Speaker

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Financial Stability and the Role of Central Banks: The Case of Mexico

Introduction

In contrast to price stability, which is essentially a monetary phenomenon, financial stability comprises monetary and nonmonetary issues, which inherently involve financial authorities beyond the central bank. This is especially true in countries where governmental institutions distinct from the central bank undertake many activities in bank regulation and supervision, as it is the case of Mexico. Based on this idea, this essay maintains that several financial authorities should engage in maintaining the financial sector operating smoothly, sharing the responsibility of delivering financial stability. Additionally, this essay supports the notion that it is not necessary to create an explicit mandate for financial stability within autonomous central banks, as financial stability is inherently attached to the *raison d'être* of such institutions already.

In Mexico, there is no legal provision that stipulates for an exclusive financial stability mandate to a single financial authority; rather, there

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is a financial stability council, formed by several financial authorities, which does have such an ordinance. This council is a coordinating body that does not have regulatory nor supervisory powers by itself; instead, it aims at coordinating regulatory and supervisory efforts among financial authorities to accomplish its purpose, coordination that the recent international financial crises showed that is essential for preserving financial stability.[1] Among other things, the council gathers, processes, and analyses financial data; evaluates methodologies and indicators to measure systemic risk; weights up the vulnerabilities of the Mexican financial system; provides recommendations in terms of prudential policy; and delivers an annual report on the financial stability status of the Mexican economy.

A challenge in terms of macroprudential policy in Mexico is to design mechanisms that render the financial stability council to operate as efficiently as possible, observing the legal framework that circumscribes the legal capabilities of each Council's member.

The remainder of this essay encompasses six sections. Section two presents the Council for the Stability of the Financial System (CESF),[2] which is the lead institution on financial stability in Mexico. This section shows that various authorities are involved in the procuring of financial stability in Mexico, and why this is a necessary condition for bringing out financial stability in the country. Section three addresses the mandate of the Banco de México (Mexican central bank), to explain why financial stability is already deeply rooted in the central bank's chart, so there is no need to change its formal mandate. Section four comments on the status of macroprudential policy in Mexico and describe some of the macroprudential instruments that are currently in operation in this country. Section five discusses some general guidelines to build up the macroprudential toolkit. Section six points out the organizational changes that have taken place within the central bank to enhance its capacities of procuring financial stability. Finally, section seven concludes

[1] See Carstens (2010).
[2] All the acronyms in this essay are in Spanish.

with some remarks on the role of central banks in financial stability and the design and implementation of macroprudential policy.

The Council for the Stability of the Financial System

On July 29, 2010, a presidential decree created the Council for the Stability of the Financial System (CESF). The decree establishes the Council as a forum for evaluation, analysis, and coordination of authorities on issues of the financial system. It also states that the purpose of the Council is to contribute to financial stability in Mexico, by avoiding substantial disruptions or disturbances in the functioning of the financial system, and by minimizing the impact of such events if they occur. According to the decree, the Council has the function of identifying in advance systemic risks and recommending and coordinating financial stability policies, measures, and actions that could be implemented by the financial authorities according to their lawful attributions.

Nine representatives from six financial authorities constitute the CESF (see Table 1). In their respective sphere of legal capabilities, these authorities are responsible for planning, coordinating, evaluating, and monitoring the banking system, including the supervision and surveillance of banks, deposit insurance, and bank resolutions. They are also responsible for organizing the functioning of non-bank financial institutions and financial markets, regulating the issuance and circulation of money, conducting the monetary policy, defining the foreign exchange policy,[3] and regulating the payment systems.

To perform its duties, the Council relies upon a Technical Committee, which is formed by 14 representatives from the same financial au-

[3] The Foreign Exchange Commission defines the foreign exchange policy in Mexico. The Secretary and the Undersecretary of Finance and Public Credit, another undersecretary appointed by the Secretary of Finance, the Governor of the Banco de México, and other two members of the Board of Governors of the Banco de México appointed by the Governor compose the Foreign Exchange Commission. The Secretary of Finance has the casting vote in case of a tie.

Table 1

MEMBERSHIP OF THE COUNCIL FOR STABILITY OF THE FINANCIAL SYSTEM (CESF) AND ITS TECHNICAL COMMITTEE[1]

Financial Authority[2]	*Council (9 members)*	*Technical Committee (14 members)*
Secretariat of Finance and Public Credit (SHCP)	Secretary (chair) Undersecretary	Undersecretary (chair) 3 high-ranking representatives
National Banking and Securities Commission (CNBV)	President	3 Vice Presidents
National Insurance and Surety Commission (CNSF)	President	1 Vice President
National Commission for the Pensions System (Consar)	President	1 Vice President
Institute for the Protection of Banking Savings (IPAB)	Executive Secretary	1 Assistant Secretary
Mexican central bank (Banxico)	Governor 2 Deputy Governors	1 Deputy Governor 3 General Directors

[1] Additional information about the Council for Stability of the Financial System can be found in <www.cesf.org.mx> (in Spanish).
[2] SHCP (Secretaría de Hacienda y Crédito Público), CNBV (Comisión Nacional Bancaria y de Valores), CNSF (Comisión Nacional de Seguros y Fianzas), Consar (Comisión Nacional de Ahorro para el Retiro), IPAB (Instituto para la Protección del Ahorro Bancario), Banxico (Banco de México).

thorities that conforms the Council (see again Table 1). The Technical Committee can make recommendations and proposals to the Council regarding the risks to financial stability and how to manage crisis situations.

It is essential to realize that the CESF is not a financial authority by itself, but a cooperative forum of financial authorities, which can make recommendations to the financial authorities. The financial authorities then decide whether to implement the recommended policies that lie within the scope of their legal mandate. Thus, a clear and adequate set of operating rules that promote strong communication and coordination among the financial authorities is paramount for the effectiveness of the Council.

Based on the decree, the Council designed and approved its operating rules, which includes the following features:

a) The Secretariat of Finance and Public Credit (SHCP) is the lead institution in the Council.

b) The Banco de México plays a central role as member and the Executive Secretary of the Council.

c) In the event of disagreements in policy recommendations within the Council, a majority vote resolves the controversies.

d) In the case of a tie, the SHCP has the casting vote.

The arrangement determined by these rules seems natural within the present legal framework of the Mexican financial system. Either the SHCP itself or its financial-regulatory agencies undertakes a substantial part of the activities concerning financial policy, regulation or supervision, deposit insurance and bank resolution. Therefore, the basic governing rules of the Council mirror the legal framework of the Mexican financial system. Rules like these allow the Council to operate without building up a new institutional framework.[4]

Having a council in charge of supervising financial stability has another significant advantage. The CESF not only brings the financial authorities that rule how the financial intermediaries and financial markets operate together, but also gathers those authorities who are in charge of the key macroeconomic goals. Some of them are projecting and coordinating the country's National Development Plan, formulating and

[4] Based on a recent cross-country analysis of existing and emerging macroprudential policy frameworks, Erlend W. Nier, Jacek Osiński, Luis I. Jácome, and Pamela Madrid (2011) conclude that the available resources, the history of existing arrangements, legal traditions, and the political economy are factors that might have significant effects on the institutional model chosen by countries for macroprudential policy. All these factors were relevant to define the institutional framework of macroprudential policy in Mexico.

implementing the fiscal policy, managing the federal public debt, and maintaining price stability. Therefore, the CESF is a forum in which the main economic policy players exchange views on financial stability from a wider economic policy perspective than they would do otherwise.

Lastly, it should be emphasized that central banks should play a crucial role for the success of financial stability councils. As pointed out by Governor Carstens (2011):

> In measuring and monitoring systemic risk closely to foresee threats to a country's financial stability and taking measures to mitigate them, autonomous central banks have two key advantages over other financial authorities. First, because their mandates are oriented toward macroeconomics, central banks already have the infrastructure in place to watch over the economy and the financial markets as a whole. Second, because they are autonomous, they might be more inclined to take away the punch bowl just as the party gets going.

The macroeconomic, systemic, and long-term perspective of the economy implanted in the autonomous central banks' spirit represents an element that should not be missed in the core of any financial stability council that makes policy recommendations. The Banco de México has the enormous responsibility of bringing and maintaining such approach in the CESF.

Banco de México's Mandate

The Mexican Constitution, the cornerstone of all legislation in the country, establishes that the country shall have a central bank that will be autonomous in the execution of its functions and management. It also determines that the primary objective of the central bank is to achieve price stability and that no authority can command the central bank to dispense financing.

The purposes of the Mexican central bank are specified in the Bank of Mexico Act. According to this law, the first purpose of the Banco de México is to provide local currency to the Mexican economy. However, in pursuing such as objective, the main priority of the Mexican central bank shall be ensuring the stability of the domestic currency's purchasing power, which means achieving and preserving price stability. The other purposes of the Mexican central bank are to promote the sound development of the financial system and the appropriate functioning of the payment systems.

In order to secure price stability, during the late 1990s and early 2000s, the Banco de México gradually adopted a monetary policy framework based on inflation targeting. The target is defined in terms of the inflation rate that is measured by a national consumer price index, which includes the prices of goods and services, but excludes the prices of assets.[5] Because of this, the conduct of monetary policy by itself does not guarantee financial stability, in the sense that it does not explicitly take into account the surging of asset price bubbles.[6]

However, the efficacy of monetary policy could be lessened or even nullified by financial instability, as financial instability may disrupt the monetary policy transmission mechanisms. Hence, financial instability dwindles the central bank's means to accomplish the inflation target. Therefore, maintaining financial stability is a necessary condition for achieving and preserving price stability.

Financial stability is also a condition for achieving the other targets of Banco de México. On the one hand, financial stability favors the sound development of the financial system, as it promotes savings, intermediation, and proper risk sharing. On the other hand, the degree of stability of the financial system affects its size, strength, and efficiency, which ultimately influences the functioning of the payment systems.

Furthermore, price stability also reinforces the sound development of the financial system and the appropriate functioning of the payment systems, as it bolsters savings, efficient allocation of resources, and

[5] The national consumer price index (INPC) includes the residential rents and owners' equivalent rents and, therefore, partially reflects the price of houses.

[6] A prudent monetary policy does not prevent the formation of credit bubbles neither, as in any market economy the credit to the private sector is an endogenous phenomenon. Nevertheless, a prudent monetary policy could contribute to diminish the incidence of credit bubbles by eradicating one of the fundamental causes of credit overexpansion: the excessive growth in high powered money.

long-term planning. Finally, the sound development of the financial system and the appropriate functioning of the payment systems contribute to financial stability, which, as mentioned before, contributes to monetary policy efficacy and price stability attainment, closing a virtuous cycle.

In sum, price stability, the financial system's sound development, the appropriate functioning of the payment systems, and financial stability are all intertwined. As a consequence, an explicit mandate for the first three targets includes also the fourth purpose. Hence, adding a mandate for financial stability seems redundant in the case of the Banco de México.

Macroprudential Policy in Mexico

As in other countries, the financial authorities in Mexico are currently invigorating the analysis and design of macroprudential policies. With the creation of the CESF, a crucial step to enhance macroprudential cooperation among financial authorities has taken place.

The policies with macroprudential character are not a new phenomenon in the country. Such policies and collaboration among authorities needed to define and implement them have taken place in Mexico for a while. Nevertheless, the creation of the CESF represents a new phase in the conduct of the financial policy in Mexico. It should provide a renewed emphasis on prudential policy based on a systemic approach.

The capabilities of the Council include both microprudential and macroprudential policy recommendations. However, usually there is not a clear line between them. For instance, it is frequently said that microprudential polices focuses on containing individual risks, to protect depositors ultimately, while macroprudential focuses on restraining systemic risk, to prevent contagion from financial distress to the real economy. This conceptual separation seems to be a useful benchmark for designing macroprudential tools, but some difficulties arise from the fact that some instruments could have both microprudential and macroprudential effects.

In any case, the experience of the global crisis of 2008-2009 suggests that even though some microprudential instruments might serve macroprudential purposes, and vice versa, additional and proper prudential instruments that center on systemic risk are required.[7]

In Mexico, there are banking and financial market instruments that already are used for macroprudential purposes (see Table 2). To understand why these instruments are considered macroprudential, it is convenient to review the definition of macroprudential policy. A formal definition of macroprudential policy does not exist in Mexico –in the sense that it is written in a legal statute–, but it could be said that an operational definition, based on the analysis undertaken jointly by the Banco de México and the SHCP to design the CESF, is in place already. The operation definition of macroprudential policy in Mexico could be defined as follows:

> A policy consisting of recollecting information and designing indicators to measure systemic risk effectively, as a means of identifying potential risks to financial stability early and implementing measures and actions to minimize such risks, as well as to maximize the resilience of the financial system to the different shocks.

Note that there are two critical elements in the definition: the timely prevention of systemic risk and the resilience of the financial system to different shocks. (The recollection of information and the design of indicators to measure system risk, mentioned in the beginning of the definition, are an essential part of the timely prevention of systemic risk.) Thus, *any device that serves at least one of these purposes could be tagged as macroprudential,* as it is the case of the instruments shown in Table 2.

[7] For instance, Beverly Hirtle, Til Schuermann and Kevin Stiroh (2009) conclude that a purely microprudential perspective is not sufficient to maintain financial stability. They suggest improvements to the Supervisory Capital Assessment Program (SCAP) to strengthen the joining of macro- and micro-prudential approaches to create a better supervisory framework that address a wider range of supervisory objectives.

Table 2

SOME INSTRUMENTS OF MACROPRUDENTIAL POLICY IN MEXICO

Currently in used	*Main purpose*
Bank system instruments[1]	
Limits on maturity mismatch in foreign currency (1992,1997)[2]	To contain banks' currency risk.
Limits on lending to related counterparties (1994, 2001, 2008, 2011)[2]	To restrain banks' exposures to shareholders' credit risks.
Limits on interbank exposure (2001)	To curb interbank contagion risk.
Financial markets instruments	
International reserve accumulation (1996-2001, 2010-2011)[3]	To improve the credit profile of the country. To protect against a reversal of capital flows.
Flexible limits on investment for pension funds (2010)[1]	To prevent massive sales and feedback to the financial markets' volatility.

[1] The first year in parenthesis is the year in which the instrument was adopted. Subsequent years correspond to revisions.
[2] These instruments are also believed to serve microprudential purposes.
[3] In parenthesis appears the period in which the instrument was in force.

The older instrument in the list shown in Table 2 is *the limits on maturity mismatch in foreign currency* for banking institutions, which was established by the Banco de México in 1992. According to the central bank's rules, the liabilities in foreign currency of all banks must not exceed a limit, which is defined in terms of their tier 1 capital. In addition, the banks should maintain a minimum of liquid assets denominated in foreign currency, the exact amount being determined in terms of the banks' short-term net cash outflows in foreign currency. The objective of theses prescriptions is to rein in the main sources of currency risks that banks face in their balance sheets. The effectiveness of this instrument has been proved already. During the global crisis of 2008-2009, no bank in Mexico faced up to any foreign currency liquidity problems as it occurred in other economies that did not use this macroprudential instrument.[8]

The CNBV established in 1994 *the limits on lending to related counterparties,* the second macroprudential instrument in the list, to restrain banks' exposures to shareholders' credit risks and to avoid conflicts of interests. According to this regulation, any lending to related counterparties in excess of a threshold should be subtracted from tier 1 capital, which imposes a significant cost to the banks if the threshold is trespassed. The last revision occurred in March 2011, when the said limit was decreased from 50% to 25% of core capital. The exposures subjected to the limit include deposits, loans, net positions in derivatives and securities holding different from shares. This prudential instrument seems to be relevant particularly in countries like Mexico, where a large share of bank assets is owned by foreign banks.

The CNBV also set up in 2001 a *limit on interbank exposure,* which includes among other things net positions in derivatives and repurchase agreements with the purpose of curbing interbank contagion risk. As a consequence of this and other factors, the banks in Mexico have improved their management of counterparty risk in the last decade, and the interbank exposures did not represent a source of systemic risk in the 2008-2009 global crisis.

For the containing of financial markets risks, two measures stand out for their macroprudential content. The Banco de México instrumented the first from August 1996 to June 2001 and from February 2010 to November 2011. It consists of a monthly put-option auction

[8] For instance, soon after Lehman Brothers collapsed in 2008, a currency crisis surfaced in Eastern Europe. In some countries of this region, local banks had large liabilities in foreign currency that they used to finance domestic mortgage loan borrowers. However, when the global crisis burst, the funding of these banks was reversed to the liquidity crisis in Western Europe, leaving the banks unable to roll over their foreign currency debt. This caused turmoil in local financial markets.

that enables the option holders to sell dollars to the central bank as a means to facilitate the stocking of international reserves.[9] The *international reserve accumulation* as an instrument of macroprudential policy has the purpose of improving the credit profile of the country in the international markets and protecting the national economy from an unexpected reversal of capital flows from abroad. The buildup of foreign currency reserves, together with the two-year flexible credit line with the IMF, has reinforced the Mexican capacity to face new outbreaks of global instability.

The CNBV implemented the last instrument in the list in February 2010. It consists in a rule that establishes that in periods of financial stress VaR limits for pension funds' portfolios increase to pre-specified levels. That is, the regulation limiting VaR for pension funds was modified to allow higher VaR limits in periods of extreme volatility than in periods of normal volatility. This is done to prevent massive sales and feedbacks to the financial markets' volatility. This measure also helps to protect the value of the saving accounts as the corresponding portfolios are made primarily of long term assets, whose value will normally recover once the turmoil is over. Absent this rule, the regulation would be obliged pension funds to take loses in periods of financial stress that could be eventually undone otherwise.

The Technical Committee of the CESF is currently working to expand the macroprudential toolkit. Two instruments that are currently under study are caps on loan-to-value ratio and a countercyclical/time-varying capital requirement.

In order to detect the piling up of systemic risks timely and to be prepared to act preemptively, the Council agreed to create five working groups. The first group is dedicated to the standardization and collection of information useful to monitor financial stability. The second group is in charge of detecting risks and vulnerabilities in the financial system,

[9] This instrument is consistent with the floating exchange rate regime prevalent in Mexico. It does not target any level of the foreign exchange rate and the mechanism used is transparent, pre-set, and automatic.

looking for identifying threats promptly. The third group is responsible for designing indicators and methodologies to measure systemic risk.[10] The work of the third group should complement the analysis of risks and vulnerabilities formulated by the second group. The fourth group is dedicated to guaranteeing the transparency of the information to both market participants and the public in general. Finally, the fifth group is devoted to assessing the systemic risks in financial markets.

Bases to Build up the Toolkit

In order for a country to implement an operative macroprudential policy, the authorities responsible for procuring financial stability should have at their disposal a set of macroprudential instruments that are feasible, coherent, and effective. The big question is how to build up such an ideal toolkit. To answer this question, first it is helpful to recognize that there is no such thing as a standard toolkit that fits the needs of all jurisdictions. In terms of the design and selection of macroprudential tools, the particular characteristics of the jurisdictions should be taken into account. Nevertheless, some general guidelines could be taken into account for the buildup of the toolbox, which are related to topics that frequently rise in policy discussions.

One of them is the tradeoff between financial stability and economic growth. In this matter, it should be acknowledged first that from an empirical point of view, measuring the impact of macroprudential policy on economic performance is far from straightforward, so the actual effects are not obvious. Nevertheless, from a theoretical point of view, as a macroeconomic topic, it is crucial to distinguish between short run and long run. In the long run, as it happens with price stability, financial stability should foster economic growth. In the short run, the situation

[10] Measuring systemic risk is one of the most challenging endeavors in the financial stability realm. As remarked by Deputy Governor Manuel Sánchez (2011, p. 2): "Available concepts of systemic risk are vague and too wide to be operationally useful. If any policy framework is to be designed and applied in a meaningful way to counteract systemic risk we need to narrow this concept and make it more precise".

could be different: financial stability might have some adverse effect on the rate at which the economic activity expands. Presumably, on some periods, a stable economy will grow at a slower rate than an instable economy, but the latter will recurrently boom before crashing. Since ongoing wellbeing is the ultimate goal, a macroprudential policy that conveys to financial stability should be pursued always. Nevertheless, the policy design ought to be carefully crafted by choosing the prudential instruments that imply the lowest cost in terms of implementation and adjustment.

Another principle is that each macroprudential instrument within the toolkit should be clearly defined and the specific objective that it targets –either to contain systemic risk or to improve the resilience of the financial system– overtly identified. Furthermore, the expected benefits and potential cost, including distortions and other limitations of the instruments, should be critically assessed, taking into consideration their possible interactions with other instruments.

According to a recent international survey on the organizing framework of macroprudential policy,[11] the instruments more frequently mentioned by the jurisdictions as potentially useful to attain financial stability are *caps on loan-to-value, countercyclical/dynamic provisioning, limits on net open currency position, and countercyclical/time-varying capital requirements.* How to evaluate whether these instruments should be included in the macroprudential toolkit? In principle, a cost-benefit analysis of each instrument should be carried out before adopting it; even better, this analysis should be undertaken on different feasible sets of instruments rather than on individual instruments, as the effects of some instruments might be correlated.

The caps on loan-to-value ratios head the list in Table 3 since it is the macroprudential instrument most frequently mentioned. It has the objective of reducing procyclicality of credit growth in the economy, which is beneficial in terms of financial stability. However, the expected costs

[11] This survey was undertaken in the Money and Capital Markets Department of the IMF, by a team coordinated by Cheng Hoon Lim (2011).

of implementing it should also be considered. For example, as this instrument is applied uniformly to all regulated financial intermediaries, regardless of their characteristics, theoretically some potential costs in terms of efficiency may arise. This could be the case if some intermediaries are better skilled to assess the quality of potential borrowers than others and they use loan-to-value ratios –probably together with other credit variables– to screen borrowers. In this situation, if the caps on loan-to-value are set too low, the screening capacity of financial intermediaries could be reduced. Additionally, a limitation of this instrument is that it could be circumvented easily through different ways, for instance, by overstating the value of the assets. Therefore, for some jurisdictions the caps on loan-to-value could have an expected net benefit, while it could be less clear for others.

Table 3

COST-BENEFIT ANALYSIS OF MACROPRUDENTIAL INSTRUMENTS (INDIVIDUALLY)

Instrument	*Expected "benefit"*	*Potential "cost" or limitations*
Caps on loan-to-value ratio	To reduce procyclicality of credit growth.	Could limit efficiency gains from screening and signaling mechanisms Could be circumvented easily by overstating the value of assets.
Countercyclical/dynamic provisioning	To limit capital losses. To reduce procyclicality of credit.	Could overlook some macroeconomic conditions.
Limits on net open currency position	To limit bank's foreign currency risk.	Could overlook other potential sources of currency risk.
Countercyclical/time-varying capital requirements	To turn banks' capital sensitive to credit risk. To reduce procyclicality of credit.	Without timely information, it could increase output volatility.

Table 3 exhibits an illustration that summarizes some of the expected benefits and potential costs or limitations of the four macroprudential instruments mentioned above.

Changes in the Banco de México

A large part of the regulation and supervision of the financial system in Mexico is conducted by the SHCP or its financial regulation agencies. However, the Banco de México has some significant regulatory and supervisory powers, fundamentally on banks and brokerage firms. These functions have not changed as a result of the global crisis of 2008-2009.[12] However, key organizational changes in the Banco de México took place during 2010, some of which are directly linked to financial stability.

In October 6, 2010, it was created the Banco de México's Financial Stability Division, formally named the Directorate General of Financial Stability. This new area has the directive of identifying and evaluating potential threats to financial stability and designing measures and policies to prevent financial instability and alleviate the impact of financial crisis.

Within the Mexican central bank, the Financial Stability Division is in charge of collecting, analyzing, and disseminating information related to systemic risks; recommending macroprudential policies and regulations to maintain financial stability and increase the resilience of the financial system; finding deficiencies in the regulatory and supervisory frameworks that could harm the steadiness of the financial sector; and keeping track on the developments in the financial regulation at home and abroad. Since its formation, the Division has been endeavoring on the improving of the models it uses to assess credit, market, liquidity, and contagion risks to fulfill its responsibilities properly.

The Financial Stability Division also coordinates the efforts in matters of financial stability of the Banco de México with other Mexican

[12] Recent changes in the regulation and supervision undertaken by the Mexican central bank are related to issues in consumer protection, which have drawn the attention of the Congress since before the crisis.

authorities through the CESF. In fact, the Governor appointed the Division's Head as the secretary of the Council. Additionally, the Division actively participates in international groups working under the aegis of the Financial Stability Board (FSB) and the Basel Committee on Banking Supervision (BCBS).

The yearly Financial System Report that publishes the Banco de México since 2006 is now leaded by the Financial Stability Division.[13] With the issue of the year 2011, the Banco de México adopted a refreshed approach in this report, with the purpose of emphasizing the evolution of systemic risks in the Mexican financial system.

The Financial Stability Report includes sections on the global and Mexican economy; the financial intermediaries and financial markets; the infrastructure of the financial system; the financial position of households, firms, and the public sector; and the contagion risk and stress tests on banks and brokerage firms. This report and the annual report published by the CESF are complements in terms of their contents. They are published about six-month apart one from the other, so the public has access to a report on the financial stability of the Mexican economy semiannually.

Final Remarks

The role of central banks in financial stability seems as imperative now as it has been always, but it does not appear to entail a need for establishing an explicit mandate on financial stability in their chart. At least for autonomous central banks oriented to price stability, as it is the case of the Banco de México, financial stability appears to be intrinsic to their current ends already.

Nevertheless, the global crisis of 2008-2009 revealed that the involvement of central banks in financial stability should be deeper and more inclined towards preventing financial instability than it has traditionally been. To do so, they should conduct their monetary policy to

[13] The Financial System Report can be downloaded in Spanish and English from the Banco de México's website on <www.banxico.org.mx>.

achieve price stability in the first place, as price stability favors financial stability.[14] Unfortunately, price stability cannot ensure financial stability by itself, and financial stability requires an effective macroprudential policy.[15]

The design and implementation of macroprudential policy has been in the center of an intense debate worldwide in recent years. In contrast to price stability, financial stability comprises monetary and nonmonetary issues, which involve institutions beyond the central bank. Therefore, a necessary condition for strengthening financial stability is that a number of financial authorities should participate in building up and implementing the macroprudential policy.

This is especially true in countries like Mexico where, given legal traditions and existing arrangements, financial authorities separate from the central bank handle multiple activities in bank regulation and supervision. The gathering of different financial authorities whose legal-competence domain includes prevention and resolution, along with fiscal, monetary and other economic policies, also confers to developing a macro based, systemic approach to financial stability.

Nonetheless, this configuration presents some challenges. First, a clear set of operating rules that promote strong coordination, cooperation, and communication among the financial authorities is essential for the effectiveness of a financial stability council. The council governance rules should not only determine who the lead institution is, how

[14] Both Banco de México's Governor Agustín Carstens and Deputy Governor Manuel Sánchez have emphasized this point in different forums. According to Carstens (2011, p. 1), "In the first place, central banks should establish the foundation for the sound development of the financial sector by conducting monetary policy that is congruent with price stability"; and according to Sánchez (2010, p. 1), "Monetary policy, in turn, should be directed towards price stability, which is a central bank's best contribution not only to long-term economic growth, but also to financial stability".

[15] As Dudley (2011, p. 3) pointed out: "As I argued before, monetary policy will often, though not always, be too blunt a tool for such tasks [*establish standards that will be appropriate throughout the cycle –for both the boom period and the bust*]. Generally, it will be better to develop and use more surgical instruments designed to fit the particular circumstances".

they take decisions, and what means of transparency and accountability is in place, but also it must place the incentives of financial authorities to pursue an ongoing, long-term, and systemic approach. The central bank has the enormous task of maintaining the agenda of this council along this line.

Second, to implement a functioning and effective macroprudential policy, the authorities in charge of procuring financial stability should have at their disposal a collection of prudential instruments that are suitable, coherent, and effective. Here, it is necessary to create a tailor-suited macroprudential toolkit for each jurisdiction, which should evaluate all relevant expected benefits and costs of the instruments, taking into consideration that the effects of some instruments could be correlated with those of others.

Finally, although a financial stability council could have a chief function in terms of resolutions and resilience; it should place emphasis on developing some machinery with the purpose of detecting risks and vulnerabilities in the financial system in advance. The council should adopt a quantitative approach of the macroprudential policy to do so, by encouraging the standardization and collection of useful information to monitor financial stability and the construction of indicators and methodologies to assess systemic risk objectively. The council must promote that the financial authorities provide and analyze such data systematically, sharing and using it opportunely.

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