PRESENTATION OF THE BOOK *THE COUNTERCYCLICAL PROVISIONS OF THE BANCO DE ESPAÑA, 2000-2016* (***)

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Abstract

The first Conference on Financial Stability, jointly organized by the Banco de España and the Centro de Estudios Monetarios y Financieros (CEMFI), was held on 24 and 25 May 2017. The Conference included a panel based on the book "The Countercyclical Provisions of the Banco de España (2000-2016)" devoted to explain the experience at the Banco de España with countercyclical provisions. The Banco de España was a pioneer in developing macroprudential tools by introducing these provisions as early as in 2000. Although not able to counter the strong credit growth in the boom years, they proved effective in smoothing the loan contraction in the first years of the credit downturn and economic recession in Spain. Furthermore, the Spanish provisions were a source of inspiration for the countercyclical capital buffer agreed by the Basel Committee on Banking Supervision in 2010 and can also be considered, with some nuances along the way, the precursor of the expected-loss concept to calculate credit provisions under the IFRS 9. This article summarizes the presentation of the book in the Panel. Sitting on it were Javier Suárez as chair, Jesús Saurina Salas and Carlos Trucharte Artigas, the authors explaining the Banco de España's countercyclical instrument and the discussants Pedro Duarte Neves and Richard Herring.
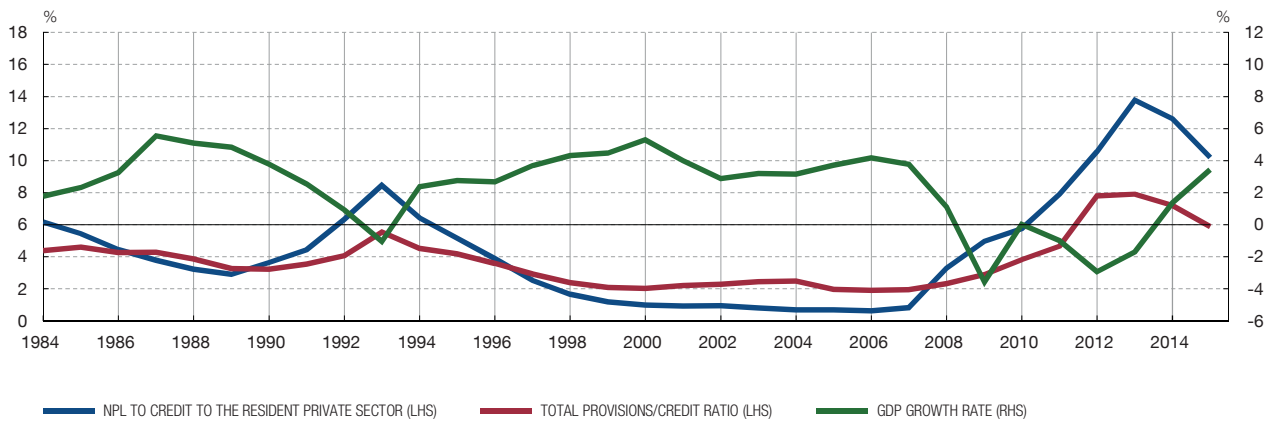
1 Why countercyclical provisions?

Almost every banking supervisor knows that bank lending mistakes are made in good times and not in bad times. That is because borrowers and lenders are over-confident about investment projects and there is also a deterioration of lending standards during buoyant times. However, in recessions, banks suddenly realize of their mistakes and cut lending, something which has a huge impact on the economy and also on the welfare of society. In this context, too much competition may make things worse. Furthermore, an accommodative monetary policy with a long period of low interest rates may also increase risk-taking.

Bank lending fluctuates for many reasons: asymmetric information, disaster myopia, herd behavior, agency problems, expense preference theory, principal agent, institutional memory hypothesis… There are many different theoretical arguments to show why lending fluctuates over the course of the cycle and why this fluctuation is important to be accounted for.

There is ample evidence of loose credit standards in expansions. The paper by Jiménez and Saurina (2006) finds quite robust evidence for Spain that rapid credit growth translates into a higher amount of non-performing loans, though not immediately; it may sometimes take even three, four or five years down the road before they present the initial symptoms of impairment. It was also found by using the Central Credit Register of the Banco de España, that loans granted in good times, when credit is growing very rapidly, have –years later– higher probabilities of default than those loans granted in bad times. Moreover, in boom periods, collateral requirements are relaxed while the opposite happens in recessions. Therefore, empirical evidence supports this banking supervisor's concern that biggest credit mistakes happen in good times.

The next natural step refers to what can be done from a policy point of view, given the fact that an uncontrolled credit expansion can be highly harmful for the economy. Hence there is a need for a countercyclical tool to account for these potential problems

NPL TO CREDIT TO THE RESIDENT PRIVATE SECTOR (LHS) — TOTAL PROVISIONS/CREDIT RATIO (LHS) — GDP GROWTH RATE (RHS)

SOURCES: Instituto Nacional de Estadística and Banco de España.

in the expansionary periods. This is the origin of dynamic provisions as a smart answer (now we call it macroprudential tool) to these problems. Chart 1 shows the non-performing loans ratio (NPL) and the GDP developments. We can see that both magnitudes are highly correlated (negatively correlated). At the time when countercyclical provisions were created in 1999, the ratio of provisions over total assets in Spain was one of the lowest amongst any OECD country. There was, on top of the theoretical arguments and empirical arguments, a policy concern: the low level of provisions as Spain joined the euro area. This was the context in which countercyclical provisions came into force in 2000.

Years later, in 2005, they had to be modified because international accounting standards were adopted across Europe. At that moment it was decided that the stock of dynamic provisions was not going to be released. Needless to say that this was a very difficult policy situation. The system was changed again in 2008, this time to allow the fully released of the stock of the fund as a result of the credit losses generated as the economic crisis unfolded.

The purpose behind the creation of the countercyclical provisions was to cover the increase in credit risk in lending expansions. They were based on a very simple mechanism: building up a buffer of provisions in good times to be used in bad times. With the benefit of hindsight, we now can say that they were the origin of a macroprudential instrument. When the dynamic provisions came into force nobody was talking of macroprudential policy, but in essence they were really a macroprudential tool. The crisis has shown that they were useful though, of course, they were not a silver bullet at all.

2   How provisions worked?

Basically, the functioning of the provisioning system was to build up a buffer in periods of increasing credit risk to cover the incurred losses not yet materialized in a specific loan, with the objective of being released in difficult times usually characterized by the collapse of the credit. Therefore, they aim to cover the expected losses over the average of the cycle, so that, in bad times, when specific losses definitively materialize in individual loans, banks could draw down them from the found previously built to cover the losses that were generated over the course of the recession.

The mechanism is simple and transparent. It is a rule-based system, with a formula governing the entire process instead of leaving that to the supervisor's discretion.

The formula of the general provisions –also called countercyclical provisions or dynamic provisions– is composed of two elements (α and β components):

$$\text{General provision}_t = \sum_{i=1}^{6} \alpha_i * \Delta\text{Credit}_{it} + \sum_{i=1}^{6} \beta_i * \text{Credit}_{it} - \text{Specific provision}_t \qquad (1)$$

where:

— General provision$_t$ is the flow of new general (countercyclical) provisions set aside in period t,

— Specific provision$_t$ is the flow of specific provisions set aside in period t,

— Credit$_{it}$ is the volume of credit corresponding to the homogeneous risk category i in period t,

— ΔCredit$_{it}$ is the change in the volume of credit in homogeneous risk category i in period t (equated with new lending),

— α_i and β_i represent the coefficients estimated by the Banco de España for the calculation of inherent losses and, therefore, for the practical application of the new general provisions. Each parameter had a different value depending on the homogeneous risk category to which it referred. The categories were virtually identical to those existing since statistical provisions came into effect in the year 2000.

The first part of formula (1) is α times the increase in the loan portfolio. Whenever α is calibrated over a whole economic cycle it covers the expected loss through the cycle. This means that in expansionary periods, when there is a significant credit growth, this growth is provisioned positively alpha times. The second term is the countercyclical part, as beta is estimated as the average of the specific provisions over the course of the lending cycle. This term is positive when the parameter β times the value of credit is higher than the specific provisions set aside in the current period and negative viceversa. Both the values of α and β are assigned according to the six homogeneous risk categories (in ascending value as the risk of each category increases, see Table 1).

When the crisis arrives, the granting of new credit stops and the first term of the formula becomes less positive or even negative and so does the second term. This is so because specific provisions increase significantly as the cycle turns adverse and banks start to draw down provisions from the previously built-up fund and use them as specific provision in the profits and loss account (P&L). Consequently, the financial statements (balance sheet and, in particular, the P&L) reflect more appropriately the true financial situation of the banks. The countercyclical mechanism induces an income smoothing

VALUES OF THE PARAMETERS OF THE COUNTERCYCLICAL PROVISION   TABLE 1

%

Risk category	α	β
Negligible risk	0.00	0.00
Low risk	0.60	0.11
Medium-low risk	1.50	0.44
Medium risk	1.80	0.65
Medium-high risk	2.00	1.10
High risk	2.50	1.64

SOURCE: Banco de España.

effect but with total transparency since credit institutions were required to disclose the amount of the dynamic provisions separately from the specific provisions. This means that if investors, rating agencies, or analysts wanted to know the exact value and effect of specific and dynamic provisions, they could undo the P&L so as to neutralize their impact on it.

Countercyclycal provisions were not really smoothing the P&L income, although many people thought they were. What they allowed was precisely to have a P&L that properly reflects the credit risk that a bank is running at each point in time. Basically, the Banco de España as supervisor wanted banks to recognize credit risks and credit losses when they were generated; not a later stage when they materialized in NPLs. This is because credit risk appears when a loan is granted, not when NPLs are recorded in the books. And the objective was to act on the P&L in order to avoid biases in profits, dividends and bank manager's bonuses.

3 What were the achievements?

Chart 2 shows credit growth and the NPL ratio in Spain. As can be seen, for many years Spain was in a significant credit boom (the growth rate was close to 30%). The consequences in terms of the flow of provisions are showed on Chart 3, where the red line depicts specific provisions as a percentage of the credit portfolio. The flow was around
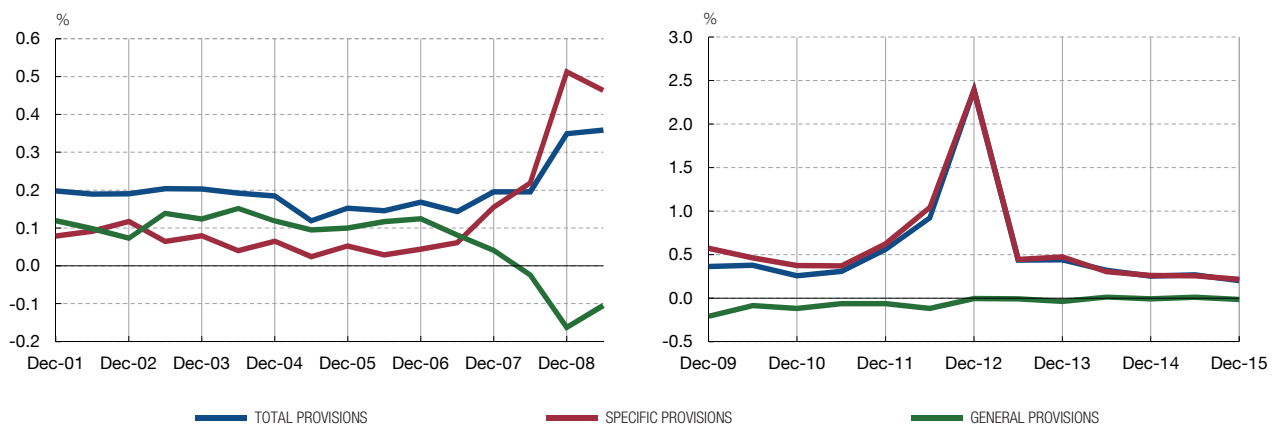
CREDIT GROWTH AND NON PERFORMING LOANS CHART 2
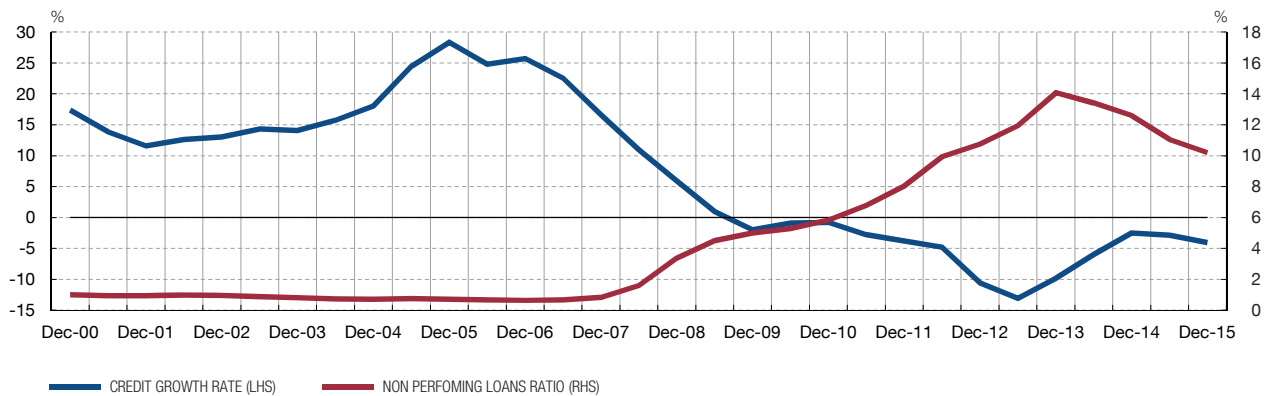
SOURCE: Banco de España.

FLOW OF PROVISIONS OF TOTAL CREDIT CHART 3

SOURCE: Banco de España.

0.05% of total credit until 2007, basically negligible. However, the red line increased more than ten times as the crisis arrived.

The green line in Chart 3 shows the flow of general provisions in terms of total credit. This is significantly twice or three times the size of the specific provisions over the boom years. They were increasing until 2005 and they became negative in 2008, as they started to be used (the fund commenced to be released) until they were exhausted. The maximum coverage they attained was 1.5% of risk-weighted assets. The blue line shows the total amount of provisions, the sum of both specific and general provisions. The automatic mechanism driving the countercyclical provisions required the banks to accumulate €26 billion, amount which surely would not have been built up without the existence of these provisions, in particular, the €7 billion of the publicly recapitalized banks. It is a legitimate question to ask whether they were useful or not. Therefore, the answer is not difficult to obtain since basically the above-mentioned €7 billion were saved for Spanish taxpayers.

Regarding the relationship between provisions and generated income, Chart 4 shows why bankers were not in favor of the provisions, and why it was quite difficult to push through such a countercyclical instrument. This basically deals with how much of the net operating income (NOI) was taken away. This buffer was between 15% and 20% of the banks' net operating income until 2007. At that point in time no other banking supervisor or regulator abroad was asking for this buffer. So it was not an easy situation for the Banco de España when dealing with its supervised banks.

In 2004, when the international accounting standards came into force, Spain had the dilemma to decide whether maintaining the provisions, or eliminate them. Bankers were really against the measure arguing that it was un-levelling the playing field. Later, from 2008 onwards, banks started to use the fund, and bankers began to realize that provisions could be useful. And finally, when the dimension of the crisis became clearer to bankers and analysts, the very same bankers came back to the Banco de España telling, concerning the dynamic provisions, that "You (regulator) should have been much tougher; you were weak".

In a careful analysis of dynamic provisions [see Jiménez et al. (2017)], with very thorough econometric approaches, it is shown that the best time to require banks for capital or for setting aside provisions is in buoyant periods. The action of building up a buffer in good

IMPACT OF THE FLOW OF COUNTERCYCLICAL PROVISIONS ON THE INCOME STATEMENT   CHART 4

% OF COUNTERCYCLICAL PROVISIONS IN TERMS OF NET OPERATING INCOME
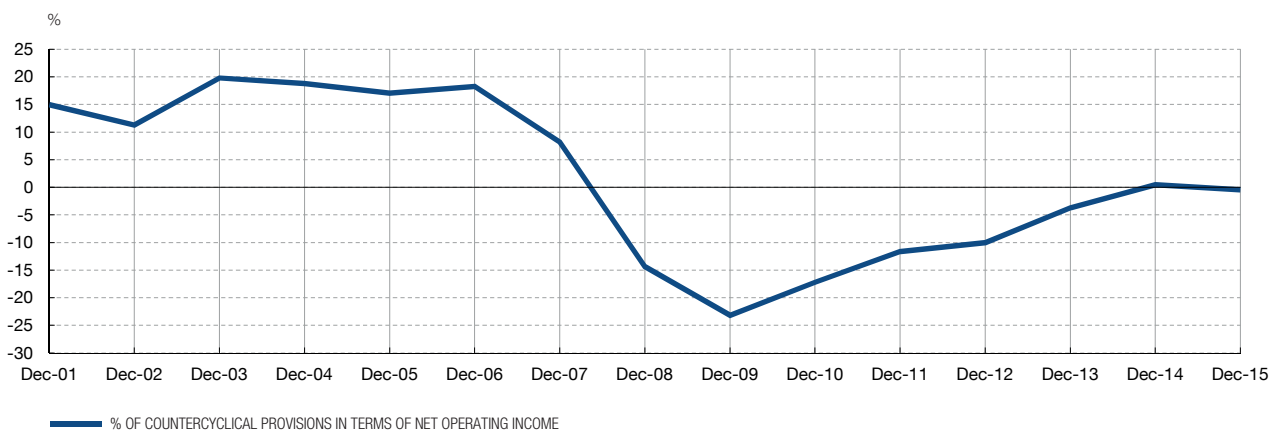
SOURCE: Banco de España.

times and releasing it later on, will make the credit crunch less painful. And this will have a positive impact on the economy. It is true that the buffer built up was limited, and to face a brutal recession (like the latest crisis) the stock of the provisions was not enough. However, this analysis of provisions shows the foundation of the macroprudential policy. It is in good times when the capital buffers or the provisions should be raised, so they can be released in recessive times in order to protect the real economy as much as possible.

4 A few lessons looking forward

This crisis has been so painful for Spain that it would be really incredible if no lessons were to be learnt. If we may borrow from one of Tano Santos' papers [see Santos (2014)], instead of "before the deluge", it should be said, after the deluge. It is not a question of seeking culprits, or putting the blame on anyone, but rather having a frank, candid discussion on how the Spanish financial system and others can be improved so as not to make the same mistakes of the previous crisis.

There are, at least, four main lessons here. The first is a basic and important principle: lending standards are key for ensuring the safety and soundness of banks, as well as for reducing systemic risk. The second one is that macroprudential policy may not be equally significant across countries and periods, in particular for countries belonging to a monetary union. The third is that there is a limit to what macroprudential tools can achieve. And finally, it is worth noting that a significant amount of modesty is needed when designing and putting in place macroprudential tools.

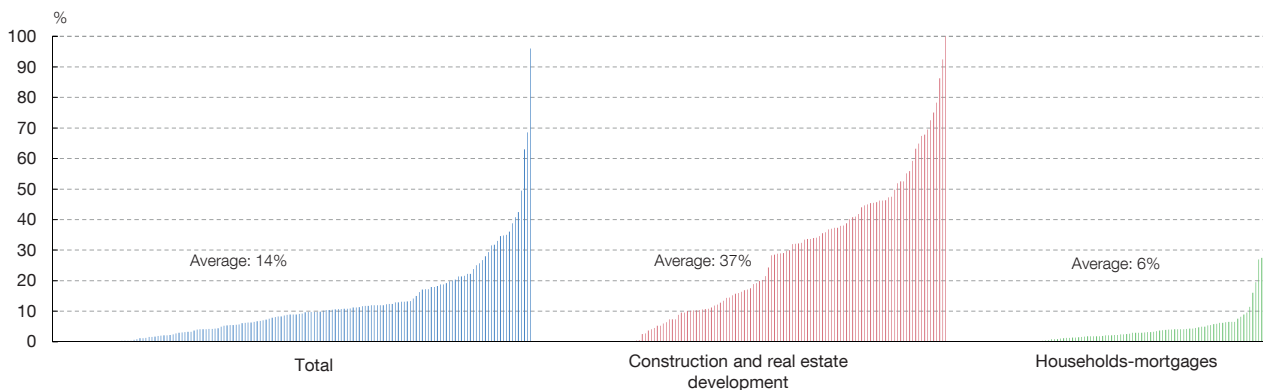LENDING BOOM: NON PERFOMING LOANS RATIO AT DECEMBER 2006   CHART 5
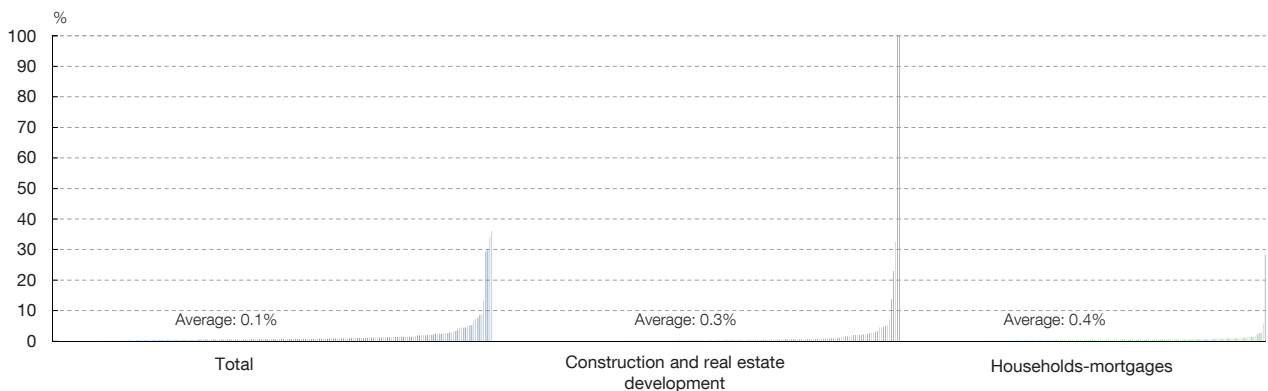
SOURCE: Banco de España.

LENDING BUST: NON PERFOMING LOANS RATIO AT DECEMBER 2013   CHART 6

SOURCE: Banco de España.

Regarding the first lesson, Charts 5 and 6 [see Estrada and Saurina (2016)], show the non-performing loans ratio of the total credit portfolio, of the construction and real estate portfolio, and also of mortgages granted by Spanish banks. In 2006, the non-performing loan ratio averages were 0.6%, 0.3%, and 0.4% respectively. In 2013, one can see how these averages have increased by 20 times, 100 times and 15 times. This is something that affects supervisory efficiency. If supervisors had looked backwards for non-performing loans in 2006, they would have found basically nothing interesting. Instead, if supervisors had looked into lending standards and how banks were granting loans (e.g. loan-to-values distribution, how resilient the lending policies were if the whole economy changed and moved into recession), they would have come across important weaknesses. So supervisors need to carry out what some would call a holistic approach to look backwards on past credit standards and also to look forward to take into account how they are evolving. This forward looking approach should also include a scenario analysis and stress-testing to complement credit standards with credit risk perspectives.

The second lesson is connected with the Taylor rule (monetary policy) shown on Chart 7. On the left-hand side of the chart one can see that interest rates set by the ECB were in line with what the Taylor rule set for the euro zone. The problem is that in doing their job properly for the entire euro area, the ECB delivered to Spain interest rates that were 200, 300, 400, 500 basis points lower than what the Taylor rule produced for Spain (Chart 7 on the right-hand side). This result shows why macroprudential tools are key and macroprudential policy is as important if not more important than the microprudential policy in a monetary union.

The third lesson is clearly depicted on Chart 8. The green line shows that nominal growth of the activity in Spain increased by more than 150% from the inception of the euro to its peak in the boom years; in addition, house prices multiplied by 2.5 times over the same period of time; credit to the non-financial private sector expanded four times; and lending to construction and commercial real estate developers raised by 10 times.

Bearing the above in mind, there are a couple of additional important issues that need to be reviewed.
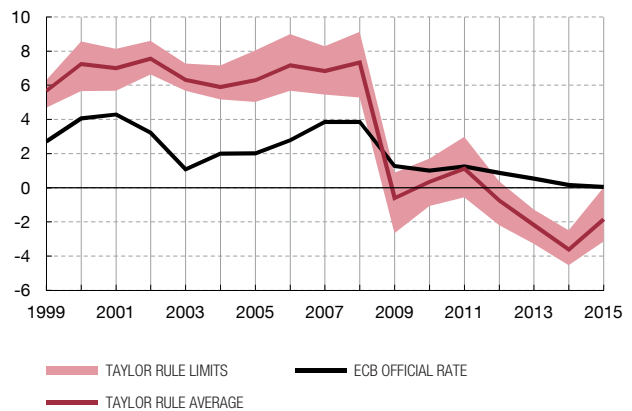
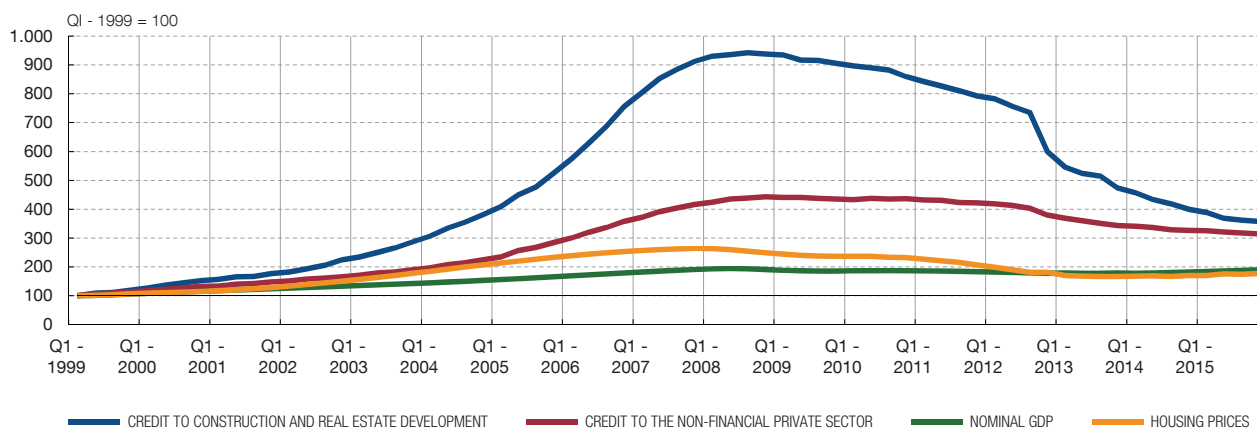TAYLOR RULES   CHART 7

1 EURO AREA
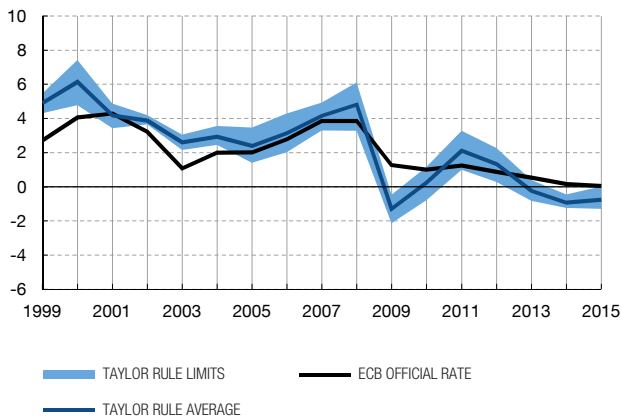
2 SPAIN

SOURCES: ECB, Eurostat and Banco de España.

CHART 8

QI - 1999 = 100

SOURCES: Instituto Nacional de Estadística, Banco de España and own calculations.

The first is two-folded: On the one hand, coordination amongst different economic policies needs to be revisited. There should be room to open a dialogue and a need to discuss monetary policy, fiscal policy, the microprudential stance and the macroprudential stance together from a general perspective, to determine what the direction of all these policies should be. On the other hand, the idea that interest rates are the macroprudential tool of last resort is not necessarily the case.

The second issue should be related to the fact that, in general, modesty is needed in terms of what a macroprudential instrument can achieve. When a huge tsunami unfolds, it is very difficult to deal with it solely with macroprudential tools. And in particular, as the book on the contercyclical provisions of the Banco de España explains, knowing that the general provisions coefficients were calibrated using the 1993 crisis as the reference.

5 Wrap up

Summing up the countercyclical provisions have been an inspiration for the CCyB of Basel 3, as the book describes thoroughly, and they are a significant macroprudential tool that can be used for the next lending boom. They were also an inspiration for provisions based on expected losses. It is true that we need to see the implementation of IFRS 9 and how pro-cyclical it will be. But there is nothing more pro-cyclical that incurred losses, and this is what the Banco de España thought –concerning general provisions– for many, many years.

Ultimately, the book *The countercyclical provisions of the Banco de España 2000-2016* is essentially a tribute to those few here and abroad who leant against the wind, against the pressures of the banking industry –of which there were many–, the resistance of accountants, and the silence and even opposition of some certain academics.

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