



BANCO DE PORTUGAL
EUROSYSTEM

Concluding remarks¹

Pedro Duarte Neves • Vice-governor

Lisbon, 10 February 2015

It's up to me to close this conference and I will start by thanking all participants for making this conference a success in bringing out such important issues for financial stability and macro-prudential policy. The fruitful and stimulating debates we had all day, will certainly make my task, of drawing some conclusions and policy messages, considerably easier.

The implementation of macro-prudential policy requires the early identification of risks and their systemic impact, the definition of appropriate and correctly calibrated instruments to mitigate these risks and a governance capable of taking decisions whenever necessary, independently of lack of public support or of possible conflicts with other policies. There are challenges inherent to all these tasks and my remarks will dwell upon them.


Identification of systemic risks

An analysis allowing a timely identification of risks and their impact is thus a critical aspect of macro-prudential policy. As shown today by Marco Espinosa Vega, the complex network of interconnectedness in the financial system can make risks more difficult to detect but very easy to propagate within the system. In addition, it is now clear to us that financial vulnerabilities have a tendency to accumulate during the expansionary phase of the credit cycle. Lower credit risk and higher valuation of collateral assets during the expansion of the cycle contribute to credit growth and to increase asset prices. These self-fulfilled dynamics can easily give rise to excessive leverage and speculative bubbles. Tackling those risks demands a robust analytical framework.

These characteristics of systemic risks also imply a two dimensional policy. A structural, transversal component, which analyses the distribution of risks and interconnectedness in the system in order to mitigate risks in a given period of time, and a cyclical component, which analyses the evolution of these risks during the expansionary phase of the cycle and intervenes with the purpose of providing the system with a greater capacity to absorb losses during the downturn (i.e. leaning against the financial cycle).

Recently, there has been a considerable volume of research on the measurement of systemic risks, namely concerning the selection of a group of indicators capable of signalling the accumulation of risk, the estimation of the probability of occurrence of a crisis, given

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that information, and on modelling the inter-linkages between the financial system and the real economy, with the purpose of determining the impact of a crisis and identifying institutions of greater systemic importance. A significant part of this analysis is based on existent models, now adapted to macro-prudential purposes, giving rise to a significant diversity and multiplicity of models. João Santos provided us with a very thorough review of some of these models and Steven Ongena enlightened us on the difficulties of mitigating risks stemming from incentives associated with too-big-to-fail institutions.

In spite of significant progress in this area, the measurement of systemic risk continues to present several challenges due to the uncertainty surrounding the functioning of the financial system, resulting from its complexity and limited available information. Firstly, the distinction between the accumulation of imbalances and movements caused by long-term trends or cyclical fluctuations determined by fundamentals is not straightforward. Indeed, only a minority of excessive credit growth events have resulted in financial crises. For the remainder of the cases, some are followed by periods of below-trend economic growth while others have contributed to financial deepening and to long-term growth.


Secondly, the fact that a crisis is a rare event implies that the information needed to determine its probability of occurrence requires long time series, not always available. Also, given the innovation and the dynamism that characterise the financial system, very long time series, even if existent, would probably not be adequate to characterise the actual inter-linkages between the financial sector and the real economy. This implies that most models are derived from a probability distribution obtained from a small sample (given the limited information) and, therefore, may not be very representative of the reality they intend to explain.

These difficulties, although challenging to policy implementation, should not deter policy action, as they do not preclude the effectiveness of policy instruments.

Policy instruments

The main goal of macro-prudential policy is to mitigate systemic risk, thereby contributing to financial stability. Its implementation implies the definition of a set of instruments, aimed at increasing the resilience of the financial sector and at reducing the fluctuations of the financial cycle. In essence, most of the instruments defined for these purposes are not different from those used by micro-prudential policy. The main distinction is the fact that macro-prudential instruments are activated as a function of the cycle or structural characteristics of the system as a whole, and not according to the specific risk profile of a given institution.

Over the recent years extensive work has been undertaken [by macro-prudential authorities, the ESRB, and the academia] to operationalise the instruments for the implementation of macro-prudential policy. This includes: identifying a set of indicators or risk parameters to trigger the activation of the instrument; analysing their transmission mechanism and impact in order to allow a more precise calibration and; identifying possible loopholes or unintended effects that could undermine their efficacy. Many of today's presentations covered these topics and I am very grateful to Carsten Detken, Javier Suarez, Gabriel Galati,



Deniz Igan, Caterina Mendicino and Ola Melander for sharing with us the conclusions of their work. If there is an area of research with great value for policy-making theirs is definitely one.

Despite this progress, the task is far from concluded. The limitations in systemic risk measurement also condition the implementation of macro-prudential policy, namely concerning the estimation of the parameters of an equation linking the activation of the instruments to a systemic risk measure. This is particularly relevant for time-varying instruments, such as the countercyclical capital buffer, which rely in the timely identification of the phase of the credit cycle. In addition, the still limited experience with macro-prudential instruments confers a significant degree of uncertainty to their impact.

Furthermore, policy-making needs to take into account that the transmission mechanism of policy instruments may not be static, but evolving with innovation and the structure of the financial system, and that the impact of policy measures can be undermined by unintended effects. These can emerge from the interaction and substitutability between the regulated and non-regulated sector (i.e. shadow banking) and from the resulting possibility of regulatory arbitrage.

In addition to the more traditional macro-prudential instruments, there are other tools – perhaps, more appropriately categorized in a middle-ground between risk analysis and policy tools – that can also be very useful for macro-prudential purposes. Stress tests and funding and capital plans can be helpful with decisions concerning the activation and calibration of both micro and macro-prudential policies, to the extent that they help to identify potential vulnerabilities in the financial system and provide a mechanism to address them pre-emptively.

Over the last 4 years, Banco de Portugal has relied in stress-tests and FCP to monitor the 8 most significant Portuguese banking groups. These tools provide us with an assessment of banks' financial projections and a framework to check whether these aggregated projections are consistent with a baseline scenario and can sustain adverse macroeconomic conditions.

For example, FCP provide us with information on bank's business models and on their projections concerning credit, deposits and other relevant variables. When aggregated, these projections can be assessed against overall macroeconomic scenarios allowing us to evaluate: whether total credit projections are consistent with the financing needs of the real economy; whether credit is concentrated on more vulnerable over-priced sectors; whether projected deposits are compatible with the expected evolution of labour market conditions and households savings.

Both FCP and stress-tests can be more forward-looking than other policy instruments in the sense that the imposition of capital requirements would not depend on the analysis of the past situation but on a forward looking assessment of scenarios that would occur under normal or adverse conditions. They could also be a useful to identify correlated exposures, as institutions would be facing the same type of stress.



Policy framework and governance

In spite of the difficulty in detecting financial systemic risk, the absence of policy intervention prior to the crisis cannot solely be attributed to this. In fact, episodes of high credit growth, excessive securitisation, and macroeconomic imbalances resulting from over-indebtedness were easily observable in many countries. However, their potential systemic impact was largely overlooked in the years preceding the financial crisis.

This situation led to the recognition that, in addition to methods to detect and mitigate risks, a profound reform in the financial regulatory framework and governance was needed in order to ensure timely and appropriate policies. Alienor Margerit gave us an excellent presentation of the extensive reforms that the EU framework for macro-prudential policy underwent over the latest years. It is clear from her presentation, as well as from Fernando Restoy's remarks, that the EU regulatory framework is very specific given the needed interaction of different countries in the context of a monetary union and a banking union.

Even though the competence for macro-prudential policy remains in the national authority, several mechanisms were put in place to ensure the coordination among different national authorities, allowing them to address cross-border issues.


This need for coordination also encompasses different regulators at the national level in order to address risks that stretch across regulatory and supervisory perimeters. Exposures of the banking sector to the shadow-banking sector and misconduct (i.e. mis-selling of financial products, market manipulation, rule completion breaches or money laundering) require that banking, insurance, market, and other regulators work closely together to develop coordinated tools to address macro-prudential risks. This joint effort is, however, at an early stage, given the diversity of mandates and governance structures among regulators.

In addition to coordination issues, there are many aspects inherent to macro-prudential policy, which constitute a challenge to governance.

The preventive nature of macro-prudential policy implies the activation of instruments at a stage where risks have not yet materialised. As this policy would contribute to reduce economic activity at a time when risks are not yet perceptible, public support for policy implementation may be low. On the other hand, limiting the amplitude of the financial cycle during a downturn normally implies the imposition of less strict regulatory requirements at a time when risks are evident. This may lead markets to question the resilience of the financial system and cause a possible conflict with the immediate objectives of micro-prudential policy.

Furthermore, the wide scope of its main objective – financial stability – and the lack of clear metrics for its measurement also raise issues concerning the accountability of macro-prudential policy. As opposed to monetary or fiscal policies, the results for which the policymaker should be held accountable for are less clear. The efficacy of a policy measure in preventing a crisis cannot be verified either – a crisis that has not occurred does not usually leave a trace.

Therefore, in addition to a governance ensuring independence and legitimacy of the macro-prudential authorities, it may be important to establish a mechanism limiting a possible



inaction in the presence of future vulnerabilities. In this context, following a ESRB recommendation, several macro-prudential authorities, including Banco de Portugal, have recently publicized their ‘macro-prudential toolkits’. These toolkits, by establishing a clear framework defining the goals of macro-prudential policy, the set of instruments available to target various types of relevant risks and the conditions for their activation (normally guided by a set of relevant indicators), can confer greater predictability and transparency to macro-prudential policy. In addition, by clarifying the utilization of instruments for macro-prudential purposes, they contribute to avoid potential conflicts with the micro-prudential authority related to the competence to activate instruments, due to the similarity of tools between the two policies.

In conclusion ...

Although the challenges with the implementation of macro-prudential policy are still substantial and no crisis is identical to the previous one, I am confident that the regulatory framework is now in a much better shape to tackle systemic financial risks than it was a few years ago. As in many aspects macro-prudential policy is still a work in progress, improvements may arise from several fronts.

The significant amount of research being undertaken to better identify systemic risks will most likely bear fruits. In the meantime, the limitations concerning risk measurements can be reduced by combining information from different models or indicators. The great variety of risk measures provided by various models can capture different perspectives of existent risks, minimizing the relevance of each model’s shortcomings.

Greater experience with the application of instruments will provide more information about their transmission mechanisms and possible unintended effects. Meanwhile, regulators could reduce the uncertainty concerning the impact of policy measures by taking advantage of the existent complementarities among different instruments.

I believe that these developments will gradually confer more robustness to macro-prudential policy, enhancing policy accountability and credibility.

ⁱ Contributions to these Concluding Remarks from the Financial Stability Department of Banco de Portugal and, in particular, from Rita Bessone Basto are gratefully acknowledged.