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A framework for the CCyB

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Ladies and gentlemen, good afternoon.

It is a pleasure for me to welcome you to the Banco de España to participate in the Second Financial Stability Conference. As in the first edition, this event has been jointly organised by the Banco de España and the Centro de Estudios Monetarios y Financieros (CEMFI). So allow me to start by expressing my gratitude to the organisers, in particular Rafael Repullo, director of CEMFI, and to all the members of the scientific committee, responsible for promoting the conference and selecting the papers included in the programme.

Let me also thank the keynote speakers, Agustín Carstens and Lars Peter Hansen, for their willingness to attend. And also the rest of the speakers, the discussants and, of course, the participants in the panel. It was difficult for the scientific committee to select the eleven papers that will be presented in these two days from the more than one hundred submissions received. In the end, in my view, a good balance has been reached in the programme. It combines excellent academic papers that will provide interesting insights into theoretical and empirical developments related to financial stability with policy issues on the most practical aspects of the organisation and governance structures of macroprudential policy. I have no doubt that, in these two days, both supervisors and financial stability policy-makers will have a constructive and enriching dialogue with academia on macroprudential policy.

Macroprudential institutional framework in Spain: the creation of AMCESFI

The timing of the conference is particularly important for us, since our new macroprudential institutional arrangements have just been set up. In early 2019 the Spanish Macroprudential Authority – Financial Stability Board (AMCESFI by its Spanish acronym) was created. Its main goal will be to contribute to the promotion of coordination and the exchange of information on financial stability issues among the Banco de España, the Ministry of Economy and Enterprise, the Spanish National Securities Market Commission and the Directorate-General of Insurance and Pension Funds. Such an institution provides Spain with a structure similar to that of other EU Member States, in line with the recommendations issued by the European Systemic Risk Board and the IMF.

In parallel, the supervision of the financial system was reinforced, extending the range of macroprudential tools available to the sectoral supervisory authorities, which remain individually responsible for deciding when they should be activated. In particular, the Banco de España is now empowered to require banking institutions to establish countercyclical capital buffers by credit segment, limits on concentration in relation to economic activity sectors, and limits and conditions when underwriting new loans (in terms of loan-to-value, loan-to-income and debt service-to-income, and also the maturity, the currency in which the operation is denominated and whether the interest rate is fixed or variable, among others).

Some of these new macroprudential tools, in particular those based on the borrowers' ability to pay, have already been introduced into the national legislation of other EU Member States to prevent excessive easing of credit underwriting standards by banks and to contribute to the sustainability of household and corporate debt. These new instruments complement those already available to the Banco de España included in the European legislation: the countercyclical capital buffer, the systemic risk buffer and the buffer for systemic banks, among others.

All in all, this new institutional setting is a significant step forward in reinforcing financial stability in Spain.

The importance of a macroprudential policy framework

In my view, the introduction of macroprudential policy instruments to complement monetary and fiscal policy is probably one of the most significant policy developments following the global financial crisis. For countries in a monetary union, like Spain, the introduction of these tools is particularly important. Indeed, it is one of the few domestically managed levers available to guarantee the stability of the domestic financial system.

However, the design of macroprudential policy poses significant challenges. This is mainly because there is little experience in the use of these tools and scant empirical evidence on their effectiveness, at least when compared with fiscal and monetary policy tools. In this setting, one of the main priorities for those responsible for ensuring the stability of the financial system with powers over macroprudential policy is, in my view, to develop a complete and coherent policy framework for the application and communication of that policy. And, in this task, the contribution of academia is of vital importance.

In what follows, I would like to share some preliminary thoughts on some of the elements that, in my opinion, should be included in this framework. In particular, I would like to focus on two specific issues: first, the macroprudential policy objectives, which of course should be the basis for the activation of the instruments; and second, the choice among the different tools at the disposal of the macroprudential authority to best achieve these objectives in different circumstances.

What should be the objective(s) of macroprudential policy?

Allow me to focus now exclusively on banks and on one particular instrument, the Countercyclical Capital Buffer (CCyB), the Basel III macroprudential tool *par excellence*. According to the Basel Committee on Banking Supervision (BCBS) its first objective is rather narrow: *The primary aim of the countercyclical capital buffer regime is to use a buffer of capital to achieve the broader macroprudential goal of protecting the banking sector from periods of excess aggregate credit growth that have often been associated with the build-up of system-wide risk.* In other words, according to this criterion, the CCyB should be used to build up resilience among banks against the reversals that typically follow periods of

credit exuberance. Thus, the idea is to protect banks against the risk of failure in a similar way as under the traditional microprudential approach to capital regulation.

However, the BCBS immediately added a second goal: Due to its countercyclical nature, the countercyclical capital buffer regime may also help to lean against the build-up phase of the credit cycle in the first place. This is a more ambitious goal. It means actively combating excessive credit growth, aiming to curb the development of a credit cycle boom.

Moreover, a third goal is also referred to by the BCBS, this time connected to economic contraction phases: In downturns, the regime should help to reduce the risk that the supply of credit will be constrained by regulatory capital requirements that could undermine the performance of the real economy and result in additional credit losses in the banking system. In fact, this objective closely follows the original 2009 G-20 recommendations to mitigate procyclicality, including a requirement for banks to build buffers of resources in good times that they can draw down when conditions deteriorate.

Under this third objective, the CCyB should also be helping banks withstand the capital implications of an economic contraction (lower profits, higher defaults, and prospectively higher PDs and LGDs) without tightening the capital constraints to the extent that the credit supply and hence the real economy is damaged. In other words, under this definition, the CCyB should allow for the accumulation of shock absorption capacity that banks could use in the downward phase of the cycle to continue providing households and firms with the necessary credit flow.

In many macroeconomic and financial contexts, the activation of the CCyB will be justified on the basis of the three objectives mentioned by the BCBS simultaneously. This would certainly have been the case in the boom period of the Spanish economy before the last financial crisis.

However, there might be cases where, based on available data, only one or two of these objectives can warrant the activation of the CCyB. In particular, there have been numerous examples of economic recessions not preceded by excessive credit growth. This promptly begs the question: should these buffers be exclusively built when the credit cycle is in a boom phase, or also when the economy is buoyant, i.e. when the business cycle is expanding?

In my view, sound arguments may justify the use of the countercyclical capital buffer to accumulate loss-aborbing capacity in good times to be used in bad times, even when there is no evidence of the emergence of excessive credit growth. The main argument, in my view, stems from the evidence that, even in those situations, when the recession comes, borrowers' default rates rise,

negatively affecting the profit and loss account and the capital position of banks. And, when banks do not have a sufficient level of capital to absorb such a deterioration or can not use their capital buffers, they tend to restrict credit and, as a result, deepen the economic recession.

Besides, there is also some evidence that both the credit and economic cycles are not independent of each other. On the contrary, a relatively stable empirical pattern of lag-lead between both credit and GDP gaps arises: during the initial phase of recoveries the output gap tends to lead the credit gap; yet when the expansion is firmly in motion, the credit gap leads the output gap. Therefore, activating the CCyB when the economic cycle is in expansion might help reduce the likelihood of an excessive credit expansion.

Moreover, there is also some evidence that the effects on the activation/deactivation of the CCyB in good/bad times are not symmetric. For example, using individual and aggregate information during the introduction of the Basel III requirements, the existing evidence shows that an increase of 1 percentage point in the banks' solvency ratio reduces credit growth by between

1 percentage point and 2.5 percentage points¹. This same evidence shows that the elasticity linked to the release of the countercyclical capital buffer accumulated during the expansionary phase could be much higher during downturns. In particular, the evidence points out that credit contracts between 3 and 6 percentage points less when the banks enter into the downturn with a level of capital 1 percentage point higher².

These results, mostly reliant on data from the last crisis, are consistent with other studies taking a longer perspective on the impact of capital over the financial cycle. One of these latter studies, which considers around 150 years of financial cycles in Spain³, finds that increasing the CCyB by 1 percentage point prior to a credit expansion might reduce that expansion by about 1 percentage point. However, this same increase of the CCyB in the expansionary phase would reduce the credit contraction in a downturn by around 6 percentage points.

Thus, a potential activation of the CCyB in good times will ensure that the capital buffers are reserved for bad times. This will affect credit significantly at the negative juncture, while not having a large effect either on credit or on GDP in

¹ See, for example, "Bank Risk Taking and Capital Requirements". R. Anguren, G. Jiménez and J. L. Peydró. Mimeo, and How effective are capital-based macroprudential measures in taming the macrofinancial cycles? A structural enquiry into Spain, E. Gerba and J. Mancia (2017). Mimeo.

² Empirical evidence with the countercyclical provisions in Spain during the credit expansion that preceded the global financial crisis shows that the introduction of additional provisions in an expansive phase of the cycle did not have a material impact on overall credit, although the composition of credit shifted to riskier companies for the most affected banks. In contrast, in the later downturn the previously accumulated provisions provided 5.5 percentage points of additional credit to non-financial firms and they also had a positive impact on employment and firms' survival probabilities (see Macroprudential Policy, Countercyclical Bank Capital Buffers and Credit Supply: Evidence from the Spanish Dynamic Provisioning Experiments (G. Jiménez, S. Ongena, J. L. Peydró and J. Saurina), *Journal of Political Economy*, 125 (6), 2126-2177, 2017).

³ Bank capital, lending booms, and busts. Evidence from Spain in the last 150 years. M. Bedayo, A. Estrada and J. Saurina. Banco de España Working Paper No. 1847.

the expansionary phase. In fact, the cyclically varying nature of the elasticities signals that the cost of tardy activation can be much higher than the cost of an excessive anticipation. Moreover, this evidence also shows that the capacity of the CCyB to control the expansion of credit could be low, reinforcing the view that its main objective should be, on the basis of this evidence, to create resilience for the downturn.

As I mentioned earlier, the current regulation makes this possibility perfectly feasible. Moreover, although it grants a preponderant role to the credit-to-GDP gap (the so-called "Basel gap"), which would tend to capture the existence of excessive credit dynamics only, it also allows the use of other complementary indicators along with expert judgement.

Indeed, in Spain we complement the Basel gap indicator with another four indicators. They have been selected on the basis of their ability to predict systemic banking crises. These complementary indicators are: house price imbalances, current account balance, change in credit relative to GDP (credit intensity) and the private sector debt burden. And as an additional important indicator, we are planning to incorporate the output gap, under the assumption that the position of the economy in the business cycle must also play a role in the activation of this tool. The usefulness of using different indicators is especially important in cases like ours, in which the Basel gap does not work well because of the shorter average duration of credit cycles in Spain. Given the time lag implementation in the CCyB, we also carefully monitor the forecasted values of the indicators.

Admittedly, accepting the role of macroprudential policies as an additional set of macrostabilising tools increases the potential interactions with other macroeconomic policies. Indeed, the interaction between monetary and macroprudential policies is particularly relevant in a monetary union such as Europe's and makes a strong case that justifies the introduction of *national* macroprudential policies. This is because, in a monetary union, monetary policy is defined on the basis of the state of the economy in the Union as a whole and, in some circumstances, it might lead to financial conditions that are too loose for certain country conditions and, therefore, can generate pockets of financial risk in some countries. Activating domestic macroprudential policy by those national authorities in such circumstances will help precisely avoid the emergence of systemic crises.

The activation of the macroprudential tools in order to create a buffer to be used in bad times incorporates a new dimension into the interactions with monetary policy. That is an issue which, in my view, should be analysed further. At a minimum, in these cases, monetary policy and macroprudential policy should take into account their respective decisions when calibrating the use of their instruments.

As for fiscal policy, it is also important to emphasise that the creation of shock-absorption capacity through macroprudential decisions should not be used as an argument for relaxing fiscal policy. In other words, fiscal policy should also

create buffers in good times to be used in bad times, through automatic stabilisers or discretionary action, in particular in countries belonging to a monetary union.

Another key issue related to this discussion is that the capital buffer built up in good times is expected to be released when the phase of the cycle changes. Significantly, this decision can be even more complex than those made in the activation phase. In this respect, and given the empirical evidence we have, there is a clear issue of timing. If it is released too early, it may even accentuate the expansion of the financial cycle. If it is released too late, it may entail a significant cost to the real economy. It is also necessary to assess whether the release has to be once-and-for-all or gradual. The release of the buffers may induce negative market reactions or generate conflicts with the microprudential supervisor.

A more automatic system of activation could solve many of these problems, while at the same time introducing an additional automatic stabiliser for the lending and/or the business cycle. However, given that we do not have much experience to date with the working of this tool, the calibration of an explicit policy rule would be premature and the principle of “guided discretion” seems a second-best option.

Assesing how to use the different macroprudential tools

Let me now turn to the second issue I wanted to tackle. Systemic risk, unlike inflation or the public deficit, is multidimensional and this is why having different macroprudential tools at the disposal of the macroprudential authority is crucial. However, it is not always obvious how to discriminate among the different macroprudential tools, in particular given the potential interactions between them.

A first example is the decision to activate the CCyB as opposed to activating a sectoral CCyB. It is perfectly feasible that some credit segments show exuberant behaviour in the economy without any evidence of the credit cycle being in an expansionary phase. The activation of the countercyclical capital buffer to address a situation of this type does not seem advisable. If this particular activity is sufficiently profitable (at least in the short term) and that is why it is gaining weight in the overall credit portfolio, the increase in the aggregate cost of financing derived from the activation of the CCyB could be counterproductive. In fact, it cannot be ruled out that banks will step up the growth of the most profitable portfolios, which are precisely those the authorities are trying to moderate, to the detriment of the rest, in order to safeguard aggregate profitability.

To achieve the objective of exclusively moderating the growth of the exuberant portfolios, it would be necessary to act on the relative costs of financing, making these more expensive in relative terms, through the activation of a countercyclical capital buffer to be applied exclusively on those credit segments. However, the coexistence between both tools can be complex, especially if a

transition from one or several sectorial buffers to the total buffer must be made. Accordingly, its use should be confined to very specific circumstances.

Another example is the use of capital instruments vs borrower-based tools. From my perspective, making all prudential supervision rely upon the amount of capital that entities need is too reductionist: the experience accumulated during the last financial crisis clearly shows how credit underwriting standards are a crucial element for the stability of the banking system. And this same evidence⁴ also shows that the analysis of credit standards must be multidimensional. Therefore, it is not enough to supervise and control a specific characteristic of the loan; rather, a comprehensive approach must be adopted in which the different dimensions are addressed. This would also prevent entities from eluding restrictions by adjusting some other dimension of the loan.

At present, however, credit underwriting standards are not contemplated in European legislation, although some authorities, including the Banco de España, are empowered to set them. I do believe that consideration should be given to including them in future revisions of the European regulation. In my view, this would offer at least three advantages. First, it would allow harmonisation of the different dimensions of the credit standards. Second, it would enable the different jurisdictions to request reciprocity of the measures adopted, which would duly make them more effective. Last but not least, it would allow the European Central Bank to top up the measures, reducing the potential inaction bias of national authorities.

On the use of borrower based tools vs capital instruments, it seems reasonable, in my view, that, if credit is showing high and sustained growth over time but without credit standards being relaxed, the ideal would be to increase entities' resilience using capital instruments. But, even if credit were to show moderate growth, if the conditions for granting these loans are being relaxed (thus increasing the volume of credit at risk of default), it would probably be more efficient to use the borrower-based tools to guarantee sound credit underwriting standards.

In any case, our experience shows that, especially at the end of expansionary credit cycles, high increases in the volume of credit tend to go hand-in-hand with a substantial easing of the conditions for granting the loans. Accordingly, both types of tools should perhaps be used simultaneously. With what gradation? It will depend on the circumstances, but always based on a rigorous and detailed analysis.

Another good example of the interactions among the different macroprudential instruments is related to the surcharge on systemic entities (globally systemic or domestically systemic banks), which is the main capital tool to address the cross-sectional dimension of systemic risk. On top of how to calibrate this buffer, we need to study further how it interacts with the countercyclical capital buffer. This is especially important in countries where credit from systemic banks

⁴ Beyond the LTV Ratio: New Lessons from Spain. J.E. Galán and M. Lamas. Mimeo.

represents a high proportion of total credit and, in addition, when these banks have a significant international presence. On the one hand, the empirical evidence is quite unanimous in showing how higher levels of capital in the banking system as a whole reduce the probability of systemic crises occurring. Consequently, if systemic entities are the main determinants of how the credit cycle evolves and the buffer applied to them is sufficiently high, it would be reasonable to think that the probability of having a systemic crisis is smaller. Conceivably, then, the degree of activism necessary with the countercyclical capital buffer would be lower than in other jurisdictions in which the systemic banks are less relevant. However, even if the probability of a systemic crisis occurring is lower, this does not guarantee that its intensity diminishes, and this buffer was not designed to be released in these circumstances. In addition, as this buffer is demanded on all exposures, nothing guarantees that its release will affect the provision of credit in a specific jurisdiction.

The other instrument in the macroprudential policy-maker's toolkit to address non-cyclical risks is the systemic risk buffer. Here, we welcome the European initiative to allow its application to sectoral credit portfolios, thus providing it with more flexibility.

Finally, let me also stress that, for the moment, the bulk of macroprudential tools affect banks exclusively. While banks continue to account for most financial intermediation, they are losing relevance and could do so even more in the future. This can give rise to regulatory arbitrage and undermine the effectiveness of macroprudential tools.

The Spanish case is to some extent innovative⁵, as similar borrower-based tools to those granted to the Banco de España were given to the financial markets authority (CNMV) and the insurance supervisor for their own sectors. Thus, one of the tests for the Spanish macroprudential institutional setting will be whether it is able to achieve enough coordination across authorities to maximise the effectiveness of the macroprudential toolkit.

In any event, we should bear in mind that global financial integration can also have similar effects to the domestic development of the non-bank financial sector, with banking and non-banking entities operating in different jurisdictions. Especially in this last area, major steps have been taken (with reciprocity agreements); but there is still ample room for improvement. I am sure we will be able to address these challenges in future editions of this conference.

Let me now conclude by stressing that, in this context in which a homogenous framework and experience in the use of macroprudential tools is lacking, having

⁵ For international attempts to follow a cross-sectoral approach on residential mortgage underwriting see, however, the FSB Principles for Sound Residential Mortgage Underwriting Practices (April 2012), the FSB Thematic Review of Mortgage Underwriting and Origination Practices (March 2011) and the Joint Forum Review of the Differentiated Nature and Scope of Financial Regulation – Chapter 3 on Mortgage Origination – (January 2010).

adequate communication is crucial. From my point of view, this is a critical element of the whole process. Even before that, macroprudential policy-makers

must be very careful to prevent the identification of risks from becoming a self-fulfilling prophecy. And when deciding to activate any tool, it is necessary to convince stakeholders with arguments and evidence that, even if there are apparent short-term costs, the medium and long-term benefits are clearly greater. Obviously, this implies an in-depth *ex-ante* impact assessment analysis including all the different options and a general equilibrium approach, and also an *ex-post* impact assessment analysis to test the efficiency of the selected tools.

And now, let me give the floor to our first keynote speaker, Agustín Carstens, who we all know so well. Dr. Carstens is currently General Manager of the BIS, but in the past he was governor of the Bank of Mexico, vice minister of finance also in Mexico and vice president of the IMF. He is, then, not only an expert in banking and financial sector regulation and supervision, but has also had to take decisions on monetary and fiscal policy. And if this were not enough, the value of international experience in the IMF and in the various international committees he has presided make him a person especially sensitive to the commercial and financial interrelations between the different economies. In sum, we are fortunate to have with us today a policy-maker whose wide-ranging experience in different areas of the economy is second to none. Agustín, many thanks once again for accepting our invitation. The floor is yours.