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Monetary policy in liberalized financial markets: the Mexican case

by Santiago Capraro and Carlo Panico[1]

Abstract

The paper examines the conduct of monetary policy and the institutional organization of economic policy in Mexico during the years of financial liberalization and the outgrowth of the financial industry. It argues that they have favored the monetary and financial stability at the cost of reducing investment and negatively affecting the strength of the productive structure and the international competitiveness of the Mexican economy. The paper argues that these negative results will eventually make the present conduct of monetary policy unable to pursue the monetary and financial stability of the economy. Unlike other outstanding critical literature, the emphasis of our evaluation of the negative consequence of the current policy is on the reduction of public investment that the institutional organization of economic policy produces, rather than the over-valuation of the real exchange rate. The paper finally discusses how the institutional organization can be reformed to avoid weakening further the productive structure and the international competitive of the Mexican economy.

JEL: E58, F31, H54, F56

Key words: monetary policy, exchange rate, foreign reserves, public investment, institutional organization.

Introduction

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"Financial liberalizations" have affected several aspects of the life of nations in recent decades. We use this expression to refer to the processes, initiated after the "Bretton Woods era", which led to the liberalization of the international capital movements and to the changes in regulation that the financial industry was able to impose owing to its capacity to affect politics and legislation.[2] These processes have promoted a huge expansion of the financial industry, which has in turn generated low growth, income inequality and a rise in the systemic risk that brought to the crisis of 2007-2008.[3]

The paper examines how financial liberalizations have affected the conduct of monetary policy and the institutional organization of policy coordination in Mexico, a middle-income country that began to liberalize its external accounts after the crisis of 1982, reformed the institutional organization of monetary policy in 1993, and officially adopted the inflation-targeting regime in 2001. In 1994-95 Mexico was hit by another financial crisis, following which it abandoned the "nominal exchange rate targeting with a crawling band regime" to move to a "floating regime", which however avoids autonomous movements of the exchange rate, i.e. movements in a different direction from thaose followed by the majority of Latin-American economies (see Basnet and Sharma, 2015). The adoption of this regime submits that financial liberalizations have reduced the ability of the national authorities to devaluate and control the exchange rate.[4]

The paper argues that the constraints set by financial liberalizations and the outgrowth of the financial industry are weakening the productive structure and the international competitiveness of the Mexican economy and will eventually make the present conduct of monetary policy unsustainable. With the passing of time, that is, the weakness of the productive structure will prevent policy from maintaining monetary stability. The paper then concludes that reforms of the institutional organization of economic policy are needed to counteract these problems.

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[2] These changes in financial regulation have replaced an approach based on the respect of pre-established coefficients (e.g., capital requirements) for that based on the discretionary power of the authorities over the managers of financial firms (see White, 2009 and Panico *et al.*, 2016).
[3] The literature on "financialization" is not homogeneous and underlines different aspects and results of these phenomena (see Epstein, 2005; Palley, 2007; Hein, 2010; 2012; Panico and Pinto, 2017).
[4] Some first signs of the loss of autonomy of national policies manifested themselves during the financial crises of the 1990s when central banks exhibited a "fear to float" the exchange rate (see Obstefeld and Rogoff, 1995; Calvo and Reinhart, 2000).

Dealing with the deterioration of the international competitiveness of emerging countries, some outstanding critical works (see Galindo and Ros, 2008; Blecker, 2009; Frenkel and Rapetti, 2009, 2012; Ros, 2015; Bresser-Pereira, 2016) have focused on the appreciation of the real exchange rate. For Galindo and Ros (2008, p. 16), monetary policy should promote a competitive exchange rate by intervening when the exchange appreciates and allowing it to float freely otherwise (see also Frenkel and Rapetti, 2012, pp. 47 and 53-54 and Ros, 2015, pp. 165-66). For Bresser-Pereira, an emerging country 'will go from currency crisis to currency crisis if it does not pursue an active exchange-rate policy' that autonomously devaluates the exchange rate (2016, p. 335; see also p. 333).

The paper we present does not discuss the effects of an overvalued exchange. It moves from the standpoint that autonomous exchange devaluations are risky in the presence of liberalized capital movements and a powerful financial industry and argues that the weakness of the productive structure and of the international competitiveness can also depend on other aspects of the conduct of monetary policy and on the organization of the coordination process between fiscal and monetary policies. This weakness can lead the country from crisis to crisis even if the real exchange rate is not overvalued.

The paper then proposes to strengthen the productive structure and the international competitiveness of the economy by relying more on national institutional reforms than on autonomous devaluations of the exchange rate. The reforms have to resume a cooperative attitude among the authorities participating in the coordination process of economic policies, without affecting the confidence and the consensus of financial markets enjoyed by the central bank. Moreover, they have to make government policies more flexible and efficient. These policies should not simply stimulate effective demand. They should identify a development strategy to strengthen the productive structure and to avoid that the increases in effective demand will result in balance of payments' disequilibria.

The paper is so organized. Section 2 deals with the instability of exchange markets and the accumulation of international reserves. Section 3 describes how monetary policy in emerging economies is bounded to operate in order to maintain some control on monetary issues and interest rates in a situation of rising official reserves. Section 4 focuses on the changes in the institutional organization of economic policy introduced to cope with the expansion of financial markets, arguing that they are weakening the productive structure and the international competitiveness of the Mexican economy. Sections 5-7 describe the forms of independence enjoyed by *Banco de México* (BdM), assessing them on the basis of the debates recently raised in the literature. Section 8 deals with the reforms of the institutional organization needed to improve the coordination process between fiscal and monetary interventions and the quality of national policy. Section 9 concludes.

2.- Exchange rate volatility and foreign reserves in developing countries: stylized facts for Mexico

During the 1970s, some literature (see McKinnon, 1973; Shaw, 1973) recommended financial liberalizations with the promise that they would eliminate "financial repression", which prevents capital from flowing from rich to poor and medium-income countries. According to these works, financial liberalizations would have improved the growth and income equality of the latter countries. This policy was recommended in the 1990s by the international organizations (see IMF, 1997; Eichengreen and Mussa, 1998).

The promises were not fulfilled (see Eatwell, 1997; Akyüz, 2006). On the contrary, liberalizations brought in new phenomena, which were unfavorable to poor and medium-income countries and were related to the increased size of the financial industry:

1. the difficulty of national policies to autonomously control the exchange rate;
2. the need to accumulate a growing amount of international reserves;
3. the need to keep interest rates at higher levels than rich countries.

The growing size of the international financial transitions after the "Bretton Woods era" has made the exchange markets more speculative and volatile.[5] After the breakdown of Lehman Brothers the volatility has further augmented. Figure 1 describes the evolution of

[5] During the "Bretton Woods era" financial transactions in foreign exchange markets grew approximately at the same rate as the flow of merchandise export. On the contrary, from 1977 to 2007, the daily average of foreign exchange market turnover measured at current dollars rose 404.81 times, while the annual flow of merchandise export measured at current dollars increased 12.43 times. This implies that the flow of merchandise export grew at an average annual rate of 8.76% and the average daily value of financial transactions in the foreign exchange markets grew at an annual rate of 22.15%. The difference between these two rates testifies to the dominance of speculative operations in the foreign exchange markets.

an indicator of this amplified level of instability, i.e. the number of days during the previous year showing a daily variation of the exchange rate between the Mexican peso and the dollar greater than ±1%.

INSERT FIGURE 1 HERE

After the crisis of 1994 the Mexican central bank decided to abandon the nominal exchange rate targeting with a crawling band regime and to manage a spurious floating regime that signals to financial operators its compromise with counteracting the large movements of the exchange rate. Since then, the movements of the nominal exchange rate between the peso and the dollar have followed a path similar to that of the currencies of the others emerging economies (see Basnet and Sharma, 2015). Like them, the peso has devaluated when events raising the degree of uncertainty in the international markets occur and has shown a tendency to recuperate, or revaluate, during other periods (see Figure 2).

INSERT FIGURE 2 HERE

Figure 3 describes the evolution of the multilateral real exchange rate of the Mexican peso. It shows that after the devaluation of the 1994 crisis, the multilateral real exchange rate appreciated until 2001 (see also Galindo and Ross, 2008, p. 14). Since then, the real exchange rate has been presenting a tendency to decline, even if, in the wake of the depreciations that simultaneously affected the majority of the currencies of emerging economies (see 2009, 2011-2012, and 2015-2016), the real exchange rate has tended to appreciate, eroding the gains in competitiveness earned through the earlier devaluations.

INSERT FIGURE 3 HERE

The documents of BdM (2017b) assert that the exchange policy aims at maintaining the stability of the purchasing power of the national currency. This interpretation has been challenged. Céspedes *et al.* (2014, p. 185) and other authors[6] point out that in several Latin American countries, including Mexico, the inflation-targeting regime is implemented in a way that deviates from the standard structure. They hold that financial

[6] See Canales-Kriljenko, 2003; Hüfner, 2004; BIS, 2005; Rosas-Rojas, 2011. On the Mexican case, see Mántey G., 2009; Capraro and Perrotini, 2012.

liberalizations have made the control of the volatility of the exchange rate a key monetary policy action, conducive to defending the national economy from international speculation, although the central banks have failed to explain that this objective is as relevant as the purchasing power stability of the currency.

The Mexican exchange policy is implemented through variations in the interest rate, foreign exchange interventions and the accumulation of international reserves. The recent literature is increasingly focusing on the changes occurred in the latter element,[7] pointing out that financial liberalizations, rather than serving as a springboard for investment, as promised, are obliging the central banks of emerging countries to raise the accumulation of reserves to ward off the instability of the international markets.

Figure 4 points out that Latin America's official reserves have systematically climbed since the 1980s. In Mexico, they swelled to over 16% by 2016. By contrast, the official reserves in the United States have been oscillating in recent years around 2%.

INSERT FIGURE 4 HERE

On the subject of these trends, the literature has highlighted that the rise of reserves has brought in an increase in financial investment flowing from poor and medium-income countries to rich ones. Thus, the international financial system behaves in such a way as to favor the rich economies. The literature argues that liberalizations and the outgrowth of the financial industry have reinforced the hierarchies across currencies. It has introduced a distinction between "Class A" currencies, which include the dollar, the sterling pound, the euro, and a small group of currencies of rich economies, and "Class B" currencies, including the others. When uncertainty is low in financial markets, speculative capital flows from rich to emerging economies on account of the highest rates of remuneration paid there. Yet, when uncertainty rises agents prefer high quality (Class A) currencies to low quality (Class B) ones, on account of the higher probability of devaluation of the latter.[8] As a result, in times of uncertainty major capital transactions flowing from poor

[7] See McKinnon (2002); Aguiar de Medeiros (2008); Calvo *et al.* (2012); Bussière *et al.* (2014); Prasad (2014); Calvo (2016); Banco de México (2017a).

[8] MacKinnon (2002) calls Class B currencies "temporary money" and Class A currencies, which tends to dominate when uncertainty festers, "definitive money".

and medium-income countries to rich ones take place, which is why in the former central banks need to accumulate international reserves in times of greater peace of mind.[9]

According to Calvo (2016), by accumulating reserves the central banks of emerging economies try to build up a defense against the risk of speculative attacks that may end in sudden stops of capital. For Bussière *et al.* (2014), the amount of reserves a central bank has to accumulate for such purpose depends on the deficits of the current account of the balance of payments and on how well the economy has performed in terms of financial stability in its recent history. The latter element highlights the importance of counting on a central bank that enjoys the confidence and the consensus of the financial industry.

3.- Management of Foreign Reserves and Money in an inflation targeting regime: the Mexican case

The need to increase the accumulation of reserves has changed the conduct and the institutional organization of economic policy. The purchase of large amounts of reserves floods the markets with monetary base and forces the central bank to implement "sterilizing operations". Figure 5 shows that BdM regulates the monetary base (MB) by offsetting the rise of reserves, represented by Net Foreign Assets (NFA), with a reduction in Net Domestic Credit (NDC), i.e. by receiving credit from the public sector and from credit institutions. The Figure submits that BdM's discretionary powers allow it to give the monetary base a regular growth and to signal to financial operators that it can control this aspect of monetary policy.

INSERT FIGURE 5 HERE

The orderly growth of the monetary base does not imply a "rigid" control over monetary aggregates, i.e. a constrain that makes them grow at a pre-established constant rate. From this perspective, BdM carries out a "pragmatic" control over them. Table 1 shows that they grew at a higher rate than the nominal GDP over the whole period 1998-2017.

[9] See Mohanty and Turner (2005; 2006); International Relations Committee Task Force (2006); Frenkel (2015).

The persistent positive difference between these rates signals that the central bank prefers stabilizing the interest rate rather than the supply of money, letting that some part of the monetary issue nourishes the speculative activity of the financial industry. In the analytical model representing the inflation-targeting regime, which assumes that money is neutral and that the economic growth potential is attained, this accommodating behavior towards the needs of the financial industry implies that the central bank is open to undertake an inflationary risk.

INSERT TABLE 1 HERE

The accommodating attitude towards the needs of the financial industry does not manifest itself in public sector financing. The two principal instruments to agree on credit between the public sector and the central bank are:

1. the "Current Account of the Treasury of the Mexican Federal Government",
2. the "Monetary Regulation Deposits in Government Securities" at the central bank.

The Mexican legislation stipulates that the public sector cannot receive credit from the central bank through the issue of bonds.[10] It can only receive credit through the Current Account of the Treasury of the Mexican Federal Government. The law prohibits this account balance from exceeding the limit of 1.5% of the outlays planned in the Federation Budget.[11] However, although legislation does permit a negative balance, the Mexican government has chosen to limit itself by lending financial resources to the central bank, instead of receiving them for conducting its policy. As shown in Figure 6, the account balance has been constantly positive since 1994. It represents a high percentage of public spending and GDP, hovering around 8% of the former since 1995 and exceeding 2% of the latter between 2011 and 2016.

[10] Article 9 of the Bank of Mexico Act (*Ley Orgánica del Banco de México*), approved in 1993, prohibits this institution from buying government securities except when these purchases are positions taken by BdM itself on the issuance auctions for an amount no greater than that of the bonds maturing on the auction day.
[11] Article 12 of the Bank of Mexico Act provides the following: "The balance which, if applicable, is held by the Federal Government, shall not exceed a limit equivalent to 1.5% of the Government's planned outlays in the Federation Budget of Expenditures for the fiscal year in question, not considering those earmarked for paying off the Government's debt; with the caveat that, in extraordinary circumstances, the temporary difference between public revenue and spending rises considerably." Article 24 reinforces this constraint, allowing BDM to issue securities on behalf of the Federal Government, depositing the outcome of these issuances in a non-withdrawable deposit managed by BDM in the name of the government.

INSERT FIGURE 6 HERE

“Monetary Regulation Deposits” are used to carry out “sterilizing operations”. When BdM deems it necessary, credit institutions must deposit the liquidity generated by the purchase of official reserves into the central bank. They can be set up as “Deposits in Government Securities” or “Deposits in Pesos”. Both impose on the balance sheet of credit institutions a transformation of monetary base into long-term assets (government bonds or long-term deposits at the central bank). Through this transformation, BdM makes sure that, in spite of the increase of official reserves, credit institutions face a lack of liquidity and must turn to the daily auctions of monetary base at the central bank.

The “Monetary Regulation Deposits in Government Securities” influence the size of the net credit the central bank has with the public sector. Credit institutions must buy these securities, which BdM issues on behalf of the government, as set by Article 23 of the “Bank of Mexico Act”. The result of these sales is allocated to non-withdrawable deposits, paying no interest, handled by BdM in the name of the Federal Government.

“Monetary Regulation Deposits in Pesos” represent, instead, a loan of credit institutions to the central bank. They are the main instruments used by BdM to receive loans from these institutions. The procedures of monetary policy prescribe that credit institutions take part in two kinds of operations made at the initiative of the central bank: the "daily" ones for short-term liquidity and the "structural" ones for long-term monetary regulation. According to the procedures of monetary policy, the balance of the current accounts that credit institutions use to deposit in the central bank the liquidity acquired in the daily auctions must be zero at the end of each day. Thus, these accounts do not represent net credit of this sector to the central bank. On the contrary, when BdM obliges credit institutions to purchase of Monetary Regulation Deposits in Pesos, the net credit of this sector to the central bank increases.

To credit institutions, Monetary Regulation Deposits in Government Securities are more convenient than those in Pesos, because they make it possible to mobilize the sums they deliver to the central bank for reasons of monetary regulations. The choice between issuing Deposits in Government Securities or in Pesos means that BdM decides to what extent the Mexican taxpayers or the credit institutions are going to shoulder the costs of keeping monetary policy functioning; in other words, the costs of controlling monetary issuance and the interest rate. BdM has a wide margin of discretion on this point, because it can, at its own choice, change the total amount of the Monetary Regulation Deposits, and because it can impose the same control on monetary issuance by opting to change the shares of credit institutions and of the public sector in Net Domestic Credit. Table 2 shows that BdM has recently opted for a greater participation of the government sector.

INSERT TABLE 2 HERE

This choice does not reflect a technical necessity. Rather, it is a political decision designating who ought to bear a greater portion of the "sterilizing operation costs". BdM has chosen to side with credit institutions, despite the fact that their earnings have skyrocketed in recent years (see Figure 7).

INSERT FIGURE 7 HERE

The official documents do not clarify the reasons underlying this decision.

4.- Institutional organization of monetary and fiscal policy, financial markets and international competitiveness

In Mexico, as in other emerging countries, the accumulation of reserves has created a new historical situation: it has converted the government into a net creditor of the central bank. The size of the credit granted by the government sector is large. The sum of the balance of the Current Account of the Treasury and of the Monetary Regulation Deposits in Government Securities has been approaching 10% of GDP (see Table 2).

The political authorities have been adhering to these new conditions, accepting to restrain the discretional management of their policy. The parties that have been in power during the last decades have accepted to maintain a high positive balance in the Current Account of the Treasury of the Federal Government, even if legislation allows them to receive credit through it. Moreover, the Congress of the United States of Mexico approved in 1993 the "Bank of Mexico Act" that attributes vast discretionary powers to this institution in the management of Monetary Regulatory Deposits. It allows the central bank to issue bonds on behalf of government without asking permission to the Treasury and to allocate the results of these sales to non-withdrawable deposits, paying no interest, handled by the central bank in the name of the Federal Government. Likewise, the Congress approved in 2006 a fiscal rule, the "Budget and Treasury Responsibility Federal Act" (*Ley Federal de Presupuesto y Responsabilidad Hacendaria*), imposing a medium-term or cyclically-adjusted balanced budget that, according to the literature, is negatively affecting investment and growth (see Ros, 2015, pp. 160-63 and the literature there cited).

Financial liberalizations have been imposing the introduction of rigid fiscal rules in most countries since the 1990s. These rules have created another new historical situation, i.e. the relegation of the democratically elected authorities to a secondary role in the process of coordination among different economic policies, and have had some negative effects on the economies for being pro-cyclical and for restraining the government expenditures (like those in public investment and education) that tends to produce positive effects on the potential output of the economy with some time lag. The occurrence of these problems is recognized by the recent literature on the coordination process between fiscal and monetary policies (see Blanchard and Giavazzi, 2004; Buiter and Grafe, 2004, Wyplosz, 2005. For a review of this literature, see Panico and Vazquez Suarez, 2008). The Mexican statistical information corroborates that public investment has decreased. It has been falling 4.5% annually between 2009 and 2016, reaching a sheer 1.8% of GDP in 2017, which represents a historically low level.

The reduction in public investment negatively affects the productive structure. It has a negative effect on total investment and most likely arouses a crowding in effect on private investment (see Ros, 2015, pp. 160-63 and the literature there cited), which, together with the public one, is the main tool to improve the international competitiveness of the economy. These negative effects can already be observed in statistical information, showing the increasing weakness of the current account of the balance of payments. Figure 8 considers an indicator of the weakness of the current account. It points out that over the time period 2013-2016, the same growth rate generated a higher current account deficit than in the time period 2003-2012.

INSERT FIGURE 8 HERE

Figures 9A and 9B elaborate another indicator of the weakness of the current account of the balance of payments. On the basis of the data presented in Figure 8, they calculate the rate of growth of GDP that can maintain the current account in equilibrium[12], showing that it has a tendency to diminish. What's more, the two Figures show that there is an alarming analogy between the tendencies of this indicator during the period 1996-2016 and during the period that preceded the crisis of 1994.

INSERT FIGURES 9A and 9B HERE

The analogy suggests that the present conduct of monetary policies and the related institutional organization of economic policy can turn out unsustainable with the passing of time. They can prove unable to protect the economy from speculative attacks against the national currency. As Bussière *et al.* (2014) points out, the progressive deterioration of the current account of the balance of payments raises the probability of these attacks.

This conclusion indicates that the weakness of the productive structure of emerging economies can also depend on the conduct and organization of policy, which can lead the country 'from currency crisis to currency crisis' even if the real exchange rate is not overvalued. By introducing national reforms that improve the quality of government policy and strengthen the productive structure and the international competitiveness, emerging economies can reduce their dependence from the international financial industry and from political, economic and financial events occurring outside the country.

5.- Bank of Mexico´s idiosyncratic independence

Financial liberalizations and the outgrowth of the financial industry have been accompanied by several changes in the institutional organization of monetary policy and of the process of coordination between monetary and fiscal policies. After that in New Zealand in 1989, a large number of reforms were introduced in different countries, within

[12] Using the data of Figure 8 we draw for each year t a decreasing 45° line to which the couple d_t y g_t, representing the current account deficit and the rate of growth of that year, belong. The equation corresponding to these lines is $d_t = - g_t + b_t$. The value of b_t can be interpreted as the rate of growth that would have made the current account deficit of that year equal to zero. If b_t diminishes, the balance of payment constraint to economic growth can be seen as deteriorating. This can be interpreted as a decline of the international competitiveness of the economy. On the contrary, if b_t increases, the external restriction to growth can be seen as improving, a result that can be interpreted as a progress in the international competitiveness of the economy.

a few years, to modify the legislation on central bank independence (see Cukierman, 1998). In 1993 the Mexican Congress modified Article 28 of the Constitution and approved the "Bank of Mexico Act".

The expression "central bank independence" acquires different meanings according to the powers assigned to the central bank. The idea of attributing some forms of independence to this institution arose after the First World War, when complex problems, related to the dimension of the public debt issued during the war and freely floating across the international markets, persuaded the political authorities to delegate their management to technical experts (see Sayers, 1976; Panico and Piccioni, 2016 and 2018).

Since then, three forms of independence were ascribed to central banks: "staff", "financial and administrative", and "technical or instrument" independence.[13] They wanted to strengthen the ability of central banks to resist the pressures of powerful economic and political groups and fortify their capacity to work in the interest of the whole society.

Another form of independence granted to central banks is in the sphere of "monetary issuance" and refers to their capacity to control the amount of money in circulation without the interference of national or foreign political and economic entities.[14] The documents of BdM place great importance on this form of independence. The text "*Historical Outline*"[15] affirms that autonomy implies that the amount of the monetary base in circulation shall be solely reliant on the decisions made by BdM's Governing Board; that the laws granting this autonomy establish that no authority shall be entitled to order the Board to grant financing; and the background, seniority, removal, and remuneration of board members shall not affect their technical decisions. As we saw in

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[13] "Staff independence" refers to the rules for the naming, duration, removal, and remuneration of governing body members. The Mexican legislation grants BdM a satisfactory degree of this form of independence (see Articles 38-44 and 49-50 of the Bank of Mexico Act). "Financial and administrative independence" refers to the central bank's capacity to fund its activity with its own resources, rather than depending on transfers from the public sectors or other entities that could influence the decisions made by its executive bodies, and to manage them pursuant to their own criteria. BdM earns from its activity sufficient resources to maintain financial independence and to pay back to the Federal Government what exceeds its requirements. "Technical independence" refers to a central bank's ability to manage monetary policy on the basis of its technical evaluation, without the interference of other national or international political or economy bodies, and considering what is best for society as a whole and not only a portion of it.

[14] The way this control is realized changes over time, adapting itself to the mutable organization of the international financial system (see Panico and Rizza, 2004; Panico and Piccioni, 2016).

[15] Available at goo.gl/ENSckt.

Section 3, BdM enjoys large discretionary powers allowing a suitable control of the monetary base.

Unlike other central banks,[16] BdM enjoys another form of independence, which is bound up in the "objectives and priorities". It allows the central bank to set the values of some relevant variables (e.g., inflation rate) as the objectives that monetary policy has to pursue and to set priorities among them when they cannot be simultaneously achieved. This form of independence has been at the center of important debates. In what follows, we assess this form of independence attributed to BdM in the light of these debates, considering the question of the identification of the final objectives of monetary policy, the compatibility between them and the procedures of representative democracy, and the role of transparency and credibility.

6.- Bank of Mexico´s single objective and priorities to debate

The documents of BdM underscore that the Constitution and the "Bank of Mexico Act" stipulate that the stability of the purchasing power of the currency is the priority objective of monetary policy and that legislation has reinforced the autonomy of the central bank in order to effectively pursue this goal. The document also specifies that BdM can implement, when it deems necessary, 'its own measures designed specifically to counteract shrinking economy activity' (BdM, "Historical Outline", Section: Banco de México's response to the financial crisis of 2008-2010[17]).

A closer look at this legislation points out that the stability of the purchasing power of the currency cannot be interpreted as an end in itself, but rather as a condition to achieve the goals of development and social justice.[18] It also points out that the stability of the

[16] The reform of the Bank of England was approved in 1997, with an eye to the vision of the New Consensus in Macroeconomics. Nevertheless, English society rejected the idea of granting the central bank independence as to objectives and priorities, considering that to run contrary to the principles of representative democracy. After four years of discussion, the law stipulated that although the central bank can make proposals thanks to its expertise on the topic, democratically-elected bodies must make the formal decisions as to objectives and priorities.

[17] Available at goo.gl/ENSckt.

[18] The new content of Article 28 of the Constitution and the description of the motives behind this reform and the introduction of the "Bank of Mexico Act" confirm this standpoint. They remind that public policy objectives must be on the same wavelength as the final goals of the Constitution, entrenched in the development of the country, the distributive justice, and the respect of the dignity of the citizen.

purchasing power of the currency is the principal, but not the unique, objective of monetary policy. As an autonomous body, BdM, which is specialized on the monetary aspects of public policy, decides how to deal with other policy problems in order to accomplish the Constitutional aspiration of social justice.

Thus, legislation does not prohibit the interventions on the defense of the national economy from the speculative attacks of the international financial industry. It leaves the decisions concerning these interventions to the discretion of the central bank. As we saw in Section 2, a large part of the literature argues that BdM already considers the defense of the national economy from the speculative attacks as important as the stability of the purchasing power of the currency. Legislation attributes the same discretion to BdM as to the decision regarding its participation in activities aiming at strengthening the productive structure and the international competitiveness of the economy. As we saw in Section 4, the weakness of the international competitiveness is generating an alarming trend in the balance of payments, raising the risk of speculative attacks against the national currency and calling for an improvement on this aspect of economic policy.

The participation of the central bank in activities strengthening the international competitiveness of the economy is thus coherent with the Mexican legislation. Moreover, it is in line with the behavior of most central banks in rich and emerging countries. By examining this behavior in different countries, recent literature (see Bhattacharyya, 2012; Rosengren, 2013) has concluded that, whatever the objectives assigned by national legislation to them, central banks tend to have a pragmatic attitude towards the achievement of the different policy goals. According to these authors, whether legislation states that monetary policy only has to pursue low inflation (see Sweden and South Korea), or has low inflation as the priority (albeit, not sole) objective (see UK and India), or has a dual mandate having to care for inflation and the level of activity (see USA), central banks pragmatically cooperate with the government and other public bodies to the promotion of a high level of activity and employment and to the fortification of the productive structure. Presenting his work to other colleagues of the central banks, Rosengren (2013, p. 11) concluded that 'perhaps a lesson to draw … is that, regardless of the formal structure of the central bank, all of us are dual mandate banks «at hearth»'.

Independence pertaining to "objectives and priorities" is not a form traditionally granted to central banks (see Panico and Rizza, 2004). It started to be taken in consideration after the publication of the papers by Kydland and Prescott (1977) and Rogoff (1985). The latter inspired some new works, known as "institutional design literature", analyzing the positive effects on the social welfare of appointing a "conservative" central banker, i.e. a person more repulsive to inflation than the median voter. These writings, which served as a key touchstone for the Washington Consensus and the New Consensus in Macroeconomics, opened up discussions about the attribution of this type of independence.

The reactions in the literature and from several central banks have been categorical in this regard. Several authors have asserted that the institutional design literature mistakenly portrays the working of the institutions deciding economic policy. Blinder (1997a; 1998) and Stiglitz (1998) deny that the Federal Reserve has any inflationary bias and maintain that a central bank does not overlook the political and institutional backdrop against which it acts. In a democratic society, argues McCallum (1996), if the central bank systematically pursues objectives different from those of the government, it raises the likelihood that the political authority will change the laws regulating the monetary authority powers.[19] Tobin (1994) and Samuelson (1994) hold that Rogoff's stance violates the principles of representative democracy because, based on an abstract idea of social welfare, it proposes an institutional structure that systematically denies the value of voter preference, disregarding that democracy implies respect for its procedures.[20] Finally, Greenspan (1996), when he was Chairman of the Federal Reserve, affirmed: 'Our monetary policy independence is conditional on pursuing policies that are broadly acceptable to the American people and their representatives in the Congress.'

The existence of this debate has not prevented BdM from assuming responsibility in deciding monetary policy objectives and priorities and establishing the rate of inflation that must be taken as the objective of monetary policy. The Mexican legislation does not

[19] Kaldor (1970) too affirmed that monetary policy decisions are affected by the need to prevent the political authorities from changing the powers of the central banks.
[20] For further references regarding this debate, see Panico and Rizza (2004).

specifically allot this prerogative to BdM, leaving it vague as to who should set monetary policy objectives and priorities. However, the central bank has made decisions, capitalizing on this legal loophole,[21] its own expertise in the topic, and the absence of debate in society and in the legislative branch about this aspect.[22]

Since 1995, BdM had been taking the rate estimated in the agreements signed with the government as its inflation target. Starting in 2001, it began to propose the inflation target autonomously. Regarding priorities, BdM's documents (2013, p. 52) highlight that its commitment to keeping inflation stable and low 'has led economic agents to have more reliable expectations as to the future path inflation will take when making decisions on consumption, savings, and investment' and has contributed to making the resource allocation more efficient. The documents deduce that by meeting the inflation target, the economy achieves its growth potential, without delving into whether the economic policy can improve the results obtained. As such, it is not necessary to set priorities because the objectives are not contradictory among themselves.

7.- Central Banks Independence and transparency policy: The Mexican case.

The inflation-targeting regime is also characterized by the use of rules of transparency, which entail three forms of actions: presentation of Reports, publication of the minutes of the meetings of the central bank, and spoken evidence to political authorities. This aspect of the institutional organization aims at reinforcing the credibility of the central bank and the efficacy of its policy. The idea that the independence and credibility of the central bank improve the efficacy of monetary policy has been prevailing since the 1920s, although it was motivated differently from the recent inflation-targeting literature.

In several writings, including the *General Theory*, Keynes pointed out that policies where a central bank is able to develop its technical role without the interference of other public or private entities are most likely to be successful. He claimed that the independence and

[21] Something similar happened in England in the 1920s and 1930s. Keynes (1932) commented on it in a debate with the Labor Party on the forms of independence granted to the Bank of England (see Panico and Piccioni, 2018).

[22] The persistence lack of debate about who should have this responsibility suggests there is no real disagreement in politics about this solution.

the prestige of the Bank of England are positive values for society (see Keynes, 1932, p. 132).[23] The independence helps ensure that the decisions made are in the interest of society as a whole. The prestige reflects the trust in the central bank's capacity to interpret and control economic events and, therefore, its ability to guide the expectations of financial operators and the private sector. According to Keynes (1926, pp. 315 and 318; 1932, p. 131), to reinforce its prestige the central bank has to foster communication with the public and allow experts to critically discuss its judgments and decisions.

A standpoint similar to that of Keynes prevailed after the Second World War until the 1980s (see Panico and Rizza, 2004). Then, the analysis of Kydland and Prescott (1977) on the dynamic inconsistency problem and the contributions of Rogoff (1985) and of the "institutional design literature" led to the development of the model of the New Consensus in Macroeconomics representing the working of the inflation-targeting regime, which introduced a new vision on the issues of independence and credibility.

This vision too admits that independence improves the efficacy of monetary policy because it makes operators believe in its announcements and base their expectations on what the central bank says. Nevertheless, in this case, the term credibility, more than to the confidence in the central bank's technical acumen, is tied to the capacity of the institutional structure to prevent the monetary authority from misusing its discretion. According to this view, the independence and discretion of the central bank must come with a high degree of transparency, which reinforces the belief that the central bank is committed to its objectives and reduces the risk that the monetary authority will behave inconsistently through time, favoring the administration in power via "surprise effects" that spur rising inflation.

On this subject too, several authors have claimed that the vision proposed by the New Consensus in Macroeconomics misrepresents the working of the institutions taking decisions on economic policy. Recalling his experience at the Federal Reserve, Blinder (1997a, p. 15) says that he 'never saw a single case of a central banker succumbing to the

[23] In the *General Theory*, Keynes asserted: 'A monetary policy which strikes public opinion as being experimental in character or easily liable to change may fail in its objective of greatly reducing the long-term rate of interest …. The same policy, on the other hand, may prove easily successful if it appeals to public opinion as being reasonable and practicable and in the public interest, rooted in strong conviction, and promoted by an authority unlikely to be superseded. (Keynes, 1936, p. 202)

temptation that so worried Kydland and Prescott'. Central banks, he said, value highly their reputation of monetary stability custodians and concluded that on this point the dynamic inconsistency approach 'is barking at the wrong tree' (Blinder, 1998, p. 24).

The same stance is found in multiple documents published by the Federal Reserve, which over the past two decades has engaged in open communication with the public to reinforce the operators' trust in its ability to interpret and control economic events (see Le Heron, 2007). This literature underscores that monetary policy predicated on "communication and trust" - understood as a strategy opposing that of the New Consensus, grounded in "transparency and credibility" – is for the central bank the most effective way to gain a reputation of competent and efficient technical body.

This reputation contributes to strengthening the efficacy of monetary policy, the position of the central bank in the social and political context, and the consensus it enjoys among financial operators. As Blinder noted (1997a, p. 15; 2004, pp. 67-68 and 94-95), central banks need to strengthen their position in the social and political context and their consensus among financial operators. Nevertheless, this concern can be a source of ambiguity and problems if the central bank, to achieve this outcome, seeks the approval of the operators by making decisions that speak only to their interests.[24]

In recent years, the monetary policy structure in Mexico has been adjusting, albeit still with limitations and shortcomings, to the forms of transparency used in the countries following an inflation-targeting regime. Article 51 of the "Bank of Mexico Act" establishes that the central bank has to present to the Federal Government and to the Congress a quarterly Inflation Report.[25] Yet, while the UK legislation specifies in detail the questions that the Bank of England has to answer in its Reports, the Mexican law allows BdM to identify the issues that the Reports have to deal with. As to the publication

[24] Blinder (1997a, p. 15) says: 'While I never saw a single case of a central banker succumbing to the temptation that so worried Kydland and Prescott, I often witnessed central bankers sorely tempted to deliver the policy that the markets expected or demanded'. In general, this temptation does not lead to a successful monetary policy: 'A central bank that tries too hard to please currency and bond traders may wind up adopting the market's ludicrously short effective time horizons as its own' (Blinder, 2004, p. 94).

[25] The article establishes that the Report has to give information on the evolution of other economic indicators too. Moreover, it establishes that (1) in January BdM has to present a document describing the main lines of the policy it intends to pursue in the new year; (2) in April it has to present a document describing the policy it has pursued in the second semester of the previous year; (3) in September it has to present a document describing the policy it has pursued in the first semester of the current year.

of the minutes of the meetings of its Governing Board, BdM started to publish them in 2011 and improved their content in 2018 by revealing the identity of the voters in favor and against specific resolutions. Nonetheless, BdM does not publish the minutes of its meeting with the Treasury, as does the Bank of England. Finally, Article 52 of the "Bank of Mexico Act" establishes that any member of the Congress can call on the Governor of BdM to provide spoken evidence on issues related to the activities of the central bank.

These procedures raise the accountability of BdM. Yet, they do not eliminate the risk that the conduct of monetary policy be examined by evading crucial problems. To mention one example, the procedures have not eliminated the opacity on the reasons of the BdM's choice to reduce the participation of credit institutions in the costs of "sterilizing operations". They leave it open the possibility of interpreting this choice as an attempt of the central bank to seek the approval of the operators by making decisions that speak to their interests.

Trust, prestige, reputation, credibility, confidence are complex terms. Beyond formal procedures, a central bank has to build its reputation by constantly showing that it is able to interpret and control events and by persistently adhering to the announced objectives. As the experience of the Federal Reserve shows, a credible central bank has the ability to shape the views of financial operators by clarifying that its choices are based on analyses of what the economy needs to enhance stability and growth.

8.- A new kind of monetary and fiscal policy coordination to escape from the trap of low growth

The document of BdM (2008, p. 10) states that coordination of monetary and fiscal policy is essential for stability and growth. Nevertheless, in spite of the controversies on this point, the document does not clarify which form coordination should take.

Financial liberalization and the financial industry's growth spurt have imposed an institutional structure that places monetary policy front and center and curbs the role of the rest of governmental policies. This trend has led to issues in practically every economy and even led some authors to propose reforms that would enable the discretionary use of fiscal policy once again.[26]

Two alternative positions have dominated the debate on coordination. On the one hand, the posture tied to the New Consensus in Macroeconomics trusts the capacity of spontaneous market forces to reach potential growth and presumes that governmental policies generate inefficiency in the allocation of resources. On the other, there are authors who do not trust spontaneous market forces to create optimal results and believe that an appropriate blend of fiscal and monetary policy is necessary in order to jumpstart growth and shore up the productive structure.

According to the former view,[27] policy coordination should be organized by giving substantial discretion to an independent central bank and by "tying the hands" of the democratically elected authorities, whose decisions are based on a time horizon constrained by the next Election Day. According to these authors, coordination ought to be grounded in "transparent" and "flexible" rules. In other words, it should unambiguously outline the rules of conduct for government authorities and should prevent economic policy from becoming pro-cyclical and curtailing public investment. Blanchard and Giavazzi (2004) give an example of flexible standards in England's introduction of the "golden rule," which excludes public investment from the fiscal rule. Buiter and Grafe (2004) observe that in order to be consistent, the golden rule should also be extended to any government spending that sparks positive effects on human capital (meaning education, health, etc.) and on the economic growth potential. According to these authors, however, this change increases flexibility at the cost of diminishing transparency by introducing arbitrary evaluations of which elements generate positive long-term effects. The difficulty to achieve a satisfactory mix of flexibility and transparency has recently led those in favor of this view to propose the introduction of independent technical bodies playing the role of “watch dogs”, i.e. “authoritarian controllers”, of fiscal discipline (see Debrun and Kumar, 2008; Debrun *et al.*, 2009).

The standpoint of the New Consensus has enjoyed some dominance during the last

[26] See Blinder, 1997b; Eichengreen *et al.*, 1999; Wyplosz, 2005 and 2008; and the review by Panico and Vázquez, 2008.
[27] See Buti et al., 2003; Blanchard & Giavazzi, 2004; Beestma & Debrun, 2005; Calmfors, 2005.

decades. According to von Hagen and Mundschenk (2003), however, its approach to coordination, which attributes to the monetary authorities the role of leaders and to the other authorities that of followers, is defective. It generates mistrust and non-cooperative attitudes among national Governments and monetary authorities and engenders that fiscal and monetary policies are conducted as strategic substitutes, rather than as complements.

Other authors have criticized the approach proposed by the New Consensus by arguing that the search for an appropriate blend of fiscal and monetary policy is necessary to jumpstart growth and shore up the productive structure. [28] According to them, coordination should be organized in such a way as to extend to fiscal policy, what was applied to monetary policy in the wake of the monetarist experiment of 1979-82. This entails evolving from steering based on rigid rules, like Friedman's money growth rule, to steering predicated on the discretion granted to independent authorities (see Fischer, 1995; Blinder, 1997b; Eichengreen *et al.*, 1999; Calmfors, 2003; Wyplosz, 2005 and 2008). Moving from the standpoint that "judgment is always superior than any rigid rule" (see Wyplosz, 2005), these authors would say that this sort of structure upholds fiscal discipline while also preventing economic policy from becoming pro-cyclical and overlooking the structural needs economies face, like the need to boost international competitiveness.

What's more, to Wyplosz (2005), the presence of independent authorities fosters dialogue between fiscal and monetary authorities and makes it easier to set priority actions and use resources efficiently. For Blinder (1997b, p. 124), it improves the working of democracy because it compels the political authorities to a detailed and unambiguous delineation of the specific objectives of their policies, an obligation that they often tend to neglect.

Independent fiscal authorities have been proliferating in recent years (see European Commission, 2013, OECD, 2018) and the international organizations have also been proposing their introduction (see OECD, 2014, 2017 and Debrun *et al.,* 2017). They however, do not always specify whether these authorities have to restore discretion in the use of fiscal policy in order to implement the most appropriate policy mix for the

[28] See Blinder (1997b), Eichengreen *et al.* (1999), Wyplosz (1999; 2005), Pisani-Ferry (2002), von Hagen and Mundschenk (2003), Fatás and Mihov (2003, 2010), Fatás et al. (2003), Panico and Suarez Vazquez (2008), Panico and Purificato (2013).

economy or have only to play the role of “watch dogs” of fiscal discipline, a distinction of utmost importance for the future conduct of economic policy.

Economic policy coordination in Mexico has come in different shapes over time. Up until the 1980s, it involved synergistic cooperation between the fiscal and monetary authorities to identify the country's needs and the financial resources to use. In later years, the institutional structure afforded broad discretion to the monetary authority and placed constraints on the authority handling fiscal policy. Initially, the political authorities spontaneously observed some agreed forms of discipline. Then, in 2006, they introduced the “Budget and Treasury Responsibility Federal Act”, a fiscal rule that, in spite of the 2013 reform, has not managed to prevent economic policy from being pro-cyclical and negatively affecting those forms spending (e.g., public investment), which generate positive long-term effects.

Policy coordination has not led to homogeneous results through Mexican history. Although not explicitly stated, the document of BdM (2008, p. 17) shows that the best results were achieved during the time period 1961-70. In recent years, coordination has favored the stability of the currency's purchasing power, but has spurred concerns about growth, the fragility of the productive structure, the ability to compete internationally, and income inequality.

In the face of these problems and, in particular, of the on-going deterioration of the international competitiveness, it is necessary to modify the institutional organization of policy. The coordination process between monetary and fiscal policy has to return to a cooperative approach allowing all the authorities, including the central bank, to participate in the identification of a series of reforms that can improve the quality and the efficiency of their interventions and to detect and implement an effective strategy that can strengthen the productive structure and international competitiveness. These reforms have to consider that BdM cannot lose the confidence and the consensus it enjoys among financial operators. If this occurred, the Mexican economy will have to face further increases in the ratio “official reserves – GDP” and further deterioration of the productive structure and the international competitiveness. By following the example of the Federal Reserve, BdM can improve its communication strategy and clarify why it has to participate in the identification of a development strategy and has to support its implementation. The central bank has to explain that, by strengthening the productive structure and the international competitiveness, these actions reinforce financial stability.

The central bank's participation in these activities has as a pre-condition, the introduction of institutional reforms aiming at promoting the quality of policy. They must:

- Reintroduce technical bodies that collect and process knowledge of what the productive sectors and the regional economies need to foster their development. Without detailed information on this point, resources cannot be spent efficiently. These entities, which had been previously operating in Mexico, were wiped out when the policies sponsored by the New Consensus came to dominance.
- Introduce new institutions (like independent fiscal councils and authorities) that, without leaving behind fiscal discipline, can restore discretion in the management of the ratio public deficit – GDP and can identify the interventions on the productive structure that accelerate the recovery of the balance of payments.[29]
- Introduce new institutions (specialized agencies) that can elaborate, supervise and realize projects generating the desired results in activities like the renewal of energy sources, agricultural progress, development of infrastructures, etc.

In the absence of these technical agencies the quality of policy cannot be improved.

9.- Conclusion

Financial liberalizations and the outgrowth of the financial industry have imposed important changes in the conduct of monetary policy and in the institutional organization of economic policy. Both have been forced to adjust to a new situation characterized by enormous powers of financial markets and increased instability, which has further

[29] In a Report written for IMF, Debrun *et al.* (2013, pp. 13 Box 1, 16, 22 and 34) state that Mexico set up a Fiscal Council in 1999. They refer to the Parliamentary Budget Office named "Centre for Public Finance Studies" that provides assessments of policy, forecasts, and 'costs proposals for new bills or amendments coming from the legislature itself and its individual members' (Debrun *et al.,* 2013, p. 16, fn. 1). It does not however provide information that can contribute to identifying the interventions on the productive structure that accelerate the recovery of the balance of payments. Unlike the IMF Report, Eichengreen *et al.* (1999, p. 420 and fn. 4) underscore the difference between Parliamentary Budget Offices and Independent Fiscal Councils. Their remarks warn against the risks of mixing up the two types of institutions.

intensified after the breakdown of Lehman Brothers. These conditions have brought about a progressive reduction of autonomy in the enactment of national policy.

The paper has argued that, in the face of the rising powers of financial markets, it is safer to strengthen the productive structure and the international competitiveness by relying more on the improvement of the quality of national policy than on autonomous exchange depreciations.

To support this proposition the paper has considered the recent debates on central bank independence, on how these institutions can enhance communication with the public, and on the introduction of institutional reforms to better the quality of national policy.

On the basis of these debates the paper has hinted at the introduction of technical bodies that can collect and process information on the needs of the productive sectors and of the regional economies, restore some discretion in the use of fiscal policy, indicate priorities among the different actions that can retrieve the balance of payments, and carry out projects that can achieve the desired results.

By recalling that the monetary authorities can find it easier to interact with technical bodies than with political authorities, the paper has argued that these reforms can promote the participation of the central bank in the identification of a national strategy that can enhance financial stability by strengthening the international competitiveness of the economy.

Finally, the paper has argued that BdM has large discretionary powers allowing it to control monetary issues, so that, even in the presence of a participation in a national strategy, it can keep signaling to financial markets its dominance over this aspect of policy. By renovating its approach to communication along the lines set by the Federal Reserve in recent decades, BdM can clarify the reasons of this participation and avoid a loss of confidence and consensus among financial operators.

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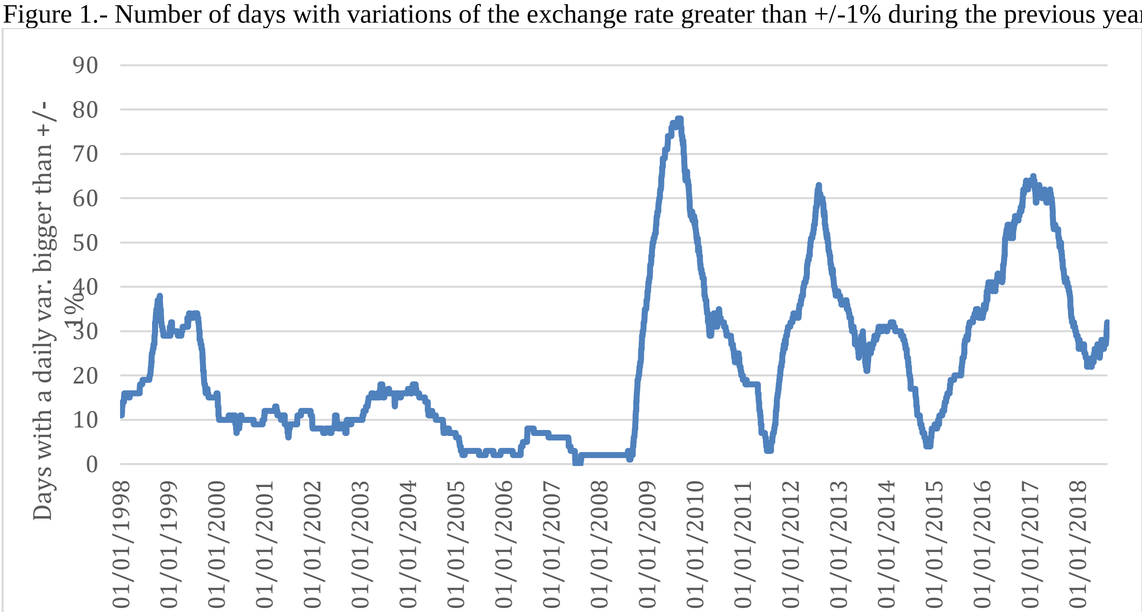
Figures and Tables

Figure 1.- Number of days with variations of the exchange rate greater than +/-1% during the previous year

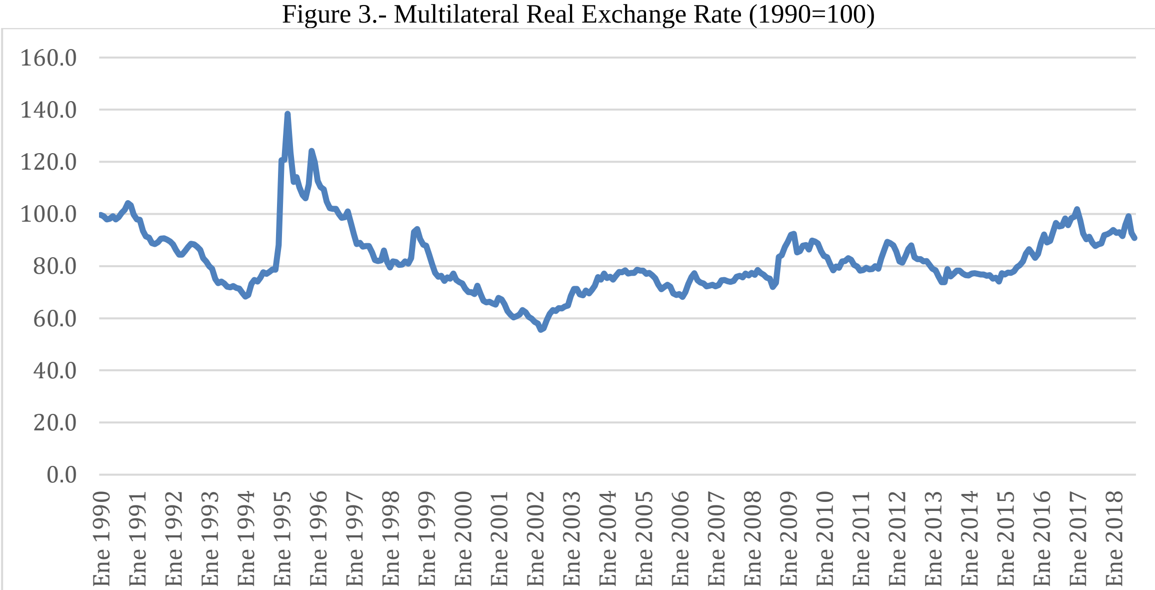


Source: our elaborations on BdM’s data.

Figure 2.- Daily nominal exchange rate, 1996-2018

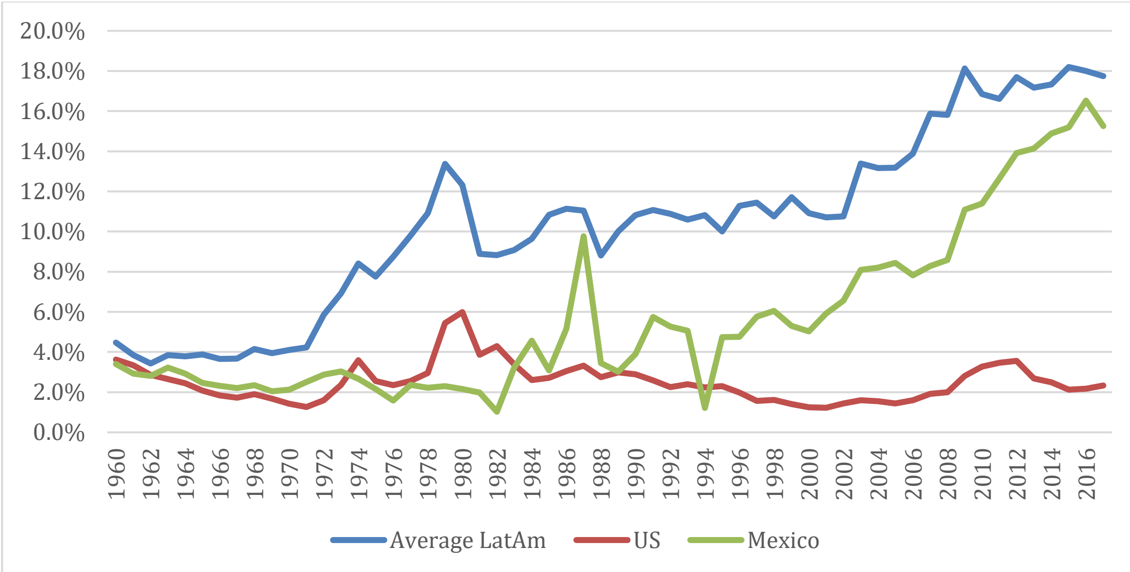
Source: our elaborations on BdM's data.

Figure 3.- Multilateral Real Exchange Rate (1990=100)



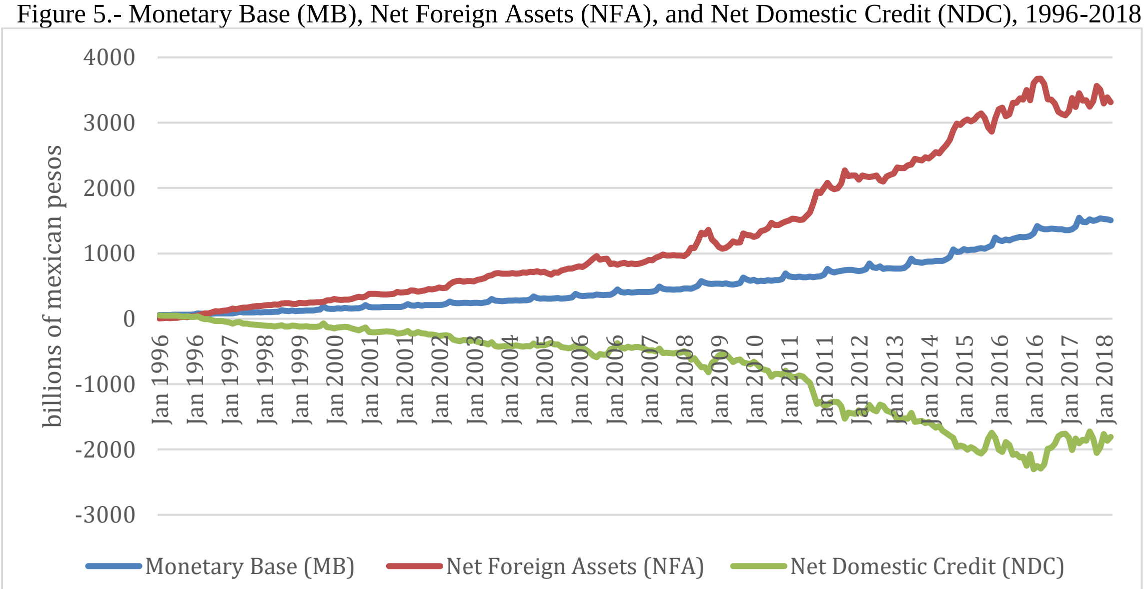
Source: our elaborations on BdM's data.

Figure 4.- Foreign Reserves as percentage of GDP



Source: WDI. Keys: Latin America (LatAm) includes: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Nicaragua, Peru, Paraguay, El Salvador and Uruguay.

Figure 5.- Monetary Base (MB), Net Foreign Assets (NFA), and Net Domestic Credit (NDC), 1996-2018



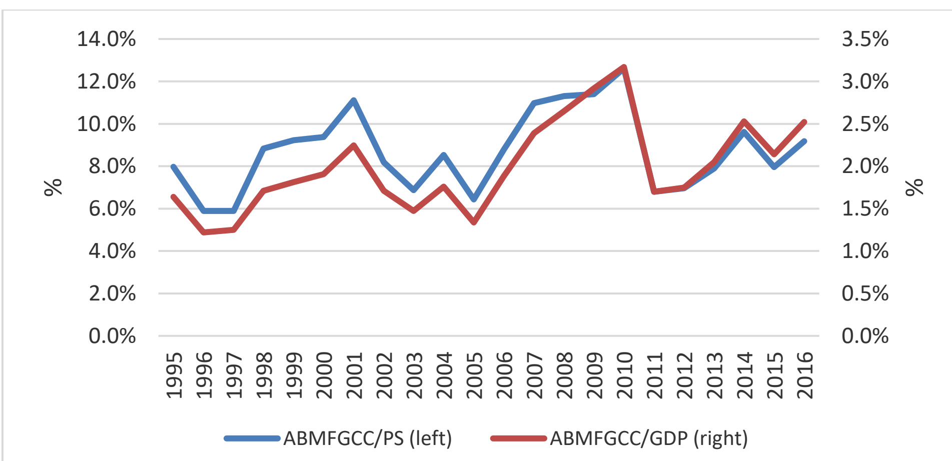
Source: our elaborations on BdM's data.

Table 1.- Annual variation rate of the Monetary Base (MB), M2 and Nominal GDP, 1998-2017

YEAR	BM	M2	NOM GDP	YEAR	BM	M2	NOM GDP	YEAR	BM	M2	NOM GDP
1998	0,24	0,30	0,21	2005	0,12	0,14	0,09	2012	0,14	0,11	0,07
1999	0,27	0,23	0,20	2006	0,17	0,12	0,12	2013	0,06	0,08	0,03
2000	0,26	0,18	0,20	2007	0,13	0,11	0,08	2014	0,14	0,10	0,07
2001	0,12	0,15	0,06	2008	0,13	0,12	0,08	2015	0,20	0,09	0,06
2002	0,16	0,13	0,08	2009	0,16	0,12	-0,02	2016	0,16	0,09	0,10
2003	0,16	0,13	0,10	2010	0,10	0,07	0,10	2017	0,16	0,09	0,10
2004	0,14	0,11	0,13	2011	0,10	0,09	0,10	**AVERAGE**	**0,16**	**0,13**	**0,10**

References: AVERAGE: The average of 1998-2017. Source: our elaborations on BdM's data.

Figure 6.- Mexican Federal Government Current Account at BdM, 1995-2016



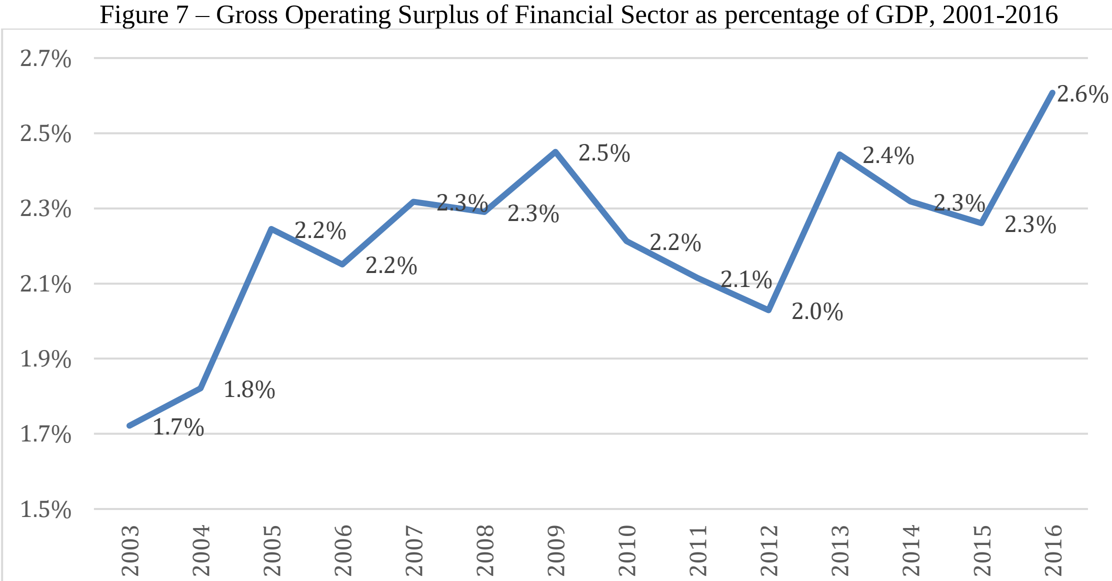
Source: ABMFGCC: Average balance of the Mexican Federal Government Current Account at BdM. PS: Public Spending. GDP: Gross Domestic Product. Source: authors' elaborations of INEGI and BdM data.

Table 2.- Monetary Regulation Deposits and Current Account of the Mexican Government at BdM (percentage of nominal GDP)

	2008	2009	2010	2011	2012	2013	2014	2015	2016
(A) Financial Institutions	2.3%	2.3%	2.1%	1.9 %	1.8 %	1.7 %	1.5 %	1.4 %	1.2 %
(B) Government Securities	1.7%	2.2%	1.8%	3.7 %	5.5 %	6.4 %	6.5 %	6.7 %	4.6 %
(C) Current Account of the Treasury of the Mexican Federal Government	2.7%	3.0%	3.2%	1.7 %	1.8 %	2.1 %	2.6 %	2.1 %	2.5 %
A+B+C	4.0%	4.5%	3.9%	5.6 %	7.2 %	8.1 %	8.0 %	8.1 %	5.8 %

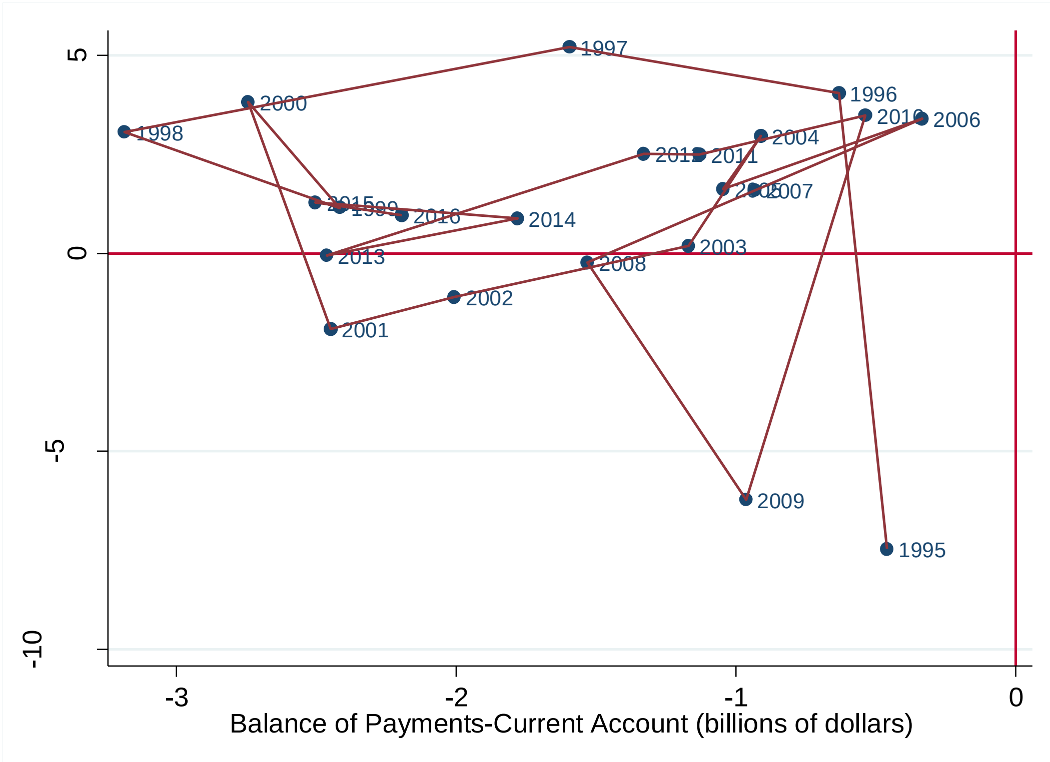
References: At the end of each year. RMB1: Regulation Monetary Bonds with limited negotiability. RMB2: Monetary Regulation Bonds with unlimited negotiability. Source: Bank of Mexico.

Figure 7 – Gross Operating Surplus of Financial Sector as percentage of GDP, 2001-2016



Source: National Institute of Statistics

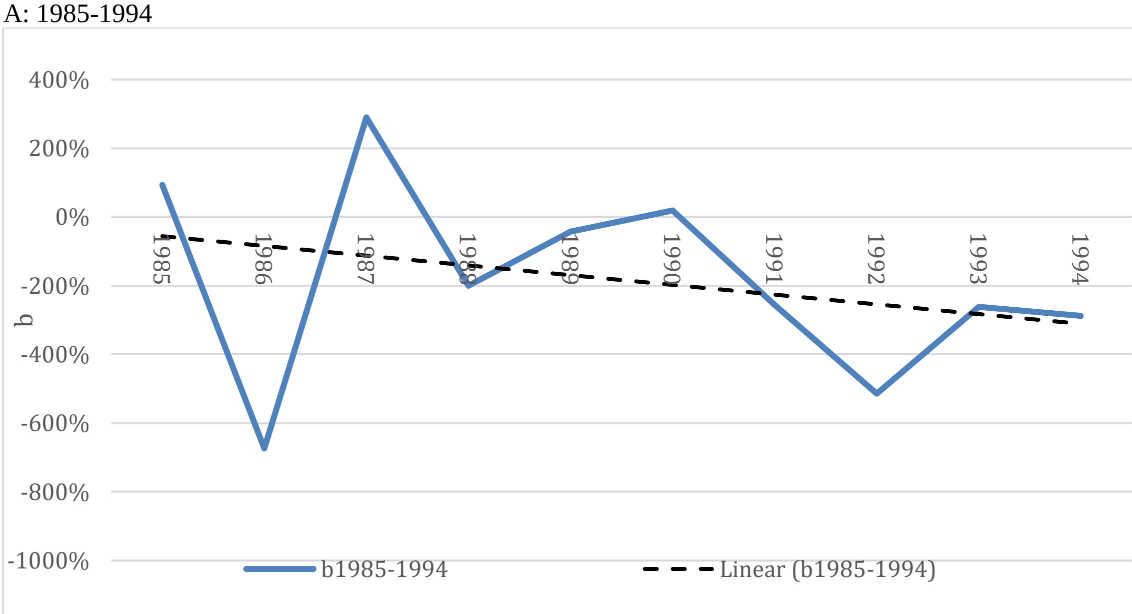
Figure 8.- Balance of Payments Current Account and the rate of growth of GDP, 1993-2017



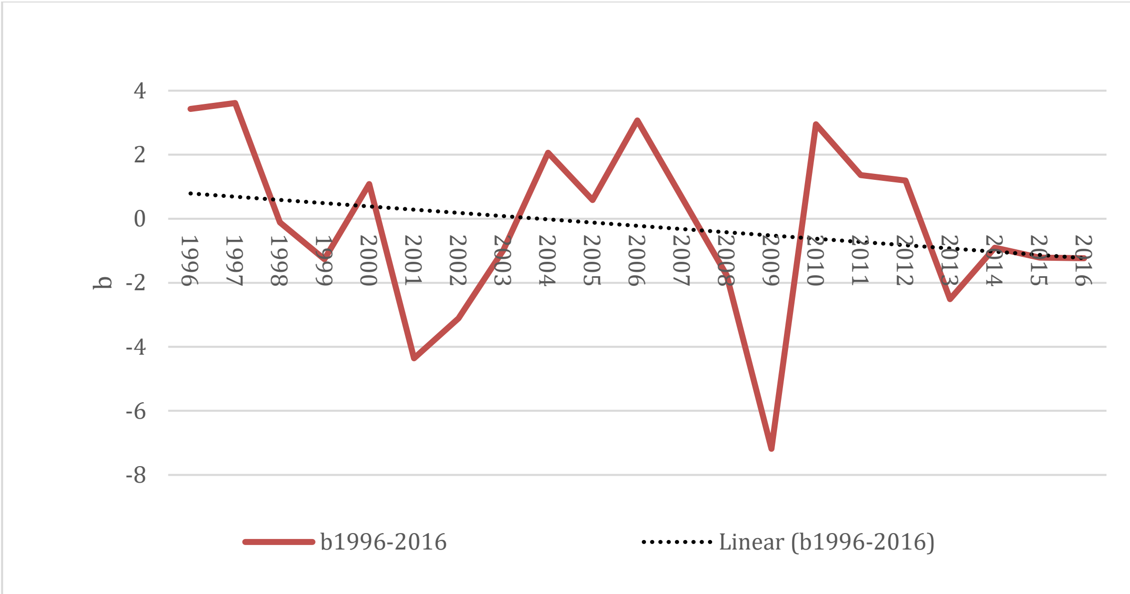
Source: our elaborations on BdM's data.

Figure 9.- Deterioration of the productive capacity of the Mexican economy, 1985-2016

A: 1985-1994



B:1996-2016



References: Using the data of Figure 8 we can draw for each year t a decreasing 45° line to which the couple d_t y g_t, representing the current account deficit and the rate of growth of that year, belong. The equation corresponding to these lines is $d_t = - g_t + b_t$. The value of b_t can be interpreted as the rate of growth that would have made the current account deficit of that year equal to zero. If b_t diminishes, the balance of payment constraint to economic growth deteriorates, indicating that the international competitiveness of the economy is worsening too. On the contrary, if b_t increases, the external restriction to growth is improving, indicating that the international competitiveness is improving too.