal adjustment undergone during the economic adjustment programme’ (in the case of Portugal) were also put forward as arguments. Many observers argued that also in the case of France in 2015, the EDP should have been stepped up, which in principle would have entailed penalties.

⁽¹⁰²⁾ A counter example in that respect is the decision to suspend structural funds in the case of Hungary in 2012 following a decision on non-effective action under the EDP. However, that decision was not formally based on the Six-pack provisions but on the macroeconomic conditionality provisions relative to the 2007-2013 financial framework.

⁽¹⁰³⁾ See European Fiscal Board (2019), ‘Assessment of EU fiscal rules with a focus on the six and Two-pack legislation’.

majority voting in this area. It further recommends the nomination of a full-time President of the Eurogroup.

II.4.3. A polarisation of views on the EU's fiscal rules

The challenges associated with enforcing the Pact should be seen in the context of a lack of consensus on the EU fiscal framework. In recent years, there has been a growing polarisation of views on the implementation of the EU's fiscal rules and, indeed, on the role that such supranational rules should play. Some Member States favour a strict interpretation of the rules. They criticise an alleged disregard for the debt reduction benchmark and the accumulation of flexibility devices, e.g. the lenient interpretation of the concept 'of 'broad compliance' with the requirements of the preventive arm, multiple flexibility clauses, ad-hoc changes to the fiscal requirements, and the non-application of sanctions. In their view, the flexible implementation of the rules has allowed a few high-debt Member States to avoid the significant deviation procedure and the debt-based EDP, despite little or no fiscal adjustment by these Member States. The stronger use of discretion is sometimes also perceived by smaller Member States as being unduly favourable to larger Member States, calling into question the principle of equal treatment. In contrast, Member States that have experienced slower recoveries from the Great Recession view flexibility as instrumental in supporting their economies and reducing unemployment. This polarisation of views has seriously eroded the consensus on the performance of the rules and the possible direction of future reforms.

Moreover, a lack of political ownership has also been aggravated by an emphasis on annual fiscal adjustments that has led to insufficient differentiation between Member States with markedly different fiscal positions and sustainability risks. In principle, the Pact has a strong medium-term focus, e.g. central role of Stability and Convergence Programmes, focus on a "close-to-balance or in surplus" budgetary position in the medium term, and multi-annual targets in the EDP. In practice, however, the framework mostly focuses on an annual assessment of annual targets, while the medium-term orientation of fiscal policy, including its multi-annual 'track record', receives less prominence.

While the secular decline in interest rates on government debt in recent decades suggests that countries might safely maintain higher levels of public debt, the heightened risks of debt market contagion within monetary union supports the need to aim for safe debt-to-GDP ratios. The design of the Pact is based on the view that high public debt is a drag on the economy and increases the risk of debt crises, in turn calling for primary surpluses that can be used for stabilising (or reducing) the debt-to-GDP ratio. This view has increasingly been called into question due to the observed decline of interest rates on government debt since the 1980s, with these rates falling below the growth rate of nominal GDP in several instances.⁽¹⁰⁴⁾ In such a situation, the public debt ratio can be stabilised (or even reduced) even if the government does not run a primary surplus, as nominal GDP growth will keep the debt ratio in check. It could, therefore, be argued that increasing debt-to-GDP ratios would be a desirable way to absorb private savings and boost the productive capacity of the economy, through higher public investment. These arguments ignore, however, the volatile and self-reinforcing nature of financial markets and the observation that unanticipated spikes in interest rates can lead to public debt spiralling to non-sustainable levels. This poses particular problems for countries in monetary union (particularly those with very high debt-to-GDP ratios) due to the specific institutional framework of the EMU, in which national public debt cannot be unconditionally backed by the central bank and where national public debt crises may threaten the EMU's overall integrity and stability. Furthermore, as the IMF argues in its April 2019 Fiscal Monitor, lower public debt ratios provide room for countercyclical fiscal policy during economic downturns.⁽¹⁰⁵⁾

II.5. Conclusion

The primary objective of EU fiscal rules is to ensure that Member States have a public debt that is sustainable. This is based on the rationale that unsustainable levels of public debt can give rise to debt crises that can spill over into other Member States' debt markets, thus threatening the very existence of the EMU. Successive reforms have given a central role to the preventive arm of

⁽¹⁰⁴⁾ See, for example, Blanchard, O. (2019), 'Public Debt and Low Interest Rates', *American Economic Review*, vol. 109 no. 4.

⁽¹⁰⁵⁾ IMF (2019), 'Fiscal Monitor: Curbing Corruption', 1 April.

the SGP, placed an emphasis on public debt in the corrective arm and tried to make the rules more adaptable to economic conditions. These innovations reflect several observations from the pre-crisis period, namely: market discipline was not sufficient to ensure sustainable fiscal policies; Member States failed to make necessary fiscal adjustments during good economic times; and debt levels can increase considerably during recessions and crisis periods.

In recent years, considerable progress has been made in reaching sound fiscal positions, although a number of highly-indebted Member States have made little or no fiscal adjustment. With all Member States meeting the 3% of GDP deficit criterion by 2018, the EDP has proven itself to be an effective tool for reducing excessive borrowing. More than half of the Member States have also reached (or are close to) their MTOs, thus providing them with fiscal buffers and proving the usefulness of the preventive arm. Underlying fiscal policies have not been appropriate in all Member States, however. For example, since the economic recovery in 2015, the correction of excessive deficits has mainly been driven by better-than-initially-expected macroeconomic conditions rather than structural fiscal adjustments. Furthermore, some highly-indebted Member States remain far from their medium-term objectives, which makes them vulnerable to breaching the (nominal) reference value of 3% of GDP if economic conditions were to deteriorate. Their debt ratios have also continued to rise or, at best, have stabilised. These observations raise the question of the extent to which the reformed SGP has made a material difference in the cases where fiscal discipline is most necessary.

Whereas successive reforms made the SGP more stringent, its implementation and enforcement have been characterised by an increasing use of flexibility and judgement. The Commission's approach to implementing the rules has been to strike a balance between the need for fiscal sustainability and the need for macroeconomic stabilisation. This has been done within the constraints of the framework and partly reflects the absence of a central fiscal capacity, as well as very large accumulated output losses during the Great Recession.

Despite successive reforms to make the framework more adaptable to economic

circumstances, the Pact continues to be implemented in a pro-cyclical manner, and the EU's ability to coordinate an appropriate fiscal stance for the euro area remains constrained. The fiscal adjustments made by a number of Member States in the immediate post-crisis period took place in a context of very low or even negative economic growth and were, therefore, clearly pro-cyclical. In contrast, fiscal consolidation has ground to a halt since 2014, while economic growth has picked up.

Moreover, in view of the asymmetry of the SGP because of its focus on debt sustainability at the Member State level, the surveillance framework does not contain the appropriate tools to steer the aggregate fiscal stance. This can be problematic when the appropriate aggregate stance is not consistent with the sum of the stances of the individual Member States. A euro area fiscal stabilisation capacity would improve the EU's ability to coordinate an appropriate fiscal stance.

The Six-pack and Two-pack legislation contain clauses requiring the European Commission to review the different pieces of legislation by the end of 2019. This will be an opportunity to reflect on the future of EU fiscal rules. In this context, the Commission has acknowledged the need to simplify the fiscal rules in the 2017 Reflection Paper on the deepening of the Economic and Monetary Union. ⁽¹⁰⁶⁾

⁽¹⁰⁶⁾ European Commission, 2017, 'Reflection Paper on the deepening of the Economic and Monetary Union', COM(2017) 291.

III. Imbalances and Adjustment

Section prepared by Leonor Coutinho and Alessandro Turrini

This section reviews ideas and evidence on adjustment in the EMU, including shock absorption and external imbalances. First, it presents the main issues with macroeconomic adjustment in a monetary union and the debate that surrounded the EMU project. Second, the section reviews the empirical evidence and presents key facts about the EMU performance in adjusting to asymmetric shocks. The point is made that, overall, the adjustment mechanisms worked as predicted, with competitiveness reacting in such a way as to absorb asymmetric shocks. However, contrary to expectations, the EMU start-up shock had major and long-lasting country-specific effects on income and employment. Moreover, in light of accumulated macroeconomic imbalances, the financial crisis produced major country-specific effects. Third, the section discusses adjustment issues related to external imbalances. It is argued that the accumulation of external imbalances turned out more disruptive than thought in the early EMU years, as they were followed by current account reversals and deep recessions that interrupted the convergence process. ⁽¹⁰⁷⁾

III.1. Introduction

The emphasis in the academic debate surrounding the creation of the economic and monetary union (EMU) was on internal adjustment - i.e. adjustment of the output gap - to asymmetric shocks, a relevant issue in light of the loss of nominal exchange rates as an adjustment tools and the loss of independent monetary policies at Member State level. Issues relating to external adjustment — i.e. adjustment of the external balance — and adjustment to macroeconomic imbalances at large were seldom discussed⁽¹⁰⁸⁾.

After 20 years of experience with EMU, there is now sufficient evidence for a much better understanding of the adjustment mechanisms in place. With hindsight, experience has shown that some of the shocks hitting euro-area countries have been of a different nature and much larger and more persistent than the standard business cycle shocks considered in the early EMU debate. These shocks triggered serious ‘internal adjustment’ challenges. At the same time, the so called ‘benign neglect’ attitude prevailing in the early years of EMU, that is, the view that current account developments and other macroeconomic imbalances were not reasons for concern but rather the reflection of integration and convergence, turned out to be unjustified. Accumulated external imbalances, coupled with internal imbalances and capital misallocation in the pre-crisis period, prompted major reversals in external financing and

perverse sovereign-bank loops; this resulted from an incomplete design of EMU, which left it without the financial sector governance and firewalls needed to deal with financial instability.

To develop these arguments, this section will review the main facts and features related to adjustment and macroeconomic imbalances observed in the euro area over these past 20 years. The remaining sub-sections are structured as follows. Sub-section 2 reviews the early debate on adjustment channels in a currency union. Sub-section 3 analyses the adjustment that has taken place in the euro area over the past 20 years and its effectiveness. Sub-section 4 highlights the type of shocks that really mattered for the euro area, while Sub-section 5 discusses the importance of macroeconomic imbalances for the effectiveness of the adjustment. Sub-section 6 analyses adjustment issues still pending and sub-section 7 concludes.

III.2. Adjustment in the euro area: the debate

In the years leading up to the EMU, the academic debate was focused on how euro-area members would adjust to asymmetric shocks in the absence of nominal exchange rates. It was argued that only countries not highly exposed to asymmetric shocks or with characteristics that helped an efficient adjustment would form an optimal currency area, i.e., an area where the benefits from sharing a common currency outweigh the costs associated with reduced room to deal with asymmetric shocks (McKinnon, 1963, Mundell, 1961)⁽¹⁰⁹⁾.

⁽¹⁰⁷⁾ This section represents the authors’ views and not necessarily those of the European Commission.

⁽¹⁰⁸⁾ See, European Commission (2008), ‘EMU@10: successes and challenges after 10 years of Economic and Monetary Union’, *European Economy*, 2.

⁽¹⁰⁹⁾ McKinnon, R. (1963), ‘Optimum currency areas’, *American Economic Review* 53, pp.509-517. Mundell, R. (1961) ‘A theory of optimum currency areas’, *American Economic Review* 51, pp.657-665.

For this reason, as a pre-requisite for a successful integration, the literature emphasised more synchronised business cycles and a low probability of asymmetric shocks — favouring notably a high degree of trade integration and economic structures supporting a quick and painless adjustment in case of asymmetric shocks. With respect to the latter, the focus was in particular on flexible product and labour markets, permitting the adjustment of relative prices, geographical mobility of production factors, notably financial risk sharing and labour mobility. Alternatively, the presence of a system of automatic fiscal transfers between Member States, helping to absorb the impact of shocks on incomes, could also facilitate the adjustment (Kenen, 1969)⁽¹¹⁰⁾.

Sceptical views were put forward in the pre-EMU debate on whether EU countries formed an optimal currency area. These views pointed among other things to the fact that unlike US states: (i) European countries were more likely to be hit by asymmetric shocks (Bayoumi and Eichengreen, 1993), (ii) they had a lower degree of labour mobility (Blanchard and Katz, 1992), and (iii) they had a much more limited system of automatic fiscal transfers between States (Bayoumi and Masson, 1995)⁽¹¹¹⁾.

More optimistically, it was also argued that the intensification of trade flows after the formation of EMU would endogenously increase the business cycle synchronisation of euro area countries bringing them closer to an optimal currency area⁽¹¹²⁾. Similar hypotheses were also put forward regarding financial integration, but subsequent studies have only confirmed the positive impact of

trade integration on business cycle synchronisation but not that of financial integration⁽¹¹³⁾. The point was also made that greater policy coordination in EMU through the Stability and Growth Pact would also lead to a higher degree of synchronisation of business cycles⁽¹¹⁴⁾. Finally, it was also debated that the loss of flexibility with nominal exchange rates would not necessarily imply adjustment issues, as floating exchange rates and independent monetary policies were found to be by themselves a source of asymmetric shocks⁽¹¹⁵⁾.

A key aspect of the discussion surrounding the EMU concerned the effectiveness of the price competitiveness channel for internal adjustment, also known as the ‘automatic adjustment mechanism’. Asymmetric shocks would cause diverging output gaps, so that the growth rate of costs and prices would have differed across countries (because of their different positions along national Phillips curves) in such a way as to produce an automatic reaction on competitiveness, which would lead to dynamics in net exports that would help to absorb the shock. Net exports would decline in countries with stronger price growth, and in so doing cool aggregate demand and reduce the output gap. This adjustment channel, if working effectively, would have helped avoid resources remaining idle for long periods in countries hit by negative shocks, therefore limiting the social costs of adjustment and reducing the extent to which adjustment takes place via migration.

⁽¹¹⁰⁾ Kenen, P. (1969) ‘The theory of optimum currency areas: an eclectic view’, in Mundell, R., and Swoboda, A. (Eds.), *Monetary Problems in the International Economy*, University of Chicago Press, Chicago, pp.41-54.

⁽¹¹¹⁾ Bayoumi, T., Eichengreen, B. (1993) ‘Shocking aspects of European monetary unification’, in Torres, F. and Giavazzi, F. (Eds.), *Adjustment and Growth in the European Monetary Union*, Cambridge University Press, Cambridge, pp. 193-229. Blanchard O, Katz L.F. (1992), ‘Regional evolutions’, *Brookings Papers on Economic Activity* 1, 1-75. Bayoumi, T., and Masson, P. R. (1995), ‘Fiscal flows in the United States and Canada: Lessons for monetary union in Europe’, *European Economic Review* 39(2), pp.253-274.

⁽¹¹²⁾ See von Hagen, J. and Neumann, M.J.M. (1994), ‘Real exchange rates within and between currency areas: how far away is EMU?’, *Review of Economics and Statistics* 76, pp.236–244; Frankel, J. Rose, A. (1998), ‘The endogeneity of the optimum currency area criteria’, *Economic Journal* 108, pp.1009–1025; and Haug, A., MacKinnon, J. G., and Michelis, L. (2000), ‘European monetary union: a cointegration analysis’, *Journal of International Money and Finance* 19, pp.419–432.

⁽¹¹³⁾ Subsequent studies continued to find trade integration to have been conducive to higher business cycle synchronisation in at least some of the euro area countries. See Gächter, M., & Riedl, A. (2014), ‘One money, one cycle? The EMU experience’, *Journal of Macroeconomics* 42, pp. 141-155 and Caporale, G. M., De Santis, R., and Girardi, A. (2015), ‘Trade intensity and output synchronisation: On the endogeneity properties of EMU’, *Journal of Financial Stability* 16, pp.154-163. However, Caporale et al. (2015) *op.cit.* and Kalemli-Ozcan et al. (2013), for instance, find that financial linkages are not always conducive of higher business cycle synchronization. Kalemli-Ozcan S. Papaioannou, E., and Peydró, J. (2013), ‘Financial regulation, financial globalization, and the synchronization of the economic activity’, *Journal of Finance* 68 (3), pp.1179-1220.

⁽¹¹⁴⁾ Darvas Z., Rose A.K., and Szapáry, G. (2007), ‘Fiscal divergence and business cycle synchronization: irresponsibility is idiosyncratic’, in Frankel, J.A., Pissarides CA (eds.) *NBER International Seminar on Macroeconomics 2005*, pp.261 - 298 MIT Press.

⁽¹¹⁵⁾ See Artis, M., and Ehrmann, M. (2006), ‘The exchange rate—A shock-absorber or source of shocks? A study of four open economies’, *Journal of International Money and Finance*, 25(6), pp.874-893; and Kontolemis, Z. and Samei, H. (2000), ‘The U.K. Business Cycle, Monetary Policy, and EMU Entry’, IMF Working Papers 00/210.

However, in addition to the stabilising competitiveness channel, it was argued that monetary unification would also imply a destabilising real interest rate channel — also known as the ‘Walters’ effect’⁽¹¹⁶⁾. As nominal interest rates in a monetary union tend to converge, countries experiencing larger positive output gaps and higher inflation would also experience lower real interest rates⁽¹¹⁷⁾. This would lead to higher consumption and investment, thus strengthening the boom. The dominance of the stabilising price competitiveness channel of adjustment over the destabilising real interest rate channel depended on a high degree of trade integration, on a relatively strong response of competitiveness to cyclical divergences, on a muted response of investment to the cost of capital, and, finally, on a low persistence of inflation differentials⁽¹¹⁸⁾.

While internal adjustment was at the centre of the attention, issues relating to external adjustment did not feature highly in the pre-EMU debate. In particular, there was no discussion on the possible conflict between internal and external adjustment implied by the automatic competitiveness adjustment mechanism. The conflict, however, became evident as, in the first decade of EMU, a number of countries in the euro-area periphery started recording strong cyclical positions, deteriorating competitiveness, and widening

current account deficits. This widening of current account imbalances among euro-area countries was not generally seen as problematic, as it was interpreted as a necessary by-product of increased financial integration associated with EMU. Actually, the build-up of current account divergences between the richer euro-area ‘core’ and the ‘periphery’ was seen as the manifestation of one of the benefits of monetary integration, namely the improved room for international borrowing to finance investment where potential gains are stronger⁽¹¹⁹⁾. In this respect, the EMU was helping to address the puzzling evidence elsewhere that capital tended to flow from countries with lower per-capita income to countries with higher per-capita income, instead of what would be expected⁽¹²⁰⁾.

Although the prevailing attitude to widening current account imbalances in the early years of EMU was one of benign neglect, concern started mounting as imbalances became larger and evidence pointed to declining productivity growth and the excessive expansion of non-tradables sectors in deficit countries⁽¹²¹⁾. The post-crisis experience showed not only that the accumulated external imbalances became increasingly hard to sustain, but that the incomplete nature of the monetary union made possible major current account reversals, triggered by the generalised risk reappraisal following the great financial crisis.

⁽¹¹⁶⁾ This argument was first pointed out by Alan Walters in 1992 to argue against UK membership of the euro area. See Walters, A. (1992), ‘Walters Critique’, in P. Newman, M. Milgate and J. Eatwell, eds., *The New Palgrave Dictionary of Money and Finance*, Palgrave Macmillan, Basingstoke.

⁽¹¹⁷⁾ According to the theory of uncovered interest parity, if there are no restrictions to international capital movements, arbitrage will drive nominal expected returns expressed in the same currency to be the same across countries. This implies that $i_t = i_t^* + (e_{t+1}^e - e_t)/e_t$, where e is the price of the foreign currency in terms of domestic and i^* is the foreign interest rate. When exchange rate risk is eliminated in a monetary union and there are no capital restrictions, nominal interest rates equalize across members states. This implies that when inflation rates are different across members of a monetary union, real interest rate differentials also emerge. See Krugman P, Obstfeld M, Melitz M (2017) *International trade: theory and policy*, 11th edn. Pearson, London, chapter 14.

⁽¹¹⁸⁾ See e.g., European Commission (2008), *op. cit.* Persistency in inflation differentials strengthen the destabilising real interest rate channel by making inflation expectations less forward looking and thus making differences in real interest rates also more persistent. Among the factors affecting the persistence of relative price changes structural conditions in product and labour markets have been mentioned. See on this Angeloni, I., and Ehrmann, M. (2007), ‘Euro area inflation differentials’, *The BE Journal of Macroeconomics*, 7(1), 1-34; and Biroli, P., Mourre, G., and Turrini, A. (2010), ‘Adjustment in the euro area and regulation of product and labour markets: an empirical assessment’, CEPR discussion paper 8010.

⁽¹¹⁹⁾ See e.g., Blanchard, O. and F. Giavazzi (2002), ‘Current account deficits in the euro area: the end of the Feldstein-Horioka puzzle?’, *Brookings Papers on Economic Activity* 2, pp.148-186; and Schmitz, B., von Hagen, J. (2011), ‘Current account imbalances and financial integration in the euro area’, *Journal of International Money and Finance* 30 (8), 1676-1695.

⁽¹²⁰⁾ This puzzle is best known as ‘Lucas paradox’, Lucas, Robert (1990), ‘Why doesn’t Capital Flow from Rich to Poor Countries?’, *American Economic Review* 80 (2), pp.92-96. A closely related puzzle is the ‘Feldstein-Horioka puzzle’, which points to the paradoxical evidence of the high correlation between domestic savings and domestic investment. See Feldstein M. and Horioka, C. (1980), ‘Domestic Saving and International Capital Flows’, *Economic Journal* 90 (358), pp.314-329.

⁽¹²¹⁾ See European Commission (2006), ‘Focus: Widening current account differences within the euro area’, *Quarterly Report of the Euro Area* 4, pp.25-37; European Commission (2008), *op. cit.*; Arghyrou, M.G., Chortareas, G. (2008), ‘Current account imbalances and real exchange rates in the euro area’, *Review of International Economics* 9 (5), 747-764; Giavazzi, F. and Spaventa, L. (2010) ‘Why the Current Account May Matter in a Monetary Union: Lessons from the Financial Crisis in the Euro Area’, CEPR discussion paper 8008; Gros, D. (2012), ‘Macroeconomic Imbalances in the euro area: symptoms or causes of the crisis?’, CEPS policy brief 226, April; Belke, A. and Dreger, C. (2013), ‘Current account imbalances in the euro area: does catching up explain the development?’ *Review of International Economics* 21 (1), 6-17; Nieminen, M. (2015), ‘Trade imbalances within the euro area and with respect to the rest of the world’, *Economic Modelling*, 48, 306-314.

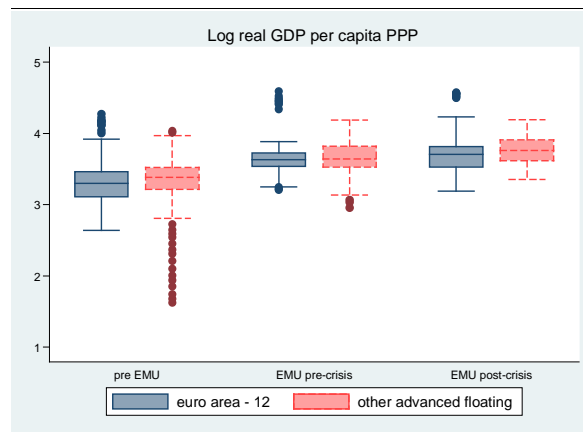
III.3. Adjustment to asymmetric shocks: was it effective?

In the years following the formation of the EMU, *prima facie* evidence suggests that the record of euro-area countries on cross-country cyclical divergences is roughly similar to that of a comparable group of countries with floating exchange rates. This is seen by taking the standard deviation of output gaps in other advanced economies with floating exchange rates and comparing it with the standard deviation of the 12 euro-area founding members, particularly after 1999, or with the euro area overall, particularly after 2008 (Graph IV.2)⁽¹²²⁾. The evidence is consistent with findings showing an increase in the synchronisation of euro-area business cycles during the 1990s (see Méltiz, 2004; Kalemlı-Ozcan et al., 2004). This increased synchronisation is likely to reflect closer economic integration and policy coordination in the run-up to — and early stages of — EMU⁽¹²³⁾. However, other factors could have played a role, including reduced cyclical fluctuations linked to globalisation⁽¹²⁴⁾.

In the aftermath of the global financial crisis, output gaps diverged widely across the euro area. The dispersion peaked in 2012 and has been decreasing since. In 2018, it was back at pre-crisis levels. The dispersion in cyclical positions following the crisis contributed to an increase in the dispersion of output per capita, particularly for the 12 euro-area founding members (Graph IV.1). This dispersion was reduced in the pre-crisis post-

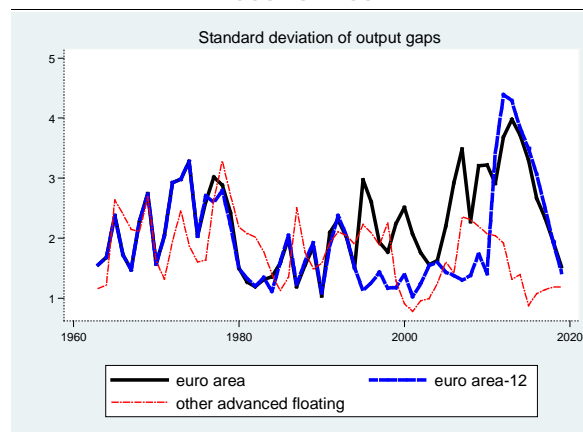
EMU period but increased almost to pre-EMU levels following the crisis⁽¹²⁵⁾.

Graph III.1: Distribution of log per-capita GDP in the euro area vs other floating advanced economies



Source: AMECO and IMF WEO

Graph III.2: Convergence of output gaps in the euro area vs other floating advanced economies



Source: AMECO and IMF WEO

⁽¹²²⁾ The group of non-euro area advanced economies with floating exchange rates (according to the IMF definition) includes Australia, Canada, Switzerland, the UK, Iceland, Japan, Korea, Norway, New Zealand, Sweden and the United States. This sample of countries is similar to the one used in Stracca, L. (2017), ‘Hanging from a cross of euros? Macroeconomic adjustment in and out of the Eurozone’, paper presented at the ‘Euro at 20’ conference in Dublin, June 2018. Notice that even prior to EMU membership candidate countries maintained a close peg to the Deutschmark/euro, hence the comparisons may even be valid some years prior to 1999/2008.

⁽¹²³⁾ Méltiz, J. (2004), ‘Risk sharing and EMU’, CEPR Discussion Papers No 4460. Kalemlı-Ozcan, S., B. Sørensen and O. Yosha (2004), ‘Asymmetric shocks and risk sharing in a monetary union: Updated evidence and policy implications for Europe’, CEPR Discussion Papers No. 4463.

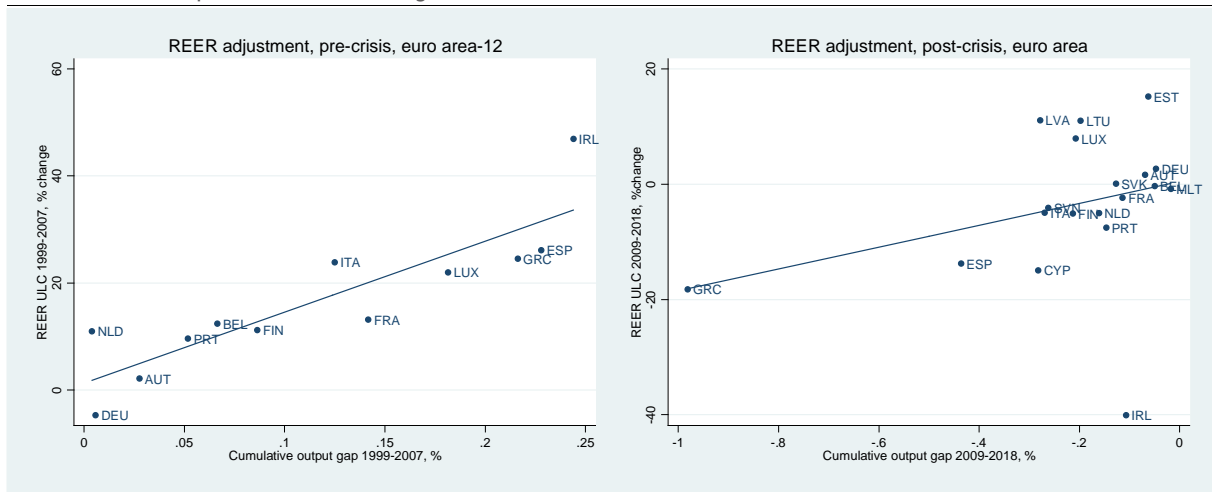
⁽¹²⁴⁾ See European Commission (2008), *op. cit.* and Artis, M. (2005), ‘Business cycle affiliations and their determinants: Where do we stand?’, in Jonung, L. (ed.) *Proceedings of the Annual Research Conference on Business Cycles and Growth in Europe*, European Economy Economic Papers No. 227.

Regarding adjustment, there is evidence that the competitiveness channel worked as expected in the euro area, with real exchange rates responding to differences in cyclical positions, before and after the global financial crisis. Empirical evidence indicates that price competitiveness responded to output gaps more forcefully after the EMU⁽¹²⁶⁾.

⁽¹²⁵⁾ This is consistent with the fact that income per capita across euro area-12 countries have been diverging between 2007 and 2014, also taking into account standard determinants in growth regressions to assess ‘beta convergence’. See Coutinho, L. and Turrini, A. (2019), ‘Convergence and Macroeconomic Adjustment’, *Forthcoming in Quarterly Report on the Euro Area*.

⁽¹²⁶⁾ European Commission (2008), *op. cit.*; Biroli, P., Mourre, G., and Turrini, A. (2010), ‘Adjustment in the euro area and regulation of product and labour markets: an empirical assessment’, CEPR

Graph III.3: REER adjustment in the euro area before and after crisis



Source: AMECO

The responsiveness of real exchange rates to output gaps observed before the crisis for euro-area members (left panel Graph IV.3) is confirmed also after the crisis and also considering the enlarged euro area (right panel Graph IV.3).

Regarding the persistency of competitiveness developments, in other words how quickly real exchange rates react to output gap shocks, the evidence suggests that real exchange rates appear to be more persistent since the EMU, due to the loss of nominal exchange rate adjustment. However, the persistence of changes in relative prices — i.e. changes in competitiveness abstracting from nominal exchange rates and the importance of different trade partners — appears to have been reduced after the single currency's adoption⁽¹²⁷⁾. This result, helped by structural reforms in labour and product markets, implies that the internal automatic adjustment mechanism will be more effective⁽¹²⁸⁾.

Despite these reassuring findings, the evidence also indicates that inflation differentials, and therefore real interest rates, reacted significantly to output gaps, and in so doing underpinned the simultaneous presence of a destabilising Walters' effect⁽¹²⁹⁾. As will be clearer in the forthcoming sub-sections, this effect proved relevant not so much in magnifying initial shocks, but rather in making the impact of these shocks structural and with persistent implications.

Discussion Papers No. 8010; and Ruscher, E. (2016), 'An overview of market-based adjustment in the euro area in the light of the crisis', Quarterly Report on the Euro Area, 14(4), 7-17.

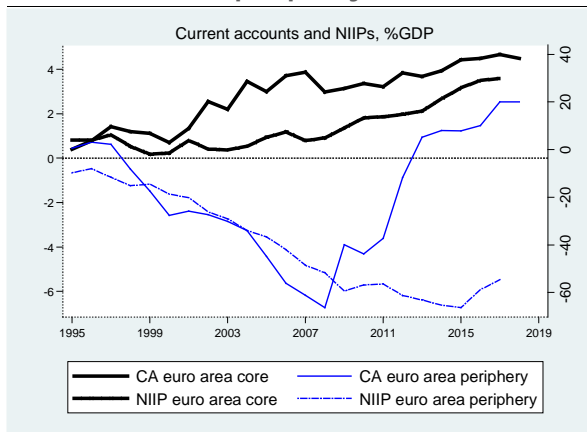
⁽¹²⁷⁾ As opposed to competitiveness measured by real effective exchange rates, inflation differentials do not take into account the extent to which relative prices change with respect to the most relevant trade partners. Biroli, P., Mourre, G., and Turrini, A. (2010), *op. cit.*

⁽¹²⁸⁾ In a monetary union, persistence in relative prices translates into persistence in real exchange rates between the members of the currency union, and vice-versa, as the nominal exchange rate cannot adjust by definition. Lower persistence therefore leads to faster adjustment and higher resilience to shocks. The latter has been associated with structural reforms in product and labour markets. See Duval, R., and Vogel, L. (2008), 'Economic resilience to shocks', OECD Journal, Economic Studies, 2008(1), 1-38; Canova, F., Coutinho, L. and Z. Kontolemis (2012), 'Measuring

the macroeconomic resilience of industrial sectors in the EU and assessing the role of product market regulations', European Economy Occasional Papers 112; and Jolles, M., Meyermans, E. and Vasicek, B. (2018), 'Determinants of economic resilience in the euro area: An empirical assessment of policy levers', Quarterly Report on the Euro Area, 17(3), 27-46.

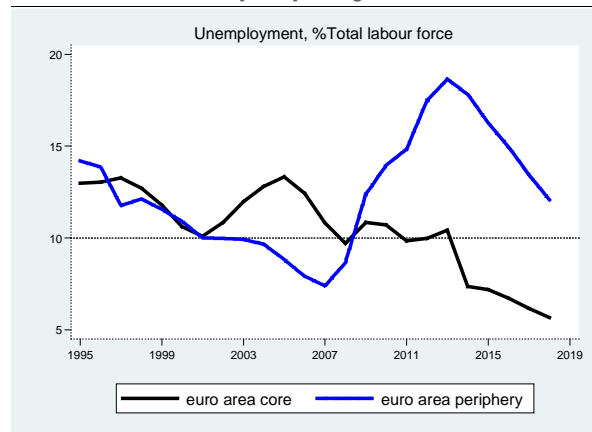
⁽¹²⁹⁾ Many studies document inflation differentials across EMU countries to be wider and more persistent than those observed among the regions of a country. See e.g., Honohan, P. and Lane, P. R. (2003), 'Divergent inflation rates in emu', Economic Policy, 18(37):357-394; and Ehrmann, M. (2007), 'Euro area inflation differentials', The BE Journal of Macroeconomics, 7(1), 1-34.

Graph III.4: External adjustment: core vs periphery



Source: AMECO

Graph III.5: Internal adjustment: core vs periphery

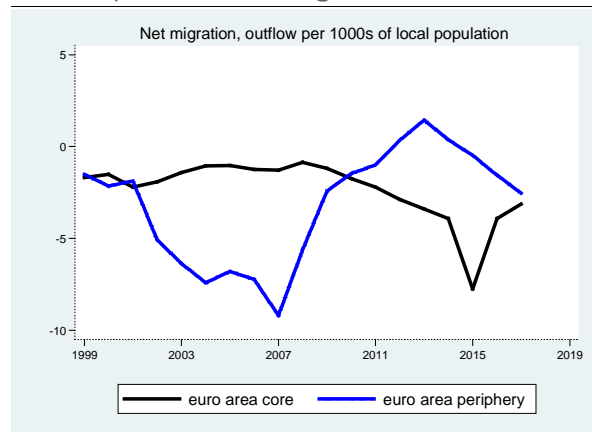


Source: AMECO

Changing relative costs and prices were not the only margin along which adjustment took place. As expected, adjustment concerned also the mobility of production factors. Capital mobility was at the same time a source of adjustment and the driver of major shocks. Capital flew to the periphery in the first decade of EMU, fuelling to some extent output booms. After the burst of the financial crisis, capital left the euro-area periphery. The extent of the capital flight was so massive as to become the source of major persistent output divergences⁽¹³⁰⁾. Recession in the periphery was accompanied by a reversal in the current account dynamics and a large surge in unemployment (Graphs IV.4 and IV.5)⁽¹³¹⁾.

Labour migration also played an important role. Net migration inflows in the first phase of EMU were positive in periphery countries. These inflows contributed, among other things, to booming housing markets in countries such as Spain and Ireland, but also helped to contain labour costs in some sectors. After the financial crisis, periphery countries started recording reduced inflows in an initial phase and then outflows. Correspondingly, net migration inflows in core countries started becoming more sizable in the second half of the 2010s (Graph IV.6).

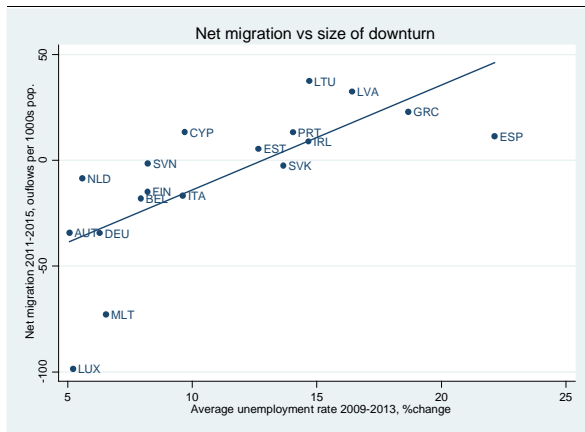
Graph III.6: Net migration outflows



Source: Eurostat

⁽¹³⁰⁾ It is important to note that, despite the limited EU budget, private outflows in the euro area have been cushioned to some extent by public support in the form of EU/IMF financial assistance programmes, provision of liquidity by the Eurosystem (captured by the development of TARGET balances), and ECB purchases of sovereign bonds. For evidence, see Merler, S., and Pisani-Ferry, J. (2012), “Sudden stops in the euro area”, Bruegel policy contribution, 6.

⁽¹³¹⁾ The core is defined as countries with a current account surplus on average between 1999 and 2007, and includes Austria, Belgium, Germany, Finland, France, Luxembourg and the Netherlands. The periphery is defined as countries with a current account deficit on average between 1999-2007 (net recipients) and includes Spain, Greece, Ireland, Italy, Portugal and new Member States, including Cyprus, Estonia, Lithuania, Latvia, Malta, Slovakia, and Slovenia.

Graph III.7: **Unemployment and population flows**

Source: AMECO and Eurostat

The pattern of net migration flows across euro-area countries in the post-crisis period was clearly linked to slack in the labour market, with countries in the periphery recording higher unemployment rates and more sizable migration outflows and those in the core being net recipients of migrants (Graph IV.7). The evidence indicates that the responsiveness of migration flows to changes in unemployment became stronger after EMU and therefore contributed to adjustment⁽¹³²⁾.

III.4. What type of shocks mattered?

Traditional optimal currency area (OCA) theory focuses on shocks that originate as asymmetric. Initially the focus was on asymmetric demand shocks — i.e. demand shocks that take place only in some countries in the monetary union but not in others. However, subsequent debate also considered asymmetric supply shocks affecting particular industries or sectors (see Baoyoumi and Eichengreen, 1993)⁽¹³³⁾. These type of business-cycle shocks played a role during the first 20 years of EMU. However, as argued already in the pre-EMU debate, the evidence also shows that common shocks can produce asymmetric effects

on output when affecting euro-area Member States to different extents and with different intensity⁽¹³⁴⁾.

With hindsight, it could be argued that the biggest source of cyclical divergences in the first decade of EMU was not the occurrence of asymmetric shocks but the very substantial reduction in nominal interest rate differentials across euro-area countries, notably between the euro-area ‘core’ and its ‘periphery’⁽¹³⁵⁾. Already before monetary unification, as a result of a credible convergence process towards the Maastricht criteria for EMU, a rapid convergence of nominal interest rates and inflation rates took place⁽¹³⁶⁾. Nominal interest rate convergence was largely the result of vanishing exchange rate risk premiums, but reduced credit premiums associated with strong public finance eligibility requirements for EMU also played a role. In parallel, inter-bank and bond markets became more integrated across the euro area and more liquid. This implied that real interest rates declined sharply in some countries as spreads across countries narrowed significantly. By the mid-1990s periphery countries started recording real interest rates below those observed in the euro-area core (Graph 8). The steeper fall in interest rates in the periphery was associated with capital inflows and current account deterioration and implied a stronger cyclical position as compared with countries in the euro-area core.

⁽¹³²⁾ See Arpaia, A., Kiss, A., Palvolgyi, B., and Turrini, A. (2016), ‘Labour mobility and labour market adjustment in the EU. IZA Journal of Migration’, 5(1), 21. Despite evidence of increased mobility across euro-area countries, recent evidence indicates that labour mobility remains below the labour mobility recorded across US states (see Beyer, R. C., and Smets, F., 2015, ‘Labour market adjustments and migration in Europe and the United States: how different?’, *Economic policy* 30(84), 643-682).

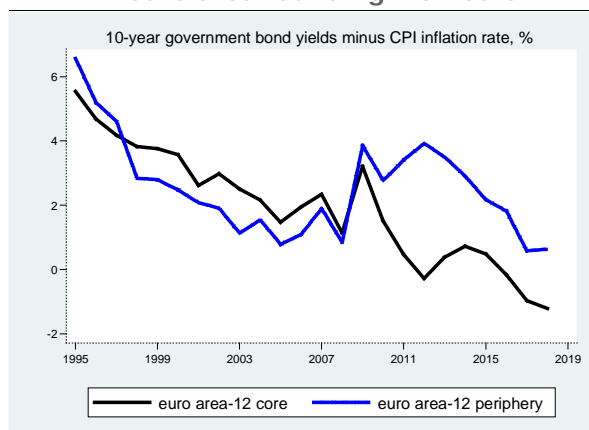
⁽¹³³⁾ Baoyoumi, T., Eichengreen, B. (1993), *op. cit.*

⁽¹³⁴⁾ Several papers have pointed out that common shocks could have a heterogeneous impact across euro-area countries. On this evidence see, for instance, Honohan, P. and Lane, P. R. (2003), *op. cit.*; Chen, R., Milesi-Ferretti, G.M., Tressel, T. (2012), ‘External imbalances in the euro area’, IMF Working Paper, 236; and Giovannini, M., Hohberger, S., Kollmann, R., Ratto, M., Roeger, W., & Vogel, L. (2018), ‘US and Euro Area External Adjustment: The Role of Commodity Prices and Emerging Market Shocks’, paper prepared for the conference ‘International Financial Integration in a Changing Policy Context’ at the European Commission (1-2 March 2018).

⁽¹³⁵⁾ Periphery countries had on aggregate larger stocks of public debt than the core (see Graph IV.11) and built up important stocks of private debt in the run-up to the crisis (see Graph IV.9).

⁽¹³⁶⁾ See European Commission (2008), *op. cit.*

Graph III.8: Long-term real interest rates in 12 euro area founding members



Source: AMECO

A new common shock with largely asymmetric effects hit the euro area, following the burst of the financial crisis. This time the effects were the opposite of those observed with the EMU start-up shock, and more abrupt. With the crisis, interest rates spiked in all countries. But while in the euro-area core interest rates gradually fell as a result of monetary policy action, they remained high in the periphery. This reflected higher interest rate spreads in the periphery associated with a reappraisal of the credit risk, partly driven and compounded by the large stocks of private, government and external debt (Graph IV.8). Due to the strong asymmetric impact of risk reappraisal following the financial crisis, demand and output growth largely diverged across the euro area (Graph IV.2).

Overall, the experience with the first 20 years of EMU shows that the shocks that mattered for cyclical divergence across euro-area countries were not those considered in the traditional literature on an optimal currency area (i.e., shocks of asymmetric nature). Instead they were major common shocks affecting financial markets and producing asymmetric effects on countries' output in light of differences in framework conditions⁽¹³⁷⁾.

III.5. The relevance of macroeconomic imbalances for adjustment in EMU

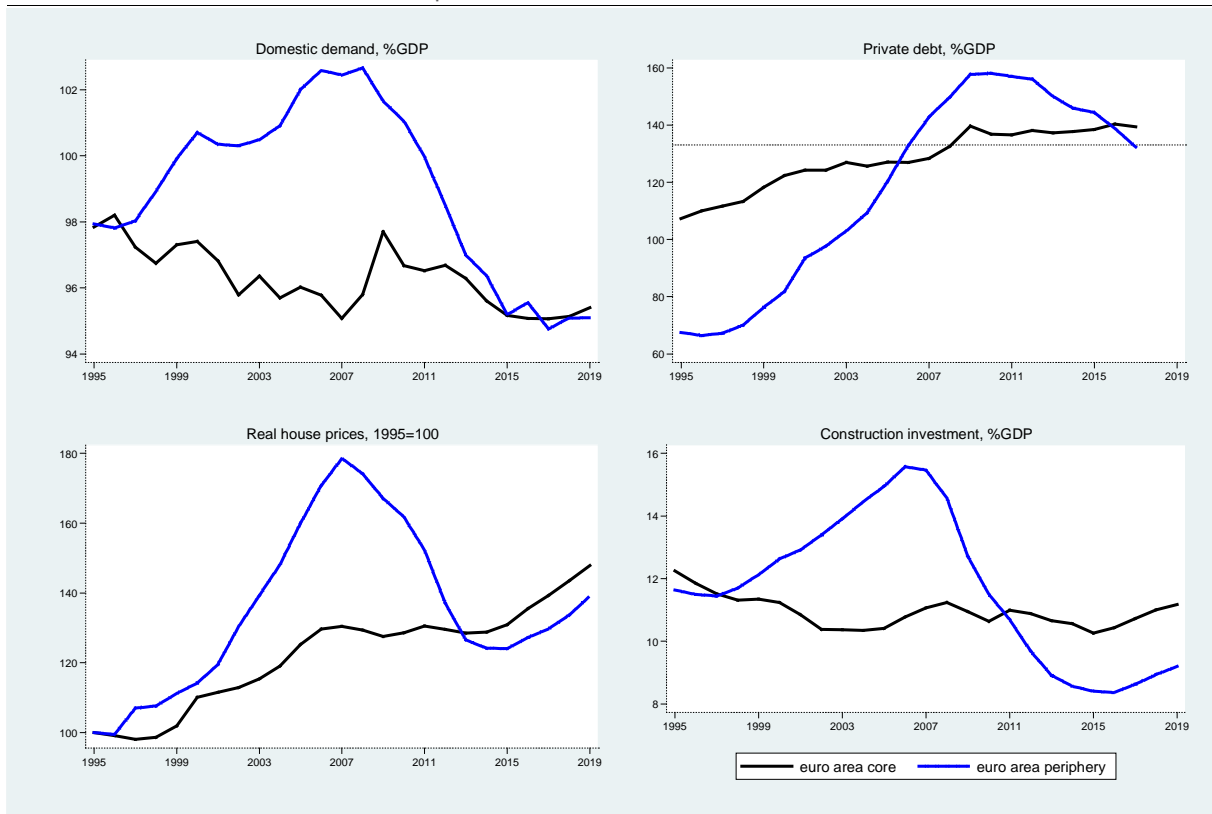
Why were the effects of the financial crisis so different across the euro area? Experience has revealed that the macroeconomic imbalances that were accumulated during the first decade of EMU played a key role⁽¹³⁸⁾.

The absorption boom in the euro-area periphery was accompanied by a rise in private debt (top panel Graph IV.9). In addition, house price bubbles and a strong growth in construction activity took place in a number of euro-area periphery countries (bottom panel Graph IV.9). This build-up of imbalances in combination with current account deficits, indebtedness and an oversized and inflated housing sector created in turn the conditions for a largely asymmetric response to the global financial crisis.

⁽¹³⁷⁾ See also Belke, A., Domnick, C., and Gros, D. (2017). 'Business cycle synchronization in the EMU: Core v periphery', *Open Economies Review*, 28(5), 863-892. These authors argue that what is most relevant is not the synchronisation of cycles but their diverging amplitude, determined by differential responses to shocks.

⁽¹³⁸⁾ Recent studies have found that the synchronisation of business cycles was negatively affected by the presence of imbalances, particularly imbalances in public and private debt, as well as in unit labour cost dynamics. See, e.g., Inklaar, R., Jong-A-Pin, R., de Haan, J. (2008), 'Will business cycles in the euro area converge? A critical survey of empirical research', *Journal of Economic Surveys*, 22 (2), 234-273; and Lukmanova, E., and Tondl, G. (2017), 'Macroeconomic imbalances and business Cycle synchronization. Why common governance is imperative in the Eurozone', *Economic Modelling*, 62, 130-144.

Graph III.9: Domestic imbalances



Source: Eurostat

In light of these very different dynamics between the core of the euro area and its periphery, macro-financial risks were not equally spread. Not surprisingly, when the global financial crisis triggered an important reassessment of risks in financial markets, risk premia spiked, especially in the euro-area periphery. The reassessment of risk was accompanied by a sudden stop of funds into the latter, forcing current account adjustments to take place abruptly⁽¹³⁹⁾. While in the first EMU decade current account imbalances (as measured by differences between actual cyclically-adjusted current accounts and current account ‘norms’, i.e., current accounts explained by fundamentals) remained very persistent, the crisis triggered a rapid adjustment, with the biggest contraction in current account deficits taking place especially in countries with larger external imbalances (Graph IV.11)⁽¹⁴⁰⁾.

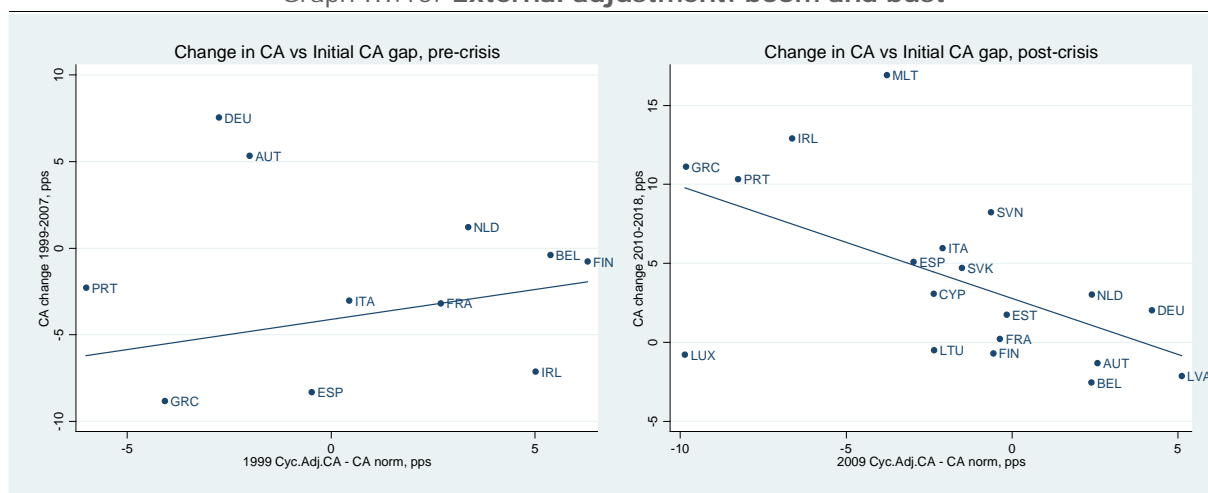
The current account reversals observed after the burst of the global financial crisis implied a major contraction in demand in most countries in the periphery, corresponding in some cases to long-lasting recessions. The drop in external funding and demand was accompanied by a downward correction in house prices notably where housing market bubbles were present in the pre-crisis period. The reappraisal of risk was followed by a deleveraging process in the banking sector and a reduction in private sector indebtedness. The loss of revenues for the government implied instead growing government debt during the first post-crisis period, with the public sector also trying to provide a buffer to counter massive deleveraging, stabilise output, and stabilise the financial sector (Graph IV.10). In some euro-area periphery countries, the growth in government debt was followed by fiscal crises and the need for official funding.

⁽¹³⁹⁾ On the reassessment of risks and the role of capital markets in the crisis see Baldwin, R.E. and Giavazzi, F., eds., (2015), ‘The Eurozone crisis: A consensus view of the causes and a few possible remedies. London: CEPR Press.

⁽¹⁴⁰⁾ The estimation of cyclically adjusted current accounts and current account norms follows Coutinho, L., Turrini, A. and Zeugner, S. (2018), ‘Methodologies for the assessment of current account

benchmarks’, European Economy Discussion Paper 086/September 2018.

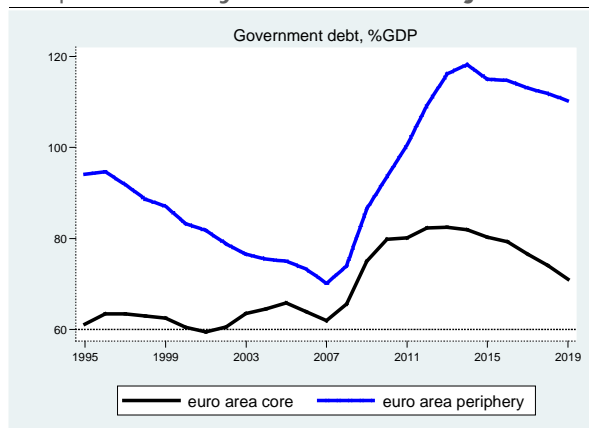
Graph III.10: External adjustment: boom and bust



(1) CA stands for current account. The horizontal axis shows the current account gap calculated as the difference between the cyclically adjusted current account - Cyc.Adj.CA - and the current account explained by fundamentals - CA norm. See Coutinho et al. (2018) *op. cit.*

Source: Eurostat and European Commission

Graph III.11: Asymmetric fiscal adjustment



Source: AMECO

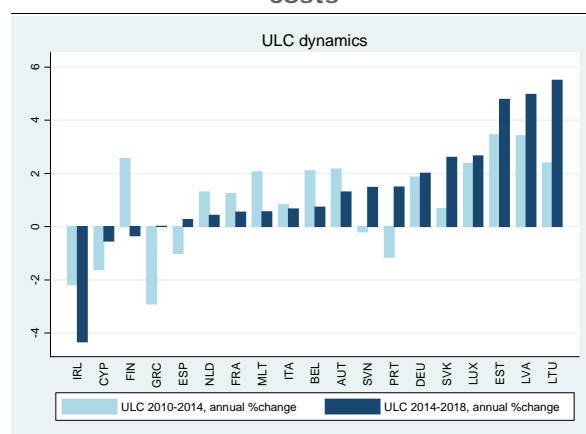
Overall, the imbalances accumulated in the pre-EMU period — with a combination of current account deficits and external debt, private debt possibly accompanied by inflated housing markets, leveraged banks and elevated government debts — contributed not only to a largely different response of financial markets to the global financial crisis, but implied very different adjustment trajectories⁽¹⁴¹⁾.

⁽¹⁴¹⁾ See, e.g., Coutinho and Turrini (2019), *op. cit.*, on evidence that convergence dynamics in the euro area have been closely linked to macroeconomic imbalances, with excessive debt and excessive growth of the non-tradable sector playing a particularly important role in decelerating convergence.

III.6. Ongoing adjustment: unfinished business?

After major cyclical divergence following the financial crisis, with some periphery countries experiencing substantial and persistent recessions and record-high rates of joblessness, a process of renewed convergence materialised. This occurred after the economic recovery of the euro area, which started in 2014, became more widespread and robust (Graph IV.2)⁽¹⁴²⁾.

Graph III.12: Adjustment in unit labour costs

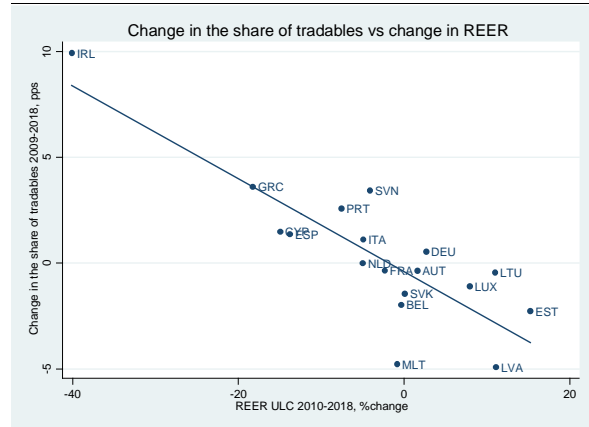


Source: Eurostat

⁽¹⁴²⁾ See Coutinho and Turrini (2019), *op. cit.*, for evidence that the standard deviation of output in the euro area re-started to decline after the crisis.

The automatic adjustment process, occurring via the competitiveness channel, worked in the expected direction, as mentioned earlier. While the excessive expansion of domestic demand created a tension between internal and external equilibrium during the first decade of EMU, the response of competitiveness to cyclical divergences helped the external adjustment after the crisis. Countries with a legacy of largely negative current accounts and accumulated net external liabilities were those with the most negative output gaps and highest unemployment rates, which resulted from the major drop in demand that followed current account reversals. As a result, the wage and unit labour costs in these countries recorded comparatively low rates of growth. This enabled cost competitiveness to recover, which in turn helped to improve net exports and contributed to a durable adjustment in external positions⁽¹⁴³⁾. This process was particularly effective in the post-crisis, pre-recovery period (2010-2014). A process of unit labour costs being significantly reduced was observed in the countries most affected by the crisis, notably Ireland, Cyprus, Greece, Spain and Portugal. This partly reflected increases in labour productivity due to labour shedding but also reflected in some countries a downward adjustment in wages. Unit labour cost growth differentials between core and periphery gradually moderated as output gaps were gradually reduced and unemployment rates started falling in periphery countries. Meanwhile, in the core, wage growth has remained subdued despite relatively tight labour market conditions since 2014 (Graph IV.12).

Graph III.13: **Adjustment in tradables and relative prices**



Source: AMECO

The recovery of price and cost competitiveness in the euro-area periphery was accompanied by a gradual shift in the composition of output. While before EMU, the increase in the real effective exchange rate in the euro-area periphery corresponded to a relative increase in the demand for and price of non-tradable goods, the opposite happened in the post-crisis period (Graph IV.13)⁽¹⁴⁴⁾. Such a process of reallocation is key to re-establish a sustainable growth engine in the periphery, as tradable goods are those that permit an export-driven form of sustained growth that is compatible with external rebalancing and that generally exhibits higher rates of total factor productivity growth, the main source of growth potential over a medium-to-long-term time horizon. In this respect, it is worth emphasising that the oversized non-tradable sector in the periphery — sometimes compounded by housing bubbles — was to a large extent a by-product of the reduction in real interest rates in the periphery⁽¹⁴⁵⁾. In this respect, the real interest rate channel played a destabilising role, not so much because it magnified the output gap implications of shocks, but because it made these shocks entrenched by entailing a shift in production

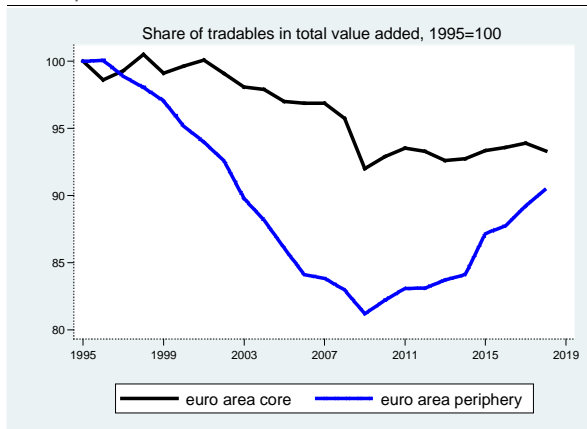
⁽¹⁴³⁾ The fall in import demand, prompted by the decline in economic activity, also contributed to an improvement in net exports, but in a less sustainable manner, as imports recover with the recovery in domestic activity.

⁽¹⁴⁴⁾ This analysis uses the AMECO database definition of tradables and non-tradables (non-tradables include NACE REV.2 codes F and K-U; tradables include NACE REV.2 codes A-E and G-J). The alternative would be to use exported value added by sector as a measure of ex-post tradability. Preliminary analysis indicates that, for most countries, the analysis would not be fundamentally different and using this alternative data and definition also has its drawbacks.

⁽¹⁴⁵⁾ Imperfect mobility of capital across sectors is also a key reasons underpinning the persistence of non-performing loans in euro-area countries. See, e.g., Loublier, A. (2016), 'Deleveraging and adjustment', Quarterly Report on the Euro Area, 14(4), 49-58.

structures that had implications on growth potentials⁽¹⁴⁶⁾.

Graph III.14: Tradables vs non-tradables



Source: AMECO

A key issue going forward, to ensure a recovery of convergence and growth prospects in the euro-area periphery, is to complete the sectoral shift away from non-tradables, which were associated with the build-up of pre-crisis imbalances. In this respect, prima facie evidence suggests that this process is not fully completed, as the share of tradeable activities out of the total generally remains below the share observed before the harmful dynamics of the first decade of EMU started to play a role (Graph IV.14). Although progress on the front of sectoral reallocation is challenged by the ongoing trade slowdown and uncertainty on the trade policy environment, such a process is key to make growth compatible with external balance, and would permit to reap larger benefits in terms of productivity growth. For periphery countries, it may be important to at least recover what they have lost in terms of tradable shares to ensure the sustainability of their external debt.

A further dimension along which adjustment in the euro area has remained incomplete relates to the largely asymmetric outcomes in domestic demand rebalancing. While in the wake of the financial crisis both private and public demand contracted sharply in the periphery as a result of the reappraisal of risks and the capital flight, demand

dynamics in the core were not able to compensate this trend, despite reduced deleveraging needs, capital inflows, and a relatively early recovery in most euro-area core countries. In particular, fiscal policy in the core did not support demand recovery (Graph IV.10). As a result, while the periphery corrected its flow imbalances following the crisis, current account surpluses in the core remained persistent and increased to some extent (Graph IV.4)⁽¹⁴⁷⁾. Because current account deficits were corrected without a parallel adjustment in surplus positions, the euro-area overall current account balance grew over time, reflecting a protracted demand shortfall that underpinned an environment of very low inflation. Subdued nominal growth implied in turn low progress in correcting stock imbalances, with private, foreign and government debt/GDP ratios remaining stubbornly high in a number of euro-area countries. Going forward, a more symmetric rebalancing of external positions across the euro area would help to make a sustained recovery of growth prospects compatible with the persistent deleveraging needs in the periphery⁽¹⁴⁸⁾.

Finally, re-establishing a healthy financial sector throughout EMU, including through the resolution of non-performing loans, to help complete the banking and capital markets unions, would help reinstate healthy intra-EU capital flows, possibly in a more balanced way between debt and equity⁽¹⁴⁹⁾.

III.7. Concluding remarks

With hindsight, a number of lessons have been learnt about adjustment within the euro area.

A first lesson is that the emphasis before the EMU on the effectiveness of the adjustment to asymmetric shocks was most probably misplaced. The most relevant shocks hitting the euro area were not of an asymmetric type. They rather had a

⁽¹⁴⁶⁾ These effects have been dubbed ‘supper Walters’ effects’ see Buti, M., and Turrini, A. (2015), ‘Three waves of convergence. Can Eurozone countries start growing together again?’ Vox, EU, 17. It has also been shown that after EMU demand shocks often had persistent effects via hysteresis, see Bayoumi, T. and Eichengreen, B. (2018), ‘Aftershocks of monetary unification: Hysteresis with a financial twist’, *Journal of Banking and Finance* 000(2018), pp.11-13.

⁽¹⁴⁷⁾ This is also to some extent linked to high corporate savings, as corporates in several advanced economies have switched from net borrowers to net savers, though the drivers of this trend are still poorly understood. See Allen, C. (2019), ‘Revisiting external imbalances: Insights from sectoral accounts’, *Journal of International Money and Finance*, 96, 67-101.

⁽¹⁴⁸⁾ Asymmetric rebalancing in EMU is largely a result of little incentives for surplus countries to adjust, a common feature of similar cases of asymmetric external rebalancing observed in different historical contexts, see, e.g., O’Rourke, K. and A. Taylor (2013), ‘Cross of Euros’, *Journal of Economic Perspectives* 27(3), pp. 167-192.

⁽¹⁴⁹⁾ See also Baldwin, R.E. and Giavazzi, F., eds., (2016), ‘How to fix Europe’s monetary union: Views of leading economists’, CEPR Press.

common origin, but reverberated very differently across euro-area countries via financial markets. The first major shock was the EMU start-up shock itself. This was a one-off shock but had major and long lasting effects associated with the compression of risk premia in the euro-area periphery. Capital flew from the euro-area core to catching-up periphery economies. The second major shock corresponded to the risk reappraisal following the financial crisis. In light of accumulated imbalances and capital misallocation in countries in the euro-area periphery, risk premia spiked especially in these countries. What ensued was a reversal of the process observed after the EMU start-up shock, with capital leaving the periphery and moving to the euro-area core. The process compounded the global recession following the outburst of the financial crisis and was abrupt, implying a largely destabilising role for capital movements.

Secondly, the competitiveness channel of adjustment worked generally as expected. This was also helped by structural reforms after the crisis that made competitiveness more responsive to cyclical divergences.

Another main lesson is that the benign neglect of external balances, and macroeconomic imbalances in general, prevailing during the first decade of EMU was not justified. In light of the incomplete nature of EMU, disruptive sudden stops in external financing took place and were underpinned by self-sustaining doom loops between banks and sovereign. This evidence underscored the urgency of completing EMU with an even stronger surveillance of macroeconomic imbalances⁽¹⁵⁰⁾, appropriate firewalls to deal with major financial crises, a banking union to enhance and harmonise regulation and supervision and to break doom loops, and a capital market union to enhance cross-border capital allocation.

The last lesson learnt is that the adjustment to external imbalances can have relevant implications for the growth and inflation. The post-crisis unwinding of current account deficits was not matched by a correction of large surpluses. The widespread deleveraging process across the euro area underpinned an aggregated demand deficit and a very low inflation environment. Going forward, ensuring a more symmetric rebalancing remains a challenge.

⁽¹⁵⁰⁾ The surveillance of imbalances in the EU is undertaken in the context of the Macroeconomic Imbalances Procedure (MIP), laid out in two regulations: i) Regulation (EU) No 1176/2011 of 16 November 2011 on the prevention and correction of macroeconomic imbalances - sketching out the excessive imbalances procedure; and ii) Regulation (EU) No 1174/2011 of 16 November 2011 on enforcement measures to correct excessive macroeconomic imbalances in the euro area - focusing on the associated enforcement measures.

IV. Institutional Reforms

Section prepared by Martina Krobath and Jakub Wtorek

This section focusses on how the institutional architecture of the economic and monetary union (EMU) evolved from the launch of the euro until mid-2019. While first attempts to build a monetary union in Europe can be traced back to the end of the 1960s, the basis for the EMU was set with the Delors report of 1989. During the first years of the EMU, the focus was on establishing the foundations of the European Central Bank and the fiscal surveillance framework. However, this focus on monetary and budgetary developments meant that structural differences between EU Member States left them vulnerable to very large macroeconomic imbalances, exposing the euro area to the economic and financial crisis, which started in 2008. The EMU's institutional architecture became stronger as a result of lessons learnt during the crisis. However, it also became more complex and increasingly subject to intergovernmental solutions and new institutions that were not accountable at EU level. In addition, the rules-based approach to governance has revealed its limitations in delivering a symmetric adjustment and achieving a proper policy mix. This creates potential tensions in the single market area and impedes the international role of the euro. To build a more resilient EMU governance, it could be considered to rebalance it towards stronger institutions — for instance through a representative for economic affairs supported by a treasury — and more effective market discipline to complement the rules-based approach. ⁽¹⁵¹⁾

IV.1. Institutional design of the EMU at its inception

IV.1.1. First steps toward policy coordination since the 1960s

When the European Economic Community was founded by the Treaty of Rome in 1957, Member States focussed on building a common market for trade and a customs union. The Treaty's provisions on monetary policy were broad and limited in scope, and the idea of a single currency had not yet been conceived. ⁽¹⁵²⁾ Over time, it became clear that closer economic and monetary coordination was needed for the internal market to flourish. ⁽¹⁵³⁾ In 1969, the communiqué of the Hague summit of heads of state or government proposed to create an economic and monetary union strengthening the European Parliament's budgetary powers and to discuss how to directly elect its leaders. In 1970, as a follow-up, the Werner report recommended to irreversibly fix parity rates, centralise the national macroeconomic policies and allow the free movement of capital. However, it fell short of proposing a single currency or a central bank.

Some form of exchange rate coordination was tested already in the beginning of the 1970s. With the collapse of the Bretton Woods system of fixed exchange rates and the introduction of a peg of major currencies to the US dollar in 1971, European economies could no longer rely on the stability of the international monetary order. The so-called “snake in the tunnel” of 1972 was meant to organise a joint float of European currencies against the dollar, while limiting the extent of fluctuations among the participating currencies. However, this process of integration lost momentum in the mid-1970s because of currency instability on international markets and the pressure of divergent national policy responses to the challenge of ‘stagflation’.

The European Monetary Cooperation Fund (EMCF) was established in 1973 to support exchange rate coordination. The Fund was run by national central banks. Its primary aim was to ensure that the ‘currency snake’ worked properly, but it also had some other tasks. In particular, it was in charge of the administration of short-term financing and settlements between central banks, and of monitoring interventions in Community currencies on the exchange markets. From 1976, the Fund was also responsible for the administration of Community loans to support the

⁽¹⁵¹⁾ This section represents the author's views and not necessarily those of the European Commission. The authors wish to thank Zenon Kontolemis, Gabriele Giudice, Eric Meyermans, Reinhard Felke and two anonymous reviewers for useful comments.

⁽¹⁵²⁾ See, for instance, Ungerer, H. (1997), A concise history of European monetary integration: from EPU to EMU, Quorum Books.

⁽¹⁵³⁾ See, for instance, European Commission (2008), ‘EMU@10. Successes and challenges after ten years of Economic and Monetary Union’, European Economy 2/2008.

balance of payments of selected Member States. ⁽¹⁵⁴⁾

The process of monetary integration was relaunched in 1979, with the creation of the European monetary system (EMS), with the European currency unit (ECU) at its centre. The EMS consisted of an exchange rate mechanism (ERM), which obliged central banks to keep their national currency within a range of plus or minus 2.25% in a network of agreed-upon bilateral exchange rates. ⁽¹⁵⁵⁾ From 1979, the EMCF carried out all the tasks related to the creation and use of ECUs. The Fund was dissolved on 1 January 1994, when its functions were taken over by the European Monetary Institute, the forerunner of the European Central Bank (ECB). ⁽¹⁵⁶⁾

IV.1.2. The policymaking consensus on the rules-based approach that prevailed in the 1980s

Overall, the EMS ran smoothly in the first 5 years against a background of international turbulence following the oil price shocks of the late 1970s and large fluctuations in the value of the dollar. Although by March 1983 seven realignments of central rates had been necessary ⁽¹⁵⁷⁾, they did not threaten the credibility of the EMS since decisions were taken by mutual consent and were carefully managed. ⁽¹⁵⁸⁾ Nevertheless, economic developments in participating countries continued to diverge strongly with only a modest reduction in inflation differentials. ⁽¹⁵⁹⁾

Because of its relative strength and the low inflation policies of the Bundesbank, the Deutsche mark was a de facto anchor of the EMS. EMS countries started to adopt anti-inflationary policies and as a result ⁽¹⁶⁰⁾ inflation rates converged. By the mid-80s all EMS countries had only single-digit inflation rates, and the need for overall exchange

rate adjustments decreased. ⁽¹⁶¹⁾ Overall volatility of nominal and real exchange rates has fallen since 1979. ⁽¹⁶²⁾ In 1985, the success of the EMS in promoting monetary stability and increasing economic integration led to the adoption of the single market programme. This was embodied in the Single European Act – the first significant revision of the Treaty of Rome.

While further strengthening economic interdependence between member countries, the single market was also expected to reduce the room of manoeuvre for independent economic policy. This was acknowledged in the 1989 Delors report – the basis for the EMU. ⁽¹⁶³⁾ The report recognised the impossible trinity of Mundell, and the ‘inconsistent quartet’ of Padoa-Schioppa, according to which it is impossible to reconcile free trade, full capital mobility, fixed exchange rates and national autonomy of monetary policy. By enlarging Mundell’s approach, Padoa-Schioppa made a strong connection between the single market and monetary integration arguing that the single market could not continue to exist without a common currency. ⁽¹⁶⁴⁾

It was also argued that trade integration would help the single currency area to eventually satisfy endogenously the criteria of the optimum currency area. ⁽¹⁶⁵⁾ By spurring the mobility of factors, the single market together with lack of exchange rate instrument in a single currency was expected to translate into more pressures for wage and price discipline at national level. ⁽¹⁶⁶⁾

The Delors report also acknowledged that the move towards an EMU represented a quantum leap, which could significantly increase economic welfare. The report suggested that a certain degree of economic convergence was needed before

⁽¹⁵⁴⁾ https://www.ecb.europa.eu/ecb/access_to_documents/archives/emcf/html/index.en.html

⁽¹⁵⁵⁾ See, for instance, Scharpf, F. (2018), ‘International Monetary Regimes and the German Model’, Max Planck Institute for Study of Societies, MPIfG Discussion Paper 18/1.

⁽¹⁵⁶⁾ See, for instance, Ungerer, 1997, *op. cit.*

⁽¹⁵⁷⁾ See, for instance, Ungerer, 1997, *op. cit.*

⁽¹⁵⁸⁾ See, for instance, Commission of the European Communities (1983), The European Monetary System, European File 4/83.

⁽¹⁵⁹⁾ See, for instance, Kleinheyer, N. and D. Simmert (1984), ‘The European Monetary System Five Years On: Achievements and Prospects’

⁽¹⁶⁰⁾ See, for instance, Ungerer, 1997, *op. cit.*

⁽¹⁶¹⁾ See, for instance, Höpner, M. and A. Spielau (2017), ‘Better Than the Euro? The European Monetary System (1979-1998)’, *New Political Economy*, DOI:10.1080/13563467.2017.1370443

⁽¹⁶²⁾ See for instance, McDonald, F. and G. Zis (1989), ‘The European Monetary System: Towards 1992 and beyond’, *Journal of Common Market Studies*, Vol. XXVII, No. 3, pp. 183-202.

⁽¹⁶³⁾ See, for instance, Enderlein, H. and E. Rubio (2014), ‘25 Years After the Delors Report: Which Lessons for Economic and Monetary Union?’, Notre Europe – Jacques Delors Institute.

⁽¹⁶⁴⁾ See, for instance, Maes, I. (2012), ‘Tommaso Padoa-Schioppa and the origins of the euro’, National Bank of Belgium Working Paper Document No 222.

⁽¹⁶⁵⁾ See, for instance, Frankel, J. and A. Rose (1998), ‘The Endogeneity of the Optimum Currency Area Criteria’, *Economic Journal*, Vol.108, No. 449, pp. 1009-1025.

⁽¹⁶⁶⁾ See, for instance, Enderlein and Rubio, *op. cit.*

reaching the last stage of EMU, but did not mention explicit convergence conditions. After endorsement by the European Council, the report set the basis for the provisions on the EMU in the Maastricht Treaty of 1992. The Treaty diverged from the report somewhat — for instance by shifting the emphasis from real to nominal convergence, and by setting the convergence criteria. However, in line with the report, it formally established three stages of adoption of the single currency.

Geopolitical developments following the fall of the Berlin wall further strengthened the motivation to establish the monetary union. With the commitment to the free movement of capital as of 1994, and the exchange rates fixed within the ERM bandwidth, central banks lost their ability to pursue monetary policy independent from the Bundesbank of the ‘anchor currency’. The German reunification — where for political reasons East German cash holdings, wages and bank accounts were converted at a highly overvalued exchange rate — led to a rise in consumer demand for Western German products and a spike in inflation. In response, in 1992 the Bundesbank considerably tightened its monetary policy and forced other central banks to follow its example if they wanted to stay in the system⁽¹⁶⁷⁾ leading to contractionary policies throughout Europe. Furthermore, the main EU economies experienced a recession. The EMS was exposed to a series of speculative attacks triggered by investors who lost faith in the overall credibility of the ERM. The situation was further amplified by the negative result of the referendum on the Maastricht Treaty in Denmark.⁽¹⁶⁸⁾ Several member countries, including the UK, had to withdraw from the ERM, after which a new wider currency fluctuation bandwidth was established.

The policymaking consensus that prevailed in the 1980s influenced the institutional setting of the EMU. At the time, macroeconomic stability was considered to be an overarching goal. In this context, an independent monetary policy was thought to be a credible way of bringing down inflation and keeping output close to its full potential. Excessive government deficits and monetary financing of government deficits would have to be banned, in order to avoid fiscal

dominance and possible bailouts.⁽¹⁶⁹⁾ The clear emphasis on the sustainability of public finances reflected the prevailing consensus that automatic stabilisers should be the primary tool for countercyclical policy, while discretionary fiscal policy was regarded with suspicion.⁽¹⁷⁰⁾ The economic thinking of the time was strongly influenced by research suggesting that discretionary policy would not typically maximise the social objective function: because of the time inconsistency problem, policy rules would be a better means of improving economic performance.⁽¹⁷¹⁾ This resulted in an architecture where the achievement of the euro area macroeconomic (and in particular fiscal) objectives was relying on decentralised national fiscal policies guided by rules-based framework of coordination and control, rather than on common institutions endowed with discretionary powers.

IV.1.3. The foundations of the EMU governance system as laid down in the Maastricht Treaty

There are two different regimes inherent in the economic constitution in the Maastricht Treaty: the intergovernmental and the supranational.⁽¹⁷²⁾ The initial model of governance of the EMU was based on the centralisation of monetary policy and on decentralised economic and fiscal policies. To tackle the time inconsistency problem, the Maastricht Treaty delegated monetary policy governance to the independent ECB. It also established the European System of Central Banks to ensure sovereignty of national central banks in policy decisions. The ECB’s main objective was to maintain price stability. To enhance the credibility of the single currency, the ECB was modelled on the German Bundesbank. Economic policy remained a national competence, with policy makers paying particular attention to coordinating

⁽¹⁶⁷⁾ See, for instance, Scharpf, 2018, *op. cit.*

⁽¹⁶⁸⁾ See, for instance, Sotiropoulos, D. (2012), ‘Revisiting the 1992-93 EMS crisis in the context of international political economy’, Kingston University London, *Economics Discussion Paper* 2012-7.

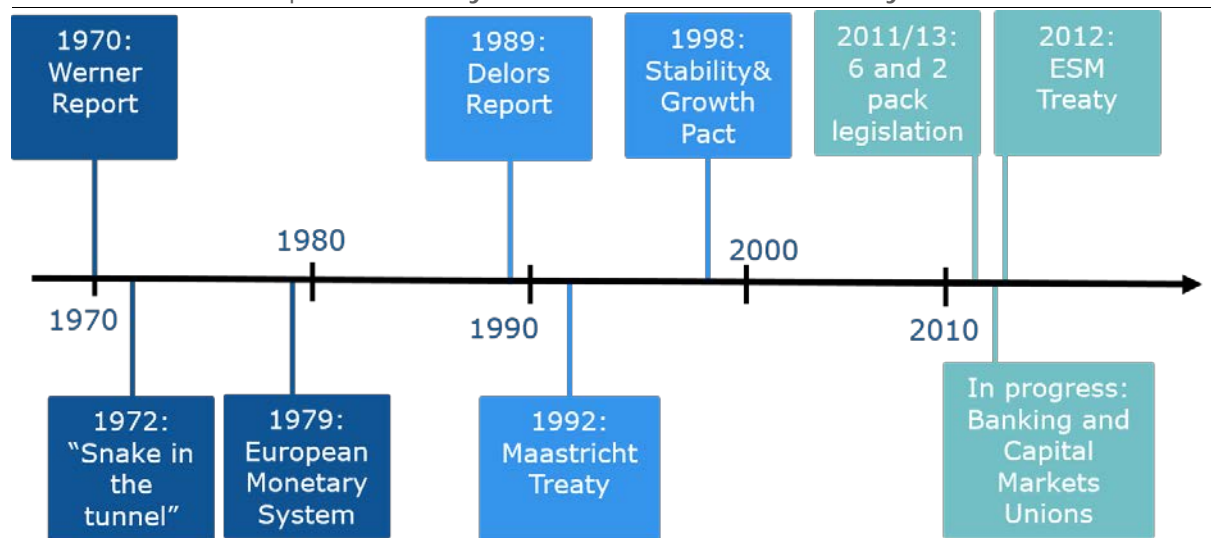
⁽¹⁶⁹⁾ See, for instance, Sargent, T. and N. Wallace (1981), ‘Some Unpleasant Monetarist Arithmetic’, *Federal Reserve Bank of Minneapolis Review* 5, pp. 1-17.

⁽¹⁷⁰⁾ See, for instance, Buti, M., ‘Fiscal Policy in the European Economic and Monetary Union: An Evolving View’, published in Blanchard, O. and L. Summers (eds. 2019), *Evolution or Revolution?, Rethinking macroeconomic policy after the great recession*, Peterson Institute International Economics.

⁽¹⁷¹⁾ See, for instance, Kydland, F. and E. Prescott (1977), ‘Rules Rather than Discretion: The Inconsistency of Optimal Plans’, *Journal of Political Economy*, Vol. 85, No. 3, pp. 473-492.

⁽¹⁷²⁾ See, for instance, Piattoni, S. (2017), ‘The European Union between Intergovernmentalism and ‘Shared and Responsible Sovereignty’: The Haptic Potential of EMU’s Institutional Architecture (The Government and Opposition/Leonard Schapiro Lecture, 2016)’.

Graph V.1: History of the Economic and Monetary Union



Source: European Commission

budgetary policies and to tackling excessive deficits. This is in line with Articles 5 and 121 of the Treaty on the Functioning of the EU, according to which Member States should coordinate their economic policies, and national economic and fiscal policies should be aligned with EU policy goals — but without any legally binding enforcement mechanism.⁽¹⁷³⁾ The system of economic governance is thus limited by constitutions of Member States, and political accountability to national parliaments.

Fiscal policy goals were supposed to be achieved under a rules-based system. As explained in the second section “Fiscal Policy”, to enforce the deficit and debt limits established by the Maastricht Treaty, the Stability and Growth Pact was agreed, and a set of preventive and corrective rules entered into force in 1998 and 1999. However, they failed to correct some policy errors, and they lacked ownership by Member States. In 2005, the Pact was reformed to address some criticisms such as a long-term objective of no debt (implied by a balanced medium-term budgetary objective), the disincentive to carry out pension reforms and the need to correct any fiscal slippage in only 1 year. To better consider individual national circumstances and to enable the correcting of the effects of economic cycle, a major role was assigned to the structural balance indicator. This first revision increased the Pact’s flexibility, but the

reform was not intended to increase market discipline. The ‘no-bailout’ principle enshrined in the Treaty on the Functioning of the EU was supposed to have a sufficient disciplinary effect.

The Eurogroup was created in 1998 to facilitate coordination between euro area Member States and to complement the Economic and Financial Affairs (ECOFIN) Council. The roles of the ECOFIN Council and the Eurogroup, and the distinction between euro and non-euro area Member States, have been clearly delineated from the beginning. The ECOFIN Council plays a central role in the economic decision making of the EU. It formally votes on decisions related to the EU or the euro area. As an informal body of ministers of finance of the Member States whose currency is the euro, the Eurogroup was originally intended as a temporary arrangement. It was established to promote conditions for stronger economic growth in the EU and, to that end, to develop ever-closer coordination of economic and fiscal policies within the euro area. In 2009, however, the Eurogroup received a treaty-based role under the Lisbon Treaty. The Lisbon Treaty also amended voting rules in the ECOFIN configuration on matters affecting the euro area, with only Eurogroup members allowed to vote. These measures strengthened the coordination and surveillance of budgetary discipline (for instance voting on the excessive deficit procedure for a euro area Member

⁽¹⁷³⁾ See, for instance, Repasi, R. (2015), Economic Governance. Introductory Statement, European Research Centre for Economic and Financial Governance.

State), and economic policy guidelines for the euro area Member States (Pisani-Ferry et al., 2012).⁽¹⁷⁴⁾

IV.2. Reforms to strengthen the integrity of the single currency introduced in the wake of the financial and sovereign debt crisis

The financial and sovereign debt crisis of 2008-2013 revealed various shortcomings in the governance of the EMU. The crisis led to a recognition that for individual countries participation in the EMU is more demanding than initially perceived, and that a high level of economic, financial and fiscal spill overs in a currency union requires stronger integration. In particular, mechanisms to deal with private sector imbalances, feedback loops between the banking sector and real economy, or tools for crisis management were largely missing. The crisis also raised questions on whether tasks should be attributed at EU or national level. As a result, several reforms were adopted to make the EMU more resilient.

IV.2.1. The experience of the first years of the EMU

Heterogeneity in the euro area was much greater than thought before the crisis. With hindsight, the Delors report was overly optimistic on wage and price flexibilities in a monetary union as it assumed that a higher level of price competition in the internal market and increasing capital mobility would promote convergence and prevent significant imbalances. Instead, as explained in the previous section, the first decade of EMU showed that structural convergence is not necessarily a by-product of nominal and real convergence.⁽¹⁷⁵⁾ Real convergence largely coincided with structural divergence, with the economies of the centre relying on exports and tradeable activities, while the economies of countries on the periphery were increasingly dominated by non-tradeable sectors and affected by loss of competitiveness reflected by growing current account deficits. The financial crisis was followed by the reversal of these large current account deficits, in combination with a protracted deleveraging and recessions in deficit countries, while current account surpluses grew

and remained persistent in some large economies.⁽¹⁷⁶⁾

The Delors' report and the Maastricht Treaty also partially overlooked the macro-financial side of monetary union and did not set up supranational supervision and resolution authorities. The risks of financial market instability and the possibility of sudden stops in capital flows were largely neglected. The report did not analyse the financial implications of setting up a single currency or mention the challenges of ensuring financial stability in a monetary union. It was assumed that within a monetary union there could be no balance of payment crisis.⁽¹⁷⁷⁾ As financial systems were much less developed and globalised in the late 1980s than they are today, some of the euro area fragilities revealed by the crisis could not be predicted at the time of the Delors report. For instance, contrary to expectations, the process of financial integration was uneven. The interbank market became highly integrated, thus increasing the risk of contagion, while retail banking, bonds and equity markets remained fragmented along national lines, resulting in negative bank-sovereign feedback loops. However, the decision to maintain a national approach to banking supervision and resolution was not a result of cognitive gaps, but of opposition by central bank governors to a centralised approach.⁽¹⁷⁸⁾

IV.2.2. The EMU institutions and reforms in the wake of the crisis

The recent economic and financial crisis led to a considerable improvement in the EMU governance framework. After the first financial support programme to Greece in 2010, which included providing bilateral loans under the Greek Loan Facility, the crisis triggered some deep institutional reforms that aimed to restore and later safeguard financial stability. The European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM) were created to provide financial assistance to euro area countries experiencing or threatened by severe financing problems. As a temporary mechanism, the EFSF has provided financial assistance to Ireland,

⁽¹⁷⁴⁾ See, for instance, Pisani-Ferry, J., Sapir, A. and G. Wolff (2012), 'The Messy Rebuilding of Europe', *Bruegel Policy Brief* 2012/01.

⁽¹⁷⁵⁾ See, for instance, Buti, M. and A. Turrini (2015), 'Three Waves of Convergence. Can Eurozone Countries Start Growing Together Again?', *VoxEU*, 17 April.

⁽¹⁷⁶⁾ For more details, see the section on 'Imbalances and Adjustment' in this Quarterly Report on the Euro Area.

⁽¹⁷⁷⁾ See, for instance, Pisani-Ferry, P., Sapir, A. and G. Wolff (2013), 'EU-IMF assistance to euro-area countries: an early assessment', *Bruegel Blueprint Series*, Volume XIX.

⁽¹⁷⁸⁾ See, for instance, Enderlein and Rubio, *op. cit.*

Portugal and Greece. The assistance was financed through the issuance of EFSF bonds and other debt instruments on the capital markets. ⁽¹⁷⁹⁾ Further financial assistance to Spain, Cyprus and Greece was provided by the ESM, which was created in 2012 as a permanent mechanism based on an international treaty not under EU law with a maximum lending capacity of EUR 500 billion.

The first section “Financial Union Integration and Stability” presents policy response to the crisis in the area of the banking sector, the banking union, and the capital markets union (CMU). From the point of view of institutional reforms, main recent achievements were the setting up of the Single Supervisory Mechanism (SSM), the Single Resolution Mechanism (SRM), and the establishment of the European system of financial supervision, which is a decentralised, multi-layered system centred around three European supervisory authorities (ESAs): (i) the European Banking Authority (EBA); (ii) the European Insurance and Occupational Pensions Authority; and (iii) the European Securities and Markets Authority as well as the European Systemic Risk Board and national supervisors (see the first section). Decisive steps have also been taken in the area of the CMU to make it easier for non-financial corporations to access capital and for households to invest their money in new ways. As the International Monetary Fund (Bhatia et al., 2019)⁽¹⁸⁰⁾ noted in a recent report, the CMU would complement the banking union and would help to increase diversity in financing. A CMU would increase private cross-border risk sharing and could therefore support convergence, growth and shock absorption.

A task force of finance ministers assessed the economic and governance framework in 2010 ⁽¹⁸¹⁾ and identified a number of shortcomings. This led to improvements being made in the macroeconomic and fiscal surveillance of Member States and to common institutions being strengthened. For example, the European Semester and macroeconomic imbalance procedure were introduced and the preventive and corrective arms of the Stability and Growth Pact were strengthened (‘six-pack’ and ‘two-pack’ reforms, see the section

“Imbalances and Adjustment”). The European Commission’s role in enforcing fiscal rules has been strengthened by making the implementation of the Stability and Growth Pact more flexible and by revising the voting majorities in the Council required for rejecting of Commission proposals (see the section “Fiscal Policy”). The newly created European Fiscal Board helps evaluate the implementation of EU fiscal rules. National ownership of the fiscal framework was also bolstered in several ways. National fiscal frameworks were strengthened by setting mandatory requirements at national level in the areas of accounting, statistics, forecasts, fiscal rules monitored by independent bodies, and transparency. ⁽¹⁸²⁾

More attention was also paid to promoting the convergence of economic outcomes, for example by focusing on how to ensure appropriate wage increases and by monitoring other factors that drive inflation and competitiveness. This is because Member States have different institutional capacities to control wage increases and prevent wage-push inflation, or diverging regulation of product markets (e.g. different degree of independence and strength of national competition authorities). Meanwhile, leaving labour and product market policies in a monetary union with no coordination could prevent structural convergence. This is one reason why national productivity boards were set up in euro area Member States, to promote policies that: support innovation, increase skills, reduce labour and product market rigidities and allow a better allocation of resources. Strong institutions and processes help to align wage increases and price and productivity developments, and therefore limit negative spill overs and imbalances within the monetary union (Wieser, 2018). ⁽¹⁸³⁾

IV.3. Remaining weaknesses: asymmetric adjustment and fragmentation

The reforms adopted in reaction to the crisis helped to fill in some gaps in the architecture of the EMU, both at European and national levels. Nevertheless, the euro area continues to be financially vulnerable due to limited private sector risk sharing and the fact that the public safety net

⁽¹⁷⁹⁾ More details at <https://www.esm.europa.eu/efsf-overview>

⁽¹⁸⁰⁾ See, for instance, Bhatia, A., Mitra, S., Weber A., Aiyar, S., Antoun de Almeida, L., Cuervo, C., Santos, A. and T. Gudmundsson, (2019), ‘A Capital Market Union for Europe’, *IMF Staff Discussion Note*, SDN/19/07, September.

⁽¹⁸¹⁾ See <https://www.consilium.europa.eu/media/27405/117236.pdf>

⁽¹⁸²⁾ See, for instance, Buti, 2019, *op. cit.*

⁽¹⁸³⁾ See, for instance, Wieser, T. (2018), ‘Deepening of EMU: some topical considerations’, in Allen, F., Carletti, E., and M. Gulati (eds. 2018), *Institutions and the crisis*, European University Institute.

for banks is still primarily at national level, which creates a risk of flight to safety and contagion. The incomplete banking union and fragmented capital markets prevent the euro area from achieving full integration, which would boost both long-term growth and stability. Asymmetries in macroeconomic policy allocations leave the euro area exposed to the lasting effects of cyclical developments. However, progress is difficult when there are deep political divisions among Member States and populist and nationalist movements. ⁽¹⁸⁴⁾ Furthermore, the current fiscal policy system is still based on national preferences and does not take sufficient account of country spill overs and the interests of the euro area as a whole. ⁽¹⁸⁵⁾

IV.3.1. An inappropriate policy mix as result of the EMU set-up

The EMU can still face financial fragility, as stabilisation and recovery have relied largely on the ECB's monetary easing policy. The role of the ECB in fighting contagion following the crisis cannot be overstated, while the 'whatever it takes' intervention was also facilitated by the major steps governments took to reinforce the integrity of the single currency. However, the ability of the ECB to fight aggregate shocks was at times impaired by the fragmentation of financial markets and the uneven transmission of monetary policy across Member States. ⁽¹⁸⁶⁾ Renewed difficulties in the sovereign debt market — possibly following a rise of interest rates ⁽¹⁸⁷⁾ — could spell problems for the financial system and the real economy. Deposit insurance and other public safety nets for banks remain at national level, creating scope for contagion and fragmentation, which could turn banking sector fragility into sovereign debt distress. The ECB's capacity to protect against another crisis might be

limited, while fiscal policy remains constrained. ⁽¹⁸⁸⁾

Because of the institutional set-up of the EMU, a symmetric adjustment in the euro area is now almost impossible. Fourteen French and German economists have criticised the euro area for its inability to deal with countries' loss of market access other than through crisis loans conditional on harsh fiscal adjustment. ⁽¹⁸⁹⁾ The most heavily indebted economies find it more difficult to reduce debt and regain competitiveness. In a low inflation environment, these economies cannot both reduce their public and external debt denominated in euros (which would be helped by higher inflation) and regain competitiveness (which requires lower nominal wage growth and inflation than in the rest of the EMU without running the risk of falling into debt deflation). ⁽¹⁹⁰⁾ Meanwhile, these economies' growth problems are intensified by higher real interest rates, which are driven by higher nominal interest rate spreads (driven by weaker sovereign rating and at times by investors' behaviour not supported by fundamentals) and lower inflation. ⁽¹⁹¹⁾

It is very difficult to have a proper macroeconomic policy mix for the euro area, especially during economic downturns. ⁽¹⁹²⁾ Budgetary policy is primarily national competence, and governments are accountable to their national parliaments. The euro area fiscal stance is a result of an aggregation of national positions and can be only steered via economic coordination. For fiscal policies, the current asymmetric nature of the Stability and Growth Pact and the Macroeconomic Imbalances Procedure – which prioritise correcting fiscal (or external) deficits over handling significant surpluses properly – is exacerbated by the absence of a central fiscal stabilisation capacity. It is therefore impossible to simultaneously have an appropriate fiscal stance for the euro area as a whole, and an optimal distribution of the fiscal effort that gets the right balance between stabilisation and sustainability at national level. When national fiscal

⁽¹⁸⁴⁾ See, for instance, Bénassy-Quéré, A., Brunnermeier, M., Enderlein, H., Fahri, E., Fuest, C., Gourinchas, P.-O., Martin, P., Pisani-Ferry, J., Rey, H., Schnabel, I., Véron, N., Weder di Mauro, B., and J. Zettelmeyer (2018), 'Reconciling risk-sharing with market discipline: A constructive approach to euro area reform', *Policy Insight* No. 91, Centre for Economic Policy Research.

⁽¹⁸⁵⁾ See, for instance, Wolff, G. (2017) 'Beyond the Juncker and Schaeuble visions of euro-area governance', *Bruegel Policy Brief*, Issue 6, December.

⁽¹⁸⁶⁾ See, for instance, Martinez, M. and J. Navarro, J. (2016), 'Transmission of monetary policy in the euro zone, monitoring via a synthetic indicator', BBVA Research.

⁽¹⁸⁷⁾ However on the contrary some scholars, e.g. Sinn, H.-W. (2019) <https://www.project-syndicate.org/commentary/ecb-mario-draghi-monetary-stimulus-risks-by-hans-werner-sinn-2019-07>, Project Syndicate, see risks for the European economy if the ECB continues the current monetary stance.

⁽¹⁸⁸⁾ See, for instance, Bénassy-Quéré et al., *op. cit.*

⁽¹⁸⁹⁾ See, for instance, Bénassy-Quéré et al., *op. cit.*

⁽¹⁹⁰⁾ See, for instance, Buti, M., Demertzis, M. and J. Nogueira Martins (2014), Delivering the Eurozone 'Consistent Trinity', *VoxEU*, 30 March.

⁽¹⁹¹⁾ See, for instance, Monteiro, D. and B. Vašíček (2018), 'A retrospective look at sovereign bond dynamics in the euro area', *Quarterly Report on the Euro Area*, Vol. 17, No 4 (2018), pp. 7-26.

⁽¹⁹²⁾ See, for instance, Orphanides, A. (2017), 'The Fiscal-Monetary Policy Mix in the Euro Area: Challenges at the Zero Lower Bound', *European Economy Discussion Paper* 60.

automatic stabilisers are constrained and governments face difficulties in borrowing to absorb a shock, there are no common euro-area level fiscal instruments available to help stabilise the cycle. This places a huge responsibility on monetary policy to counterbalance economic developments and shocks at a time when policy action is increasingly constrained by the insufficient and asymmetric supply of high quality assets in the euro area. In more pronounced downturns, difficulty to achieve a proper policy mix might result in unnecessary output losses, meaning that some Member States might experience more severe crises than necessary.

IV.3.2. Potential tensions in the single market

In the ongoing public debate concerns have been raised that recent EMU reforms may affect the integrity of the single market.⁽¹⁹³⁾ The ‘six-pack’ reforms of 2011 deepened the legal and institutional gap between the euro- and non-euro area Member States. While strengthening the surveillance of budgetary positions or preventing and correcting macroeconomic imbalances apply to the EU, the associated budgetary sanctions or the enforcement mechanism to correct excessive macroeconomic imbalances refer only to the euro area. Stronger and more binding rules for euro area countries compared to other Member States may in theory result in diverging policy stances. In financial supervision, new institutions remained at EU level, but they sometimes play a special role in the euro area (e.g. the European Banking Authority, the European Systemic Risk Board). Finally, the banking union with integrated supervision applies to the euro area countries, while banking regulation is still EU competence. As long as the main European financial centre remains outside the euro area, this might potentially create trade-offs between preserving the integrity of the single market and permitting the euro area countries to manage their affairs.

IV.3.3. Limited international role of the euro

The euro’s role on the global stage falls far short of its potential, considering that economic security is becoming a higher priority.⁽¹⁹⁴⁾ Several factors are holding back the EU’s financial sovereignty and

⁽¹⁹³⁾ See, for instance, Pisani-Ferry et al., 2012, *op.cit.*

⁽¹⁹⁴⁾ See, for instance, Acedo Montoya, L. and Buti (2019), ‘The euro: From monetary independence to monetary sovereignty’, *VoxEU*, 1 February

limiting the euro’s international role. These include: (i) insufficient financial sector integration; (ii) insufficient capital markets development, and (iii) the absence of a common euro area safe asset with high credit quality that is in sufficient supply. Given geopolitical changes, strengthening the international role of the euro has become a priority. But it very much depends on the completion of the EMU. The euro’s role would also be strengthened if the euro area spoke with one voice in international fora.⁽¹⁹⁵⁾

IV.4. Remaining weaknesses: overly complex architecture

EMU institutions’ inability to address challenges such as financial vulnerability, insufficient long-term growth and political divisions is due to a lack of proper policy tools, and also to existing institutional conditions and incentives. There are three main shortcomings. First, the intergovernmental approach used during the crisis involved layers of reforms and a reinterpretation or redirection of existing instruments. This led to a complex decision-making process, for which it is difficult to design proper democratic checks and balances. Second, the rule-based approach has not worked in many instances and its shortcomings have led to a lack of trust between countries and in institutions. Third, mainly relying on rules and on strengthening institutions that do not necessarily represent the EU as a whole — but only partial constituencies — has led to a lack of accountability at the appropriate level.

IV.4.1. An ‘ultima ratio’ framework in absence of a shared narrative

The process of incremental integration following the Maastricht Treaty meant that the complexity of the EMU architecture increased over time. The architecture of EMU governance was built gradually, mainly because of insufficient consensus among Member States.⁽¹⁹⁶⁾ During the economic crisis, the capacity for EU political action was constrained by the very high levels of consensus

⁽¹⁹⁵⁾ See, for instance, Bénassy-Quéré, A. (2015), ‘The euro as an international currency’, Documents de travail du Centre d’Economie de la Sorbonne 15029, Université Panthéon-Sorbonne.

⁽¹⁹⁶⁾ See, for instance, Dehousse, R. (2016), ‘Why has EU macroeconomic governance become more supranational?’, *Journal of European Integration*, Vol. 38, No. 5, pp. 617-631.

required. ⁽¹⁹⁷⁾ Due to limitations in the EU legal framework in finding quick solutions to respond to emergencies, Member States often opted for new intergovernmental solutions. ⁽¹⁹⁸⁾ As a result, the institutional architecture balances EU institutions' procedures with those in an increasing number of intergovernmental treaties (Treaty on Stability, Coordination and Governance, including the Fiscal Compact) and bodies (Eurogroup, ESM).

The current system is criticised as being too complex and opaque. ⁽¹⁹⁹⁾ Economic and fiscal policy, which remain national competences, are now thoroughly coordinated at EU level in various fora, often with the involvement of various stakeholders. These fora and institutions have their own chairpersons and presidents, their own accountability and in some cases accounting systems. ⁽²⁰⁰⁾

This complexity of the decision-making process makes the design of democratic checks and balances at European level more difficult. A separation of powers between the executive and the legislature is a prerequisite to guaranteeing democratic accountability of policy making. However, unlike with the EU's supranational decision-making pillar, the institutions' executive and legislative powers are not clearly delineated under the intergovernmental pillar. ⁽²⁰¹⁾ As in other areas of the EU framework, executive bodies have the main legislative powers. For economic policy making, this would mean that the ESM — an executive body — is under orders and supervision of the Eurogroup, in principle a subset of a legislative body, which also takes executive decisions. Such a set-up causes confusion on the role of institutions, as it is not clear whether they are legislative or executive, and it is difficult to introduce proper checks and balances, where a legislative institution controls the executive one.

⁽¹⁹⁷⁾ See, for instance, Scharpf, F. (2012), *Legitimacy Intermediation in the Multilevel European Policy and Its Collapse in the Euro Crisis*, Max Planck Institute for Study of Societies, MPIfG Discussion Paper 12/6.

⁽¹⁹⁸⁾ See, for instance, Buti, M. and M. Krobath (2019), 'Should the eurozone be less intergovernmental?', *School of European Political Economy LUISS Policy Brief*, 30 August 2019.

⁽¹⁹⁹⁾ See, for instance, Tuori, K. and K. Tuori (2014), *The Eurozone Crisis: A Constitutional Analysis*, Cambridge University Press.

⁽²⁰⁰⁾ See, for instance, European Commission (2017), *Reflection Paper on the Deepening of the Economic and Monetary Union*.

⁽²⁰¹⁾ See, for instance, Fabbri, S. (2017), 'The dual executive of the European Union: A comparative federalisms' approach', Paper submitted at EUSA biennial conference, Miami, 4 May 2017.

IV.4.2. The rules-based approach to governance has revealed some weaknesses

The shortcomings of the rules-based approach to fiscal governance were revealed in the first years of EMU. The EMU's framework of fiscal rules includes fundamental trade-offs, notably between simplicity, predictability and adaptability (or smartness). A simple set of rules can be predictable but not flexible enough to respond to changing economic circumstances. Conversely, introducing more detailed rules inevitably increases complexity and reduces transparency. ⁽²⁰²⁾ Moreover, concerns have been raised that a stronger role for the European Commission in implementing the fiscal rules has made the burden of taking unpopular decisions heavier, because the Commission is seen as the only relevant actor in this game. ⁽²⁰³⁾

In addition, while progress has been made in fiscal consolidation, the balance between stabilisation and sustainability has not been achieved by the current rules, because the debt has increased in some heavily indebted Member States, and — according to other opinions — the fiscal framework was not sufficiently effective in confining 'the deficit bias' of governments. ⁽²⁰⁴⁾ At the other end of the spectrum, it has been argued that after the great recession the fiscal framework led to a tighter fiscal stance than in other advanced economies, explaining the poor macroeconomic performance of the euro area. ⁽²⁰⁵⁾ A more nuanced view, for instance expressed in the second section, holds that the post-crisis implementation of the rules has remained pro-cyclical, even if there has been considerable overall progress in reaching sound fiscal positions. ⁽²⁰⁶⁾

The perception that policy outcomes have been mixed only increases the lack of trust among Member States. ⁽²⁰⁷⁾ The main divisions are between debtors and creditors, and between those who want more risk reduction and those who

⁽²⁰²⁾ See, for instance, Buti, (2019), *op. cit.*

⁽²⁰³⁾ See, for instance, Wieser (2018), *op. cit.*

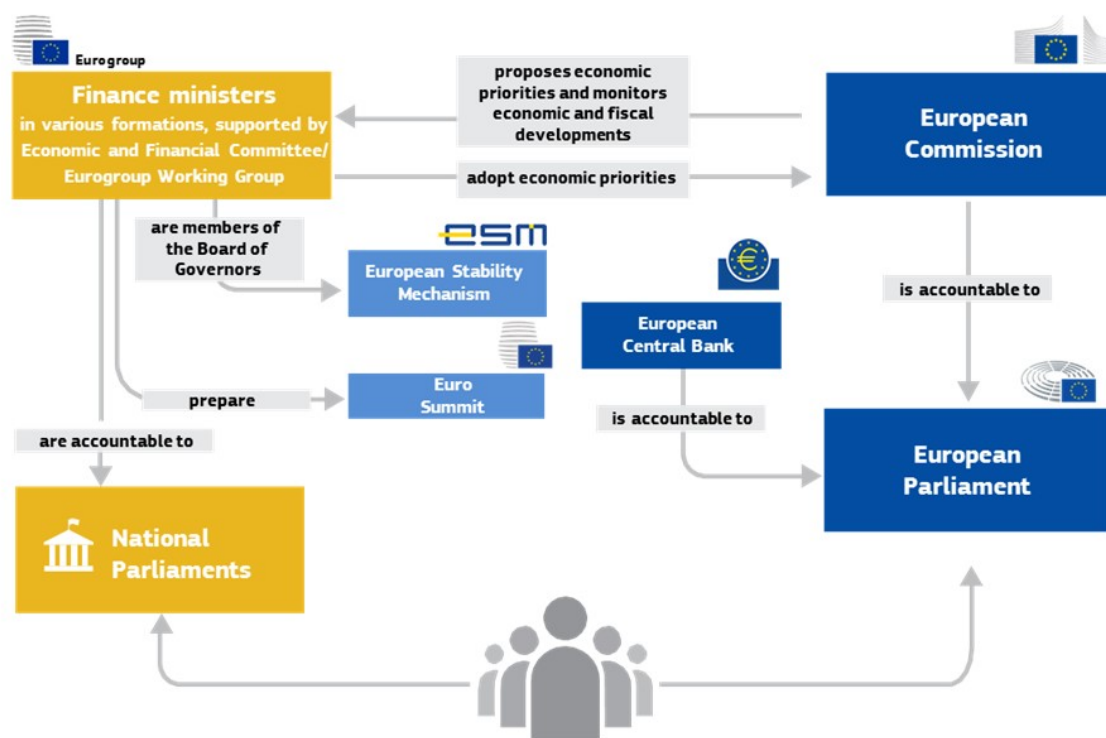
⁽²⁰⁴⁾ See, for instance, Feld, L., Schmidt, C., Schnabel, I. and V. Wieland (2018), 'Refocusing the European fiscal framework', *VoxEU*, 12 September.

⁽²⁰⁵⁾ See, for instance, Bofinger, P. (2018), 'Black zero' in disguise', *VoxEU*, 13 September.

⁽²⁰⁶⁾ See, for instance, Mangov A., Monks A., Mourre G., and H. Van Noten (2019), 'Fiscal Policy', Quarterly Report on the Euro Area, Vol. 19, No 2 (2019).

⁽²⁰⁷⁾ See, for instance, Wieser (2018), *op. cit.*

Graph IV.1: Complex institutional architecture of the EMU



Source: European Commission

demand more risk sharing. ⁽²⁰⁸⁾ Moreover, as others point out, the current situation is characterised by conflicting national preferences between these camps, which produces an inefficient equilibrium that potentially makes both sides worse off. ⁽²⁰⁹⁾ There is also a lack of trust in EU institutions. While political decision making is its main task, the European Commission has sometimes been portrayed in the debate as being too politicised to be given new responsibilities.

Nonetheless, common institutions with executive power and clear accountability have proven their strength, for two reasons. First, while rules are generally static and cannot be updated quickly when unforeseen circumstances arise, institutions — who must meet the specified objectives — can be dynamic and take a flexible approach. For instance, discretion and flexibility in the use of

tools in the wake of the crisis helped to strengthen the ECB's credibility. By contrast, rules lose credibility if they are applied with discretion. Second, the institutional approach can help produce better outcomes because institutions and their actions can be subject to more clearly defined democratic control, as there is a more direct link between decisions and responsibility. ⁽²¹⁰⁾

IV.4.3. A lack of a European perspective

During the crisis, the role of institutions that were not democratically accountable at EU level was strengthened. For instance, the European Council became the most important forum for decision making in affairs related to the EMU. The role of the Eurogroup was also strengthened. In addition to major decisions on national budgets and reforms, the Eurogroup has taken decisions on programmes, such as those agreed for Greece,

⁽²⁰⁸⁾ See, for instance, Demertzis, M. (2018), 'Trust in the EU? The key obstacle to reform', Bruegel.org, 9 February.

⁽²⁰⁹⁾ See, for instance, Delatte, A.-L. (2018), 'Fixing the euro needs to go beyond economics', VoxEU, 23 October.

⁽²¹⁰⁾ See, for instance, Draghi, M. (2019), 'Sovereignty in a globalised world', Speech in the University of Bologna, 22 February.

Ireland, Portugal, Cyprus or Spain. However, while the members are individually accountable to their national parliaments, neither the European Council, nor the Eurogroup are democratically accountable at EU level. ⁽²¹¹⁾ This means that the principle of accountability at decision making-level has not been respected. Moreover, the current President of the Eurogroup is also a national minister of finance, presenting a potential conflict of interest with his or her national position.

The European Parliament has criticised the lack of democratic oversight of the ESM a number of times. ⁽²¹²⁾ Although it provides the necessary safety net for the euro area, the ESM in its current form is an intergovernmental institution concerned primarily with preserving the interest of the Member States as creditors. The parliamentary oversight of the Eurogroup's ESM activities at EU level is also insufficient. It is essentially limited to voluntary appearances of the Eurogroup's President and the Managing Director of the ESM before the European Parliament and oversight by Member States' national parliaments.

The relative weakening of accountability at EU level was matched by an asymmetric increase in national accountability. The crisis reinforced the gap between national parliaments in the euro area, ⁽²¹³⁾ as only some ministers faced great scrutiny in their parliaments. As mentioned above, the European Council's role was strengthened, but the intergovernmental working method generally limited the involvement of parliaments and their participation in policy debates. Their oversight of the European Council's activities was very uneven. ⁽²¹⁴⁾ Several parliaments were able to influence the debate on the European level, while others were rather inactive. In particular, the parliaments of some creditor countries strengthened their positions as regards the executive. ⁽²¹⁵⁾

Because of a lack of accountability at the appropriate level, there is no general euro area perspective on economic policy making. Various long-term historical, intellectual and cultural factors mean that national economic philosophies in the EU do not overlap and national debates on the future of EMU produce different policy recommendations on how to respond to crises. The fact that national policy makers use the same words for different concepts only reinforces the mutual incomprehension. ⁽²¹⁶⁾ A common European narrative on the future of EMU could be reinforced by creating more space for euro area-level debates, for instance by empowering the European Parliament and strengthening the accountability at EU level, the lack of which increases democratic deficit during times of crisis. It is impossible to achieve effective democratic checks and balances when decisions affecting the euro area as a whole are taken by national institutions. ⁽²¹⁷⁾ There is also no certainty that an intergovernmental approach can guarantee the right balance of power between creditor and debtor regions. Meanwhile, the US experience with building a stable set of arrangements over macroeconomic and financial policy reveals that it is a long process, which requires a proper representation of both creditors' and debtors' interests. ⁽²¹⁸⁾

IV.5. Perspectives for the future: EMU institutional set-up in the steady state

IV.5.1. Different Scenarios for the future evolution of the institutional architecture of EMU

A wide range of options for the future development of the EMU's institutional organisation are presented in the literature. Some scenarios propose heading in the direction of a United States of Europe, and building fiscal and political unions. ⁽²¹⁹⁾ A particular controversial discussion relates to more integration in the area of fiscal policy and the question on whether the Economic and Monetary Union misses a fiscal

⁽²¹¹⁾ See, for instance, Bertoincini, Y. (2013), Eurozone and Democracy(ies): a Misleading Debate, Notre Europe – Jacques Delors Institute.

⁽²¹²⁾ See, for instance, Rittberger, B. (2014), 'Integration without Representation? The European Parliament and the Reform of Economic Governance in the EU', *Journal of Common Market Studies*, Vol. 52, Number 6, pp. 1174-1183.

⁽²¹³⁾ See, for instance, Auel, K. and O. Hoing (2014), 'Scrutiny in Challenging Times – National Parliaments in the Eurozone Crisis', Swedish Institute for European Policy Studies.

⁽²¹⁴⁾ See, for instance, Bertoincini (2013), *op.cit.*

⁽²¹⁵⁾ See, for instance, Auel and Hoing (2014), *op. cit.*

⁽²¹⁶⁾ See, for instance, Brunnermeier, M., James, H., and J. Landau (2016), *The Euro and the Battle of Ideas*, Princeton University Press.

⁽²¹⁷⁾ See, for instance, Buti, M. and M. Lacoue-Labarthe (2016), 'Europe's incompatible trinities', *VoxEU*, 7 September.

⁽²¹⁸⁾ See, for instance, Frieden, J. (2016), 'Lessons for the Euro from Early American Monetary and Financial History', Bruegel essay and lecture series.

⁽²¹⁹⁾ See Manifesto for the Democratisation of Europe) at <http://tdem.eu/en/manifesto/>

stabilisation instrument. ⁽²²⁰⁾ Others suggest revitalising the Maastricht rules and introducing more market discipline. ⁽²²¹⁾ Often, possible solutions are presented as a dichotomy between more or less euro area cooperation.

A kind of middle way and multi-speed Europe was also suggested ⁽²²²⁾ presenting a new structure for Europe where Member States would be part of a ‘bare-bones EU’ with a fixed set of policies, and could then choose to integrate further and participate in multiple clubs that are open to all. Although this could break the existing stalemate between Member States, it needs to be designed carefully. One can imagine a situation where a limited group of euro area countries sign an additional intergovernmental treaty to deepen integration in one area, resulting in fragmentation of financial markets. This situation of ‘one money, but several financial markets’ would effectively entail several monetary policies within the euro area. ⁽²²³⁾

Some authors explicitly point to the link between further integration and an adequate institutional structure. For instance, Leino and Saarenheimo (2018)⁽²²⁴⁾ highlighted that discussions on EMU need to be put into a broader context, meaning that increased powers for the EU in the field of economic policy might be useful but only if adequate democratic structures are also put in place. The political and institutional dimension is further developed by Bertoincini (2013, *op. cit.*) who suggests a ‘government’ for the euro area consisting of three levels: (i) strengthened euro area summits at the presidency level; (ii) a Eurogroup with a full-time president at the ministerial level; and (iii) the ESM, the Commission, Eurogroup and the ECB at the administrative level (Bertoincini, 2013, *op. cit.*).

The choice of the future institutional and democratic EMU architecture will largely depend

on the tools and instruments allocated to EU-level governance. Overall, and in order to tackle the remaining weaknesses of the EMU, a possible governance solution could combine: (i) stronger market discipline⁽²²⁵⁾ for all Member States; (ii) a proper degree of risk sharing that protects against the risk of financial instability; and (iii) stronger central institutions accountable for their actions at the proper level of governance. The proper sequencing of a package of reforms would be crucial to ensure that risk sharing mechanisms support the effectiveness of risk reduction measures. ⁽²²⁶⁾ In addition, without strong institutions the future of the EMU could be put into question, ⁽²²⁷⁾ as there is no legitimacy without accountability, and central institutions need to be underpinned by democratic structures.

IV.5.2. A possible euro area treasury

A euro area treasury and its possible functions is one of the ideas presented in the literature. There is no uniform understanding of how such a treasury could be designed. Some proposals suggest the creation of a euro area treasury in order to pool funding for public investment spending, financed by proper European treasury securities (ETUC, 2017, Bibow, 2015). ⁽²²⁸⁾ In particular, Bibow considers that such an institution could recreate the link between the central bank and the treasury institutions, thus addressing the euro regime’s essential flaw and ultimate source of vulnerability. Traditionally, a ministry of finance or treasury is part or even the centre of a country’s ‘Central Finance Agency’ responsible for carrying out the government’s financial functions, which include policy-related, regulatory, transactional or operational and policy-transactional functions (Allen et al., 2015). ⁽²²⁹⁾

⁽²²⁰⁾ See also Mangov A., Monks A., Mourre G., Van Noten H. (2019), ‘Fiscal Policy’, *op. cit.*

⁽²²¹⁾ See, for instance, Feld, L., Schmidt, C., Schnabel, I. and V. Wieland (2016), ‘Causes of the Eurozone Crisis: A nuanced view’, *VoxEU*, 22 March.

⁽²²²⁾ See, for instance, Demertzis, M., Pisani-Ferry, J., Sapir, A., Wieser, T. and G. Wolff (2018), ‘One size does not fit all: European integration by differentiation’, *Bruegel Policy Brief*, Issue 3, September.

⁽²²³⁾ See, for instance, Pisani-Ferry (2012), *op. cit.*

⁽²²⁴⁾ See, for instance, Leino, P and T. Saarenheimo (2018), ‘Fiscal stabilisation for EMU: Managing incompleteness’, *European Law Review*, Vol. 43, No. 5, pp. 623-647.

⁽²²⁵⁾ See, for instance, Meyermans, E. (2019), ‘Does market discipline enter governments’ fiscal reaction functions in the euro area?’, *Quarterly Report on the Euro Area*, Vol. 18, No 1 (2019), pp. 9-23.

⁽²²⁶⁾ See, for instance, Buti, M., Deroose, S., Leandro, J. And G. Giudice (2017), ‘Completing EMU’, *VoxEU*, 13 July.

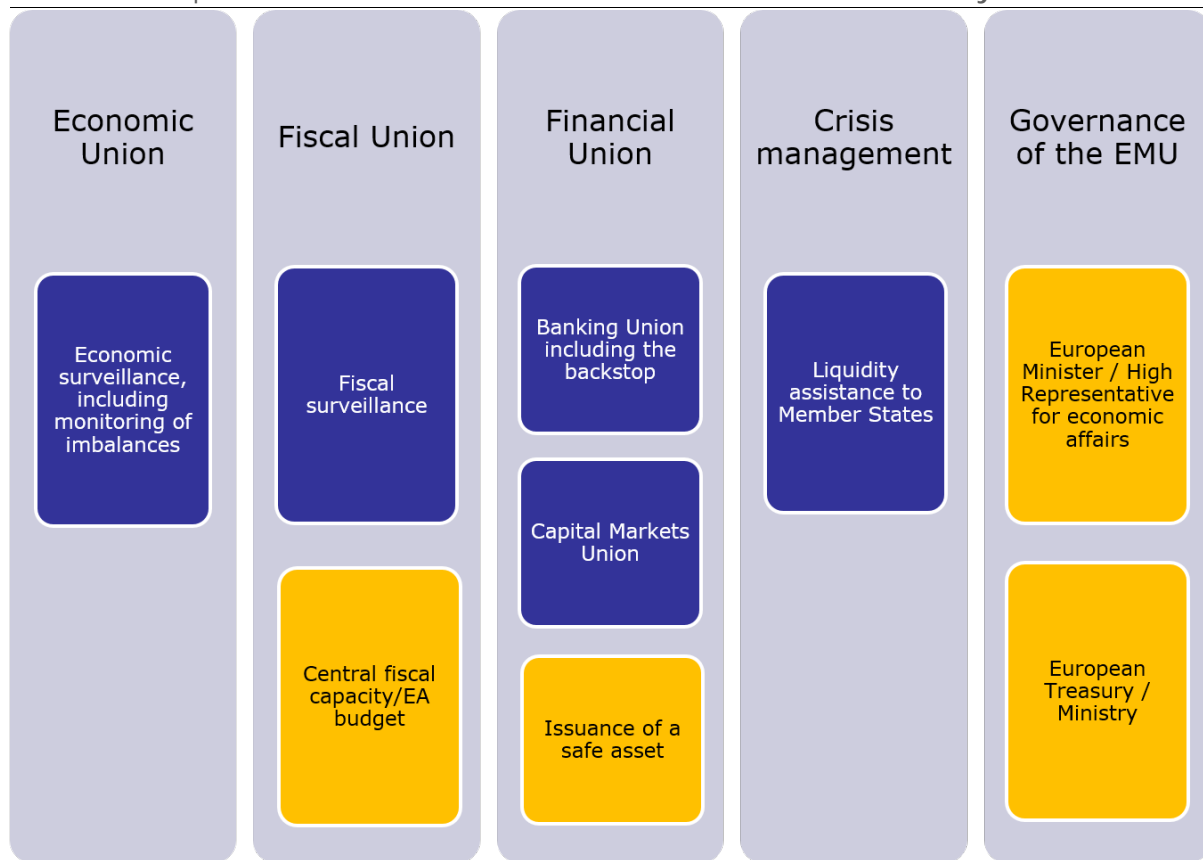
⁽²²⁷⁾ See, for instance, Tabellini, G. (2018), ‘Risk sharing and market discipline: Finding the right mix’, *VoxEU*, 16 July.

⁽²²⁸⁾ ETUC position paper: ‘A European Treasury for Public Investment’ (2017): <https://www.etuc.org/en/document/etuc-position-paper-european-treasury-public-investment>,

Bibow, J. (2015) ‘Making the Euro Viable: The Euro Treasury Plan’, Levy Economics Institute, Working Papers Series Paper No. 842.

⁽²²⁹⁾ See, for instance, Allen, R., Hurcan, Y., Murphy, P., Queyranne, M., and S. Ylaoutinen (2015), ‘The evolving functions and organisation of Finance Ministries’, *IMF Working Paper*, WP/15/232.

Graph V.3: Possible architecture of the Economic and Monetary Union



(1) Existing instruments (that could be still expanded or revised) are marked in blue, while the new ones in yellow
Source: European Commission

A euro area treasury would clearly not have all the functions covered by a national ministry or treasury. A link and possible authority over national budgets would therefore need to be clarified. ⁽²³⁰⁾ Initially, a treasury could bring together existing competences and services that are currently scattered across different institutions and bodies. ⁽²³¹⁾ It could therefore cover the economic surveillance competences currently performed by the European Commission and eventually — once the ESM becomes part of the EU legal framework — also include the activities currently performed by the ESM, including the backstop to the Single Resolution Fund.

In time, when an agreement is in place on new instruments to tackle the remaining weaknesses of

the EMU, such a treasury could be given additional tasks. These new instruments could make it possible to have a symmetric adjustment and to achieve a proper macroeconomic policy mix in the euro area, or to strengthen the international role of the euro.

A treasury could be in charge of a central fiscal capacity, which could take various forms, such as: (i) a macroeconomic stabilisation fund (e.g. Arnold et al 2018),⁽²³²⁾ (ii) an unemployment insurance scheme ⁽²³³⁾; or (iii) a euro area budget focussed on financing investment in Member States. ⁽²³⁴⁾ Such a central fiscal capacity could also have a borrowing capacity to increase the stabilisation effects in case of extreme shocks. ⁽²³⁵⁾ A treasury could also offer

⁽²³⁰⁾ See, for instance, Bénassy-Quéré, A. (2016), 'Euro-area fiscal stance: definition, implementation and democratic legitimacy', European Parliament, Economic and Monetary Affairs Committee.

⁽²³¹⁾ European Commission (2017), Reflection Paper on the Deepening of the Economic and Monetary Union. COM(2017) 823 final.

⁽²³²⁾ See, for instance, Arnold, N., Bergljot, B., Ture, E., Wang, H. and J. Yao (2018), 'A central fiscal stabilization capacity for the euro area', *IMF staff Discussions Note*, SDN/18/03, March.

⁽²³³⁾ See, for instance, Beblavý, M. and I. Maselli (2014), 'An Unemployment Insurance Scheme for the Euro Area: A simulation exercise of two options', *CEPS Special Report* No. 98.

⁽²³⁴⁾ See, for instance, Enderlein, op. cit.

⁽²³⁵⁾ See, for instance, Claeys, G. (2017), 'The mission pieces of the euro architecture', *Bruegel Policy Contribution* No. 28.

more funding services to the euro area Member States, as it would be responsible for common issuance at the euro-area level. A common safe asset could tackle the ‘flight to safety’ phenomenon and the associated large capital flows from one country to another during a crisis and would therefore prevent further fragmentation in financial markets. ⁽²³⁶⁾

IV.5.3. A high representative for economic affairs

In the literature, a euro area treasury is often linked to a European minister. A first step in strengthening the EMU’s institutional architecture in this direction could be to make the President of the Eurogroup a full-time position. A permanent Eurogroup President could be a catalyst for future institutional reforms. The idea was already explored by euro-area leaders in 2011,⁽²³⁷⁾ and has recently been supported by some authors.⁽²³⁸⁾ The argument goes that, in contrast with the current practice of the Eurogroup President being one of the ministers, making the job full-time would enable a considerably deeper involvement by national policy actors, which would improve the understanding and acceptance of common policies. It could also help to avoid conflicts of interest stemming from the President’s position as a national minister of finance. The Eurogroup President would need to consult regularly with national parliaments ⁽²³⁹⁾ but would also hold regular dialogues with the European Parliament.

As a second step, an overly complex governance structure could be mitigated by creating a European minister of economy and finance or a high representative for economic affairs. The notion of a European minister of economy and finance has been raised by various scholars and politicians, although there is no common view on what powers and competences such a figure should

have. As Geeroms (2017) ⁽²⁴⁰⁾ points out, the position of a minister needs to be based on a commonly agreed mandate and powers in order to avoid an additional administrative layer. Institutionally, he suggests — for the sake of simplicity and credibility — that the role should combine the position of President of the Eurogroup and a member of the European Commission. The Commission also suggested such a ‘double-hat’ minister in its Communication of December 2017, with the minister being a Commission vice-president and chair of the Eurogroup (COM, 2017). ⁽²⁴¹⁾

A high representative could increase transparency on several levels. Being a member of the European Commission, the high representative would be accountable to the European Parliament, including on issues related to the ESM, as the Eurogroup President is usually chairing the ESM’s Board of Governors. Such an increase in transparency at the euro-area level would be in addition to the accountability each individual Eurogroup minister already has towards her national parliament. This two-level system of accountability could improve the balance of preferences between both creditors and debtors and promote the euro area’s interest in the Eurogroup’s and the ESM’s actions. A special — initially informal — appointment procedure could be created to make it possible for the European Parliament to appoint and dismiss the high representative. Such a procedure could be later established in the revised EU Treaties, further reinforcing accountability at the EU level. The high representative would therefore receive political legitimacy from the European Parliament and would be politically independent from Member States.

A minister or high representative is associated with different competences in the literature. Villeroy de Galhau (2016) ⁽²⁴²⁾ suggests a minister who would be responsible for preparing a collective economic strategy for the euro area. Such a strategy would be adopted by the Eurogroup and endorsed by the European Parliament. In addition, the minister would be in charge of supervising the

⁽²³⁶⁾ See, for instance, Best, K. (2018), ‘Shared scepticism, different motives: Franco-German perceptions of a common European safe asset’, *Jacques Delors Institute* Berlin; and Monteiro and Vašiček (2018), *op. cit.*

⁽²³⁷⁾ https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/125644.pdf

⁽²³⁸⁾ See, for instance, Wolff (2017) *op. cit.* and Enderlein, H. and J. Haas (2015), ‘What Would a European Minister of Finance Do? A Proposal’, Jacques Delors Institut.

⁽²³⁹⁾ See, for instance, Fabbri (2017), *op. cit.*

⁽²⁴⁰⁾ See, for instance, Geeroms, H. (2017), ‘Why the Eurozone needs a minister of finance and economic reform’, *European View*, 16, p. 219-230.

⁽²⁴¹⁾ COM(2017) 823 final.

⁽²⁴²⁾ See, for instance, Villeroy de Galhau, F. (2016), ‘Europe at crossroads: How to achieve efficient economic governance in the euro area?’, speech at Bruegel, 22 March.

implementation of policy objectives at national level, crisis management and a euro area budget. Other contributions suggest that the minister should represent the euro area globally thereby helping the euro area to speak with a unified voice (Geeroms, *op. cit.*, COM, 2017, *op.cit.*).

Creating a minister of finance is not uncontroversial. Some scholars (Wolff, 2017, Fabbrini 2017, *op. cit.*)⁽²⁴³⁾ point to problems with the separation of powers. This is because the ECOFIN Council⁽²⁴⁴⁾ is, in principle, a legislative institution, but it also has executive functions. This confusion would not be resolved by appointing the double-hat minister as president of the Eurogroup and the Commissioner: s/he would have a combined executive and legislative role, chairing the Council that should in principle control her/him. An alternative solution is that the minister could be appointed by the Eurogroup to become the vice-president of the Commission responsible for economic affairs. In such a scenario, s/he would be accountable to the Eurogroup, but would need to receive a strong executive mandate entailing new functions and responsibilities.

IV.6. Conclusions

In conclusion, while the first attempts to build a monetary union in Europe go back to the end of 1960s, the institutional set-up of the EMU was designed in the Delors report and reflected the policymaking consensus that prevailed in the 1980s. History shows that cooperation on economic and monetary policy started with a rather loose coordination which eventually led to the centralisation of monetary policy and duly coordinated economic policies at the EU level.

Important revisions of the Maastricht framework have taken place in the wake of the economic and financial crisis of 2008-2013, which also reflect the experiences of other monetary unions — for instance the one in the United States of America — which have been evolving over the years and developing in response to economic difficulties.

The remaining incompleteness of the EMU architecture is widely recognised. Different solutions to the shortcomings have been presented in the debate, and in the recent years policy makers have been discussing possible avenues of reform. The EMU and its governance structures will most probably change in the future. While introducing EMU reforms, it will be important to reduce the complexity of the governance structure, increase democratic accountability and the European perspective of economic policy making. The planned reform of the EMU could fundamentally shift the surveillance balance away from rules towards stronger institutions and more market discipline. Finally, the ultimate institutional architecture of the EMU should be consistent with the final institutional set-up of the EU itself. Institutional arrangements for economic governance cannot be discussed in a vacuum, but should rather be set against the background of the Treaty-based EU institutional framework.⁽²⁴⁵⁾

⁽²⁴³⁾ Wolff, G. (2017), 'The European Commission should drop its ill-designed idea of a finance minister', <http://bruegel.org/2017/12/the-european-commission-should-drop-its-ill-designed-idea-of-a-finance-minister>, 4 December.

⁽²⁴⁴⁾ While the Eurogroup is not a (legislative) institution, only Eurogroup members are allowed to vote in the ECOFIN Council on matters only affecting the euro area.

⁽²⁴⁵⁾ Fabbrini, 2017, *op. cit.*

V. Monetary Policy

Section prepared by Anton Jevčák

This section focuses on the ECB's conduct of monetary policy during its first 20 years of existence. Whereas until October 2008 the ECB conducted monetary policy mainly by adjusting its key policy rates, during the global financial crisis and in its aftermath the Bank introduced a number of non-standard measures. Notably, it started to provide forward guidance on how it expected its key interest rates to evolve, and it conducted large-scale asset purchases to support monetary policy transmission in certain market segments and provide additional monetary stimulus once key interest rates approached their lower bound. As a result, the ECB succeeded in ensuring that annual HICP inflation in the euro area averaged 1.7% between January 1999 and December 2018. Nevertheless, whereas annual inflation averaged 2.2% over the first decade, it amounted to on average just 1.3% over the second decade, as average annual GDP growth in the euro area slowed down from about 4% during 1999-2008 to just 2.5% over 2009-2018 ⁽²⁴⁶⁾.

V.1. ECB's mandate, policy strategy and the operational framework

The European Central Bank (ECB) was established on 1 June 1998 and assumed responsibility for setting monetary policy for the euro area on 1 January 1999. The ECB, together with the national central banks of euro-area Member States, constitute the central banking system of the euro area, known as the Eurosystem. While monetary policy decision-making is centralised at the ECB, monetary policy operations are (mostly) carried out by national central banks. In addition, unlike other major central banks, the ECB conducts monetary policy in the absence of an equivalent euro-area fiscal authority. This places a relatively larger burden on the ECB with respect to stabilisation of the overall euro-area economic activity.

According to the Maastricht Treaty signed in 1992, the primary objective of the Eurosystem is to maintain price stability ⁽²⁴⁷⁾. The ECB Governing Council presented its monetary policy strategy in October 1998. It was based on a quantitative definition of price stability and a two-pillar approach to the analysis of risks to price stability, i.e. monetary and economic analysis. The ECB defined price stability as a year-on-year increase in the harmonised index of consumer prices (HICP) for the euro area of below 2% and signalled that price stability was to be maintained over the

medium term. By referring to increases in the HICP it made clear from the outset that deflation was excluded from the definition of price stability. The monetary analysis reflected the prominent role assigned to monetary developments (as also signalled by a reference value for the growth of a broad monetary aggregate). The economic analysis was a broader-based assessment of the outlook for price developments and the risks to price stability in the euro area using a wide range of economic and financial variables.

Following the comprehensive review of its monetary policy strategy, the ECB Governing Council clarified in May 2003 that in its pursuit of price stability it aimed to maintain inflation rates below, but close to, 2% over the medium term. It also clarified the way in which it integrated the indications stemming from the two complementary analytical pillars by emphasising that the monetary analysis mainly served as a means of cross-checking, from a medium to long-term perspective, the short to medium-term indications coming from economic analysis. Hence, with its medium-term orientation (i.e. without a fixed time horizon over which the price stability should be re-established), the two-pillar approach and the no single-point, symmetric inflation target, the ECB's monetary policy strategy continued to differ substantially from 'pure' inflation-forecast-targeting strategies, which most of the prominent academics at the time generally supported ⁽²⁴⁸⁾.

The Eurosystem's standard operational framework consists of open market operations, standing

⁽²⁴⁶⁾ This section benefited from comments by Eric Ruscher and Lucio Pench. Graphs were prepared by Ulrike Stierle-von Schütz and formatted by Erdemia Malagrida.

Neither the European Commission nor any person acting on behalf of the European Commission is responsible for the use that might be made of the information contained in this publication.

⁽²⁴⁷⁾ The Eurosystem was also assigned other tasks, as listed in Article 127 of the Treaty on the Functioning of the European Union.

⁽²⁴⁸⁾ See e.g. Alesina, A., O. Blanchard, J. Gali, F. Giavazzi and H. Uhlig (2001), 'Defining a Macroeconomic Framework for the Euro Area', Centre for Economic Policy Research.

facilities and minimum reserve requirements for credit institutions. The Eurosystem's regular open market operations conducted in the form of collateralised loans comprise one-week liquidity-providing operations in euro, known as the main refinancing operations (MROs), as well as three-month liquidity-providing operations in euro, known as the longer-term refinancing operations (LTROs). Two standing facilities, i.e. the marginal lending facility and the deposit facility, aim to provide and absorb overnight liquidity and bound overnight inter-bank interest rates. The ECB requires euro-area credit institutions to hold minimum deposits on accounts with their national central bank, known as minimum reserve requirements, which generate demand for its regular liquidity-providing monetary policy operations and thus facilitate the transmission of its monetary policy ⁽²⁴⁹⁾. In line with this operational framework, the ECB Governing Council sets three key interest rates: the MRO rate, the deposit facility rate and the rate on the marginal lending facility. These three key rates constitute an 'interest rate corridor' steering short-term euro interest rates and they indicate the ECB's monetary policy stance for the euro area.

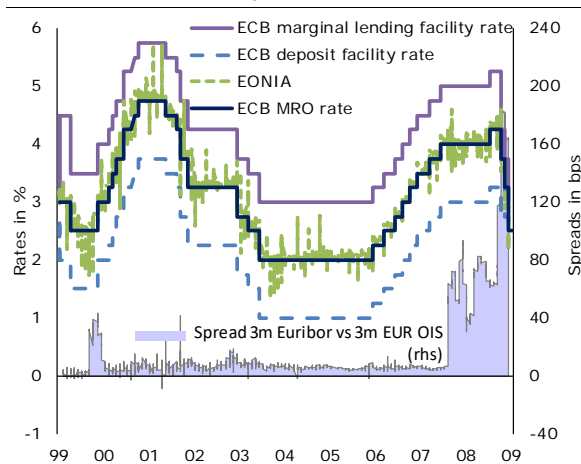
As required by its statute (Protocol No 4 of the Treaty on the Functioning of the European Union), the Eurosystem provides credit only against adequate collateral. Due to pre-existing differences in financial structures across the Member States, two categories of assets ('tier one' and 'tier two') were initially eligible for use as collateral in ECB credit operations. Tier one consisted of marketable debt instruments which fulfilled uniform euro-area wide eligibility criteria specified by the ECB. Tier two consisted of additional assets, marketable and non-marketable, which were of particular importance for national financial markets and banking systems and for which eligibility criteria were established by national central banks, subject to the minimum eligibility criteria established by the ECB. In 2004, the Eurosystem decided to introduce the single list of eligible collateral. It was implemented in 2005 for marketable assets and in 2007 for credit claims.

⁽²⁴⁹⁾ By limiting holdings of net financial assets related to national, non-monetary policy tasks of the national central banks, the Eurosystem's Agreement on Net Financial Assets (ANFA) ensures that there normally is a structural deficit of central bank liquidity in the euro-area banking sector, i.e. that banks need to borrow liquidity from the Eurosystem in order to be able to fulfil their minimum reserve requirements.

V.2. Conduct of monetary policy prior to the 2008-2009 global financial crisis

The ECB Governing Council set the MRO rate at 3% for the start of stage three of the EMU on 1 January 1999. After temporarily cutting it to 2½% between April and November 1999, it started gradually raising its key policy rates in early 2000 to counter upward risks to price stability amid a buoyant economy and a depreciating euro exchange rate ⁽²⁵⁰⁾. The first hiking cycle ended in October 2000 with the MRO rate peaking at 4.75%. Between May 2001 and June 2003, the ECB gradually lowered the MRO rate to 2% in view of weaker economic performance and subdued inflationary pressures in the euro area. In December 2005, the ECB started raising its key policy rates as economic activity in the euro area re-gained momentum and inflationary pressures intensified against the backdrop of robust credit and monetary expansion. The second hiking cycle lasted until July 2008 when the MRO rate peaked at 4.25% (see Graph V.1).

Graph V.1: ECB policy and money market rates, 1999-2009



Source: ECB, Macrobond

The inter-bank euro money market functioned relatively well from early 1999 until mid-2007 with the liquidity injected by the Eurosystem distributed

⁽²⁵⁰⁾ The trend euro depreciation started to gradually reverse after concerted FX market interventions conducted by the ECB together with the US Federal Reserve, the Bank of Japan, the Bank of England and the Bank of Canada in September 2000 and unilateral FX market interventions by the ECB in November 2000.

<https://www.ecb.europa.eu/press/pr/date/2000/html/pr000922.en.html>

<https://www.ecb.europa.eu/press/pr/date/2000/html/pr001103.en.html>

across the euro-area banking sector according to the liquidity needs of each credit institution. However, in summer 2007, as it became apparent that there were substantial risks embodied in some USD-denominated structured securities and related exposures, euro-area banks grew more circumspect about counterparty risks and started hoarding liquidity. This led to disruptions at inter-bank and other short-term funding markets, as reflected, for example, in widening spreads between unsecured term inter-bank borrowing rates (Euribor) and equivalent overnight index swap (OIS) rates, which largely display the increased perception of counterparty risks. The ECB reacted to the resulting increased demand for liquidity by adjusting both the timing and the maturity of its liquidity-providing operations. In particular, it decided to conduct supplementary three-month LTROs and later also introduced LTROs with a six-month maturity. Moreover, in December 2007, thanks to the swap line with the US Federal Reserve, the Eurosystem started providing US-dollar liquidity against its standard ECB-eligible euro-denominated collateral.

V.3. Further non-standard measures adopted during the global financial crisis and in its aftermath

Up to October 2008, the ECB continued to limit the overall amount of liquidity provided to the euro-area banking sector. After the collapse of Lehman Brothers in September 2008, financial market turmoil intensified and further impaired the functioning of the inter-bank market. In response, between October 2008 and May 2009, the ECB adopted a package of non-standard measures (known as ‘enhanced credit support’⁽²⁵¹⁾) targeted at the domestic banking sector. This reflected the fact that the euro-area financial system was predominantly bank-based, i.e. banks played a crucial role in channelling credit to the real economy. The enhanced credit support consisted of the following five main elements:

1) All refinancing operations started being conducted under the ‘fixed-rate full-allotment mode’. This implied that the demand from private banks for Eurosystem refinancing was fully

accommodated at the MRO rate, subject to sufficient availability of ECB-eligible collateral.

2) The list of eligible collateral was expanded. In particular, the credit rating threshold for marketable and non-marketable assets to be eligible as collateral in Eurosystem credit operations was lowered from A- to BBB-, with the exception of asset-backed securities.

3) The maturity of longer-term refinancing operations was extended up to 12 months.

4) The provision of US-dollar refinancing was enhanced and a weekly EUR/CHF swap line was introduced. These operations were financed through foreign exchange swap arrangements with the Federal Reserve and the Swiss National Bank.

5) The first covered bond purchase programme, set to amount to €60 billion, was launched in July 2009 in order to improve liquidity in this market segment and support the longer-term provision of credit.

The introduction of the enhanced credit support was accompanied by a fast reduction in key ECB policy rates as the MRO rate was cumulatively cut by 325 basis point to 1% by May 2009. Moreover, as excess reserves held by euro-area banks with the Eurosystem increased from close to zero in September 2008 to above €200 billion in late 2008, the EONIA rate⁽²⁵²⁾ dropped close to the deposit facility rate, which represents the floor for pricing overnight inter-bank lending in euro. Money market tensions also eased with the three-month Euribor-OIS spread falling below 50 basis points by mid-2009.

Some of these ECB policy actions were part of a coordinated crisis response by major central banks. Specifically, on 8 October 2008 the Bank of Canada, the Bank of England, the ECB, the Federal Reserve, Sveriges Riksbank and the Swiss National Bank announced reductions in their key policy interest rates with the Bank of Japan expressing support for these actions⁽²⁵³⁾. Apart from reducing their key policy rates, central banks in the US, euro area and the UK rapidly expanded

⁽²⁵¹⁾

https://www.ecb.europa.eu/press/key/date/2010/html/sp100618_2.en.html

⁽²⁵²⁾ The Euro OverNight Index Average (EONIA) rate is the 1-day interbank interest rate for the euro area.

⁽²⁵³⁾

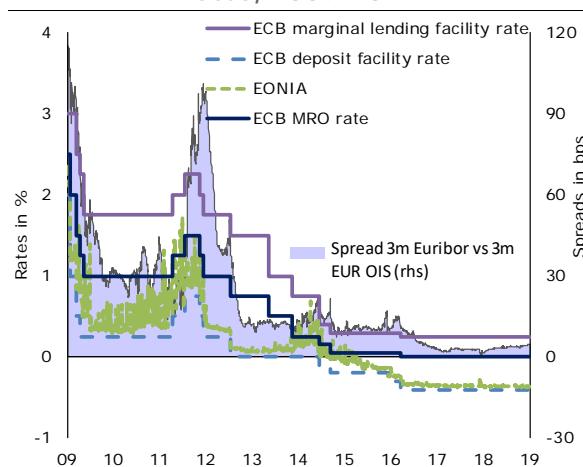
<https://www.ecb.europa.eu/press/pr/date/2008/html/pr081008.en.html>

their balance sheets through various non-standard liquidity-providing measures, which were, on a smaller scale and for a shorter duration, also deployed in Japan ⁽²⁵⁴⁾. In particular, the Federal Reserve announced in November 2008 that it would purchase up to \$100 billion in direct obligations of housing-related government-sponsored enterprises and up to \$500 billion in mortgage-backed securities under the programme popularly known as ‘Quantitative Easing’ ⁽²⁵⁵⁾.

Thanks to coordinated and decisive action by major central banks, the global financial market situation slowly improved throughout 2009. After declining from close to 4% in mid-2008 into negative territory by mid-2009, euro-area annual headline HICP inflation increased gradually to above 2% by end-2010 as global GDP growth and commodity prices recovered. Given that headline inflation further accelerated in early 2011, the ECB decided to increase its key interest rates by 25 basis points in April and then again in July 2011. These two rate hikes were, however, fully reversed again in late 2011 as rising financial market tensions within the euro area led to a tightening of financing conditions, which combined with faltering confidence, dented economic recovery.

During this time period (i.e. as long as its key policy rates remained above zero), the ECB communication was guided by the so-called separation principle, making a clear distinction between decisions on its key policy rates, which remained geared towards maintaining price stability, and non-standard measures aimed at addressing malfunctioning financial market segments and thus ensuring effective transmission of its monetary policy. This allowed the ECB to increase its key policy rates in 2008 and 2011 while at the same time keeping its non-standard measures in place (see Graph V.2). ⁽²⁵⁶⁾

Graph V.2: ECB policy and money market rates, 2009-2019



Source: ECB, Macrobond

Euro-area sovereign debt crisis

The negative impact of the global financial crisis on banking and public sector balance sheets gradually undermined financial market confidence in the credit-worthiness of some euro-area sovereigns and/or in the soundness of their domestic banking sectors and thus ultimately in the irreversibility of their euro-area membership. Consequently, spreads between the longer-term government bond yields of the most vulnerable euro-area countries and those of the most creditworthy countries started to widen in early 2010.

To address the severe tensions in certain segments of euro-area financial markets, which were hampering its monetary policy transmission mechanism, the ECB decided in May 2010 to conduct interventions (in the form of outright secondary market purchases) in the euro-area public and private debt securities markets under the securities markets programme (SMP). Effectively, the SMP targeted government debt securities issued by five euro-area sovereigns (Greece, Ireland, Portugal, Spain, and Italy) with about €214 billion in bonds acquired under the programme from 2010 until early 2012 ⁽²⁵⁷⁾.

Despite government bond purchases under the SMP and two three-year very-long-term refinancing

⁽²⁵⁴⁾ For more details, see e.g. Jevčák, A. (2014), ‘Monetary Policy Frameworks: Gradual Implementation of Steadily Evolving Theory’, *ECFIN Economic Brief*, Issue 29, European Commission.

⁽²⁵⁵⁾ In March 2009, the Federal Reserve then decided to increase its total purchases of these securities to up to \$1.45 trillion in 2009 and to purchase up to \$300 billion of longer-term Treasury securities over the next six months.

<http://www.federalreserve.gov/monetarypolicy/bst.htm>

⁽²⁵⁶⁾ See e.g. Hartmann, P. and F. Smets (2018), ‘The First Twenty Years of the European Central Bank: Monetary Policy’, *ECB Working Paper*, No. 2219.

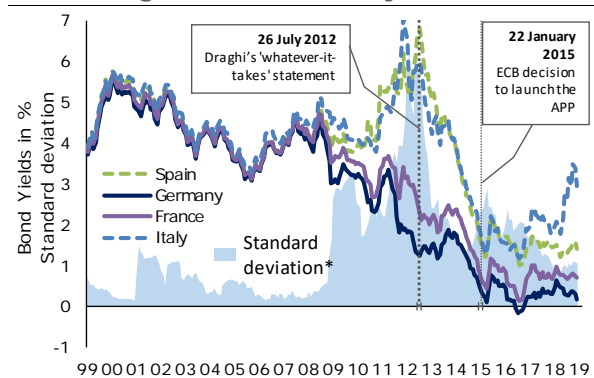
⁽²⁵⁷⁾ Eser, F. and B. Schwaab (2016), ‘Evaluating the Impact of Unconventional Monetary Policy Measures: Empirical Evidence from the ECB’s Securities Markets Programme’, *Journal of Financial Economics*, 119(1), pp. 147-167.

operations⁽²⁵⁸⁾ in late 2011 and early 2012⁽²⁵⁹⁾, financial market tensions in the euro area further intensified in the first half of 2012. In July 2012, the ECB therefore decided to cut its key interest rates by 25 basis points, i.e. lowering the deposit facility rate to zero. Moreover, in August 2012 the ECB announced⁽²⁶⁰⁾ that it might undertake outright open market operations of a size adequate to address the severe malfunctioning in the price formation process in the bond markets of euro-area countries, as financial market fragmentation was hindering the effective transmission of its monetary policy. Subsequently, in September 2012, the ECB decided on the modalities for undertaking outright monetary transactions (OMT's) in secondary markets for sovereign bonds in the euro area and terminated the SMP⁽²⁶¹⁾.

Following the introduction of OMT's⁽²⁶²⁾, the signs of severe financial market fragmentation within the euro area gradually receded, without such open market operations actually being launched for any country. In particular, spreads between the longer-term government bond yields of the most vulnerable euro-area countries and those of the most creditworthy countries narrowed considerably (see Graph V.3)⁽²⁶³⁾. This was surely

also thanks to the strengthening of the EMU architecture, as the June 2012 euro-area summit agreed to create a single supervisory mechanism for the euro-area banking sector, while the European Stability Mechanism (ESM) formally began operating in October 2012.

Graph V.3: **Benchmark long-term government bond yields**



* Standard deviation covers all euro-area Member States.

Source: Eurostat, Macrobond

Nevertheless, there remained a considerable variation in credit risk spreads among euro-area sovereign issuers, which was also reflected in their overall domestic financing conditions. For example, although the second half of 2012 saw a significant decrease in the dispersion of the country-specific composite financing cost indicators for non-financial corporations (NFCs)⁽²⁶⁴⁾, which had increased considerably between early 2009 and mid-2012, the dispersion remained above its average pre-crisis levels throughout 2013-2014. The single ECB monetary policy thus still did not seem to be uniformly transmitted across the euro area. This also hampered economic recovery, as annual real GDP of the euro area declined marginally in 2013, before it started to expand in 2014.

Forward guidance, credit easing measures and asset purchase programmes

Dampened by the sluggish pace of economic recovery, annual headline HICP inflation in the

⁽²⁵⁸⁾ See e.g. Darracq-Paries, M. and R. A. De Santis (2015), 'A non-standard monetary policy shock: the ECB's 3-years LTROs and the shift in credit supply', *Journal of International Money and Finance*, Vol. 54, Issue C, pp. 1-34. They show that the 3-year long-term refinancing operations supported bank lending to non-financial corporations over the two- to three-year horizon thereby helping to avoid a major credit crunch.

⁽²⁵⁹⁾ In addition, the ECB also launched the second covered bond purchase programme in November 2011 and reduced the minimum reserve ratio from 2% to 1% as from the reserve maintenance period starting on 18 January 2012 while further expanding the pool of eligible collateral.

<https://www.ecb.europa.eu/press/pressconf/2011/html/is111208.en.html>

⁽²⁶⁰⁾ This followed ECB President Draghi's statement at the Global Investment Conference in London on 26 July 2012 that: 'Within our mandate, the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough.'

<https://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html>

⁽²⁶¹⁾ A necessary pre-condition for OMT's is strict and effective conditionality attached to an appropriate European Stability Mechanism (ESM) programme. OMT's would be focused on the shorter part of the yield curve, in particular on sovereign bonds with a maturity of between 1 and 3 years. No ex ante quantitative limits were set for OMT's. For more details, see:

https://www.ecb.europa.eu/press/pr/date/2012/html/pr120906_1_en.html

⁽²⁶²⁾ On 16 June 2015, the Court of Justice of the EU ruled that the OMT programme was compatible with EU law.

<https://curia.europa.eu/jcms/upload/docs/application/pdf/2015-06/cp150070en.pdf>

⁽²⁶³⁾ See e.g. Altavilla, C., D. Giannone and M. Lenza (2016), 'The financial and macroeconomic effects of OMT announcements', *International Journal of Central Banking*, Vol. 12, No. 3, pp. 29-57.

They find that the OMT announcement decreased the Italian and Spanish two-year government bond yields by about 2 percentage points, while leaving the equivalent bond yields in Germany and France unchanged.

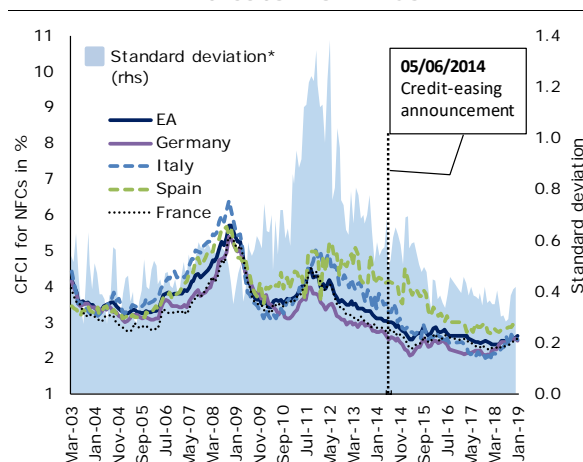
⁽²⁶⁴⁾ For more details on the calculation of the composite financing cost indicator, see Briciu, L. and A. Jevčák (2013), 'Drivers of Diverging Financing Conditions across Member States', *Quarterly Report on the Euro Area*, Vol. 12, No.1, pp. 19-25.

euro area slowly declined from above 2% in mid-2012 to below 1% in late 2013. Given the limited space for further policy rate cuts, the ECB Governing Council abandoned its established line of never pre-committing regarding its future monetary policy orientation. In July 2013, it introduced the so-called forward guidance by signalling that it ‘expects the key ECB interest rates to remain at present or lower levels for an extended period of time’⁽²⁶⁵⁾. This decision was meant to provide more clarity over its assessment of the economic outlook and its reaction function⁽²⁶⁶⁾.

As euro-area HICP inflation declined further to around 0.5% by mid-2014, the ECB announced a major credit-easing package in June 2014. In an unprecedented move for a major central bank, the ECB moved its deposit facility rate into negative territory, setting it at -0.1% (while also lowering the MRO and the marginal lending rate). The other core element of the package was the decision to conduct a series of targeted longer-term refinancing operations (TLTROs) provided at a fixed rate with a maturity of up to 4 years. Their aim was to support bank lending to the non-financial private sector in the euro area, excluding loans to households for house purchase⁽²⁶⁷⁾.

In September 2014, the ECB lowered the deposit facility rate to -0.2% and decided to start purchasing non-financial private sector assets under the asset-backed securities purchase programme and the third covered bond purchase programme. Following the introduction of the credit-easing package, the financing costs of NFCs gradually declined across the euro area and their cross-country dispersion further compressed (see Graph V.4).⁽²⁶⁸⁾

Graph V.4: Composite financing costs indicator for NFCs



* Based on data available for nine euro-area Member States
Source: ECB, Bloomberg, DG ECFIN calculations

The collapse of oil prices in the second half of 2014, when the price of Brent crude dropped from above \$110 per barrel in June 2014 to below \$60 per barrel in late 2014, further accentuated disinflationary pressures in the euro area, with the annual headline inflation dropping into negative territory in December 2014. In January 2015, the ECB decided to launch an expanded asset purchase programme (APP), encompassing the two ongoing private sector purchase programmes for asset-backed securities and covered bonds and a new public sector purchase programme⁽²⁶⁹⁾. The combined purchases of securities under the APP, amounting to on average €60 billion per month, were initially intended to be carried out until end-September 2016. The end of net asset purchases was, however, from the outset also conditional on a sustained adjustment in the euro-area inflation path that was consistent with the ECB aim of achieving inflation rates below, but close to, 2% over the medium term. The forward guidance on

⁽²⁶⁵⁾ <https://www.ecb.europa.eu/press/pressconf/2013/html/i130704.en.html>

⁽²⁶⁶⁾ See e.g. Praet, P. (2013), ‘Forward guidance and the ECB’, Column published on VoxEU.org on 6 August 2013. <https://voxeu.org/article/forward-guidance-and-ecb>

⁽²⁶⁷⁾ For more details on the operational modalities of TLTROs, see: https://www.ecb.europa.eu/press/pr/date/2014/html/pr140605_2_en.html

⁽²⁶⁸⁾ ECB (2015), ‘The Transmission of the ECB’s Recent Non-Standard Monetary Policy Measures’, *Economic Bulletin*, Issue 7, pp. 32-51.

⁽²⁶⁹⁾ The secondary market purchases of investment grade securities under the public sector purchase programme were allocated across issuers from different euro-area countries on the basis of the ECB’s capital key with purchases of domestic securities by national central banks not being subject to potential loss sharing. They were subject to an issue limit of 25% (raised to 33% in September 2015 subject to certain conditions) and an issuer limit of 33% in order to safeguard market functioning and price formation as well as to mitigate the risk of the Eurosystem becoming a dominant creditor of euro-area governments. The Eurosystem accepted the same (*pari passu*) treatment as private investors with respect to purchased securities. For more details on the operational modalities of the expanded APP, see: https://www.ecb.europa.eu/press/pr/date/2015/html/pr150122_1.en.html

net asset purchases thus incorporated both date- and state-dependent conditioning elements.

In order to ensure a sustained adjustment in the euro-area inflation path, the ECB subsequently extended net asset purchases under the APP until March 2017, then until end-2017, September 2018 and finally until end-2018. At the same time, the average monthly pace of net asset purchases was temporarily increased to €80 billion from April 2016 until March 2017 and then gradually reduced to €60 billion until end-2017, €30 billion until September 2018 and €15 billion until end-2018. To facilitate the achievement of net asset purchase targets, a new corporate sector purchase programme was launched in June 2016. In addition, the deposit facility rate was lowered to -0.3% in December 2015 and to -0.4% in March 2016 when a new round of TLTROs was also announced. Finally, in March 2016, the ECB also for the first time linked the forward guidance on its key interest rates to its guidance on net asset purchases by stating that it expected these rates ‘to remain at present or lower levels for an extended period of time, and well past the horizon of [its] net asset purchases’ (270).

Thanks largely to the APP (271), the Eurosystem balance sheet increased from below 22% of euro-area GDP at the end of 2014 to almost 41% by end-2018 (see Graph V.5). As a result, excess liquidity held by euro-area banks at their accounts with the Eurosystem increased to about €1.8 trillion. This ensured that overnight euro money market rates continued to trade close to the negative deposit facility rate. However, as access liquidity accumulated in some euro-area countries, TARGET2 (272) balances, i.e. the net positions of national central banks participating in the payment system vis-à-vis the ECB, also widened considerably (273).

(270)

<https://www.ecb.europa.eu/press/pressconf/2016/html/is160310.en.html>

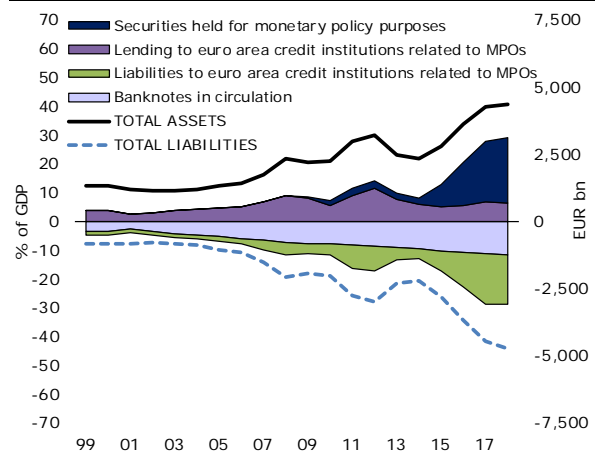
(271) On 11 December 2018, the Court of Justice of the EU ruled that the public sector purchase programme did not infringe EU law.

<https://curia.europa.eu/jcms/upload/docs/application/pdf/2018-12/cp180192en.pdf>

(272) TARGET stands for Trans-European Automated Real-time Gross settlement Express Transfer system. TARGET2 is the second generation of TARGET. It is the real-time gross settlement system owned and operated by the Eurosystem and used by both central banks and commercial banks to process payments in euro in real time.

(273) For a more thorough discussion, see e.g. Baldo, L., Hallinger, B., Helmus, C., Herrala, N., Martins, D., Mohing, F., Petroulakis, F.,

Graph V.5: Eurosystem balance sheet



Source: ECB

Supported by the ample degree of monetary accommodation and further reduction in financial market fragmentation, euro-area GDP growth accelerated from 1.4% in 2014 to 2.4% in 2017 before slowing again to below 2% in 2018. At the same time, euro-area inflation picked up from below 0.5% over 2014-2016 to 1.5% in 2017 and 1.7% in 2018 (for more details on the macroeconomic impact of the APP, see Box V.1). As a result, given its confidence in the sustainability of the euro-area inflation path, the ECB confirmed in December 2018 its intention (first announced in June 2018) to cease net asset purchases under the APP by end-2018. At the same time, the ECB enhanced its forward guidance on reinvestment by clarifying that it would ‘continue reinvesting, in full, the principal payments from maturing securities purchased under the APP for an extended period of time past the date when [it starts] raising the key ECB interest rates, and in any case for as long as necessary to maintain favourable liquidity conditions and an ample degree of monetary accommodation’ (274).

V.4. Inflation developments over the last 20 years

Annual HICP inflation in the euro area averaged 1.7% between January 1999 and December 2018 (see Graph V.6). This is a considerable achievement, given that annual inflation in the

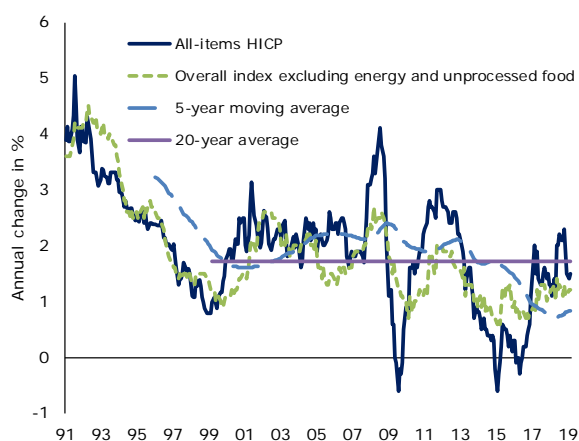
Resinek, M., Vergote, O., Usciati, B. and Y. Wang (2017), ‘The Distribution of Excess Liquidity in the Euro Area’, *ECB Occasional Paper*, No. 200.

(274)

<https://www.ecb.europa.eu/press/pressconf/2018/html/ecb.is181213.en.html>

initial 11 euro-area countries (EA11), which adopted the euro in 1999, averaged 2.6% between January 1991 and December 1998. Moreover, it declined gradually from above 4% in 1991 to 1.1% in 1998 also thanks to the efforts of these countries to comply with the so-called Maastricht criteria in order to be able to adopt the euro in January 1999.

Graph V.6: HICP inflation in the euro area



Source: Eurostat

Euro-area inflation developments, however, differed considerably between the first two decades. Whereas annual inflation averaged 2.2% over the first decade, it amounted to on average 1.3% over the second decade. The decline naturally reflected the disinflationary impact of the global financial crisis as well as the subsequent euro-area sovereign debt crisis, with average annual GDP growth in the euro area slowing down from 4.1% during 1999-2008 to 2.5% over 2009-2018 and the average annual growth rate of the broad monetary aggregate M3 from 8.1% in 1999-2008 to 3.2% in 2009-2018.

Although economic activity in the euro area has recovered in recent years (the unemployment rate declined from above 12% in early 2013 to below 8% in 2018), underlying consumer price pressures have remained relatively muted, with core inflation hovering around 1.2% over 2017-2018. Changes in the link between measures of economic slack and consumer prices (i.e. the Phillips curve) can stem from different causes, such as an increased role played by global factors⁽²⁷⁵⁾ or a shift in short-

⁽²⁷⁵⁾ For more details, see e.g. Forbes, K. (2018), 'Fixing the Astrolabe: Global Factors and Inflation Models', Conference proceedings: ECB Forum on Central Banking, 16-18 June 2018, Sintra, Portugal, pp. 170-186.

term inflation expectations, which appear to have become more sticky and backward-looking⁽²⁷⁶⁾.

V.5. Broader institutional context

The past two decades have demonstrated that consumer price stability is not sufficient to ensure overall macro-financial stability in the euro area. In the run-up to the global financial crisis, a number of euro-area countries had accumulated large macroeconomic imbalances, which then exacerbated the negative impact of the external shock and necessitated a protracted adjustment process. This experience was reflected in the EU surveillance process, notably by introducing the macroeconomic imbalance procedure in 2011. The euro-area institutional architecture was subsequently strengthened by the creation of the single supervisory and resolution mechanisms for the banking sector and by the establishment of the ESM to assist countries in severe financial distress. The ECB also helped to restore macro-financial stability during the peak of the euro-area sovereign debt crisis, in particular by announcing OMTs in September 2012⁽²⁷⁷⁾.

Going forward, the ECB still faces the challenge of having to conduct monetary policy in a currency union without an equivalent fiscal authority. This makes stabilising overall euro-area economic activity more challenging⁽²⁷⁸⁾. In addition, large-scale asset purchases for monetary policy purposes are also more complex in the euro-area context due to the lack of a sufficiently large pool of common safe assets⁽²⁷⁹⁾. As a result, a further development of the EMU institutional architecture⁽²⁸⁰⁾ could also make it easier to conduct monetary policy in the euro area.

⁽²⁷⁶⁾ For a more thorough discussion, see e.g. Ciccarelli, M. and C. Osbat (eds., 2017), 'Low Inflation in the Euro Area: Causes and Consequences', *ECB Occasional Paper*, No. 181.

⁽²⁷⁷⁾ For a more detailed review of the impact of OMTs on the euro-area financial system see e.g. Hartmann and Smets (2018), op. cit..

⁽²⁷⁸⁾ For a more thorough discussion, see e.g. Claeys, G. (2017) 'The Missing Pieces of the Euro Architecture', *Bruegel Policy Contribution*, Issue 28.

⁽²⁷⁹⁾ See e.g. Cœuré, B., 'Bond Scarcity and the ECB's Asset Purchase Programme', Speech at the Club de Gestion Financière d'Associés en Finance in Paris.

https://www.ecb.europa.eu/press/key/date/2017/html/sp170403_1_en.html

⁽²⁸⁰⁾ As proposed by e.g. European Commission (2017), 'Reflection Paper on the Deepening of the Economic and Monetary Union'.

https://ec.europa.eu/commission/sites/beta-political/files/reflection-paper-emu_en.pdf

V.6. Conclusions

According to the Maastricht Treaty, the ECB's primary objective is to maintain price stability. Over the first 20 years of its existence, the ECB succeeded in ensuring that annual HICP inflation in the euro area averaged 1.7%. However, its operational environment has become more challenging in the aftermath of the 2008 global financial crisis and the subsequent euro-area sovereign debt crisis. The ECB has therefore deployed a wide range of non-standard monetary policy measures, with some of them having been challenged before the Court of Justice of the EU, which confirmed their conformity with EU law. As a result, overnight euro money market rates have traded in the negative territory since late 2014 while the Eurosystem balance sheet increased to almost 41% of euro-area GDP by end-2018. Nevertheless, HICP inflation has averaged just 1.3% over the last decade.

After having carried the burden of the reflationary effort over the past years, monetary policy might be subject to diminishing returns while the risk of

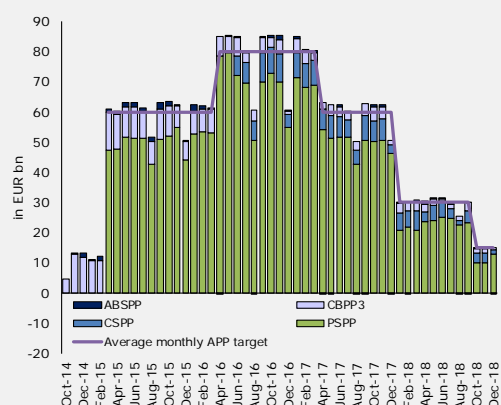
negative side effects could be increasing. As a result, to be fully effective over the longer term, monetary policy needs to be coupled with appropriate structural reforms and responsible fiscal policy supported by growth-friendly composition of public finances.

Moreover, some recent structural changes in the euro-area financial system, such as the increased demand for high quality liquid assets and the larger role played by the non-bank financial sector, together with the overall backdrop of lower potential growth will likely continue affecting monetary policy implementation and its subsequent transmission going forward. At the same time, further progress in building up the EMU institutional architecture, including a budgetary instrument as well as completing the banking and capital markets union, would make it easier to conduct single monetary policy. In particular, a more resilient euro-area economy and financial system would also imply that less burden is placed on the ECB when economic activity needs to be stabilised in view of negative developments/shocks.

Box V.1: The macroeconomic impact of the ECB APP

Net purchases of securities under the expanded asset purchase programme were conducted from March 2015 until December 2018. They cumulatively amounted to €2.6 trillion (i.e. 22% of euro-area GDP) with the largest contribution of almost €2 trillion stemming from the public sector purchase programme. The APP portfolio was then held stable until November 2019 as the Eurosystem continued to fully reinvest all principal payments from maturing securities purchased under the APP.

Graph 1: Pace and composition of net asset purchases



Source: ECB

This massive withdrawal of longer-term securities (with remaining maturities of between 1 and 30 years) from financial markets and their primary substitution by central bank reserves implied significantly lower duration risk borne by the private sector (duration extraction effect). ⁽¹⁾ Together with the APP-induced relative shortage of certain longer-term securities (scarcity/preferred habitat effects), this has suppressed term premia and thus longer-term financing costs in the euro area. Using an arbitrage-free term structure model, Eser et al. (2019) estimate that the overall dampening impact of the APP on the 10-year term premium amounted to around 95 basis points in June 2018. ⁽²⁾ This conclusion is broadly corroborated by empirical evidence based on event studies showing that term premia declined across various euro-area financial market segments following ECB communication and news stories related to the APP. ⁽³⁾

By easing financing conditions across the euro area, the APP supported economic activity and the related build-up of inflationary pressures. According to various estimates, the APP thus had a significant positive impact on economic growth and inflation in the euro area over the past years. For example, a DSGE-model-based estimation by Hohberger, Priftis and Vogel (2019) suggests that the APP increased year-on-year output growth and inflation in the euro area by on average 0.4 and 0.9 percentage points, respectively, over the period 2015-2018. ⁽⁴⁾ Using the Gertler and Karadi (2013) model, which builds on a closed-economy framework, Andrade et al. (2016) find that the initial APP configuration (i.e. as announced in January 2015) increased output gradually by around 1.1 percent and inflation by about 40 basis points, reaching its peak in around 2 years. ⁽⁵⁾ Sahuc (2016), based on

(1) Duration risk embodied in longer-term interest rates captures the uncertainty regarding the expected path of short-term/policy interest rates.
 (2) Eser, F., Lenke, W., Nyholm, K., Radde, S. and A. L. Vladu (2019), 'Tracing the Impact of the ECB's Asset Purchase Programme on the Yield Curve', *ECB Working Paper*, No. 2293.
 (3) See e.g. Altavilla, C., Carboni, G. and R. Motto (2015), 'Asset Purchase Programmes and Financial Markets: Lessons from the Euro Area', *ECB Working Paper*, No. 1864 or De Santis, R. A. (2016), 'Impact of the Asset Purchase Programme on Euro Area Government Bond Yields Using Market News', *ECB Working Paper*, No. 1939.
 (4) Hohberger, S., Priftis, R. and L. Vogel (2018), 'The Macroeconomic Effects of Quantitative Easing in the Euro Area: Evidence from an Estimated DSGE Model', mimeo.
 (5) Gertler, M. and P. Karadi (2013), 'QE 1 vs. 2 vs. 3...: A Framework for Analyzing Large-Scale Asset Purchases as a Monetary Policy Tool', *International Journal of Central Banking*, Vol. 9, pp. 5-53, and Andrade, P., Breckenfelder, J., De Fiore, F., Karadi, P. and O. Tristani (2016), 'The ECB's Asset Purchase Programme: an Early Assessment', *ECB Working Paper*, No. 1956.

(Continued on the next page)

Box (continued)

the same model, estimates the initial effect on both real GDP growth and inflation in 2015-2016 at some 0.6 percentage points.⁽⁶⁾ Finally, according to the Eurosystem staff estimates, all ECB monetary policy measures adopted since mid-2014 cumulatively contributed around 1.9 percentage points both to euro-area inflation as well as real GDP growth over 2016-2020, with the strongest impact in 2016.⁽⁷⁾

⁽⁶⁾ Sahuc, J.-G. (2016), 'The ECB's Asset Purchase Programme: A Model-Based Evaluation', *Economics Letters*, Vol. 145, pp. 136-140.

⁽⁷⁾ ECB (2019), 'Taking Stock of the Eurosystem's Asset Purchase Programme After the End of Net Asset Purchases', *ECB Economic Bulletin*, Issue 2, pp. 69-92.

VI. Structural reforms for growth and resilience in the Euro area

Section prepared by Erik Canton, Gaetano D'Adamo, Luis Garcia Lombardero and Plamen Nikolov

This section discusses how structural reforms in the euro area have contributed to the functioning of the EMU over the past 20 years by stimulating growth, convergence and resilience. There is a high premium on structural reforms in a monetary union, as they increase the capacity of individual economies to adjust and hence compensate for the limited discretion at the national level. However, progress in implementing structural reforms has been uneven across countries. Efforts to complete the Single Market and establish the Banking and Capital Market Unions also help to make growth more inclusive and sustainable and improve resilience in the euro area, but the full benefits of cooperation among Member States can only be reaped when EU action is complemented by structural reforms at national level. The EMU governance framework has offered a number of means to stimulate national reforms. Despite some progress, tools such as the country-specific recommendations have not entirely overcome the political economy constraints facing national governments. Recent initiatives, including the establishment of the National Productivity Boards or the proposal for the Budgetary Instrument for Convergence and Competitiveness, are intended to help implement reforms. The need for reform will be even greater in the future with digital transformation, ageing, climate change and changes in the global economy. ⁽²⁸¹⁾

VI.1. The concept of convergence and its role in the functioning of the EMU

A well-functioning Economic and Monetary Union (EMU) is one that delivers sustainable and inclusive economic growth and proves resilient to economic and financial disturbances. A process of convergence is needed to deliver a strong EMU and ensure that the cohesion between its different parts is not threatened by diverging developments and adverse shocks.

When the euro was introduced, the progress on nominal convergence was a major achievement. In the first decade of the euro's existence, it was broadly accompanied by real convergence of economic output. However, a massive misallocation of cross-border financial flows resulted in the accumulation of imbalances in a number of euro area countries and structural divergence. Once the economic and financial crisis hit, it proved very costly to correct these trends, and it came with great social implications. This painful process resulted in a significant slowdown of the real convergence momentum in the euro area ⁽²⁸²⁾. Twenty years later, a broad consensus has emerged that the euro area members need to

converge towards resilient economic structures. Such structures should provide sufficient adjustment capacity and ensure that the benefits of membership are widely shared across and within countries. Box VI.1 provides a more detailed account of the evolution of the notion of convergence within the euro area.

Already in the early stages of the euro project, economic convergence was recognised to be important. Nominal convergence was recognised as a prerequisite for a common currency. In addition, upward real convergence, a condition that ensures economically weaker Member States catch up, was broadly expected to stem naturally from the benefits of the common currency (price transparency, elimination of transaction costs, cross-border capital flows, etc.) ⁽²⁸³⁾. In other words, nominal convergence was seen as contributing to economic growth, which in turn would ensure that the economically less-developed Member States caught up.

⁽²⁸¹⁾ This section represents the authors' views and not necessarily those of their affiliation.

⁽²⁸²⁾ See, for example, Coutinho, L and A. Turrini (2019), 'Convergence and macroeconomic imbalances', Quarterly Report in the Euro Area, Vol. 18, No. 1, pp. 37-51 and Tamas Borsi, M. and N. Metiu (2015), 'The evolution of economic convergence in the European Union', Empirical Economics, Vol. 48, No. 2, pp. 657-681.

⁽²⁸³⁾ Perhaps this notion was based on the ideas of OCA endogeneity that could be seen for example in Frankel and Rose (1999), 'The Endogeneity of the Optimum Currency Area Criteria', The Economic Journal, Vol. 108, pp. 1009-1025. The authors show that cyclical synchronisation tends to follow the fixing of exchange rates.

Box VI.1: The notion of convergence in the euro area

The importance of convergence for the proper functioning of the EMU was recognised already at its inception by explicitly mentioning having a high degree of sustainable convergence as a requirement to achieve the EMU in the Treaties. Consequently, the degree of convergence started being examined through the so-called convergence criteria, set forth in Article 140 of the Treaty of the Functioning of the EU (TFEU).

The convergence criteria are: the achievement of a high degree of price stability; the sustainability of the government financial position; the observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System; and the durability of convergence achieved by the country in question and of its participation in the exchange-rate mechanism being reflected in the long-term interest-rate levels. However, it was soon evident that the criteria that prescribe nominal benchmarks related to the fixed exchange rates and to the common monetary policy instrument and the criteria that require prudent fiscal policy might not suffice in ensuring a smooth functioning of the EMU.

In fact, the founders of the euro provided for other relevant metrics to be monitored in order to ensure convergence in the last paragraph of Article 140 of the TFEU. These other criteria depend on the structure of the economy and include integration of markets, the situation and development of the balances of payments on current account and an examination of the development of unit labour costs and other price indices. Starting with the 2012 Convergence Report, the convergence assessment is aligned with the broader European Semester approach which takes an integrated look at the economic policy challenges facing EMU in ensuring fiscal sustainability, competitiveness, financial market stability and economic growth, see European Commission Convergence Report, 2019. It could be argued that such alignment existed implicitly even at the euro inception. For example, the very first Convergence Report published in 1998 included a Commission Communication on EMU and structural policies for growth and employment in view of the 1998 Broad Economic Policy Guidelines ⁽¹⁾.

Thus, a gradual broadening of the convergence concept from the narrow nominal convergence provided for in the Treaties started almost at the same time as the EMU itself. These various interrelated convergence elements are briefly recalled below.

Nominal convergence is a direct consequence of irrevocably fixing the exchange rates and conducting common monetary policy. It results in interest and inflation rate differentials shrinking. Observation of fiscal sustainability requirements also results in convergence of nominal variables such as public debt ⁽²⁾.

Effective common monetary policy requires the synchronisation of the business cycles of the participating Member States (**cyclical convergence**) ⁽³⁾. If countries are at a different stage of the economic cycle, the common monetary policy instrument cannot bring the required price stability in all of them. The interlinkages between the financial systems and interconnected trade patterns of the Member States play an important role for the synchronisation of their business cycles.

⁽¹⁾ European Economy, Growth and employment in the stability oriented framework of the EMU, Convergence Report 1998

⁽²⁾ Consolidated version of the Treaty on the Functioning of the European Union, Article 140, Official Journal of the European Union, C 202/108, 7.6.2016. The different convergence concepts are also detailed in Berti K. and E. Meyermans (2017), 'Sustainable convergence in the euro area: a multidimensional process. Quarterly Report on the Euro Area, Vol. 16, no. 3.

⁽³⁾ The literature on business cycle convergence includes: Belo, F. (2001), 'Some Facts about the Cyclical Convergence in the Euro Zone', Banco de Portugal, Economic Bulletin December 2001, pp. 37-44; Gayer, C. (2007), 'A fresh look at business cycle synchronisation in the euro area', European Economy, Economic Papers No. 287; and Balta, N. (2015), 'Business cycle synchronisation in the euro area, Quarterly Report on the Euro Area', Quarterly Review of the Euro Area, Vol.14, No.2.

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Box (continued)

The convergence of living standards is best described by the aligning of real variables – such as real GDP per capita. The importance of GDP as a component and indicator of welfare has a very long history closely coinciding with the efforts to find metrics of aggregate output ⁽⁴⁾. **Real convergence** has thus started to be understood as catching up in terms of GDP per capita in the sense described by the neoclassical growth model ⁽⁵⁾.

In recent years, the economic fallout from the crisis and the related perception of growing inequalities spurred a further broadening of the concept of convergence by including social elements, such as the convergence of living standards and working conditions (**social convergence**) ⁽⁶⁾.

Structural convergence is an element that came into prominence with the understanding of the EMU's role in building up imbalances in certain countries. With gradual convergence of nominal variables such as inflation and interest rates towards the lower values in the euro area core countries like Germany and France, capital started flowing towards the euro area periphery and predominately in services and construction. The growth of non-tradable sectors there stood in contrast to the performance of tradable sectors in the euro area core. The ensuing divergences, for example in current account balances and external competitiveness in general, prompted policy makers to talk about the need to align the structures of the economies in the various parts of the EMU.

The Great Recession also led to the creation of the framework of **economic resilience** in the EMU. It is based on three dimensions: (a) vulnerability, whether and how strongly a shock hits the economy, (b) absorption, ability of an economy to cushion the direct impact of a shock, minimising immediate output and job losses and reallocation, (c) recovery, how persistent the effects of shocks to the economy are. Turning the EMU into a more resilient economic entity will inevitably make it a more durable project and will increase the political support for it and will make it truly self-sustained.

⁽⁴⁾ See Oulton N. (2012), 'Hooray for GDP! GDP as a measure of wellbeing', VOXEU, 22.12.2012.

⁽⁵⁾ An empirical investigation can be found in Barro, R.J. and X. Sala-i-Martin (1992), 'Convergence', Journal of Political Economy, Vol. 100, No. 2.

⁽⁶⁾ Commission Recommendation of 26.4.2017 on the European Pillar of Social Rights, C(2017) 2600 final.

The economic and financial crisis has clearly demonstrated the importance of structural reforms for the functioning of the euro area, going well beyond their contribution to sound growth ⁽²⁸⁴⁾. Reforms can dampen the impact of shocks, ease the recovery process and make growth more sustainable by providing flexibility to markets and by incentivising market participants to adjust. This flexibility of economic structures can serve as a stepping-stone to a renewed process of real convergence, when both EU and national institutions and policies are in place ⁽²⁸⁵⁾. Reforms

that ensure flexibility on product and labour markets can also reaffirm the benefits of the single currency, for example, by facilitating its role in price transparency in a product market that is open to foreign competitors, by helping risk sharing through labour mobility and by easing the transmission of monetary policy ⁽²⁸⁶⁾. EU-wide initiatives such as the completion of the Single Market, the creation of the Banking and the Capital Markets Union and the Budgetary Instrument for Convergence and Competitiveness, on the other hand, will help achieve sustainable and inclusive growth.

⁽²⁸⁴⁾ A good overview of studies that link structural reforms to economic growth is given in Table 1 of Barkbu, B., J. Rahman and R. O. Valdes (2012), 'Fostering growth in Europe now', IMF Staff Discussion Note, No. 12/07.

⁽²⁸⁵⁾ Buti, M. and A. Turrini (2015) "Three waves of convergence. Can Eurozone countries start growing together again?", <https://voxeu.org/article/types-ez-convergence-nominal-real-and-structural>

⁽²⁸⁶⁾ Masuch, K, R. Anderton, R. Setzer and N. Benalal (editors) (2018), 'Structural policies in the euro area', ECB Occasional Paper, No. 210.

Finally, reforms can enable euro area economies to address challenges to robust and sustainable growth in an adequate way as prioritised in the forthcoming Commission programme ⁽²⁸⁷⁾. Ageing populations, technological transformations, climate change and spillovers from global economic tensions can make growth underperform and can prevent its benefits reach all citizens. Economic policies that ensure sustainable growth, that gradually eliminate the adverse effects of human activity on climate and help businesses and consumers embrace changes in technology will make the euro area more coherent and economically stronger.

The rest of this section will show how structural reforms, national policies and EU initiatives can ensure growth and resilience and thus contribute to a coherent and well-functioning EMU. The section is structured as follows. Sub-section VI.2 discusses Member States' progress with structural reforms since the crisis. Sub-section VI.3 focuses on actions at EU level. Sub-section VI.4 discusses the challenges encountered in designing and implementing the structural reforms and solutions put in place. Sub-section VI.5 concludes by focusing on digitalisation and the new reform challenges for the future.

VI.2. Progress in implementing structural reforms at national level and their impact on growth and resilience

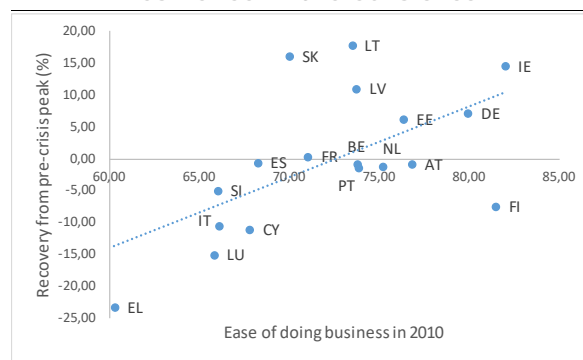
The global economic and financial crisis affected EU and euro area Member States in an uneven way, and the response in terms of reforms and policies varied.

The capacity to absorb and recover from a negative shock requires a substantial reallocation of labour and capital. Structural rigidities may leave resources trapped after a recession and therefore reduce the economy's ability to adapt after a shock. Examples of such rigidities include regulations limiting the ability of firms to adapt labour demand in a recession or making it difficult for a 'zombie' firm to exit the market; the lack of re-training or other support schemes for the unemployed; banking

regulations providing an incentive to banks to roll over the debt of insolvent clients.

In contrast, with market flexibility it is easier to reallocate resources across firms and sectors in case of shocks, therefore making market flexibility critical to ensuring a country has the effective capacity to adjust. Improving governance can also reduce the economic and social costs associated with rent-seeking while supporting innovation-related activities and entrepreneurship ⁽²⁸⁸⁾. A range of empirical studies confirms that well-functioning product and labour markets have a positive effect on resilience ⁽²⁸⁹⁾. For example, Graph VI.1 shows that euro area countries with a more enabling business environment experienced a stronger recovery from the crisis. Furthermore, wide differences in business regulations between euro area Member States may hamper not only individual Member State economies but also affect the functioning of the Single Market and the overall growth prospects of the euro area.

Graph VI.1: Business environment and resilience in the euro area



Recovery from the pre-crisis peak is the % difference in 2017 from the maximum value in 2007-2008 in real Gross National Income per capita. Malta is not included because ease of doing business is not available for 2010.

Source: European Commission, World Bank

Weaknesses in the business environment and rigidities in labour and product markets can also

⁽²⁸⁷⁾ See Political guidelines for the next Commission (2019-2024) - "A Union that strives for more: My agenda for Europe", and more specifically the part: "An economy that works for people", presented by Ursula von der Leyen at the European Parliament on 16 July 2019.

⁽²⁸⁸⁾ Masuch, K., Anderton, B., Setzer, R. and N. Benalal (2019) "Structural policies in the euro area", ECB occasional paper 210.

⁽²⁸⁹⁾ Sondermann, D. (2018) "Towards more resilient economies: the role of well-functioning economic structures", *Journal of Policy Modeling* 40, pp. 97-117; Canova, F., Coutinho, L. and Kontolemis, Z. (2011) "Measuring the macroeconomic resilience of industrial sectors in the EU and assessing the role of product market regulations", *European Economy – Occasional Paper 112*, European Commission. There are also some authors who caution that structural reforms can have negative short-term consequences on growth when the country is at the zero lower bound. Eggertsson G, A. Ferrero and A. Raffo (2014), 'Can structural reforms help Europe?' *Journal of Monetary Economics*, Vol. 61, 2-22.

weaken investment in dynamic and growing firms and sectors and delay projects or postpone investment decisions. Investment in EU Member States in fact took a big hit with the global economic and financial crisis and was very slow to recover. While microeconomic barriers cannot account for the entire drop in investment during the crisis, removing these barriers is especially relevant in the post-crisis context.

Indeed, when looking at survey data, barriers to investment seem to be related to firms' actual ability to invest. Across EU Member States, there is a positive relationship between the share of firms that declare that there is an obstacle to investment and the percentage of firms that declare that they cannot make any investments (Graph VI.2) ⁽²⁹⁰⁾.

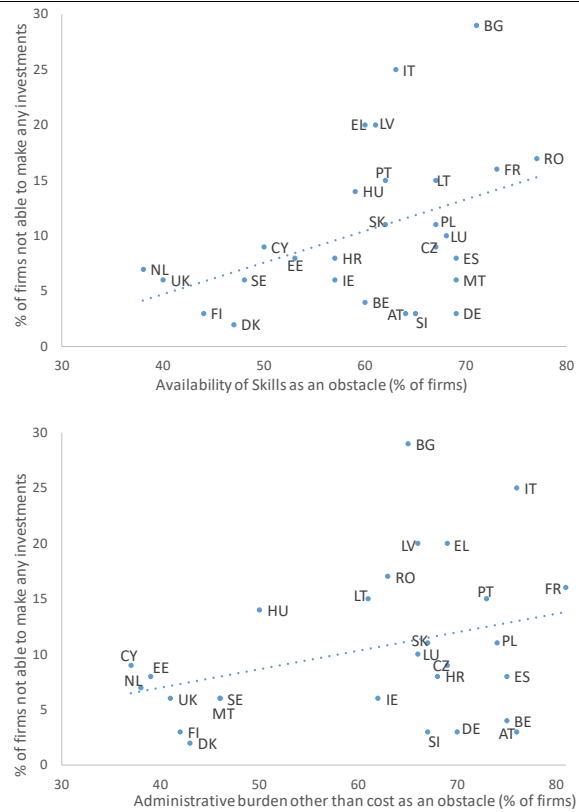
To sum up, structural and institutional barriers and challenges can make an economy less resilient and, by hindering investment, they can slow down the recovery process after a crisis.

Against this background, the European Commission has put a lot of emphasis on the importance of structural reforms, for example, with its co-ordination of policy in the European Semester. The multilateral surveillance that is the backbone of the European Semester has also created incentives for Member States to take ownership of reform. The structural reforms recommended in the Semester aim at strengthening the architecture of the EU and the euro area, improving Member States' competitiveness and attractiveness to investment and reducing their macroeconomic imbalances. Ultimately, this increases their economic resilience.

EU and especially euro area Member States (notably countries that underwent macroeconomic adjustment programmes) have made significant reform efforts in the last few years. Graphs VI.3 and VI.4 show convergence in implementing reforms. Euro area economies have generally become more flexible since the crisis, but this is especially true for countries which were less

flexible (or more regulated) before the crisis. We can therefore observe a degree of structural convergence in reaching up to the higher institutional quality of the leading EU economies.

Graph VI.2: **Perceived barriers and firms' ability to invest**



Source: Flash Eurobarometer 459.

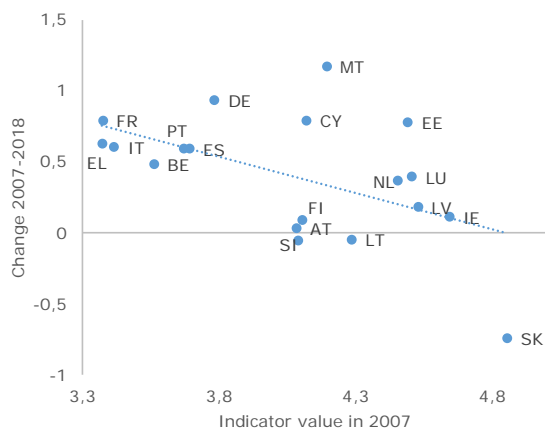
Speeding up the adoption and implementation of national reforms is crucial to improving the conditions for investment and growth. In the framework of the European Semester, Member States' progress in implementing country-specific recommendations (CSRs) is ranked from 'no progress' to 'limited progress', 'some progress', 'substantial progress' and 'full implementation'. Since the start of the European Semester in 2011, Member States have adopted, with at least 'some progress', about two thirds of the country-specific recommendations in the framework of the European Semester, although to varying degrees depending on the country and the policy area ⁽²⁹¹⁾. In particular, the policy area where most progress

⁽²⁹⁰⁾ One could argue that survey data in this case might be biased because firms with poorer business models might perceive stronger barriers to investment and therefore have a higher chance of not being able to make any investment, leading with the positive relationship observed here. However, even if we replace the variable on the vertical axis with the investment gap, measured as the difference between a country's pre-crisis average investment rate and the rate in the survey year, this relationship is confirmed.

⁽²⁹¹⁾ European Commission (2019), "2019 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation (EU) No 1176/2011", COM(2019) 150 final.

has been made is that of financial services, because of the priority given to the stabilisation and soundness of the financial sector in the aftermath of the financial crisis. Moreover, since the crisis had a large initial impact on labour markets, there has been sound progress with the implementation of the recommendations aimed at promoting job creation on permanent contracts and addressing labour market segmentation. Progress has been weaker, on the other hand, in the policy areas of competition and regulatory frameworks, as well as in addressing recommendations related to state-owned enterprises. In some cases, there is even some evidence of backtracking of reforms, in particular concerning the long-term sustainability of public finances, including pensions.

Graph VI.3: Degree of flexibility



This indicator is one of the sub-components of the Global Competitiveness Index. It ranges from 1 to 7 where 7 is the best practice.

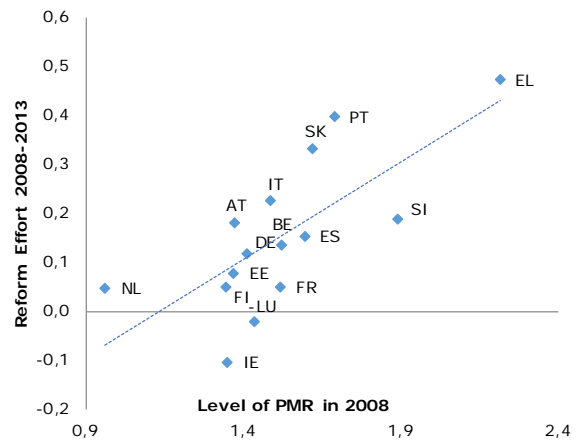
Source: World Economic Forum

The reforms adopted since the outset of the global economic and financial crisis have the potential to contribute to faster growth, job creation and resilience in the euro area. The European Commission has used two approaches in quantifying the reform impact.

First, the European Commission has done a model-based exercise that shows that if Member States were to close half of the observed gaps with best performers in areas such as market competition and regulation, labour market and skills-upgrading, tax structure and R&D, EU GDP would be lifted by 3% after 5 years and almost 6% after 10 years. Country effects can be even larger

for Member States further away from best performance ⁽²⁹²⁾.

Graph VI.4: Reform effort in product markets



A higher value of the Product Market Regulation indicator means more stringent product market regulation (PMR). The reform effort is calculated as the change in the PMR between 2008 and 2013 (most recent value), where a positive value means a less stringent regulation.

Source: OECD

Second, efforts were also made to estimate the impact of actual reforms put in place by Member States. Model simulations on reforms adopted by four Member States (France, Italy, Spain and Portugal) in their 2013-2015 National Reform Programmes (NRPs) suggest that, by 2020, they will raise GDP by some 1.25% in Italy and Spain, some 2% in Portugal, and close to 0.5% in France, for which only measures included in the 2015 National Reform Programme were considered. These gains in output are driven by higher productivity and/or higher employment rates. Reforms also generally improve government balances, as higher growth boosts tax revenues ⁽²⁹³⁾.

Although the results of the two approaches cannot be directly compared, the order of magnitude of the estimated gains suggests that further benefits from structural reforms can be reached.

⁽²⁹²⁾ Varga, J. and in't Veld, J. (2014) "The potential growth impact of structural reforms in the EU: A benchmarking exercise", European Economy – Discussion Papers 541.

⁽²⁹³⁾ European Commission (2016) "The Economic Impact of Selected Structural Reform Measures in Italy, France, Spain and Portugal", European Economy – Institutional Paper 023.

Box VI.2: Real convergence in the euro area regions

This box evaluates if the real convergence patterns for the euro area Member States over 2000-2016⁽¹⁾ hold at the regional level. It uses two standard metrics of convergence. The first one (sigma convergence) evaluates if there has been a decline in the variation of GDP per head across the units considered (i.e., countries or regions). The second one (beta convergence), if poorer countries / regions have, on average, grown at a faster pace than richer ones over the period of analysis.

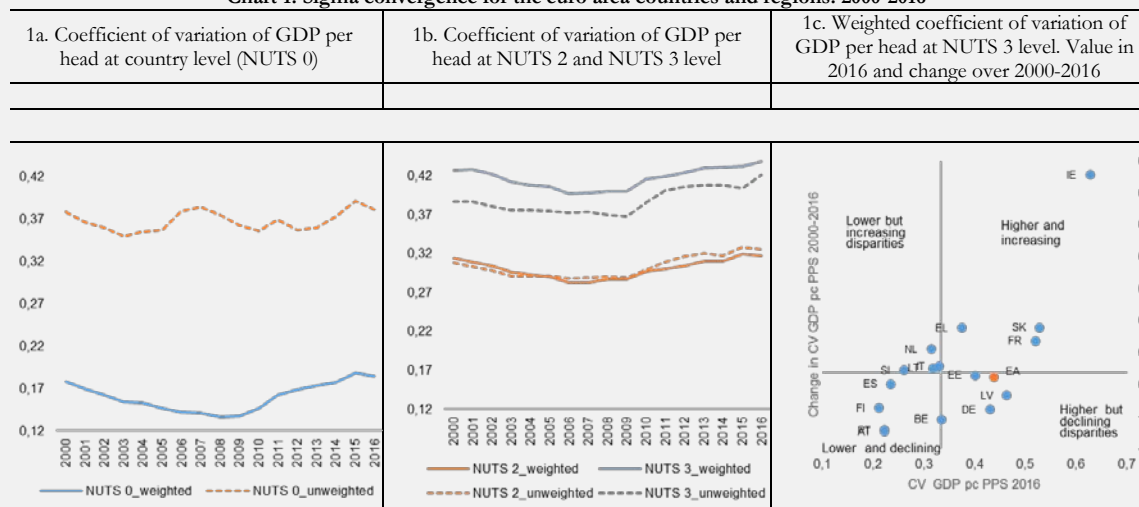
Sigma and beta convergence at country level (NUTS 0)

At the country level (NUTS 0), there is no visible downward trend in the GDP per head's dispersion (Chart 1a). Disparities in GDP per head declined slightly in the years preceding the euro area financial crisis and then increased, only to go back in 2016 to a level similar to the starting one in 2000. However, Chart 2a suggests that without conditioning on other factors beta convergence in the euro area countries has taken place during the considered period. This is based on the negative relation between the starting level of GDP per head and its growth rate, which suggest that on average, poorer euro area countries have grown at a higher rate than richer ones over 2000-2016.

Sigma convergence at regional level

The results at the regional level do not show evidence of sigma convergence either. GDP per head at NUTS 2 and NUTS 3⁽²⁾ level euro area regions fluctuated over the reference period in a similar way as the country level and reached values in 2016 broadly comparable to the starting ones (Chart 1b).

Chart 1. Sigma convergence for the euro area countries and regions. 2000-2016



(1) Source: Eurostat and own calculations.

(2) The coefficient of variation is the ratio of the standard deviation of the variable of interest to its mean. The weighted coefficients of variation shown in charts above use population weights.

There are, however, differences within the euro area countries –see chart 1c, which shows the coefficient of variation of GDP per head for the NUTS 3 regions of each euro area Member State in 2016 and its change over 2000-2016.⁽³⁾ Over 2000-2016, disparities declined in the Austrian, Portuguese, Belgian, Finnish, Latvian, Portuguese and German NUTS 3 regions. Conversely, they

(1) Traditionally, the convergence analyses use longer time series, e.g., 30 years of data or more, as those can better capture structural changes in the economy and are logically less influenced by the business cycle. This box relies on a shorter time span, i.e., the 2000-2016 period, as this is the period for which there are regional data available for the euro area countries. While this time horizon is narrower than in most studies, it allows for cross-country comparison of regional developments.

(2) 190 NUTS 2 and 932 NUTS 3 euro area regions.

(3) Countries with two or less NUTS 3 regions are excluded.

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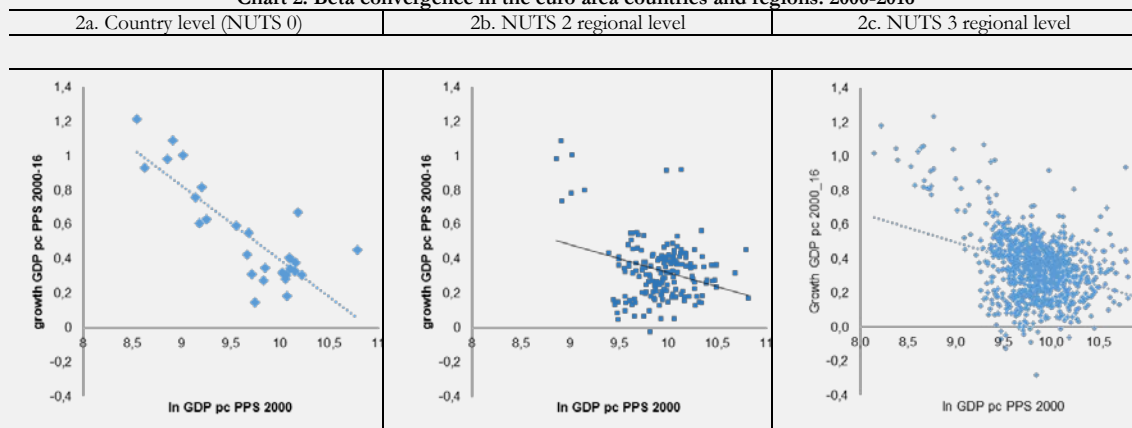
Box (continued)

increased in the Irish, Greek, French, Dutch and Slovak regions. As for the level, in 2016, disparities were lowest in the Finnish, Portuguese, Austrian and Spanish NUTS 3 regions.

Beta convergence at regional level

In spite of the above, we observe a negative relation between the starting level of GDP per head and its growth rate over the reference period, this being suggestive of beta convergence. Nevertheless, this relation is weaker than at the country level (NUTS 0); see the lower slope of charts 2b and 2c compared with 2a.

Chart 2. Beta convergence in the euro area countries and regions. 2000-2016



(1) Source: Eurostat and own calculations.

There is also evidence of beta convergence after conditioning for variables taken from the standard neoclassical growth theory, such as the investment rate, the rate of growth of population and an educational attainment level indicator. Table 1a reports the results for all euro area NUTS 3 regions. The coefficient of the starting level of GDP per head is statistically significant in all specifications. However, its value is rather small, thus pointing to a low speed of convergence.

This beta convergence pattern across the euro area regions masks differences within the euro area countries. Table 1b reports the regression results for the NUTS 3 regions of the four largest euro area countries (i.e., Germany, France, Italy and Spain).⁽⁴⁾ These suggest that there has been beta convergence in the NUTS 3 regions of Germany and Spain. However, there is no evidence of convergence within the NUTS 3 regions of Italy. The results point to regional divergence in France but only when including the six Île de France NUTS3 regions, two of which, Paris and Hauts-de-Seine, are outlying observations in terms of GDP per head. ⁽⁵⁾

⁽⁴⁾ The results for other countries are not reported, given the low number of observations.

⁽⁵⁾ More research is needed to understand better the convergence dynamics in France.

(Continued on the next page)

Box (continued)

Table 1a Beta convergence regressions. EA NUTS 3 regions

	(EA) gr_GDPpc_~16	(EA) gr_GDPpc_~16	(EA) gr_GDPpc_~16	(EA) gr_GDPpc_~16
ln_GDPp~2000	-0.1707** (0.002)	-0.1110** (0.002)	-0.0911*** (0.000)	-0.0439* (0.023)
Irate_avg~16		0.2043** (0.002)		0.0957* (0.016)
n_avg_200~16		-0.2041** (0.004)		-0.1800*** (0.000)
EAL_low_a~16		-0.1512*** (0.000)		-0.0635*** (0.000)
_cons	2.0350*** (0.000)	1.6236*** (0.000)	1.2482*** (0.000)	0.5831* (0.038)
Country dummies	No	No	Yes	Yes
N	932	932	932	932
R-sq	0.123	0.471	0.694	0.721
adj. R-sq	0.122	0.469	0.687	0.715
rmse	0.1727	0.1344	0.1031	0.0985

p-values in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Table 1b: Beta convergence regressions. Large EA Member States' NUTS 3 regions

	(DE) gr_GDPpc_~16	(ES) gr_GDPpc_~16	(FR) gr_GDPpc_~16	(IT) gr_GDPpc_~16
ln_GDPp~2000	-0.0780** (0.008)	-0.2668** (0.009)	0.1334*** (0.000)	0.0262 (0.556)
Irate_avg~16	0.2574*** (0.000)	-0.1281 (0.450)	-1.6005** (0.001)	0.0892 (0.279)
n_avg_200~16	-0.2084** (0.001)	-0.3194*** (0.001)	0.1604 (0.190)	-0.1765 (0.355)
EAL_low_a~16	-0.0167 (0.395)	-0.3139 (0.111)	-0.0640 (0.182)	0.0118 (0.898)
_cons	1.0178* (0.018)	3.0994 (0.124)	-2.8261** (0.004)	-0.5239 (0.628)
N	403	57	96	110
R-sq	0.278	0.621	0.324	0.043
adj. R-sq	0.271	0.592	0.294	0.007
rmse	0.1053	0.0660	0.0692	0.0758

p-values in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Notes:

- (1) OLS regressions with robust standards errors clustered at NUTS 2 level. The dependent variable is growth in GDP per head over 2000-2016 for the EA NUTS2 regions excluding the French DOM-TOM regions, Ceuta, Melilla, Aland and Acores. The regressors are the following: i) the log of the GDP per head in PPS in 2000; ii) the log of the ratio of gross fixed capital formation to GDP (i.e., the investment rate) averaged over 2000-2016; iii) the log of the sum of population growth (n), growth in technological progress (g) and the depreciation rate (δ) averaged over 2000-2016; g plus (δ) are assumed to equal 5% (as in Mankiw (1992) and iv) an indicator of education attainment level, defined as the log of population aged 25-64 having attained ISCED levels 0-2 (i.e., less than primary, primary and lower secondary education).
- (2) The regressions use NUTS 3 GDP per capita and population data while investment rates and educational attainment level are at NUTS 2 level. The analysis assumes that all NUTS 3 units belonging to the same NUTS 2 region share the same investment rate and educational attainment level. Using NUTS 3 level data increases substantially the number of observations per country relative to the NUTS 2 level, thus easing the estimation of OLS regressions with multiple covariates.

Sources:

Mankiw, G., Romer, D. and Weil, D. *A contribution to the empirics of economic growth*. The Quarterly Journal of Economics, May 1992

VI.3. How EU-level actions help to improve growth and resilience in the euro area

In addition to national measures, EU initiatives and reforms have helped to improve the growth and resilience of the EU and especially the euro area.

These initiatives have built on the foundations laid by the creation of the Single Market in 1993 and have been followed by more recent initiatives like the Services Directive, the Capital Markets Union, the Digital Single Market, to name a few. Whereas these measures and initiatives are adopted for the whole EU, to the extent that they contribute to a better functioning of the four freedoms (movement of goods, services, people and capital), they also contribute to a better functioning of the EMU.

The process of European integration has brought substantial benefits to citizens and the European economy, although measuring the full extent of the welfare gains is challenging. A conservative estimate puts the magnitude of economic benefits brought by the Single Market since 1993 at 4.4% of GDP at EU level ⁽²⁹⁴⁾. Alternative estimates using a structural macro-model simulating a counterfactual scenario where trade barriers are reintroduced put the effect of the Single Market between 8% and 9% of EU GDP, as a result of direct trade effects, economies of scale and competition ⁽²⁹⁵⁾.

These gains have materialised because the Single Market has allowed for economies of scale, reinforced the incentives for firms to innovate and facilitated the dissemination of knowledge. This has led to more efficient production processes, higher quality, greater product diversity, and higher consumer purchasing power through lower prices and higher wages. The enforcement of common standards for goods and services, the implementation of policies to facilitate the mobility of workers, and the removal of behind-the-border barriers to enforce the freedom of establishment for firms have helped to create a level-playing field

for firms across the EU and improved the efficiency of resource allocation ⁽²⁹⁶⁾.

The actions and initiatives launched since 2014 to complete the Single Market are also delivering benefits in terms of growth and resilience. The combined macro-economic impact of the full and timely implementation of the reforms identified by the Digital Single Market, the Single Market Strategy, the Capital Markets Union and the Energy Union may result in the creation of an additional 1 million jobs by 2030 and an additional increase of EU GDP of 1.5% by 2030 ⁽²⁹⁷⁾.

VI.4. The challenges in implementing structural reforms

Structural reforms remain mostly a prerogative of national economic policy makers. However, they represent a matter of common concern and the Treaties mandate efforts to create and deepen the Single Market, thus requiring coordination of structural reforms at national level and policies at EU level.

EU governance models have gradually changed over the past 20 years since the euro's adoption. It is useful to recall the early days of the euro and the Lisbon strategy, which was the action and development plan in place for the economy of the European Union between 2000 and 2010.

The aim of the Lisbon Strategy was to make the EU 'the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion' by 2010. This Lisbon Strategy was built upon earlier initiatives, in particular the Cardiff, Cologne and Luxembourg processes ⁽²⁹⁸⁾. The adopted governance approach

⁽²⁹⁴⁾ Mayer, T., Vicard, V., and Zignago, S. (2018) "The cost of non-Europe, revisited", CEPII working paper No. 2018-06.

⁽²⁹⁵⁾ in't Veld, J. (2019) "Quantifying the Economic Effects of the Single Market in a Structural Macromodel", European Economy – Discussion Paper 094.

⁽²⁹⁶⁾ 'Behind-the-border barriers' are non-tariff barriers that operate inside the countries rather than at the border and have the ultimate effect of restricting trade. A non-exhaustive list includes technical barriers, export subsidies, health and environmental regulations, administrative rules on public procurement.

⁽²⁹⁷⁾ Christensen, M., Conte, A., Di Pietro, F., Lecca, P., Mandras, G., and Salotti, S (2018). "The third pillar of the Investment Plan for Europe: an impact assessment using the RHOMOLO model". JRC Working Papers on Territorial Modelling and Analysis No. 02/2018, European Commission, Seville, 2018, JRC113746.

⁽²⁹⁸⁾ The 'Jobs Summit' in Luxembourg (November 1997) launched the open method of coordination envisaged by Article 128 EC (now Article 148 TFEU) of the Treaty's Employment Title, which became known as the 'Luxembourg process'. The process involves drawing up annual employment guidelines, national employment action plans and a joint employment report (Article 148 TFEU). In Cardiff (June 1998), Member States decided to put in place an improved macroeconomic dialogue on economic

in the Lisbon Strategy was the so-called open method of coordination (OMC). The OMC uses soft instruments such as guidelines and sharing of best practices. For example, targets are set for R&D spending, but how Member States achieve these targets is left to their own discretion. No official sanctions were envisaged in case of non-compliance, and the effectiveness of OMC essentially depends on whether or not politicians feel some peer pressure to reach the jointly determined targets.

This soft form of coordination aims to combine decentralisation of policy formulation and decision-making with re-integration at the EU level⁽²⁹⁹⁾. The reason behind adopting this governance model is the belief that Member States need to take ownership for implementing structural reforms, whereas countries can learn from each other about the design of policy packages to achieve the targets.

In 2010, the Lisbon Strategy was followed by the Europe 2020 strategy. It emphasises smart, sustainable and inclusive growth as a way to overcome the structural weaknesses in Europe's economy, improve its competitiveness and productivity and underpin a sustainable social market economy. The strategy has explicit targets for employment, research and development, climate change and energy, education, and poverty reduction and social inclusion. Some of these targets are legally binding (CO₂ emissions and renewable energy), while all others were subject to the OMC. This strategy is monitored through the European Semester, which was introduced in 2010 and enables EU Member States to coordinate their economic policies throughout the year and address the economic challenges facing the EU. Within the European Semester cycle, each year the Commission undertakes a detailed analysis of each country's plans for budget, macroeconomic and structural reforms and then provides EU

governments with country-specific recommendations for the next 12-18 months. These are then endorsed by the Council, increasing Member State ownership of the reforms and making the surveillance process truly multilateral. One could argue that this governance model is somewhat stronger than the OMC method used under the Lisbon Strategy, as CSRs can be quite concrete, pointing at specific policy issues.

Whereas progress has certainly been made on the structural reform agenda and in the implementation of CSRs, as discussed in sub-section VI.2 the degree of implementation differs across countries and policy areas. This sluggish implementation of structural reforms at national level not only deprives citizens of the economic gains that could have been achieved, but it also hampers progress in creating the Single Market, especially since delivering services across borders is more complicated when there are large differences in regulatory systems. This section continues with the key challenges to the adoption of structural reforms and the implementation of country-specific recommendations in order to better understand where these differences come from.

Ten challenges for structural reforms

There are various reasons why implementing structural reforms can be difficult. First, structural reforms often generate relatively modest benefits for all, and relatively large costs for a small group. Those who risk to lose can become vocal and may organise themselves better to resist any reform since they are fewer (possibly with the help of lobbyists who specialise in keeping things unchanged). Most people tend to gain from the reform, but it is typically more difficult to become organised in order to push for the change since they are more numerous and diverse.

Second, structural reforms can have negative effects in the short run (in particular when adopted in times of recession and when interest rates are at the zero lower bound), whereas the benefits take more time to materialise, often much longer than the electoral horizon of politicians⁽³⁰⁰⁾. Often

reforms, with a view to unleashing a more dynamic economic performance. The ongoing pursuit of this agenda on the functioning of product and capital markets and on reforms in labour markets and public finances is known as the 'Cardiff process'. Member States created the basis for a Community employment policy, which takes account of all the economic factors that affect employment in Cologne (June 1999). The main objective of the European Employment Pact, known as the 'Cologne process' is to encourage dialogue between all the parties involved in macroeconomic policy and to strengthen their confidence, in order to encourage growth and job creation.

⁽²⁹⁹⁾ Szyszczak, E. (2006), "Experimental governance: the Open Method of Coordination", *European Law Journal*, 12(4), pp. 486–502.

⁽³⁰⁰⁾ Eggertsson et al. (2014), *op. cit.*

reforms simply do not help politicians get re-elected ⁽³⁰¹⁾.

Third, structural reforms are sometimes (but certainly not always) complex. For example, active labour market policies can shorten unemployment spells but require a thorough understanding of the various incentives and barriers at play in the search behaviour of employees and the recruitment decisions by firms. The design of effective reforms thus requires a thorough understanding of the market and the behavioural responses of the main players.

Fourth, compelling quantitative evidence on the impact of structural reforms is often not available. While the call for evidence-based policy becomes louder, in many Member States the culture of doing an impact assessment before starting and a policy evaluation at the end is still underdeveloped. Also, such analytical support to the policymaking process would need a set of broadly supported methodological guidelines (such as an agreement on the discount rate to be used to calculate the present value of investment projects, or the systematic use of features when implementing reforms which would allow for a rigorous final evaluation based on experimental techniques ⁽³⁰²⁾).

Fifth, even when such evidence is available, opponents could always try to find popular counterarguments and present them in a way that is biased or not nuanced in order to defend their case. Fake news can also be damaging in this respect.

Sixth, the quality of institutions matters for the actual implementation of structural reforms and more generally their impact. Member States might have difficulties in actually designing and implementing structural reforms on the ground, for example, because they lack the capacity or technical resources or they need to cooperate with local public administrations. This may lead to different

speeds of effective implementation even within the same country. These large differences show up also in the business environment indicators: for example, on the time it takes to start a business, in Spain it is equal to 14 days in Andalusia, and 30.5 days in Ceuta, as captured in a subnational version of the World Bank Doing Business project ⁽³⁰³⁾. Box VI.2 gives some evidence on the regional disparity in the euro area.

Seventh, how effective structural reforms are often also depends on the right sequencing of policies. A well-known example of this is the policy to stimulate R&D. If the supply of R&D workers is inelastic, such policies essentially tend to raise the wages of researchers, not increase R&D activity. Such stimulus programmes are more effective when the supply of research personnel is made more elastic, for example, by making it easier for foreigners to apply. Therefore, in this case one first would need to make the supply of research personnel more elastic before increasing R&D subsidies.

Eighth, how effective structural reforms are can depend on the state of the business cycle, where for example, one should be careful about making labour markets more flexible in times of recession, as people who are laid off may find it particularly difficult to find a new job when business activity is low. This could eventually even lead to permanent effects, for example when people end up in long unemployment spells and see their human capital diminish (hysteresis effects) ⁽³⁰⁴⁾.

Ninth, the existence of complementarities and interactions across policy areas points to the importance of considering reforms in broad packages. A full materialisation of a stand-alone reform in a specific sector might be hampered if bottlenecks remain in other policy domains. Likewise, considering reform packages that are balanced in terms of their distributional effects or include compensation packages might help to overcome the resistance to change mentioned

⁽³⁰¹⁾ This has become known as the Juncker curse, when he stated ‘We all know what to do, but we don’t know how to get re-elected once we have done it’. The empirical relevance of this curse has however been contested, cf. Buti et al. (2008), ‘Defying the ‘Juncker Curse’: Can reformist governments be re-elected?’, European Economy Economic Papers 324, May 2008.

⁽³⁰²⁾ For example, in order to learn about the effectiveness of the proposed intervention, one could set up pilots with randomly created treatment groups (with the intervention) and control groups (without the intervention) in order to study the causal impact of the intervention. Successful pilots can then be scaled up, and less successful pilots can be discontinued.

⁽³⁰³⁾ Cf. Doing Business in Spain 2015, the World Bank.

⁽³⁰⁴⁾ Berti, K. and Meyermans, E. (2017) ‘Maximising the impact of labour and product market reforms in the euro area’, Quarterly Report on the Euro Area (QREA), Directorate-General Economic and Financial Affairs (DG ECFIN), European Commission, vol. 16(2), pages 7-19, October. See also Meyermans E. and P. Nikolov (2018) ‘Long-term labour market effects of the Great Recession’, Quarterly Report on the Euro Area (QREA), Directorate-General Economic and Financial Affairs (DG ECFIN), European Commission, vol. 16(3), pages 41-56, February.

earlier, but this would also complicate implementation (e.g. because it can be difficult to specify eligibility criteria or mobilise the necessary political support for a comprehensive policy package) ⁽³⁰⁵⁾.

Finally, an agenda for structural reforms needs to be genuinely supported by politicians, stakeholders, and society as a whole. Such ownership is necessary to design an effective reform, to mobilise the financial and human resources that are needed for such a reform and to overcome resistance.

Addressing challenges with implementing structural reforms

Despite these difficulties in implementing structural reforms, they are essential to prepare for future challenges, and are expected to generate substantial benefits when they are introduced in a smart and timely manner. The importance of reforms has been recognised by the Eurogroup when it committed to hold regular thematic discussions to consider and define common policy objectives. Consequently, a number of services, initiatives and instruments have been introduced in recent years in the EU to foster structural reform adoption and improve the effectiveness of the European Semester process.

In order to address the challenges Member States face when preparing, designing and implementing structural reforms, the Commission decided in 2015 to create a permanent structure that could help any EU country with reforms: the Structural Reform Support Service. To provide such tailor-made support, this service manages a specific programme (the Structural Reform Support Programme) with a budget of €222.8 million over the period 2017-2020. The support starts with a request from an EU country and does not require co-financing by Member States. A Member State may ask for support from the programme for reforms undertaken at their own initiative, for economic adjustment programmes or for reforms linked to EU economic governance (country-specific recommendations and implementation of EU law).

Boosted by the Five Presidents' Report, there is also a renewed interest in benchmarking ⁽³⁰⁶⁾ ⁽³⁰⁷⁾.

The main objective of benchmarking is to support the reform processes at the Member State level by cross-examining relative performances, identifying challenges and promoting the exchange of good practices. In this context, benchmarking public policy is defined as the cross-examination of indicators against some point of reference (benchmark value). As such, benchmarking could serve multiple purposes. Benchmarking can help to identify underperformance and need for action. So it can be used as a detection instrument. Second, it can be seen as an accountability or monitoring instrument. The Member States have committed to pursue certain actions, and benchmarking can help to monitor the progress and communicate the results. While benchmarking should not be seen as a panacea for promoting structural reforms, it can serve as a useful complement to support policy action.

Since structural reforms are relevant for implementing fiscal surveillance, flexibility for structural reforms has been introduced in the preventive arm of the Stability and Growth Pact without changing legislation. The Pact's existing rules are applied to strengthen the link between structural reforms, investment and fiscal responsibility in support of jobs and growth. The structural reforms clause takes into account the impact of structural reforms and allows, under specific conditions, temporary deviations from the medium-term budgetary objective or the fiscal adjustment path towards it. The conditions are: (i) reforms have been implemented or are detailed in dedicated plans; (ii) deviation does not lead to a breach of the 3% deficit and the 'safety margin' is preserved and (iii) the budgetary position has to return to the medium-term objective within 4 years.

In addition, new budgetary instruments are proposed under the new Multiannual Financial Framework for 2021-2027 to support Member States' reform agendas. In order to increase proactivity in adopting comprehensive reforms, the Reform Support Programme and more specifically the Reform Delivery Tool will be available for all EU Member States. The Budgetary Instrument for Convergence and Competitiveness (BICC),

⁽³⁰⁵⁾ Berti, K. and Meyermans, E. (2017), *ibid.*

⁽³⁰⁶⁾ Juncker, J.-C., Tusk, D., Dijsselbloem, J., Draghi, M. and M. Schultz (2015), "Completing Europe's Economic and Monetary Union".

⁽³⁰⁷⁾ On page 9, the "Five Presidents' Report" mentions: "The Eurogroup could (...) play a coordinating role in cross-examining performance, with increased focus on benchmarking and pursuing best practices. This must go hand in hand with the use of the Macroeconomic Imbalance Procedure (MIP) to its full potential".

intended for euro area (and ERM II, on a voluntary basis) Member States, will support both structural reforms and public investment that reflect the key objective of increasing convergence and competitiveness within the euro area.

Designing and implementing policies to enhance productivity is challenging and requires strong national ownership to succeed. Such policies should be based on robust evidence and comprehensively address the complex drivers of productivity, which are to some extent specific in each Member State. This is why the Five Presidents' Report recommended that each euro area Member State establish an institution to track economic competitiveness and make policy recommendations in the field. The purpose of these institutions is to promote and help implement structural reforms by providing a solid analytical foundation and informing public debates. Member State governments can benefit from the evidence generated by these institutions to gain political and public support for the reforms needed.

Based on a proposal by the Commission, the Council adopted a Recommendation in September 2016 inviting the Member States of the euro area to establish National Productivity Boards by March 2018. The Productivity Boards are envisaged as institutions that could investigate the productivity challenges and contribute to evidence-based policy-making with objective, neutral and independent analysis and content. Based on the common characteristics and tasks envisaged for these Boards, each Member State could decide upon the exact setup of its own productivity board. National Productivity Boards have already been established in a majority of euro area Member States and the number of Productivity Boards is steadily growing.

VI.5. In conclusion: reform challenges for the future of the EMU

There are challenges to the proper functioning of the EMU that go beyond the wide swings of the economic cycle and are more long term in nature.

First, there is a widespread belief in Europe that growth has not been inclusive. Increasing market income inequality is a global phenomenon, and its main causes are likely connected to the process of technological change and the global integration of

production⁽³⁰⁸⁾. At the same time, the effects of the economic and financial crisis contributed to stronger increases in inequality in some EU countries, and to widening differences in average incomes across countries. The resulting divergence also has important implications for the functioning of the euro area. Overall, failure to deliver inclusive growth increases the difficulty of building a political consensus around structural reforms, further reducing potential growth and negatively affecting convergence and resilience in the EMU.

Second, in all likelihood, the new technologies will cause large disruptions in the labour and product markets, and policymakers will have to consider these. However, their full scale and, particularly, net effects on job creation are very uncertain and will depend on the accompanying policies. Researchers have found strong displacement effects in the EU because of routine-replacing technical change, but this has also created new jobs through increased product demand (cf. Gregory, Salomons and Zierahn, 2019)⁽³⁰⁹⁾.

For example, digitalisation — as a General Purpose Technology (GTP), i.e. a technology that can affect an entire economy and potentially drastically change the society — is about to transform both household life and the ways in which firms conduct business (cf. Jovanovic and Rousseau, 2005)⁽³¹⁰⁾. The notion of digitalisation as a GPT helps to understand the secular productivity slowdown we have been experiencing since the 1990s. Van Ark (2017)⁽³¹¹⁾ argues that the 'the new digital economy' (since the 2000s) is driven by a

⁽³⁰⁸⁾ See, for example Autor, D., D. Dorn, L. Katz, C. Patterson and J. Van Reenen (2017), "The fall of the labor share and the rise of superstar firms", NBER Working Paper No. 23396, for the role of market concentration in falling labour share, and De Loecker, J. and J. Eeckhout (2018), "The rise of market power and the macroeconomic implications", NBER Working Paper No. 23687 for the macroeconomic implications of rising market power in general. For the general relation between technological cycles and inequality, see Jovanovic, B. (2009), "The technology Cycle and Inequality", *The Review of Economic Studies*, Vol. 76, No. 2 (Apr., 2009), pp. 707-729. Yet, there have been periods in the past marked by global trade and technology changes but declining inequality. Often inequality is a result of deliberate or involuntary policy choices.

⁽³⁰⁹⁾ Gregory, T., A. Salomons, and U. Zierahn (2019), "Racing with or against the machine? Evidence from Europe", IZA Institute of Labor Economics Discussion Paper 12063. The emerging consensus points towards a possibly positive overall effect, which nevertheless hides high levels of labour market transitions.

⁽³¹⁰⁾ Jovanovic, B., and P. Rousseau (2005), "General purpose technologies", chapter 18 in *Handbook of Economic Growth* (edited by P. Aghion and S. Durlauf).

⁽³¹¹⁾ Van Ark, B. (2017), "Is there an EU productivity challenge?", Presentation at workshop with National Productivity Boards.

combination of mobile technology, worldwide access to the Internet and the shift toward storage, analysis and development of new applications in the cloud. The arrival of a GPT – in this case new digital economy – can cause a temporary decrease in aggregate productivity, as experience is lost upon adoption, and additional skills are needed to operate the new technology. Huge complementary investments are necessary to adapt to the rapidly changing environment. These additional investments are likely to be much higher than the initial investments to develop the new technologies in the first place.

The differences in readiness between countries to embrace the digital transformation can lead to further divergences. The transformation costs to implement digital technologies will depend on the sectoral structure, the fraction of automatable jobs, and the skill set and demographic composition of the population. Countries facing higher adjustment costs possibly experience slower technology diffusion, and this could ultimately lead to greater differences in income between countries. That can prove detrimental to EMU cohesion. Such upward pressure on income dispersion may also occur at regional level, for example when there is an urban-rural divide in technological readiness, see Box VI.2.

Skills are crucial to allow the benefits of technological progress to unfold and to foster inclusive growth. Basic and advanced digital and cognitive-technical skills are a key asset for productivity and economic growth. However, this is only half of the story: a wider set of 'ICT-complementary' and 'transversal' skills will be crucial too. To work with machines, skills that can be used to perform complex non-routine tasks are key: digital skills but also a broader set of 'ICT-

complementary' skills, such as social and communication skills, creativity, entrepreneurship, readiness to learn, critical thinking, problem-solving skills and independent work organisation. A combination of technical and social skills is likely to be the winning strategy.

The package of skills in demand will evolve over time, and the 'job-for-life' model is being replaced by other models such as the gig economy: upskilling and re-skilling via equal access to lifelong learning is necessary to adjust and to foster complementarities between labour and capital. Efficient and effective investment from both the public and private sectors is needed to increase both the level and variety of education and skills. Not only digital and cognitive skills, but also socio-behavioural skills such as self-organisation, self-learning, teamwork, that will complement technological change, are important types of skills for the future.

In conclusion, for the next 20 years of its existence, the Economic and Monetary Union will need to position itself in a profoundly changing environment connected with digitalisation, population ageing, globalisation, climate change and the energy transition. A comprehensive agenda for policy action is needed to prepare and get ready for these changes. This is an agenda of inclusive growth, where the general-purpose nature of the ICT revolution is embraced through technology-neutral policy support and the transitions to the new technological environment are well-managed through supporting measures and modernised social protection systems. Such a revamped growth model will form the basis for delivering on a prosperous, green and inclusive Europe and an EMU where cohesion between the different nations and regions is not questioned.

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