MACROECONOMIC ANALYSIS

Using macroprudential policies in Latin America: which, how and why?

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- In the last years, macroprudential policies have increasingly been incorporated into the toolkit of regulators in Latin America.
- The macrofinancial environment, the updating of global regulatory recommendations and, in certain jurisdictions, an interventionist bias have been the three main drivers of the adoption of macroprudential policies in the region. The importance of each one of these three drivers in every country varies considerably.
- The focus of macroprudential regulation in Latin America has been on both capital and liquidity issues and, to a lower extent, on credit markets.
- We expect macroprudential regulation to continue to be an important policy option in most Latin American countries in the years to come.

Using macroprudential policies in Latin America: which, how and why?

Policy makers in Latin America have been adopting series of macroprudential measures in the last years to reduce macroeconomic and financial risks, in a context where robust domestic growth and excessive liquidity in global markets have been pressuring the price of the assets in the region, such as equity and fixed income prices, exchange rates, etc (see the Box "A primer on macroprudential policy" below for a brief definition and characterization). In addition to being a reaction to external and domestic turbulences, the increasing use of macroprudential policies is also a consequence of the adoption in the region of the new regulatory recommendations, in line with the recent developments in the macroprudential framework at the global level[1]. Finally, the interventionist bias exhibited by regulators in some countries in the region, determined by local idiosyncrasies and preferences, was also a driver of the recent frenzy in the macroprudential field. In a few words, the macrofinancial environment, the updating of global regulatory recommendations and, in certain jurisdictions, an interventionist bias have been the three main -and interconnected- drivers of the adoption of macroprudential policies in Latin America. As we will discuss below, the importance of each one of these three drivers in every country varies considerably.

Table 1 –as well as Table A.1- shows that Latin American countries have been deploying series of different macroprudential tools, which we classified in three different groups – "credit-related", "liquidity-related" and "capital-related" to facilitate the analysis. Moreover, it reveals that there is a significant heterogeneity among countries both in terms of frequency/intensity as in terms of the specific instruments used.

According to the information we collected for the main countries in Latin America, Brazil is the country where macroprudential policies have been more frequently and intensely used. In our view, that is because in this case the three main drivers of the adoption of macroprudential measures we referred to above apply. In other words, the use of this type of policies in Brazil follows (i) the need to react to global and domestic turbulences and manage macroeconomic and financial risks, such as the related to a sharp exchange rate appreciation, excessive capital inflows, etc; (ii) the decision to implement internally the new set of regulatory recommendations developed at global levels – mainly Basel recommendations; and (iii) the interventionist bias of domestic regulators.

Among the main tools used in Brazil are certainly reserve requirements on deposits. In the last years, changes in these requirements were very common. They were cut, for example, when the 2008-2009 crisis hit the country and, very recently, in the middle of 2014, following the concerns revealed by the monetary authority about an excessive moderation in domestic credit markets (i.e. by the factor (i) according to the taxonomy we are adopting in this report). In addition, reserve requirements were often used because, in spite of the recent reductions, banks' reserves on the central bank are still very significant (around 7% of GDP and more than 20% of deposits on financial institutions) and, therefore, a powerful tool to manage domestic liquidity. Moreover, limits on net open foreign exchange positions and currency mismatches were also frequently changed in the last years, in line with the pressures on the Brazilian real (driver (i)) but also with the interventionist tone of regulators (driver (iii)). Finally, capital requirements, driven by (i), (ii) and (iii), as well as minimal requirements for lending to particular sectors, driven by (iii) and also by (ii), also took centre stage.

1: Many of the macroprudential measures in the region were established prior to the 2008-2009 financial crisis. This was because most countries experienced financial crises in the late twentieth century and one of the lessons learned was the need to implement macroprudential measures to avoid creating imbalances during expansive cycles.

Table 1
Macroprudential policies in Latin America: instruments used and prioritized by the regulator*

	ARG	BRA	CHI	COL	MEX	PAR	PER	URU
Credit-Related								
Limits on real estate exposure								
Limits on other sectors	X							X
Limits on exposure concentration	X	X		X	X	X	X	X
Specific quotas for lending to particular sectors	X	X					X	
Cap on Loan-to-Value (LTV) ratios		X	X **	X				
Cap on Debt/Loan-to-income (DTI/LTI) ratios				X			X	
Limits on Loan-to-deposit (LTD) ratio	X							
Ceiling on credit or credit growth								
Caps on foreign currency lending	X							
Liquidity-related								
Active use of Reserve requirements on deposits	X	X				X	X	X
Liquidity requirements	X	X	X	X	X		X	X
Limits on net open FX positions/currency-mismatch	X	X	X	X	X	X	X	X
Limits on maturity-mismatch		X	X	X	X		X	X
Capital-related								
Countercyclical capital requirements							X	
Time-varying / Dynamic provisioning				X		X	X	X
Limits on profit distribution	X	X			X			
Capital and leverage ratios	X	X	X	X	X	X	X	X

* The correspondent cell is filled in with a "X" when the instruments is used by the regulator and is highlighted when it is being developed/used more intensely by the regulator. ** There is no cap to LTV for most of the mortgaged debt, but the authorities have implemented some restrictions for the issuances of covered bond, and will soon put into practice a new regulation following the Australian model with staggered provisions depending on the LTV of the credit. See Tabla A.1 in the Annex for details.
Source: BBVA Research

In Argentina macroprudential policies have also established minimal requirements for lending to some specific segments like investment projects and micro, small and medium enterprises. Moreover, differently from most of other countries in the region, banks are required to have an additional capital buffer of 75% above normal capital requirements in order to distribute dividends.[2] This has been complemented with limits on foreign currency lending and on banks' net foreign assets position. Some macroprudential action was also driven by the need to manage macroeconomic and financial risks. In this regard we highlight the use of reserve requirements. Finally, it is worth noting that Argentina is currently taking some steps to implement Basel III, which will shape future macroprudential policies, especially those related to capital requirements.

2: The other three countries in Latin America that limit profit distribution are Brazil, Mexico and Peru. However, in Brazil and Mexico that basically occurs under some exceptional circumstances while in Peru there is not a cap but a rather a floor: financial institutions have to distribute at least 5% of its profits among workers.

Capital regulation in line with Basel III has already been implemented while regulation on liquidity and leverage should soon be announced.

The need to manage macroeconomic and financial policies and to reduce the pressures created by robust domestic growth and excessive global liquidity was probably the main shaper of the macroprudential agenda in the Andeans (Chile, Colombia and Peru) and also in Uruguay and Paraguay. Even though adopting the best global practices to define domestic macroprudential policies was in general an issue, especially in Peru and Colombia where Basel III capital and liquidity regulation are being introduced, not all these countries have announced the implementation of Basel III recommendations.

In these countries, regulatory activism in the macroprudential field has been less intense than in Brazil or Argentina. In the case of Chile and Paraguay it has been practically non-existing, whereas it has been more intense in Peru and to a lower extent in Colombia and Uruguay. In the Peruvian case, the focus of regulators has been on managing liquidity conditions by using reserve requirements and on establishing countercyclical capital requirements. Regarding the latter instrument, it is worth noting that reserve requirements on short-term loans by financial institutions in Peru, were until recently an important part of the strategy to smooth the impact of strong capital inflows into the country. In Colombia, attention has been paid on tightening capital requirements and improving liquidity requirements. In Uruguay and in Paraguay, in addition to the use of reserve requirements, we highlight that regulators have been concentrated on capital-related measures such as adjusting capital and provision requirements. In Chile, where the role of macroprudential policy remains limited, the focus has been on liquidity-related policies.

Finally, in Mexico the macropudential agenda has been mostly shaped by the implementation of globally-recommended regulation. In this sense, the focus has been on adopting liquidity and capital requirements in line with Basel III, and on implementing the institutional and governance structures for the monitoring and management of systemic risks.

Mexican regulation has also been driven by the updating of the framework first introduced after the Tequila crisis of 1995; recent changes have been made to the credit provisioning regime (the country moved from an incurred-losses framework for one based on expected-losses) and to the rules governing related-lending (and lending to controlling parties), to name only two. These interventions have strong effects given the significance of bank credit within the financial system as a whole.

Another important macroprudential policy item has been the establishment of the Financial System Stability Council[3], conceived as an information exchange *venue* for all of the authorities with a financial supervision mandate. Its goal is to timely identify systemic risks and to coordinate actions to tackle them according to each of its members' powers and responsibilities[4]. The Council is charged with an annual report of its activities and of the country's financial stability. The recent Financial Reform allows for information exchange between authorities both in the context of the Council and on a one-on-one basis, thus setting the groundwork for an effective monitoring of systemic risks.

When compared with other Latin American economies, Mexico's recent economic growth has not been particularly high, nor has it been fuelled by the global commodity boom; further, the impact of excessive global liquidity on domestic assets and credit markets was not significant, as capital inflows have not been channelled through the banking system. These conditions have rendered moot concerns of overheating, market and credit bubbles and of potential foreign exchange risk; issues that in turn seem to drive several of the macroprudential tools introduced elsewhere in the region.

3: Previously known as the Financial Stability Council (set up by presidential decree in July 2010), it was re-launched as the Financial System Stability Council through the Financial Reform of 2014.It brings together the Secretary of Finance, the Governor of the Bank of Mexico, the presidents of the Banking and Securities, Pension Fund and Insurance and Surety Commissions, and the head of the Bank Savings Protection Institute.
4: In Colombia there exists, since the financial crisis of 1999 and formalized in 2010, an equivalent committee, the Coordinating Committee for Monitoring of the Financial System, which meets quarterly.

Finally, the non-interventionist tone of Mexican regulators has contributed to the comparatively lower usage of macroprudential policies in the country and to their particular *tenor:* opting when intervening, for an incentives regime, rather than one of caps and quotas.

Conclusion

In line with what has been happening in developed countries and other emerging regions, macroprudential policies have increasingly been incorporated into the toolkit of regulators in Latin America. However, as we highlighted above, there is significant heterogeneity among the countries in the region as the impact of global and regional turbulences varies significantly across countries; global regulation – mainly Basel III- has been adopted at different speeds; and local regulators have different preferences in terms of intervention and willingness to use macropudential policies as a substitute to traditional monetary policy instruments. Moreover, it is worth noting that the focus of macroprudential regulation in Latin America has been on both capital and liquidity issues and, to a lower extent, on credit markets, which does not mean that regulators have not been tackling the risks related to an excessive credit expansion in the last years. Looking forward, we expect macroprudential regulation to continue to be an important policy option in most Latin American countries in the years to come.

Box: A primer on macroprudential policy

What is Macroprudential policy?

Macroprudential policy can be characterized as the set of regulations and tools aimed at ensuring financial stability by preventing the build-up of asset price bubbles and financial system imbalances. However a more precise definition of the objective of this policy would be to temper the cycle rather than merely ensuring the resiliency of the financial system.[5]

Macroprudential tools have been used for a long time to address systemic risks, both in developed and emerging countries. However, it is only recently, in the aftermath of the financial crisis that macroprudential policy has emerged as having an explicit role in managing financial cycles. In particular, macroprudential policy became a G-20 priority amid an intense debate around its optimal architecture and toolkit design.

In addition, new macroprudential authorities have been created around the world with the mandate of preventing and mitigating systemic risks by actively managing the financial cycle. This institutional debate is intense in the European Union with the newly created Single Supervision Mechanism (SSM) and the corresponding split of the macroprudential powers between National Competent Authorities (NCA) and the ECB[6].

Overall, we can say that we are at an early stage in the use of macroprudential policies.

A proper prudential policy mix

Apart from the institutional debate, from a practical perspective it is crucial to set a proper combination between macroprudential and microprudential regulation and supervision. Microprudential supervision contributes to financial stability by ensuring the safety and soundness of individual banks. However, it could ignore the aggregate negative impact that the accumulation of individual decisions can have over the financial system. In turn, macroprudential policy tries to fix this drawback by adopting a dual approach. First, it aims to track and control the evolution of systemic risk and its procyclical nature (the time dimension). Second, it tries to identify how risks are allocated within the financial system (the cross-sectional dimension). This explains why most of the tools that have been and are being used with a macroprudential purpose are indeed microprudential tools that have been calibrated to achieve systemic goals such as mitigating bubbles, capital inflows or outflows, and credit booms. In fact some authors actively differentiate macroprudential tools between time varying and cross sectional instruments.[7] This classification overlaps with the dual approach mentioned above but it tries to go beyond it. In fact, structural measures include cross-sectional policies to mitigate contagion but they also include financial regulation.

Moreover, an optimal adoption of prudential policies requires an effective coordination with the main macroeconomic policies.

5: Speech by Vitor Constancio Vice-President of the ECB, at high-level seminar organised by De Nederlandsche Bank, 10 June 2014.
6: 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 Also it may apply more stringent measures aimed at addressing systemic or macroprudential risks at the level of credit institutions subject to the procedures set out in the Regulation (EU) No 575/2013 -CRR- and Directive 2013/36/EU - CRD IV.
7: Speech by Vitor Constancio Vice-President of the ECB, at high-level seminar organised by De Nederlandsche Bank, 10 June 2014.

Macroprudential tools

Traditionally, domestic authorities have used a wide range of tools to address systemic risk in the financial sector. According to the IMF[8], these tools can be divided from two different perspectives:

- Credit-related: caps on the loan-to-value (LTV) ratio, caps on the debt-to-income (DTI) ratio, limits on foreign currency lending, mandatory insurance for riskier loans and caps on credit volume or credit growth.
- Liquidity-related: limits on net currency position or net currency mismatch, limits on maturity mismatch, limits on funding gaps, core funding requirements and prudential stability levies/taxes.
- Capital-related: countercyclical or time-varying capital requirements (including changes in the risk weight of certain loans), dynamic or time-varying provisions, reserve requirements and restrictions on profit distribution.

Macroprudential goals

Usually a tool (or a combination of tools) is selected to mitigate one, or more than one, of the following broad categories of systemic risk factors:

- Risks generated by excessive credit growth and credit-driven asset price inflation.
- Excessive private sector leverage and the subsequent deleveraging process.
- Systemic liquidity risk (i.e. financial entities are not able to obtain short-term funding).
- Risks related to large and volatile capital flows.
- Direct and indirect exposure concentrations.
- Misaligned incentives with a view to reducing moral hazard.

However, as can be seen in this watch, in the case of Latin America macroprudential policies have also been used to disguise an interventionist bias in the banking industry, not to reduce systemic risks but to pursue industrial policies or address some macroeconomic vulnerabilities not directly related to the banking sector.

8: International Monetary Fund, 2011. “Macroprudential policy: What instruments and how to use them?” IMF Working Paper No 11/238.

Annex

Table A.1
Macroprudential policies in Latin America

		ARG	BRA	CHI
	Credit-Related			
1	Limits on real estate exposure	No	No	No
2	Limits on other sectoral exposure	Yes. Limits on non-financial public sector (75 % of the adjusted equity).	No	No
3	Limits on exposure concentration	Credit exposure to individual borrower cannot exceed 10% without collateral or 25% with collateral approved by regulator.	Yes. No more than 25% of the Regulatory Capital per client. Moreover, the sum of all the individual exposures accounting for more than 10% of the Regulatory Capital should not exceed 600% of the Regulatory Capital.	No
4	Specific quotas for lending to particular sectors	Yes, 5% of deposits at different times since 2012 to be lent to companies for investment projects, 50% of the amount to SME´s and micro companies.	Yes. Banks are forced to use some specific funding resources such as saving accounts (*contas de poupança*) in some specific sectors (for example, the real estate sector, which is a mandatory destination of at 65% of the saving account resources).	No
5	Cap on Loan-to-Value (LTV) ratios	No	Yes (Not actively used).	Not in general, but 75% for covered bond (*letras hipotecarias*)
6	Cap on Debt/Loan-to-income (DTI/LTI) ratios	No	No	No
7	Limits on Loan-to-deposit (LTD) ratio	Yes. Limits in local currency financing to large.	No	No
8	Ceiling on credit or credit growth	No	No.	No
9	Caps on foreign currency lending	Yes, FX loans to exporters to avoid currency mismatch	No. Although taxes on FX lending were used frequently lately.	No
	Liquidity-related			
10	Active use of Reserve requirements on deposits	Yes.	Yes. Actively used.	No
11	Liquidity requirements	Minimum reserve requirements on deposits according to maturity and currency. On average around 15% of deposits for the financial system	Yes.	Yes (short term liquidity 30 days).
12	Limits on net open FX positions/currency mismatch	The net foreign assets position of a bank cannot exceed 20% of its total equity. Rule reinstated to 30% in February 2014 and reduced again to 20% in October 2014.	Yes. 30% of capital. This parameter was frequently changed in the last years. Moreover, reserve requirements on financial institutions'' short spot positions in FX.	Yes. 1% of core capital. Not changed through the cycle
13	Limits on maturity mismatch	No	Yes.	Yes. For less than 1 year.
	Capital-related			
14	Countercyclical capital requirements	No	No countercyclical rules. Although there will be countercyclical requirements from 2016 on according to new regulation in line with Basel III.	No
15	Time-varying / Dynamic provisioning	No	No. But parameters were changed in the last years.	No
16	Limits on profit distribution	Yes, banks are required to have an additional capital buffer of 75% above normal capital requirements in order to distribute dividends	Yes, but only in some specific situations.	No
17	Capital and leverage ratios	Yes, minimum capital to risk-weighted assets ratio is set at 8%. Initial steps to implement Basle 3 are being taken.	Yes. Minimum requirements of Capital to Risk Weighted Assets (11%) Changing from 2016 onward in line with adoption of Basel III. Very frequent change in the parameters needed for calculating risk-weighted assets.	Yes. 5%

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Table A.1

Macroprudential policies in Latin America (cont.)

		COL	MEX	PAR
	Credit-Related			
1	Limits on real estate exposure	No	No.	No
2	Limits on other sectoral exposure	No	No.	No
3	Limits on exposure concentration	10% without valid guarantee, 25% with valid guarantee	In general terms exposure to an individual borrower and to its Common Risk Group depends on the lending bank's capitalization levels: a bank merely meeting the capital requirement may lend up to 12% of its basic capital to a person and its "associates"; whereas a bank with a capital level in excess of 15% may lend up to 40% of its basic capital. Exposures which are fully covered with highly rated guarantees may exceed applicable limits, subject nevertheless to the following provisions: in any case, a bank's 3 largest exposures may not exceed 100% of basic capital; exposures to other banks (otherwise exempted from these limits) are not to exceed 100% of basic capital (including exposures to their foreign parent banks, where applicable); and, individual exposures to agencies and entities of the Federal Government are to be limited to the lending bank's basic capital. On a parallel route, there are related parties' lending restrictions (the whole of which may not exceed 50% of basic capital). Further, exposures to "Relevant Related Parties" (those relevant parties who hold 20% or more of the bank's capital) are limited to 25% of basic capital, with any excess to be deducted from tier 1 capital.	20% without warranty, up to 30% with collateral accepted by the regulator
4	Specific quotas for lending to particular sectors	No, but there are compulsory investment in debt titles to finance specific sectors (eg.: agriculture)	No.	No
5	Cap on Loan-to-Value (LTV) ratios	Yes for mortgages; 70% and 80% for low value dwellings (VIS)	No. But credit provisioning and capitalization weights vary according to LTV levels and type of guarantees in place.	No
6	Cap on Debt/Loan-to-income (DTI/LTI) ratios	Yes; mortgage payments limited to 30% of disposable income; not changed through the cycle	No.	No
7	Limits on Loan-to-deposit (LTD) ratio	No	No.	No
8	Ceiling on credit or credit growth	No, only used as indicator by regulator and central bank	No.	No
9	Caps on foreign currency lending	No, but there are limits on open foreign exchange positions	No.	No
	Liquidity-related			
10	Active use of Reserve requirements on deposits	No. Used in 2007 and 2008 to curb excessive credit growth (>25% YoY).	Methodologies where updated in recent years from an incurred-loss to an expected-loss model. Relevant variables could, in theory, be tuned as deemed necessary according to evidence on the ground; this however has not been the case yet.	No
11	Liquidity requirements	Yes, short term liquidity requirements (IRL for 7 and 30 days)	Basel III ratios are currently under development.. Banks are currently required to manage liquidity risk and Basel's original approach to market risk is applied to the whole balance (no distinction is made between banking and trading books).	No
12	Limits on net open FX positions/currency mismatch	Yes; net open foreign exchange positions must lie between -5% and 20% of total equity (technical). Not adjusted through the cycle.	Stemming from the implementation of Basel's market risk treatment positions are compensated according to their nature and their maturity along time bands and zones. Different capital charges apply accordingly.	Yes, there are three alternatives to choose from: a) Activa 30% - Pasiva 10%, b) Activa 40% - 50%, y c) Activa 90% - 100%.The choice is made annually.
13	Limits on maturity mismatch	Yes, unfavorable maturity mismatch (liabilities>assets) should not exist at 7 and 30 days		No
	Capital-related			
14	Countercyclical capital requirements	No	No	No
15	Time-varying / Dynamic provisioning	Yes, statistical provisioning according to credit cycle	No.	No
16	Limits on profit distribution	No	No. Only as part of early warning system (resolution process).	No
17	Capital and leverage ratios	Yes, capital to risk weighted assets (including market risk) is set at a minimum of 9%	No.	Yes. There are two minimum limits: Level1 : 8% and Level2: 12%

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Table A.1
Macroprudential policies in Latin America (cont.)

		PER	URU
	Credit-Related		
1	Limits on real estate exposure	No. Not explicitly, but there is a higher capital requirement according to certain variables and thresholds (eg. LTV, term, currency, number of homes the borrower already owns)	No
2	Limits on other sectoral exposure	No. Not explicitly, but there is a higher capital requirement according to the type of loan (consumer revolving, consumer non-revolving, vehicles)	Limits on lending to the public sector only (it cannot exceed 200% of equity)
3	Limits on exposure concentration	Yes: financing to firm or economic group should not exceed 10% of bank's capital (uncovered)	Credit exposure to individual borrower cannot exceed 15% w/o collateral or 25% with collateral approved by regulator
4	Specific quotas for lending to particular sectors	Yes: financing to firm or economic group related to the bank should not exceed 30% of bank's capital	No
5	Cap on Loan-to-Value (LTV) ratios	No. However, there are recommendations from the regulator in the sense that LTV should not exceed 70/80% depending on whether the house the borrower wants to buy is its first or second or if it is for recreational purposes	No
6	Cap on Debt/Loan-to-income (DTI/LTI) ratios	Yes. Actively used. Quota/income < 70%; otherwise, overindebtness	No
7	Limits on Loan-to-deposit (LTD) ratio	No	No
8	Ceiling on credit or credit growth	No	No
9	Caps on foreign currency lending	No. However, the regulator requires the bank to have a model that identifies borrowers exposed to FX risk	Higher risk weights and provisioning on FX loans, not changed through the cycle
	Liquidity-related		
10	Active use of Reserve requirements on deposits	Yes	Yes, actively used to curb the inflow of short term capitals
11	Liquidity requirements	Yes	Yes, reserve requirements on deposits
12	Limits on net open FX positions/currency mismatch	Yes: (i) positive net open FX position under 50% of bank's capital, (ii) negative net open FX position under 10%, and (iii) net position on derivatives under 20%. Not actively changed by the regulator through the cycle	Yes, net open positions should not exceed 150% of capital. Unchanged since 1990´s
13	Limits on maturity mismatch	Yes. The bank sets the limits	Yes, exposure exceeding 3 years is limited by equity
	Capital-related		
14	Countercyclical capital requirements	Yes	No
15	Time-varying / Dynamic provisioning	Yes	Yes, statistical provisioning according to cycle
16	Limits on profit distribution	No. There is not a cap on profit but rather a floor: the financial system has to distribute at least 5% of its profits among workers	No
17	Capital and leverage ratios	Yes: capital/RWA at least of 10%	Yes, minimum capital to risk-weighted assets ratio is set at 8%.

Source: BBVA Research

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