

The case for macroprudential policy as a stabilizing tool for the euro area

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Current account deficits are not destabilizing per se and cross-border capital flows can contribute to the economic convergence of the euro area and private risk-sharing if monitored more adequately than provided for by the current macroeconomic governance framework of the European Union. Macroprudential policy could fill this gap. This would allow countries with lower capital stocks to continue importing capital and to strengthen private risk-sharing in the euro area, while avoiding negative side effects, such as excessive credit growth and the risk of a balance of payment crisis. We make a case for broadening the EU's macroeconomic imbalances procedure (MIP) to include the assessment of the macroprudential stance, particularly with respect to the possible negative side effects of capital inflows. Our argument is inspired by the effective application of macroprudential policy in Austria in the post-World War II era, when Austria featured a structural balance of payment deficit and liberalized both its capital account and its banking sector without a balance of payment crisis.

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Beyond the realm of monetary policy, efforts to stabilize the euro area economy initially focused on fiscal deficits and public debt while neglecting financial imbalances in the private sector. In response to the global financial crisis and the European sovereign debt crisis, the European Union reformed its governance framework, in particular the Stability and Growth Pact (SGP), and enhanced its toolkit by launching a further surveillance procedure (the macroeconomic imbalances procedure – MIP) with a view to preventing and correcting also external and internal macroeconomic imbalances like asset bubbles and large current account deficits or surpluses. In this respect, we argue that current account deficits are not destabilizing per se and that cross-border capital flows can contribute to the economic convergence of the euro area and private risk-sharing, if monitored more adequately than is currently the case. Specifically, we make a case for broadening macroprudential policy² beyond the scope of banking and for enhancing the MIP framework by including the assessment of the macroprudential stance, particularly with respect to the possible negative side effects of capital inflows. In laying out our argument, we proceed in four steps that also define the structure of the paper: first, we recall selected stylized facts of the balance of payment crisis in euro area periphery countries. Second, we ask to what extent these aspects are addressed by the MIP scoreboard. Third, we study

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² Macroprudential policy is “the forward-looking analysis and identification of risks to the stability of the financial system”. Based on the findings, the respective national macroprudential committee (in Austria the Austrian Financial Market Stability Board) decides to activate macroprudential policy measures in order to increase the resilience of the financial system and to prevent the build-up or reduce systemic risk (for more details see: www.oenb.at/en/financial-market/macroprudential-supervision).

the historic evidence regarding the effectiveness of macroprudential policy in addressing balance of payment imbalances. Finally, we discuss the potential contribution of the current macroprudential toolkit to strengthen the resilience of the euro area economy as well as the remaining challenges.

1 Not all current account deficits are equal: the structure and allocation of capital flows matters

While the euro area as a whole showed almost balanced external positions during its first decade of its existence, persistent macroeconomic imbalances³ were building up beneath this benign surface very much in line with the textbook principle that one country's current account surplus (financial account deficit) is another country's current account deficit (financial account surplus): While core euro area countries like Germany ran substantial current account surpluses, euro area periphery countries like Greece, Ireland, Italy, Portugal and Spain featured matching current account deficits (Wolf, 2014). Moreover, nominal interest rates declined significantly following the establishment of the currency union (European Commission, 2008; Pierluigi and Sondermann, 2018). In this context, the tightening spreads of periphery countries' government bond yields over German government bonds were simply regarded as an indication that the currency area worked: investors and regulators had assessed government bonds of euro area countries as close risk-free substitutes (Aizenman, 2016).⁴ Yet in euro area periphery countries, increasing capital inflows led to the build-up of high external and domestic debt (charts 1–3). Crucially, net debt inflows and domestic credit growth were strongly correlated (Lane 2013, 2015), and in euro area periphery countries, the related capital inflows were predominantly directed towards mortgages and consumption rather than towards investment in tradable, productive sectors (Allen et al., 2011; Avdjiev et al., 2018). In addition, the capital inflows contributed little to cross-border risk-sharing as short-term interbank debt played a large role relative to more stable and risk-bearing forms of funding (Allen et al., 2011).⁵ At the same time, key fiscal indicators for some periphery countries that experienced balance of payment crisis were low prior to the crisis: in Spain and Ireland government gross debt in percent of GDP averaged only 48% and 31%, respectively, between 1999 and 2007 (compared to 65% and 69% for Germany and France).

Most policymakers, market participants and researchers underestimated the destabilizing effects associated with reversals of capital flows within the euro area (balance of payment crisis) and the systemic risk implications of the strong bank-sovereign nexus (Pierluigi and Sondermann, 2018; Eichengreen, 2018). The

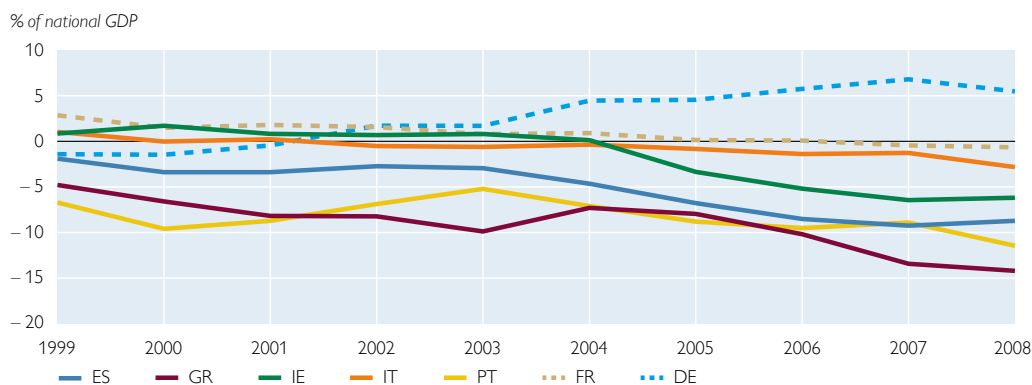
³ Imbalances refer to "situations where stock and flow variables are out of equilibrium for an extended period of time [...]" (Pierluigi and Sondermann, 2018, p.3). For a more differentiated picture of economic developments in euro area periphery countries like Spain and Portugal, see European Commission (2008).

⁴ The notion that government debt is broadly risk-free only accounts for countries that issue debt in their own currency they control and not for member countries with a common currency (at least very low risks of default but risks of inflation remains, Wolf 2014; Aizenman, 2016). In addition, market participants probably confused the absence of exchange rate risk with the absence of credit risk. In addition, market participants expected government bailouts in case of difficulties in banks, which was another incentive in favor of additional risk-taking by creditors (Eichengreen, 2018).

⁵ Chart 2 shows the increase in cross-border interbank inflows. Due to a change in the reporting system of balance of payments data in 2014, very detailed data (e.g. according to maturities and sectors) is only available for 2014 onwards.

Chart 1

Euro area periphery countries were net capital importers from the rest of the world prior to the crisis

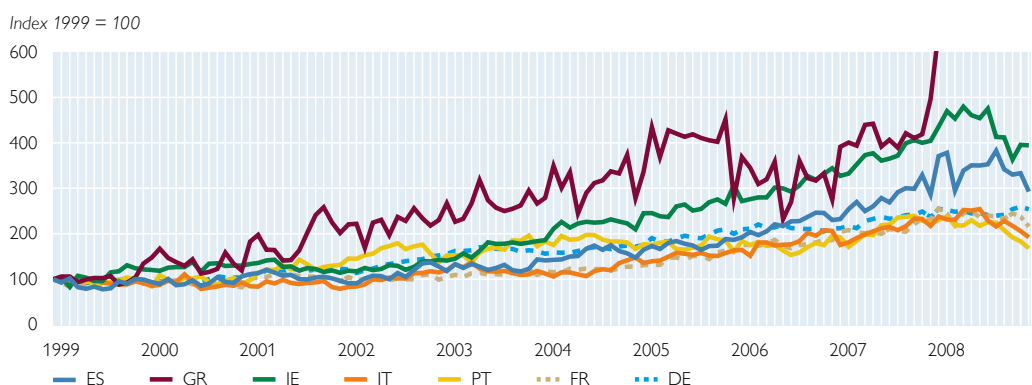


Source: European Commission (Ameca).

Note: This chart shows domestic net lending (+) or borrowing (-) in relation to national GDP. The measures correspond to the sum total of the current and capital account balances in the balance of payments and thus represent the net resources that the total economy made available to the rest of the world (+) or received from the rest of the world (-).

Chart 2

Interbank debt inflows increased strongly in many euro area periphery countries prior to the crisis



Source: ECB.

Note: The chart shows cross-border interbank flows from euro area countries to the individual reporting countries. The outlier for Greece measured 1061 at the end of 2018.

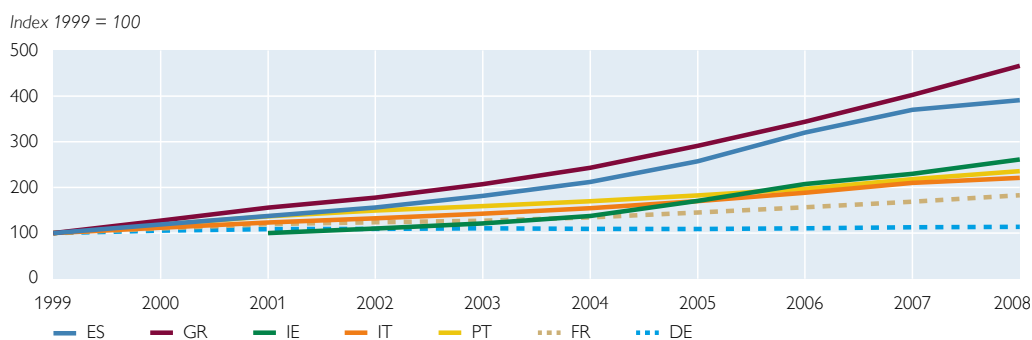
financial crisis of 2008 and the subsequent sovereign debt crisis laid this bare.⁶ For example, the International Monetary Fund (IMF) pointed at risks related to the above-mentioned external imbalances in euro area periphery countries like Ireland, Portugal and Spain, but attested good availability of external financing. In addition, the related IMF reports highlighted the mitigating factors put forth by domestic policy and thus underestimated the probability that a crisis would occur (IMF, 2007a, b, c).

When establishing the Economic and Monetary Union (EMU), its masterminds had focused on the real economy and macroeconomic aggregates, based on

⁶ Some studies noted that the loss of exchange rate policy as policy instrument and insufficient countercyclical fiscal policy rules distorted the allocation of resources and that macroeconomic heterogeneity and missing risk-sharing mechanisms (e.g. concerning deposit insurance and management of liquidity risk) could become a matter of concern (e.g. Blanchard and Giavazzi, 2002; for further examples see Pierluigi and Sondermann, 2018).

Chart 3

Increasing indebtedness of the private nonfinancial sector in euro area periphery countries



the theory of optimum currency areas (OCA), and neglected the nexus between monetary policy and financial vulnerability.⁷ The fact that the OCA theory was heavy on the real economy was at least partly a consequence of the state of macroeconomics in the 1960s – the time when the OCA theory was developed.⁸ Back then, exchange rates were fixed (Bretton-Woods system), financial integration was low and cross-border capital mobility limited due to capital controls and tight banking regulation (Dellas and Tavlas, 2010; Eichengreen, 2018).⁹ The OCA theory essentially covered labor and capital mobility, wage and price flexibility and cross-border transfers (Handler, 2013). A different strand of research developed in the late 1990s put the main stress on systemic risks caused by the occurrence of currency and banking crises (“twin crisis”). Research found that problems in the banking sector typically precede currency crises, which reinforce banking crises leading to a “vicious spiral” (Kaminsky and Reinhart, 1999). As the focus was on emerging markets in Latin America and Asia, the related results – though internationally well recognized – were apparently not considered relevant for policy implementation in the euro area.

A further explanation for the narrow focus on asymmetric real shocks might be that policymakers expected that the build-up of systemic risks in the financial sector would be prevented by banks’ risk management¹⁰ and by microprudential bank supervision. Yet the crisis demonstrated that compliance with microprudential requirements did not guarantee systemic stability. In addition, some euro area member countries had to reimpose capital controls, e.g. Cyprus in 2016 or Greece in 2015, although they are incompatible with a currency union.

⁷ Academia never considered the euro area an OCA, but they expected that the gradual convergence of economies would ensure the viability of the monetary union (Handler, 2013). Its designers assumed that internal devaluations, the mobility of the factors of production, and market driven interest rate differentials (due to different risk premia) across member states would effectively substitute for exchange rate flexibility. They ruled out fiscal transfers between member states, which played a substantial role in other currency areas.

⁸ In this early phase of OCA theory, the academic discourse led by Mundell, Kenen and MacKinnon identified criteria that regions would have to meet to qualify as an optimum currency area (for more details see e.g. Handler, 2013).

⁹ This explains why the potentially destabilizing effects of cross-border capital flows received less attention than real asymmetries (Aizenman, 2016; Eichengreen, 2018) back then with the notable exception of Ingram (1969).

¹⁰ The incentives for bank stakeholders are not always compatible with societal objectives (Posch et al., 2018).

On this basis, we argue that the tensions observed in the euro area during and after the financial and economic crisis were largely due to the three main catalysts of balance of payment crisis rather than mere fiscal excesses: (i) capital inflows in the most volatile form (short-term bank debt), (ii) the allocation of capital to excessive credit growth and bubbles rather than productive investment, and (iii) the bank-sovereign nexus.¹¹ And we go on to ask whether recent reforms of the euro area institutional framework have been adequate to address these catalysts effectively.

2 The existing toolkit for stabilizing the euro area economy does not adequately address problems related to the structure of cross-border capital flows

The Stability and Growth Pact focuses on fiscal rules to ensure that EU Member States pursue sound public finances, preventing negative spillovers to other Member States and to common policy areas such as monetary policy within the euro area. Before the Great Recession, the SGP defined (i) common rules for fiscal policy (upper limits for the debt-to-GDP ratio at 60% and for the fiscal deficit at 3%) and provided for (ii) an instrument to sanction countries that did not comply with the benchmarks. However, the EU institutions never enforced the SGP, especially once the two largest member countries, France and Germany, violated the rules with impunity in the first five years of monetary union and as influential states tweaked them in their favor (Hallerberg and Baerg, 2016). This led to the de facto suspension of the requirements laid down in the SGP (Van Riet, 2010).

The experience of the financial crisis motivated policymakers to broaden EU macroeconomic surveillance in areas beyond the fiscal aspects covered by the SGP, inter alia by putting more weight on preventing large current account imbalances, asset bubbles, etc., with the introduction of the macroeconomic imbalance procedure (MIP) in 2011. The aim of the MIP was to prevent the accumulation of macroeconomic imbalances that could adversely affect economic stability in a particular EU Member State, the euro area, or the EU as a whole. Countries identified as having imbalances receive country-specific recommendations (CSRs) from the European Commission and the EU Council in the context of the so-called European Semester. Surveillance may be escalated through activation of the excessive imbalance procedure (EIP), which comprises the delivery of a corrective action plan with a set of policy measures to be carried out within a predetermined time frame. The repeated delivery of an insufficient corrective action plan or repeated lack of compliance with the policy measures detailed in the plan may imply sanctions.¹²

In response to the sovereign debt crisis, the euro area also introduced institutional reforms to strengthen the monetary union with the creation of a fully-fledged banking union. A new supervisory framework was launched, consisting of the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM), which have been implemented, and the European Deposit Insurance Scheme (EDIS), which has yet to be finalized. The rationale for the banking union was to reduce the likelihood of banking crises caused by inadequate banking supervision and regulatory capture of national supervisors (SSM) and to break the

¹¹ Only the financial crisis in 2008 brought the vicious circle between banks and their domestic sovereigns to the center of policy attention (for more details see Dell'Ariccia, 2018).

¹² https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/macro-economic-imbalance-procedure/scoreboard_en.

bank-sovereign nexus (SRM, EDIS). To complete banking union, European policy-makers also launched a far-reaching capital markets union project to foster the diversification of investment finance.

While these reforms are wide-ranging, they continue to neglect the structure and allocation of cross-border capital flows. Although the MIP constitutes progress relative to the SGP by having included a wider range of macroeconomic imbalances, the monitoring framework for current account imbalances only scratches the surface, so to say, of balance of payments developments by looking at aggregate figures. The MIP neglects the deeper structure of the related capital inflows. In turn, potential positive effects on economic convergence such as private risk-sharing are dismissed. Given that monetary policy cannot be country-specific and might even reinforce the build-up of imbalances in some parts of EMU while being too restrictive in others, other policy tools are needed such as an effective national macroprudential policy.

In the euro area, the process to set up a macroprudential policy framework started with the creation of the European Systemic Risk Board (ESRB) in 2010. This committee gathers representatives from national central banks and supervisors from all EU countries. The ESRB was not given any direct authority over macroprudential policy instruments, but has the power to issue legally nonbinding warnings and recommendations about systemic risks to the EU, to Member States, to the European supervisory authorities or to national supervisory authorities.

The next layer of a macroprudential policy framework for the euro area was created in 2014 with new EU legislation providing for national macroprudential tools to counteract the build-up of systemic risk. Specifically, these instruments are stipulated in the Capital Requirements Regulation and Directive (CRR and CRD) and can be distinguished along three lines: (i) capital-based measures, (ii) liquidity-based measures, and (iii) borrower-based measures. Capital- and liquidity-based measures comprise the capital conservation buffer, the countercyclical capital buffer, the systemic risk buffer, capital buffers for global and other systemically important institutions, the liquidity coverage ratio and the net stable funding ratio. Wherever available within the national legal framework, national authorities can also impose borrower-based measures that restrict lending, for example for mortgages, at the level of the individual borrower, such as caps on loan-to-value ratios (LTVs) or on debt-to-income/debt-service-to-income ratios (DTIs/DSTIs).¹³ While these macroprudential tools are solely in the hands of the national authorities, the SSM Regulation empowers the ECB to impose more stringent measures laid down in Union law (so-called “topping-up” power) to prevent inaction bias of national authorities, if spillover effects substantially increase systemic risk for the euro area financial sector.¹⁴

Austria implemented its macroprudential policy framework primarily via (EU) secondary legislation in the form of amendments to the Austrian Banking Act (Posch et al., 2018). The Austrian Banking act thus installed the Financial Market

¹³ Art. 458 CRR also includes own funds, large exposure limits, public disclosure, the capital conservation buffer, sectoral risk weights (in the residential and commercial property sectors) and intra-financial sector exposures whereby higher risk weights can be set vis-à-vis financial sector exposures that can be applied for macroprudential purposes.

¹⁴ In particular, Article 5 of the SSM Regulation provides that the ECB may, if deemed necessary, apply higher requirements for capital buffers than applied by the national competent authorities or national designated authorities of participating Member States. These capital buffers are to be held by credit institutions at the relevant level in addition to own funds requirements. The ECB may also apply more stringent measures aimed at addressing systemic or macroprudential risks at the level of credit institutions subject to the procedures set out in Regulation (EU) No 575/2013 and Directive 2013/36/EU in the cases specifically set out in relevant Union law.

Stability Board as the decision-making body (based on the ESRB recommendation on the macroprudential mandate of national authorities) and created the legal basis for activating a systemic risk buffer and other systemically important institutions buffers in 2015, effective from January 1, 2016. However, to be truly effective in contributing to the stability of the euro area, the focus of macroprudential policy would need to be broadened to also address the catalysts of balance of payment crises.

3 Historic experience highlights the effectiveness of macroprudential policy to improve the allocation of capital inflows and to reduce the risk of balance of payment crises

Capital inflows can contribute to economic convergence and private risk-sharing, but they can also lead to a balance of payment crisis. Capital inflows may benefit especially small, open economies or emerging economies if capital can be directed into long-term/risk-bearing and productive investments. Macroprudential policy can be useful in this regard. Austria is a case in point – it introduced credit controls, bank lending limits and additional reserve requirements to avoid the building up of systemic risk due to excessive credit growth, misallocation of credit and to avoid disturbances to the financial system caused by volatile short-term capital flows after World War II (Döme et al., 2016; Schmitz, 2016). These measures have been effective: sustained capital inflows contributed to the convergence of the Austria economy to Western European standards by the mid-1970s.

Macroprudential policy was re-invented in the aftermath of the financial crisis of 2008. We have since observed a more active use of these instruments, such as capital requirements, reserve requirements, loan-to-value ratios and taxes on credit, to smooth out the credit cycle to avert major crises. Austria has implemented macroprudential measures to curb foreign currency lending and to improve the refinancing structure of subsidiaries of Austrian banks, as well as structural instruments – the systemic risk buffer and the other systemically important institutions buffer – to address long-term, noncyclical systemic risk. A recent study (Döme et al., 2018) shows that the implementation of these measures has been effective. Banks have been substituting euro-denominated loans for foreign currency loans. The policy measure introduced for some Austrian banks and their subsidiaries in 2014 to reduce excessive wholesale funding (a maximum loan-to-local-stable-funding ratio) reduced banks' excessive wholesale funding, while no significant negative side effects on banks' profitability and competitiveness have been observed. The evidence regarding the activation of the systemic risk buffer has also shown that systemic risk has decreased, and that the CET1 ratios of Austrian banks have improved strongly (+270 basis points from Q2 2015 to Q4 2017) as did bank lending to the real economy (+500 basis points) (Posch et al., 2018). The measure led to a rating upgrade for the Austrian financial system, which was accompanied by rating upgrades for Austrian bank liabilities. This reduced bank funding costs and the funding costs of the real economy.¹⁵

¹⁵ See *inter alia* the upgrade of the Austrian banking system from BICRA (Banking Industry and Country Risk Assessment) group 3 to group 2 out of 10 (1 lowest risk, 10 highest risk; no banking system in group 1 as of 1 June 2018): "...its stability has improved, primarily due to capital strengthening, supported by the derisking of larger banks in Central and Eastern Europe. Given this positive transformation in recent years, we consider that overall industry risk for the Austrian banking sector has reduced to be on par with that of previously stronger peers, such as Germany, France, Belgium, or the Netherlands." (Standard and Poor's, 2018) and Moody's (2017).

Studies for other countries (e.g. Brazil, Spain) confirm that macroprudential policy measures have been effective in addressing the catalysts of balance of payment crises, but not always to the extent necessary. Brazil experienced large capital inflows during late 2010, fueled by “real” carry trades (Glocker and Towbin, 2012 and 2015). This hampered the effectiveness of monetary policy and led to higher inflation and a credit boom. The central bank of Brazil introduced a number of macroprudential measures, such as additional reserve requirements and capital flow management measures. Higher reserve requirements led to an exchange rate depreciation, a current account improvement, and an increase in prices. Exchange rate depreciation dampened capital inflows to Brazil. Steering the inflowing capital to more long-term investment could only be realized by introducing capital flow management measures on foreign purchases of domestic bonds and equities, which was intended to stem volatile carry trades and lengthen the maturities of the inflows. To manage a sustainable credit allocation Brazil introduced additional capital requirements for consumer loans and LTV ratios. The evidence for Brazil suggests that macroprudential measures improve (i) the form of inflows and (ii) the allocation of credit, but there were no measures to explicitly address (iii) the bank-sovereign nexus. Of course, some of the measures (capital controls) are not applicable in the euro area because they are in contradiction to the core fundamentals of the internal market. The Spanish experience (Jimenez et al, 2017; Rubio, 2017) showed that dynamic provisioning (a countercyclical instrument) reduced the amplitude of the financial cycle but could not prevent a crisis; in particular, risks stemming from excessive mortgage growth fueling a housing bubble were not addressed properly.

A number of cross-country studies conducted in recent years found that macroprudential policy was effective, in particular when it was targeted and intrusive

Table 1

Overview of cross-country studies about the use and the effectiveness of macroprudential instruments

| Paper | Countries | Period | Policies | Results |
|--|-----------------------|-------------|---------------------|--|
| Kliatskova (2018) | 24 emerging economics | 1997–2014 | 5 | Macroprudential policies and capital controls on inflows are employed in a countercyclical fashion in the sample countries |
| Cerutti, Claessens and Laeven (2017) | 117 | 2000–2013 | 12 | Instruments have been economically effective, even more so for emerging markets but less effective for open economies |
| Cerutti, Correa, Fiorentino and Segalla (2017) | 64 | Q1 01–Q2 14 | 5 | Capital requirements have the most changes, LTV ratio limits and reserve requirements have the largest number of tightening and loosening episodes |
| Kuttner and Shim (2016) | 57 | Q1 80–Q2 12 | 9 | DSTI ratio effective to curb housing credit, increases in housing-related taxes have significant negative effects |
| Vandenbussche, Vogel and Detragiache (2015) | 16 (CESEE) | 1997–Q1 11 | 29 | Impact on housing prices: capital requirements, sectoral leverage ratio (for household loans), reserve requirements on foreign borrowing and credit ceilings |
| McDonald (2015) | 17 | 1990–2013 | 2: LTV, DTI limits. | Tightening measures (such as lowering the maximum LTV ratio) during upturns lower the level of housing credit over the following year by 4% to 8% and the level of house prices by 6% to 12% |

Source: Authors' compilation.

(see table 1). The reviewed instruments include market-wide measures such as dynamic loan-loss provisioning, reserve requirements, tightening of capital requirements, credit growth caps, levy/tax on financial institutions, caps on leverage ratio and counter-cyclical requirements, but also sectoral instruments such as LTV or DTI ratios, limits on foreign lending and concentration limits. The measures have different objectives and the effectiveness differs among instruments and identified risk.

Especially in a currency union macroprudential measures based on a national mandate can be effective in addressing imbalances. Allen et al. (2011) suggest applying macroprudential tools, especially borrower-based ones, to prevent asset price bubbles, especially in residential real estate. They also find that cross-border bank exposure is more stable when it operates through subsidiaries (FDI) rather than debt. Brzoza-Brzezina et al. (2015) find that macroprudential policy could have lowered the amplitude of credit and output fluctuations in the euro area periphery. Houben and Kakes (2013) argue that credit cycles are still national and that, therefore, macroprudential tools at the national level would have made the banking system more resilient. Rubio (2017) shows that macroprudential tools can limit the building up of bubbles in EU Member States.

Based on the Austrian and the international experience we conclude that macroprudential measures can be effective in addressing the catalysts of potential balance of payment crisis, especially if intrusive measures are activated in a timely and decisive manner (Döme et al., 2016). At the same time, some of the most effective instruments to steer capital inflows employed in non-EU countries are not available in the euro area, such as balance of payment controls. The Austrian experience in the late 1960s and early 1970s shows that macroprudential measures can effectively substitute for capital controls (Schmitz, 2016). Korinek and Sandri (2016) underpin that finding theoretically. They show that in more developed economies, where the liberalization of the balance of payments limits the role of capital controls, macroprudential measures can address the potential negative side effects of capital flows.

4 Macroprudential instruments should complement the current instruments to avoid excessive macroeconomic imbalances

The integration of macroprudential policy in the MIP to avoid the negative side effects of capital inflows would enhance the stability of the euro area. It should address the three main catalysts of recent balance of payment crisis identified in section 1 (bank sovereign-nexus, structure and allocation of capital inflows). The MIP should contain a comprehensive assessment of the appropriateness of the macroprudential stance of the Member State with respect to the catalysts of potential balance of payment crises. The European Systemic Risk Board (ESRB) already conducts similar analyses on a regular basis (ESRB, 2016b, 2018; and nonpublic country risk assessment reports). These results should form the basis for assessments by the European Commission to avoid the duplication of work. However, the European Commission shall not be bound by the ESRB's view, because it is the Commission that bears the final responsibility for the MIP.

The ESRB is currently developing a conceptual framework on a macroprudential stance (ESRB, 2019) which we regard as key concept for our policy proposal to apply macroprudential policy to avoid negative side effects of capital inflows and to integrate it into the MIP. The aim is to arrive at a common language for policy-makers when talking about macroprudential policy. The framework offers a

method to assess whether the activation of macroprudential instruments is neutral, tight or loose relative to the underlying systemic risk.¹⁶ This framework can also be applied to assess the appropriateness of the macroprudential policy with respect to the catalysts of balance of payment crises. That's the focus of the following sections.

4.1 Breaking the bank-sovereign nexus

The CRD IV already includes macroprudential tools that can be employed to reduce the bank-sovereign nexus. The global and the other systemically important institutions (GSII and OSII) buffers reduce the probability and costs of bank failures. However, Sigmund (2018) find that the OSII buffer-levels differ substantially across euro area member states for similar levels of systemic importance. European Commission assessments of OSII policies in the MIP can address insufficient buffers in some EU Member States.

If a bank fails nonetheless, the Banking Recovery and Resolution Directive (BRRD) aims at reducing the negative externalities of banks exiting the market. The Single Resolution Board (SRB) and the national resolution authorities (NRAs) should make sure that all banks become resolvable. For very large banks, this implies vigorous early intervention combined with sufficient minimum requirements for risk-bearing liabilities (MREL). In this respect, the introduction of the SSM and the SRB are substantial improvements. The respective inaction biases of national authorities before and during the crisis caused substantial spillover effects, which the SSM and the SRB can internalize. However, the regular calls for various layers of public backstops show that more needs to be done to make banks resolvable.

In Austria, the systemic risk buffer (SyRB) addresses systemic vulnerabilities and thereby reduces the bank-sovereign nexus: bank insolvency or resolution will always impose costs on sound banks, but the “systemic vulnerabilities” component of the SyRB ensures that sound banks can bear these costs without jeopardizing financial stability and without public bail-outs. This includes the ability of the banks to provide ex post contributions and loans to their deposit guarantee schemes (DGS). The “common exposure” component of the Austrian SyRB also contributes to reducing the bank-sovereign nexus by internalizing the negative externalities of common exposures of Austrian banks to CESEE.

The introduction of collective action clauses for sovereign bonds in 2022 will contribute to private risk-sharing in the euro area. Based on a decision at the Euro summit on December 18, 2018, the European Stability Mechanism will be reformed by facilitating the dialogue between member states and their creditors, in line with IMF practice. From 2022 onwards, sovereign bonds will contain single-limb collective action clauses in order to make the prevention of bail-in by smaller creditors more difficult. This could improve the efficiency of possible debt restructurings in the exceptional case that these were deemed necessary (Allen et al., 2011).

Not least, some countries (i.e. Sweden) introduced prudential risk weights for sovereign bonds. The legal implementation of such a tool in euro area countries

¹⁶ In a first step, the policy stance assessment addresses the question how tight or loose the policy stance is (if it is neutral, no further action is required). In a second step, a policy action assessment addresses the question if policy adjustments are needed based on a costs-benefits analysis with a conclusion on what policy should be implemented. While there are many challenges in operationalising the macroprudential stance framework, one core issue is how to measure the various components of stance, i.e. risks, resilience and policies, appropriately.

would reduce the bank-sovereign nexus as would concentration limits on exposures to banks' home sovereigns.

4.2 Steering the allocation of capital imports from consumption loans and mortgages towards productive investments

The CRD V introduces a sectoral systemic risk buffer (SyRB) to address structural risks related to specific sectors (e.g. residential mortgages versus investment loans to nonfinancial corporates). However, the current framework does not allow for activating different SyRB rates for different sectors. The CRD V will fill that gap by introducing sectoral capital buffers for household mortgages, other household loans, commercial real estate and other nonfinancial corporates' loans. Thus, the sectoral SyRB will soon be available to steer the allocation of structural capital imports from, say, consumption loans to nonfinancial corporate loans by applying higher buffer rates for the former.

All euro area countries should introduce borrower-based measures to address excessive mortgages growth and the deterioration of mortgages lending standards. Both of these contributed substantially to the crisis in Ireland, Spain, and Portugal. In addition, Art. 124 of the CRR empowers the national competent authority (NCA) to increase the risk weights on exposures secured by mortgages on immovable property on the basis of financial stability considerations for banks under the standardized approach. If losses on such exposures increase, the NCA can increase risk weights for exposures secured by residential and commercial real estate to up to 150%. Similarly, Art. 164 of the CRR empowers NCAs to increase the loss-given default (LGD) for banks using an internal ratings-based approach under the same conditions. Some member states have already taken measures under these articles. However, their effectiveness in terms of mortgage pricing, volume growth, and capital allocation has turned out to be low relative to borrower-based measures.

4.3 Steering capital inflows towards more stable forms

Fewer and less well tested instruments are available to steer capital flows to more risk-bearing and longer-term forms, such as equity, risk-bearing liabilities, and foreign direct investment. Art. 458 of the CRR provides the so-called national designed authorities (NDAs) with a wide range of tools to address systemic risk, of which higher liquidity requirements (LCR and NSFR)¹⁷ and stricter limits on intra financial sector exposures are of particular interest with respect to steering capital inflows in the banking sector towards more stable forms.¹⁸ The liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR) are insufficient to address systemic liquidity risk (Houben et al., 2015; ECB, 2018). This stems from two sources: (i) the common exposure of a large number of banks to the risk of sudden reversal of capital flows and (ii) the endogeneity of liquidity. Steering capital inflows from short-term interbank lending to long-term lending, from less risk bearing to more risk-bearing forms would improve the private risk sharing in the euro area. Prior to the financial crisis, short-term interbank lending accounted for

¹⁷ The LCR (liquidity coverage ratio) requires banks to hold a minimum of highly liquid assets to cover stressed liquidity outflows over a 30-day period; the NSFR (net stable funding ratio) requires banks to fund exposures with a remaining maturity above one year with stable funding of remaining maturity above one year. The ratios aim at limiting banks' short-term and structural liquidity risk.

¹⁸ See also footnote 12.

the largest share of cross-border capital flows. The short maturity led to a very sudden stop of funding of peripheral banks, instead of effective risk sharing. Few peripheral banks held enough high-quality liquid assets (HQLA) to absorb the funding shock and the effects became systemic. Stricter limits on intra financial sector exposures could be targeted at capital inflows via cross-border intra-financial sector exposures. As such they could discourage, and thus limit, the least stable forms of capital inflows. However, this instrument has so far not been activated by euro area member states and little can be said about its effectiveness.

4.4 Challenges

We identify three main challenges to unlock the full potential of macroprudential policy for the stabilization of the euro area:

The macroprudential toolkit lacks effective instruments to steer capital inflows from short-term unsecured money market to more stable forms of funding such as foreign direct investment. We suggest introducing macroprudential instruments to address systemic liquidity risk. This includes expanding the macroprudential policy beyond banking (ESRB, 2016a), such as amendments to the European Market Infrastructure Regulation (EMIR) that allow for instruments to address systemic risk stemming from the procyclicality of funding conditions in financial markets. These include the dynamic adjustment of minimum haircuts and margins for derivatives, securities financing transactions (SFTs) and other clearing activities such as cash equity/bond markets. Furthermore, tools covering insurance companies and investment funds are lacking.

The identification of productive investments is challenging. The record of the credit allocation policies of the post-World War II era is sobering in this respect. However, the objectives of macroprudential policy are less ambitious. It already improves the allocation of credit by preventing bubbles and excessive credit growth, especially in the residential real estate sector (Allen et al., 2011). These contribute little to long-term productivity growth, as the lion's share of transactions takes place in existing real estate.

The institutional set-up in the euro area includes procedures to enforce compliance with fiscal rules vis-à-vis member states, but not to incentivize the activation of macroprudential measures. The NDAs are independent. At the euro area level, the ECB has a top-up power for macroprudential capital buffers, but it is also independent. Bearing this in mind, we regard the MIP to be an adequate instrument to prevent inaction-bias and to provide for moral suasion to nudge the NDAs towards adopting an appropriate macroprudential stance.

5 Conclusions

The current approach to euro area stabilization focuses excessively on avoiding structural current account imbalances and, consequently, structural capital inflows. This can hamper private risk-sharing and reduce the speed of economic convergence in the euro area. The MIP should take a more balanced structural approach to current account imbalances and incentivize private long-term and risk-bearing capital flows, in line with the objectives of the capital markets union.

The integration of macroprudential policy in the MIP would allow for a more nuanced and structural perspective on cross-border capital flows (and current account imbalances). While it is beyond the scope of this policy proposal to flesh

out all the details, we argue that macroprudential measures can be effective in addressing the potential negative side effects of structural and cyclical capital inflows. Integration in the MIP would improve the activation of existing macroprudential instruments and speed up the introduction of any instruments that may be required in addition to address the catalysts of potential balance of payment crises in the euro area.

A number of macroprudential instruments are already available to complement the current macroeconomic instruments designed to prevent excessive macroeconomic imbalances, particularly in the area of the bank-sovereign nexus and excessive credit growth. A substantial body of literature found that these are effective in reducing the risk of balance of payment crisis. However, not all national authorities have yet recognized the power of these tools to make the euro area more resilient or prefer to rely on common backstops of ex post stabilization (Eurosystem or ESM). In addition, the BRRD can contribute to stabilizing the euro area economy, if such measures are enforced effectively by the SRB. Finally, we call for additional macroprudential instruments geared towards channeling the use of capital imports from consumption loans and mortgages towards productive investments, from short-term debt to private long-term risk-bearing capital inflows – i.e. instruments whose focus goes beyond the reach of banking.

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