Economic Modelling 59 (2016) 570–582

Contents lists available at ScienceDirect

Economic Modelling

journal homepage: www.elsevier.com/locate/ecmod

Coordinating macroprudential policies within the Euro area: The case of Spain[☆]

Margarita Rubio [a,*], José A. Carrasco-Gallego [b]

[a] University of Nottingham, Sir Clive Granger Building, University Park, Nottingham NG7 2RD, UK
[b] Portsmouth Business School, Portland Street, Richmond Building, Portsmouth PO1 3DE, UK

ARTICLE INFO

Article history:
Received 28 December 2015
Received in revised form 3 June 2016
Accepted 15 June 2016
Available online 28 July 2016

JEL classification:
E32
E44
E58

Keywords:
Macroprudential policy
Coordination
Loan-to-value ratio
Welfare
Euro area
Spain

ABSTRACT

In the aftermath of the global financial crisis, there is consensus on the need for macroprudential policies to promote financial stability. However, the optimal way to implement such policies in the Euro area is a question open to debate, given that countries have to coordinate. In this paper, we propose a two-country, two-sector monetary union dynamic stochastic general equilibrium model (DSGE) with housing to analyze the optimal implementation of macroprudential policies in the Euro area. Currently, Spain is the only country within the EU that has not established a macroprudential regulator. We use Spain as a natural experiment to study the effects of a lack of coordination in the use of macroprudential policies in the European Monetary Union (EMU). We focus on a particular macroprudential policy, a rule regarding the loan-to-value ratio, which responds countercyclically to credit booms. We find that such a policy is welfare enhancing for the Euro area. Nevertheless, if one country does not implement the policy, but the rest of the EMU does, as in the current situation with Spain, this country still yields some benefits as a result of its partners' implementation of the policy because it gains from a more stable financial system without incurring any output costs. However, if all Euro countries actively implement the policy, the welfare gains for all of them are larger.

© 2016 Elsevier B.V. All rights reserved.

> "[…] *The entry into force of the new EU prudential rules for banks on 1 January 2014 gives the macro-prudential authorities in the EU a new set of policy instruments to address financial stability risks more effectively. This will establish a common legal framework for macro-prudential policy across the EU. However, the application of macro-prudential policy is still in its infancy. Much of the analytical framework has yet to be developed.*"[1]
>
> [Mario Draghi, March 2014]

1. Introduction

After the recent financial crisis, a new set of economic policies was developed and referred to as macroprudential policies. The main objective of these policies is to prevent excessive credit growth and systemic risk.[2] Although there is consensus on the need for such policies, the best way to implement these policies in a monetary union is still a question that is open to debate. The first issue that arises is whether these policies should be implemented centrally or at a national level. If they are set on a national basis, the next question is how their implementation should be coordinated with other countries in the union that are also implementing such policies. If there is no coordination, i.e., if one country does not apply the same set of policies as the rest of the monetary union, this may have important implications for welfare, financial stability, and the functioning of the area.

When one country within a monetary union implements macroprudential policies, positive effects on financial stability may spill over to other countries that are not implementing them. This could lead to some accidental and unwanted consequences, including leakages and regulatory arbitrage, as well as external effects on other member states and an uneven playing field. To alleviate these unintended consequences, coordination and reciprocity are required between national macroprudential authorities. In this context, coordination means that, within the monetary union, a member state applies to its own

---

[☆] This paper was presented at the 47 Annual MMF Conference, the IV Meeting on International Economics, the 7th ReCapNet Conference, the SAEe 2015, the Workshop in macroprudential policy, monetary policy and Real Economic Activity at the University of Portsmouth, the RES conference and the University of Valencia. The authors wish to thank Anna Samarina and George Bratsiotis for their discussions at the ReCapNet Conference and at the Workshop in macroprudential policy, monetary policy and Real Economic Activity at the University of Portsmouth, respectively. Special thanks to Javier Suárez, an anonymous referee and the editor of Economic Modelling for their very helpful comments. We are responsible for any remaining errors.

[*] Corresponding author.
E-mail addresses: mar-garita.rubio@nottingham.ac.uk (M. Rubio), jose.carrasco-gallego@port.ac.uk (J.A. Carrasco-Gallego).

[1] See Draghi (2014).

[2] See IMF (2011).

http://dx.doi.org/10.1016/j.econmod.2016.06.006
0264-9993/© 2016 Elsevier B.V. All rights reserved.

institutions the same or an equivalent macroprudential measure to that set by another member state.

In the European Union (EU), the European Systemic Risk Board (ESRB) is the main body responsible for monitoring macroprudential policies, although each country can implement its own policy.[3] That is, macroprudential policies are implemented at a national level, but within a system of central supervision. Along these lines, the ESRB recommended in 2011 that Member States should designate a national authority entrusted with the conduct of macroprudential policy.[4] In the last Annual Report, ESRB (2014a), the Board concluded that very different levels of accomplishment of the 2011 Recommendation existed. In particular, it observed that 27 out of 28 EU members had already established their national macroprudential competent supervisory authorities. The only country that remains without a competent macroprudential supervisory authority, and that has not implemented a macroprudential policy under the ESRB regulatory framework, is Spain. This represents an example of noncoordination in these type of policies; therefore, the case of Spain provides a perfect natural experiment to study the economic consequences of a lack of coordination in the implementation of a macroprudential instrument in a currency area; i.e., it is an example of the case where one country does not apply a macroprudential instrument that is being used by the rest of the area.

The aim of this paper is to analyze the implications of a lack of coordination in implementation of a macroprudential instrument between one country within the currency area and the rest of the countries, and to compare it with the consequences of coordination, when a country commences implementation of the macroprudential instrument that has already been implemented by the rest of the currency area. Therefore, this paper considers two situations: first, the situation corresponding to the current state of affairs, in which one country, Spain, has not implemented a macroprudential policy but the rest of the Euro area has done so; and second, we forecast the situation where this country coordinates with the rest of the union and puts in place a new macroprudential policy.

To achieve this goal, we propose a two-country, two-sector monetary union DSGE model[5] with housing and collateral constraints, allowing for cross-country differences in mortgage and housing markets. In each country, there is a group of individuals that are credit constrained and need housing collateral to obtain loans. Countries trade goods and savers in each country have access to foreign assets. In our model, one of the countries is calibrated to represent the Spanish economy, our natural experiment, whereas the other country in the model represents the rest of the Euro area. The model is appropriately calibrated to reflect the basic features of the Spanish economy, i.e., a loan-to-value (LTV) ratio that is larger than average, variable rate mortgages, a GDP that is 10% of the Euro area's total GDP and higher housing wealth as a proportion of GDP.

The basic modeling framework in this paper follows Rubio (2014), although we add macroprudential measures. Our paper relates to different strands of the literature. The model constitutes a two-country, two-sector version of the seminal paper of Iacoviello (2005), which introduces a financial accelerator that works through the housing sector, in line with Aspachs and Rabanal (2010). However, this paper introduces cross-country housing market heterogeneity, as in Rubio (2014). In addition, this paper is related to the recent literature on macroprudential and monetary policies in Iacoviello-type models, including Kannan et al. (2012) and Rubio and Carrasco-Gallego (2014). Finally, it is connected to the literature on calibrated DSGE models for Spain, including Andrés et al. (2013); Ortega et al. (2011), and Mora-Sanguinetti and Rubio (2014). However, none of these models consider the study of macroprudential policies in Spain in relation to the rest of the Euro area.

In this paper, we evaluate an LTV rule as the relevant macroprudential instrument, considering the comments of the ESRB, which believes that this instrument is suitable for avoiding credit booms in real estate markets, which create substantial risks to financial stability.[6] In particular, we analyze the implementation of a rule for the LTV ratio, where the rule is analogous to how monetary policy is conducted. We assume that, in the same way that the central bank follows a Taylor rule for monetary policy, the macroprudential authority follows a linear rule in carrying out macroprudential policy, using the LTV ratio as an instrument. The monetary policy literature has shown that simple rules result in good performance. Therefore, it seems sensible to apply this kind of rule to macroprudential supervision (see Yellen, 2010).[7] We consider a rule for the LTV ratio that means it responds to deviations of credit from the steady state. In this way, booms that lead to an increase in borrowing are moderated.[8] To reflect the recommendations of the ESRB, we consider that the macroprudential rule is implemented at a national level.

Using this modeling framework, we shed some light on the effects of a lack of coordination in the use of macroprudential policies in the Euro area, taking the case of Spain as an example. That is, taking monetary policy as given, we calculate the optimal implementation of the macroprudential rule in the rest of the Euro area, when macroprudential policies are not active in Spain. This case represents the current situation in the Euro area. Then, we look at the counterfactual of coordination, when Spain also implements macroprudential policies, and we compute the optimal macroprudential rule for both regions. This represents a future case.[9] We calculate the welfare associated with each case for each agent in the economy, for each country, and for the whole union. In addition, we show how the dynamics of the economy under expansionary shocks are different in each situation.

Our results show that macroprudential policies are welfare enhancing for the Euro area because they promote financial stability. However, the welfare gain is larger if all countries in the monetary union implement the policies, i.e., if there is coordination. We find that if Spain does not implement macroprudential policies, but the rest of the union does, as in the current situation, then Spain benefits slightly from its partners' policies because it can enjoy a more stable financial system without incurring any output costs. However, if both regions, Spain and the rest of the union, have active macroprudential policies, then the welfare gains are larger. In terms of the dynamics, we present impulse responses to different shocks that generate a credit boom in the economy: a productivity shock, a housing demand shock, and an expansionary monetary policy shock. We find that, given the expansionary nature of these shocks, credit increases. However, when the country has an active macroprudential rule in place, the LTV ratio declines and the credit boom is mitigated.

These results have important implications in terms of policy. If the ESRB wants to increase financial stability in the whole monetary

---

[3] The ESRB was established in 2010 as a component of the European System of Financial Supervision (ESFS). See Section 3 for more details.

[4] See ESRB (2011).

[5] As Gerke et al. (2013) point out, this type of model is widely used by the national central banks of the European System of Central Banks (ESCB). Although the different national banks capture country-specific characteristics and their models differ in some respects, the models share some commonalities regarding their overall setup.

[6] ESRB (2014a, 2014b) considers that this macroprudential instrument can be implemented by national authorities targeting borrowers to increase the resilience of both banks and borrowers.

[7] We can find other examples of LTV ratio rules in the literature. Funke and Paetz (2012) use a nonlinear rule for the LTV ratio and find that it can help reduce the transmission of house price cycles to the real economy. In a similar way, Kannan et al. (2012) examine a monetary policy rule that reacts to prices, output, and changes in collateral values with a macroprudential instrument based on the LTV ratio. Lambertini et al. (2013) allow for the implementation of both interest rate and LTV ratio policies in a model with news shocks.

[8] The IMF (2013) states that a macroeconomic environment that gives rise to credit growth will contribute to the build-up of systemic risk.

[9] It is expected that Spain will eventually put in place a macroprudential authority.

Download English Version:

https://daneshyari.com/en/article/5053317

Download Persian Version:

https://daneshyari.com/article/5053317

Daneshyari.com