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 raise the likelihood that with the passing of time the present conduct of monetary policy will become 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.

1.- Introduction

"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 subsequently generated the progressive changes in regulation that the financial industry

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imposed owing to its capacity to affect politics and legislation.[2] The changes in regulation have in turn promoted a huge expansion of the financial industry and have caused the rise in the systemic risk that brought to the crisis of 2007-08.[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, which began to liberalize its external accounts after the crisis of 1982, reformed the institutional organization of monetary policy in the direction of an inflation-targeting regime in 1993-94, and officially adopted it 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" that however avoids autonomous movements of the exchange rate, i.e. movements in a different directions from those followed by the majority of Latin-American economies (see Basnet and Sharma, 2015). The adoption of similar exchange policies in these countries submits that financial liberalizations have reduced the ability of the national authorities to carry out autonomous devaluation of the exchange rate.[4]

The paper argues that financial liberalizations and the outgrowth of the financial industry have led to changes in the institutional organization of economic policies, limited the conduct of governmental policies and set off a reduction of public investment, which has been weakening the productive structure and the international competitiveness of the Mexican economy. As a consequence, the country is facing a rising probability that the present conduct of monetary policy will eventually become unsustainable. That means that with the passing of time the weakness of the productive structure and of international competitiveness can prevent monetary policy from maintaining financial stability. The paper then concludes that some 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" or "to devaluate" the exchange rate (see Obstefeld and Rogoff, 1995; Calvo and Reinhart, 2000; Ros, 2015).

Dealing with the deterioration of the international competitiveness of emerging countries, some 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 moves from the standpoint that autonomous devaluations are risky in the presence of liberalized capital movements and a powerful financial industry. Moreover it argues that the weakness of the productive structure and of the international competitiveness can depend on other aspects of the conduct of monetary policy and of the organization of the coordination process between fiscal and monetary policies, associated with the adoption of an inflation-targeting regime. We contend that, by weakening the productive structure and the international competitiveness, these aspects can lead these countries 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. Policies should not simply stimulate effective demand. They should identify a development strategy strengthening the productive structure and avoiding that the increases in effective demand will result in balance of payments' disequilibria.

To argue that the adoption of the inflation-targeting regime in Mexico has produced negative effects on the productive structure and on the international competitiveness through its impact on fiscal policy and public investment, we analyze the period that starts in 1996, after the institutional reforms of the organization of monetary policy introduced in 1993-94 and the financial crisis of 1994-95. As we point out, the conduct of economic policy shows a certain degree of homogeneity over this period.

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 that can 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 prevented 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 strategy 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, by increasing the size of the financial industry, liberalizations brought in new phenomena, which were unfavorable to poor and medium-income countries:

1. the difficulty of national policies to autonomously depreciate 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 abandonment of the Bretton Woods agreements has gradually enlarged the size of the international financial transactions.[5] In turn, this has made the exchange markets more speculative and volatile. After the breakdown of Lehman Brothers the volatility has further augmented. Figure 1 describes the evolution of an indicator of volatility, 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 floating regime that however gave financial operators clear signs that the central bank was compromised 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 those of the currencies of 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 remain stable 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 depreciation of the 1994 crisis, the multilateral real exchange rate appreciated until 2001 (see also Galindo and Ross, 2008, p. 14). From 2001 to 2018, it has been presenting a tendency to depreciate, even if its value had been fluctuating around a stable value from the end of 2003 to the end of 2014.

INSERT FIGURE 3 HERE

[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, according to calculations made by Panico and Pinto (2017) and based on data of the BIS Triennial Report, 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%.

Several authors[6] have pointed out that in several Latin American countries, including Mexico, the inflation-targeting regime is implemented in a way that deviates from the standard structure:

> Repeated and large deviations from the standard IT framework are documented: exchange market interventions have been lasting and widespread; the real exchange rate has often become a target of policy, though this target is seldom made explicit; a range of other non-conventional policy tools, especially changes in reserve requirements but occasionally taxes or restrictions on international capital movements, also came into common use' (Céspedes *et al.*, 2014, p. 185).

For this literature, financial liberalizations have made the control of the exchange rate a key monetary policy action, conducive to defending the national economy from international speculation. Central banks, these authors say, have often failed to explain that this objective is as relevant as the purchasing power stability of the currency.[7]

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,[8] 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, the ratio official reserves – GDP moved from 4.8% in 1996 to 11.1% in 2009, reaching 15.2% in 2016. By contrast, the ratio official reserves – GDP in the United States has been oscillating between 1.2% and 3.6% since 1983 (see Figure 4). In 2016 it was 2.2%.

INSERT FIGURE 4 HERE

[6] See Céspedes *et al.* (2014), Canales-Kriljenko, 2003; Hüfner, 2004; BIS, 2005; Rosas-Rojas, 2011. On the Mexican case, see Mántey G., 2009; Capraro and Perrotini, 2012.

[7] Document BdM (2017b), however, seems to recognize the importance of maintaining the stability of the exchange rate for the Mexican central bank.

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

Figure 5 portrays the natural logarithms of the nominal values of the reserves, measured in US dollars, held by BdM. It shows that the accumulation of official reserves has had a tendency to grow at a positive rate since 1996. Its rate of accumulation has increased during the period mid-2009 end of 2014. After this date it has however shown a tendency to go down or to remain stable.[9]

INSERT FIGURE 5 HERE

Figure 6, which presents the annual rates of variation of official reserves, confirm this conclusion. Official reserves have grown at an average annual rate of 10.9% from 1998 to the end of 2008. From the beginning of 2009 to the end of 2014 they have grown at an average annual rate of 14.8%. After that date, they have grown at a negative average annual rate.

INSERT FIGURE 6 HERE

About 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.[10] As a result, in times of high uncertainty major capital transactions flowing from poor and medium-income countries to rich ones take place, which is why central banks

[9] Further analyses, which go beyond the scope of this paper, are required to interpret the complex trends of the accumulation of reserves. They also have to consider the evolution of BdM's exchange interventions.
[10] MacKinnon (2002) calls Class B currencies "temporary money" and Class A currencies, which tends to dominate when uncertainty festers, "definitive money".

need to accumulate international reserves in times of low uncertainty.[11] This implies that, in spite of the incoming speculative capital looking for higher yields, the rise in international reserves, which are largely composed of government bonds of USA and Germany, generates an outflow of capital from low- and medium-income countries to the richest ones.

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 of monetary issues

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 7 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 controls this aspect of monetary policy.

INSERT FIGURE 7 HERE

The orderly growth of the monetary base does not imply a "rigid" control over monetary aggregates, i.e. a constraint that makes them grow at a pre-established constant rate. BdM carries out a "pragmatic" control over them. Table 1 shows that they grew at a higher rate

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

than the nominal GDP over the whole period 1996-2017. The persistent positive difference between these rates signals that the central bank prefers accommodating the demand for liquidity of the economy at the interest rates that it wants to stabilize to rigidly imposing a constant rate of growth on monetary aggregates.

INSERT TABLE 1 HERE

The control of the monetary issues affects the credit relations of BdM with the government sector and credit institutions. 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.[12] It can only receive it 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.[13] Yet, 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.[14] As shown in Figure 8, the account balance has been constantly positive since 1996. With the exception of 2011 and 2012, it exceeded 2% of GDP between 2007 and 2018 and was not lower than 3% in 2009, 2010, 2017 and 2018.

[12] 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.
[13] 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.
[14] Studies and evidence on this decision of the political authorities are lacking and an attempt to interpret it goes beyond the scope of this essay. For this reason, we limit ourselves to suggesting two hypotheses in terms of responsible behavior of the parties, which contradicts the dominant view that low morality characterizes these institutions, or in terms of pressures on them coming from powerful groups able to affect the electoral results through the funding of campaigns and control of the media.

INSERT FIGURE 8 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”. Moreover, to conduct sterilizing operations BdM can also issue its own bonds, like the BREMs (*Bonos de Regulacion Monetaria*) (see Table 2). All these forms of sterilizing operations impose a transformation of monetary base into long-term assets (government bonds or long-term deposits at the central bank) on the balance sheet of credit institutions. Through this transformation, BdM makes sure that, in spite of the increase of official reserves, credit institutions face a lack of liquidity and turn to the daily auctions of monetary base of 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 can 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 the securities that the credit institutions buy can then be sold in the market and the results of the sales reinvested in activities that can pay higher returns. 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 between 2003 and 2009 the share of Monetary Regulatory Deposits of credit institutions was similar to that of the Government sector. In many of those years it was even greater. On the contrary, after 2009, BdM has systematically 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 been rising in recent years (see Figure 9).

INSERT FIGURE 9 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. In recent years 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.

The political authorities have been accepting this new condition, agreeing to restrain the central bank's monetary funding of their policy well beyond the limits set by legislation.

As shown by Figure 8, the parties that have been in power since 1996 have maintained 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 powers to this institution in the management of Monetary Regulatory Deposits. Among other thinks, 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. What’s more, the Mexican 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. The introduction of this law has fortified the tendency of the governments to maintain a positive balance in their current account at the central bank. Figure 8 shows that after 2006 the average value of the account balance, measured as a percentage of GDP, has been higher than before.

Financial liberalizations have imposed in many countries the introduction of fiscal rules that have proved to be pro-cyclical and to reduce those government expenditures (in public investment and education) that tend to generate positive effects on the potential output of the economy with some time lag. The occurrence of these problems in the majority of countries is widely recognized by the literature,[15] which underlines that electoral reasons induce the political authorities to prefer the reduction of capital expenditure to that of current expenditure. Although it emphasizes the strength of this tendency, the literature recognizes that other forces can counter-act it in some years.

In Mexico too the recent institutional organization of the coordination process between monetary and fiscal policies has been accompanied by a tendency of of public investment to decline. This has been falling 4.5% annually between 2009 and 2016, reaching a sheer

[15] For a review of this literature see Panico and Vázquez Suárez (2008). In an interview to *Le Monde* of October 2002, Romano Prodi, who was then the European Union’s Commissioner, declared that the rigid rules of the European Stability and Growth Pact are stupid since they negatively affect the potential growth of the economy. To avoid these problems Blanchard and Giavazzi (2004) proposed to reform the Pact by introducing a “golden fiscal rule”, already used in UK, which excludes capital expenditure from the constraint imposed on the government budget. For an appraisal of this proposal see Buiter and Grafe (2004)

1.8% of GDP in 2017. The latter value represents a historically low level.[16] The literature has argued that the decline in public investment has not been accompanied by a rise in private one.[17] It has, on the contrary, generated a reduction in total investment and negative effects on the productive structure and on the international competitiveness of the economy.

Statistical data on the current account of the balance of payments display these effects. Figure 10 describes the average current account deficits associated with the average growth rate of GDP during the periods considered and, by comparing the first and the last period, it points out that a lower rate of growth is associated with a similar current account deficit. The observed reduction of the rate of growth can be considered an indicator of the increased weakness of the international competitiveness of the economy.

INSERT FIGURE 10 HERE

Figures 11 and 12 elaborate another indicator of the weakness of the current account of the balance of payments. On the basis of the data presented in Figure 10, they calculate the rate of growth of GDP that can maintain the current account in equilibrium[18], showing that it has a tendency to diminish. What's more, the two Figures show that there is an analogy between the tendencies of this indicator during the period 1996-2016 and during the period that preceded the crisis of 1994.

INSERT FIGURES 11 and 12 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

[16] Before 2009, however, the rise in oil price had largely benefited the incomes of the Mexican Government sector, favoring an increase in public investment.

[17] See Ros, 2015, pp. 160-63 and the literature there cited, which contend that the reduction in public investment likely arouses a crowding in effect on private investment.

[18] By employing the data used in Figure 10 we consider the couple of values of the current account deficit, d_t, and of the rate of growth, g_t, of year t. We then draw for each year t a decreasing 45° line to which the couple d_t y g_t 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.

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 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 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 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.[19] They wanted to

[19] "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

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.[20] The documents of BdM place great importance on this form of independence. The text "*Historical Outline*"[21] 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 Section 3, BdM enjoys large discretionary powers allowing a suitable control of the monetary base.

Unlike other central banks, BdM enjoys another form of independence, which is bound up in the "objectives and priorities".[22] 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.

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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.

[20] 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).

[21] Available at goo.gl/ENSckt.

[22] 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.

6.- Objectives and priorities of monetary policy 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)[23].

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.[24] It also points out that the stability of the 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 a trend in the balance of payments, which raises the risk of speculative attacks against the national currency and calls for an improvement on this aspect of economic policy.

[23] Available at goo.gl/ENSckt.

[24] 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.

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 similar 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 tend pragmatically to cooperate with the government and other public bodies to counter shrinking economy activity. 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 Kydland and Prescott (1977) and Rogoff (1985). The latter inspired some new works, known as "institutional design literature", analyzing the positive effects on 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.[25] 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.[26] 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 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,[27] its own expertise in the topic, and the absence of debate in society and in the legislative branch about this aspect.[28]

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.

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[25] 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.

[26] For further references regarding this debate, see Panico and Rizza (2004).

[27] 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).

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

7.- Central Bank Independence and transparency policy.

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 the prestige of the Bank of England are positive values for society (see Keynes, 1932, p. 132).[29] 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" influenced the development of the model of the New Consensus in Macroeconomics representing the working of the inflation-targeting regime and led to the introduction of 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

[29] 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)

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 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.[30]

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.[31] 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 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, but 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 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

[30] 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).

[31] 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.

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 policy coordination to escape from the trap of low growth

Document 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, it 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 other 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.[32]

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,[33] 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.

[32] See Blinder, 1997b; Eichengreen *et al.*, 1999; Wyplosz, 2005, 2008; and the review by Panico and Vázquez Suárez, 2008.

[33] See Buti et al., 2003; Blanchard & Giavazzi, 2004; Beestma & Debrun, 2005; Calmfors, 2005.

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 Buiter and Grafe (2004), 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 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.[34] For them, coordination should be organized in such a way as to extend to fiscal policy what was successfully applied to monetary policy after 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.[35] 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.

[34] 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 Vázquez Suárez (2008), Panico and Purificato (2013).

[35] See Fischer, 1995; Blinder, 1997b; Eichengreen *et al.*, 1999; Calmfors, 2003; Wyplosz, 2005, 2008.

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 foster discretion in the use of fiscal policy in order to implement the most appropriate policy mix for the economy or only have to play the role of "watch dogs" of fiscal discipline, a distinction of utmost importance for the future conduct of economic policy.

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 have 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, document 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, income inequality, the fragility of the productive structure and the ability to compete internationally.

In the face of these problems, 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 need to foster their development and of how changes in the production structure can affect the current account of the balance of payments. The loss of this knowledge has been a negative consequence of the dominance in Mexico of the inflation-targeting regime. In previous years, this knowledge was collected and processed by the Mexican development banks. Recently, the view that industrial policy is damaging has led to dismissing this activity. Yet, without detailed information on the needs of the productive structure and on how to lessen the constraints of the balance of payments, the quality of policy concerning the reinforcement of the productive structure cannot be improved and resources cannot be spent efficiently.
- Introduce new institutions (like independent fiscal councils[36] and authorities) that,

[36] 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,

without leaving behind fiscal discipline, can improve the credibility that financial operators attribute to the fiscal authorities and foster discretion in the management of the ratio public deficit – GDP. These institutions have to cooperate with the political authorities and the central bank to the identification of a national development strategy able to strengthen the productive structure and the international competitiveness of the country, and to identify the interventions that can accelerate the recovery of the balance of payments.

- 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.

The improvement in the quality of policies and in the credibility of the authorities can facilitate the participation of the central bank in the identification of a national development strategy and in the support to it. As we argued in the paper, the central bank has wide discretionary powers in the control of the monetary issue. So, it can support the funding of activities strengthening the productive structure and the international competitiveness of the economy without suffering a loss of control of it. BdM can impose an increase of the Monetary Regulations Deposits in Pesos to compensate the use of resources to finance the development strategy identified with the other authorities. In this way, the credit institutions operating in Mexico, which have enjoyed increasing benefits in recent years, as shown by Figure 9, will have to give their contribution to the progress of the economy and to the regular growth of the monetary aggregates.

9.- Conclusions

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

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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 on the improvement of the quality of national policy rather 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, foster discretion in the use of fiscal policy, indicate priorities among the 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 fortifying 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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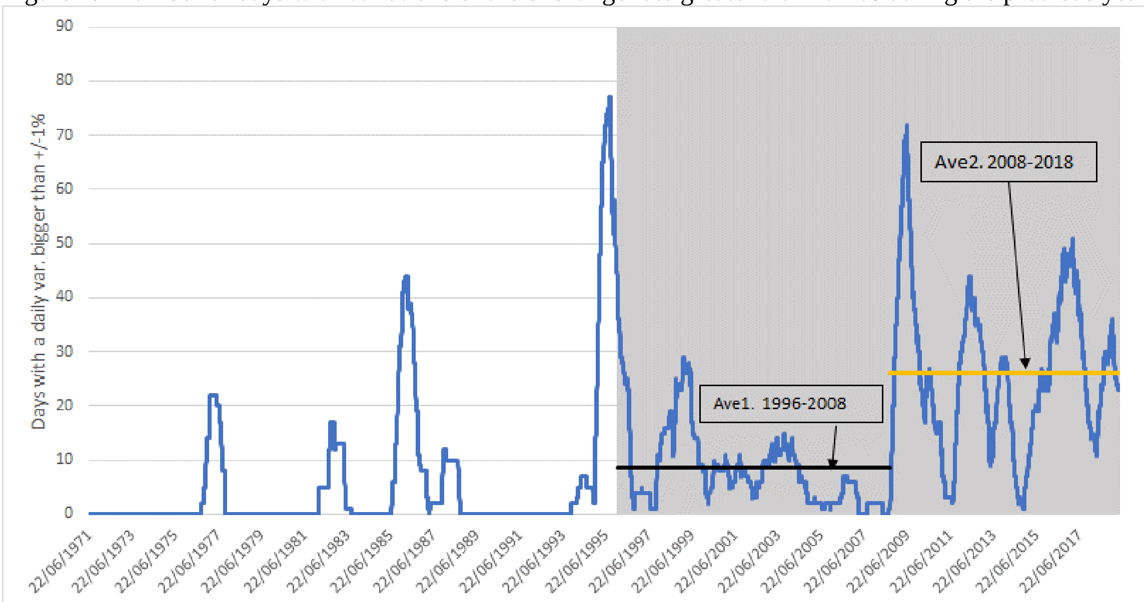
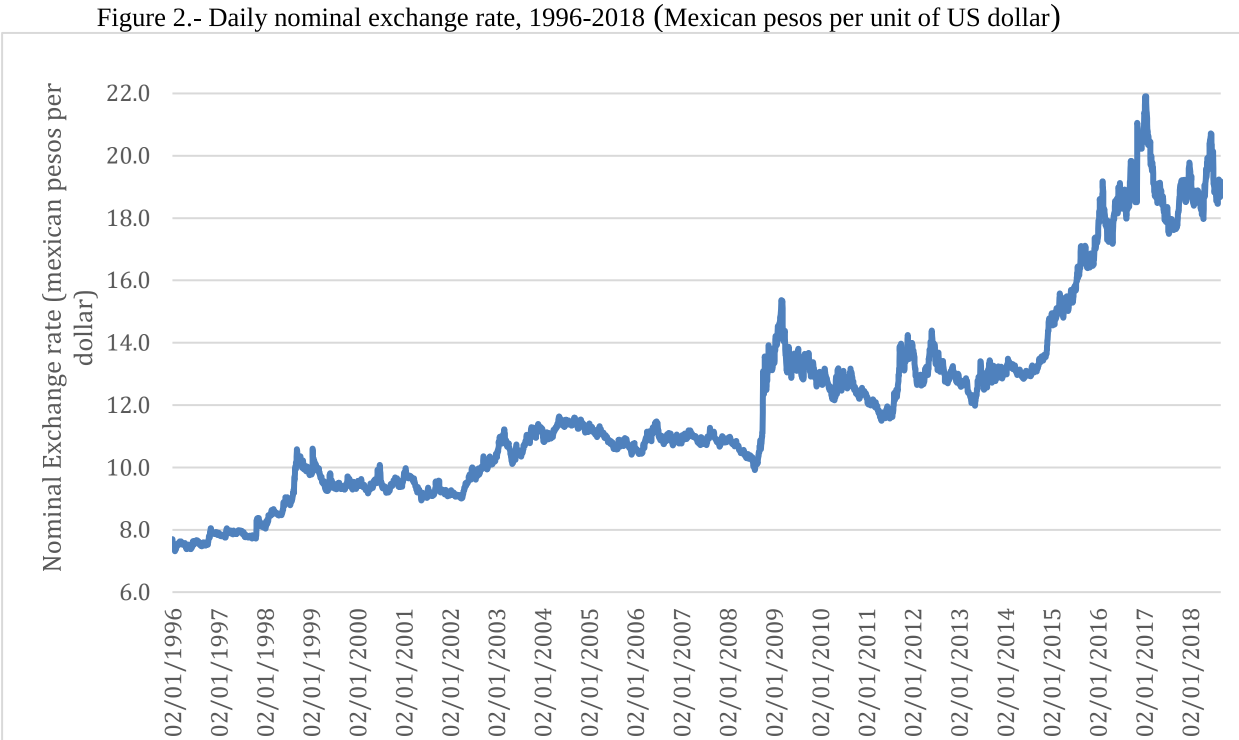
Figures and Tables

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



Ave1.: It goes from 01/01/1996 to 08/29/2008. Ave2.: It goes from 01/09/2008 to 12/31/2018.
Source: our elaborations on BdM's data.

Figure 2.- Daily nominal exchange rate, 1996-2018 (Mexican pesos per unit of US dollar)

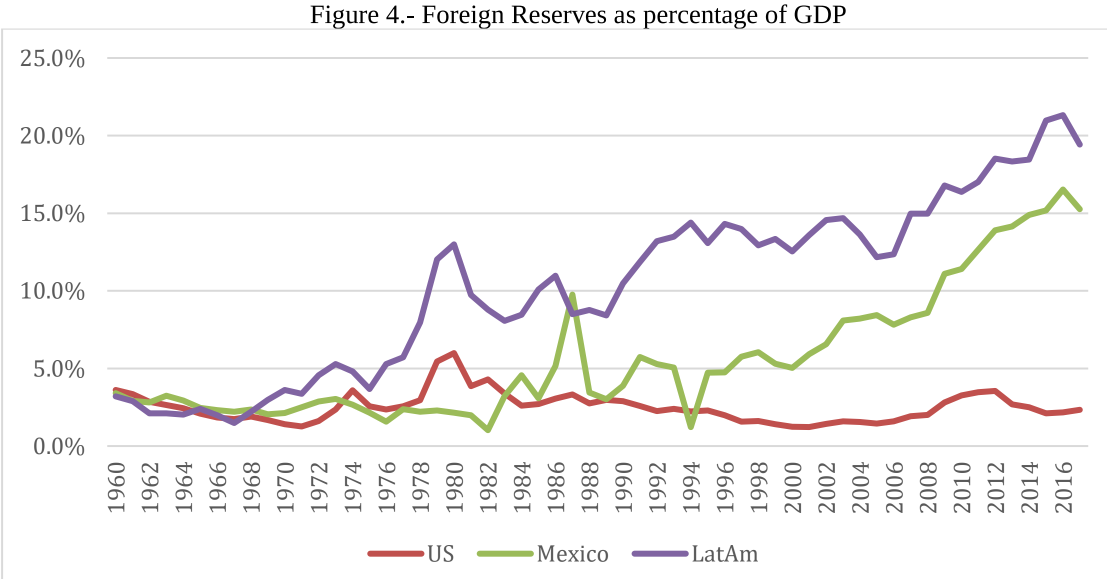


Source: our elaborations on BdM's data.

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

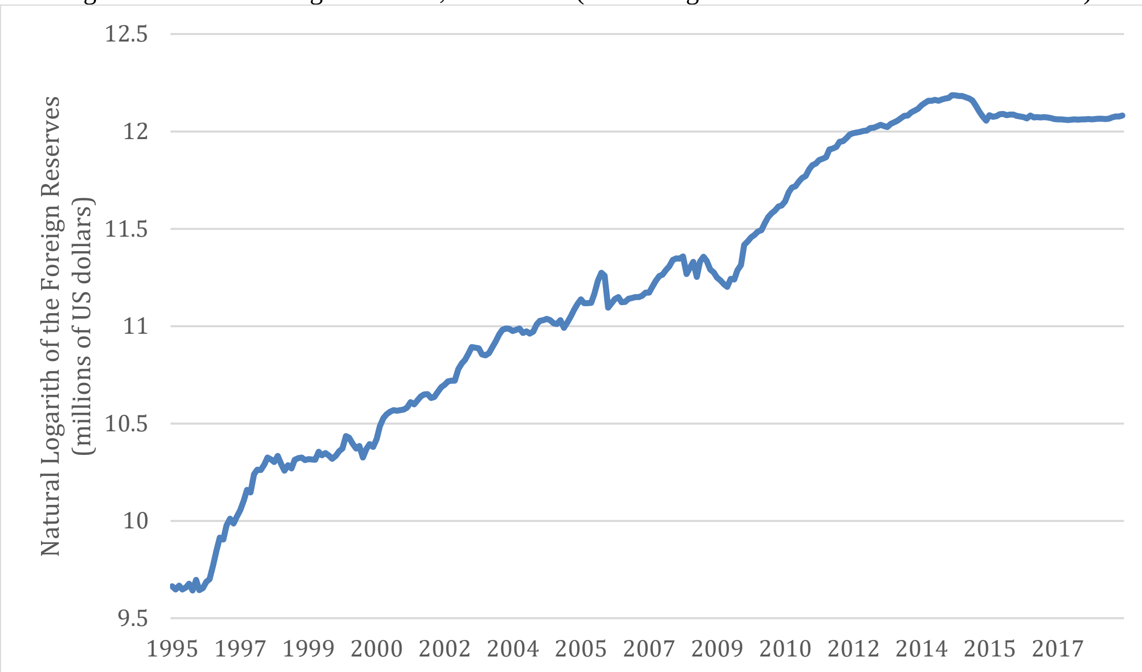
Source: our elaborations on BdM's data.

Figure 4.- Foreign Reserves as percentage of GDP



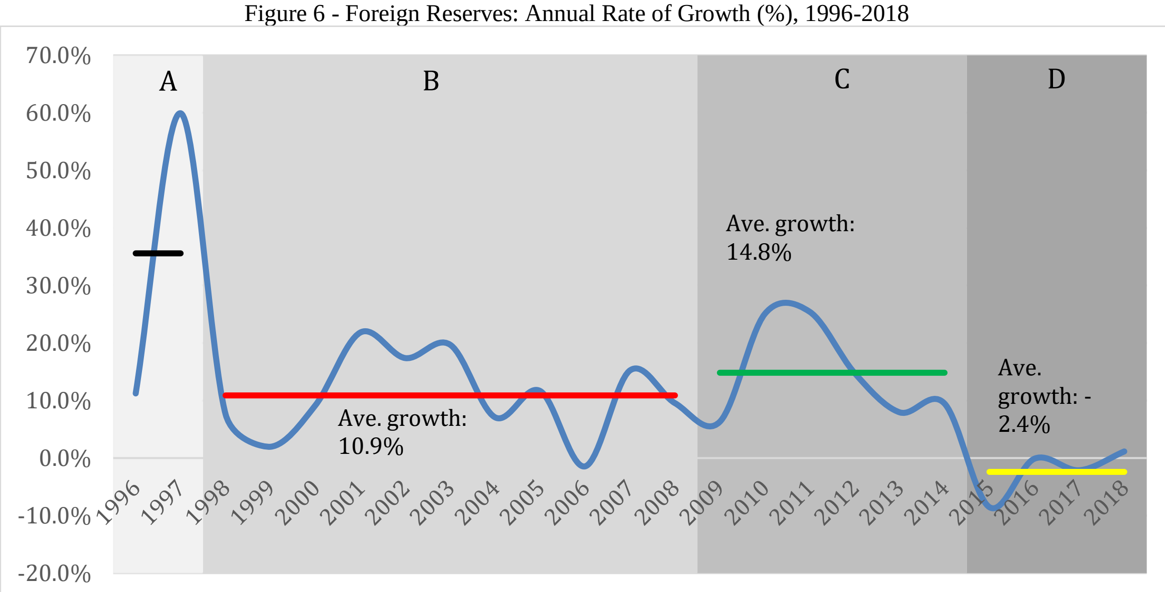
LatAm includes Latin America countries using inflation targeting (Brazil, Chile, Colombia and Peru)
Source: WDI.

Figure 5 - BdM´s Foreign Reserves, 1996-2018 (natural logarithms of nominal values in dollars)



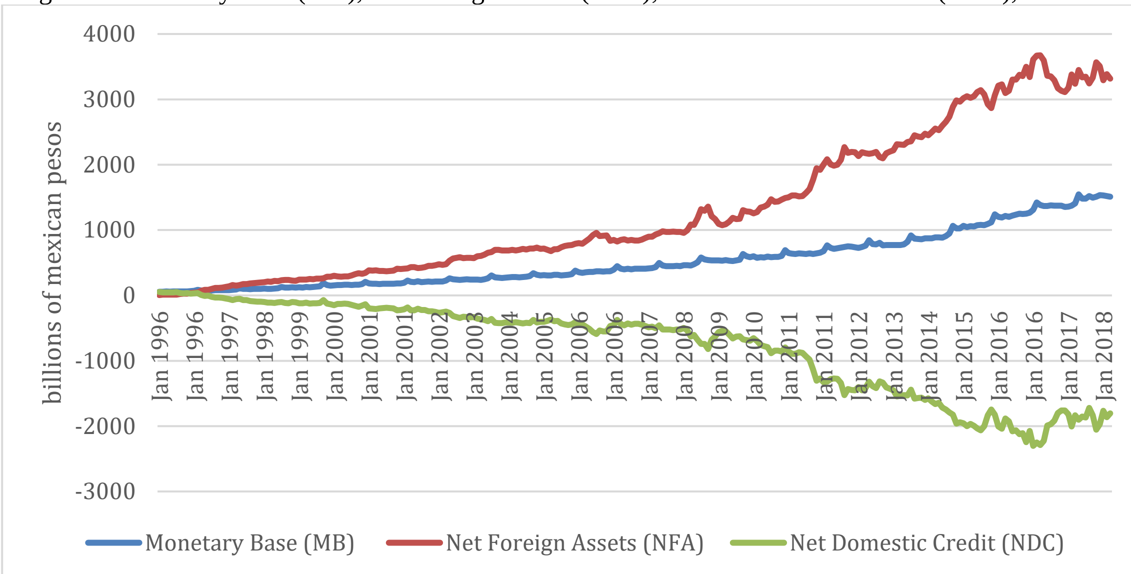
Source: our elaborations on BdM's data.

Figure 6 - Foreign Reserves: Annual Rate of Growth (%), 1996-2018



Source: our elaborations on BdM's data.

Figure 7.- Monetary Base (MB), Net Foreign Assets (NFA), and Net Domestic Credit (NDC), 1996-2018



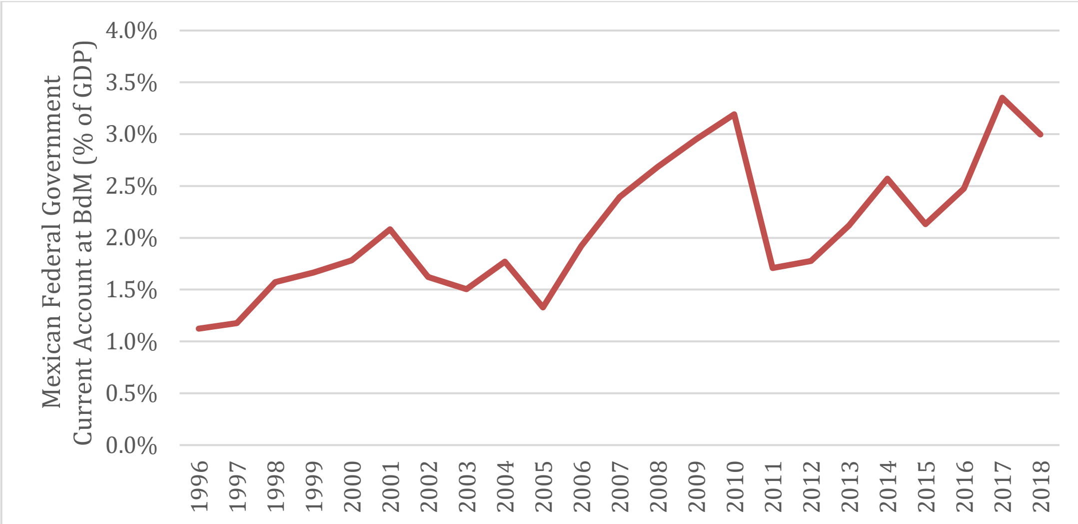
Source: our elaborations on BdM's data.

Table 1.- Annual variation rate of the Monetary Base (MB), M2 and Nominal GDP, 1996-2017

YEAR	BM	M2	NOM GDP	YEAR	BM	M2	NOM GDP	YEAR	BM	M2	NOM GDP
1996	0,26	0,32	0,35	2003	0,16	0,13	0,10	2011	0,10	0,09	0,10
1997	0.30	0,31	0,27	2004	0,14	0,11	0,13	2012	0,14	0,11	0,07
1998	0,24	0,30	0,21	2005	0,12	0,14	0,09	2013	0,06	0,08	0,03
1999	0,27	0,23	0,20	2006	0,17	0,12	0,12	2014	0,14	0,10	0,07
2000	0,26	0,18	0,20	2007	0,13	0,11	0,08	2015	0,20	0,09	0,06
2001	0,12	0,15	0,06	2008	0,13	0,12	0,08	2016	0,16	0,09	0,10
2002	0,16	0,13	0,08	2009	0,16	0,12	-0,02	2017	0,16	0,09	0,10
2003	0,16	0,13	0,10	2010	0,10	0,07	0,10	**AVERAGE**	**0,16**	**0,15**	**0,11**

AVERAGE: The average of 1996-2017.
Source: our elaborations on BdM's data.

Figure 8.- Mexican Federal Government Current Account at BdM (% of GDP), 1996-2018



Source: authors' elaborations of INEGI (National Institute of Statistics) and BdM data.

Table 2.- Monetary Regulation Liabilities (percentage of nominal GDP; end of year values)

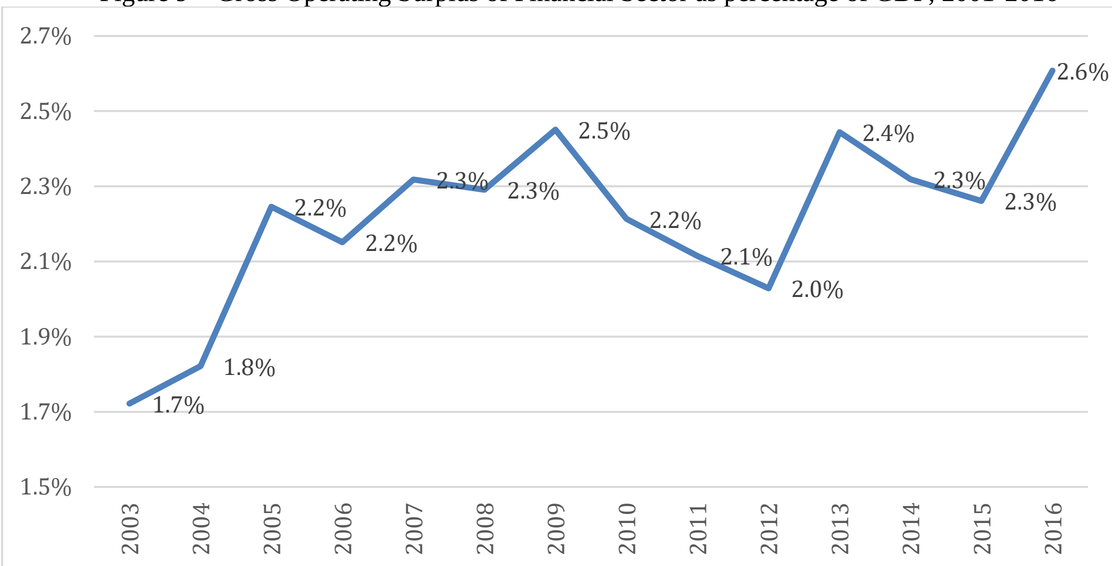
	1996	1997	1998	1999	2000	2001	2002	2003
(A) Monetary Regulation Deposits in Pesos	-	-	0.5%	0.8%	0.7%	1.4%	2.0%	2.3%
(B) Monetary Regulation Deposits in Government Securities	-	0.9%	0.4%	1.6%	2.1%	0.7%	0.5%	0.0%
(C) Monetary Regulation Bonds (BREMs)	-	-	-	-	0.3%	2.2%	3.0%	3.0%
(A) +(B)+ (C)	0.0%	0.9%	0.9%	2.4%	3.1%	4.2%	5.5%	5.3%

	2004	2005	2006	2007	2008	2009	2010	2011
(A) Monetary Regulation Deposits in Pesos	2.6%	2.9%	2.6%	2.4%	2.3%	2.3%	2.1%	1.9%
(B) Monetary Regulation Deposits in Government Securities	0.0%	0.0%	0.6%	1.5%	2.0%	2.0%	2.7%	4.9%
(C) Monetary Regulation Bonds (BREMs)	2.6%	2.7%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%
(A) +(B)+ (C)	5.2%	5.6%	4.3%	4.0%	4.3%	4.3%	4.8%	6.8%

	2012	2013	2014	2015	2016	2017	2018	Aver. 1996-2018
(A) Monetary Regulation Deposits in Pesos	1.8%	1.7%	1.5%	1.4%	1.1%	1.0%	0.9%	1.6%
(B) Monetary Regulation Deposits in Government Securities	6.2%	7.0%	7.3%	6.3%	4.9%	4.7%	4.1%	2.7%
(C) Monetary Regulation Bonds (BREMs)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%
(A) +(B)+ (C)	7.9%	8.7%	8.8%	7.7%	5.9%	5.7%	5.0%	5.1%

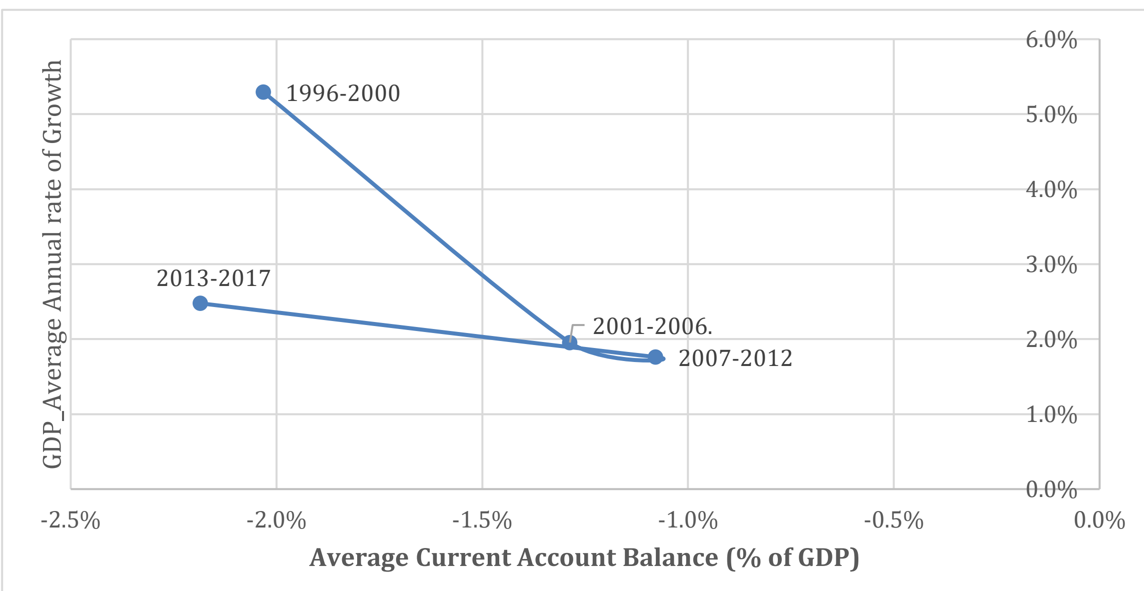
Source: our elaborations on BdM's balance sheets' data

Figure 9 – Gross Operating Surplus of Financial Sector as percentage of GDP, 2001-2016



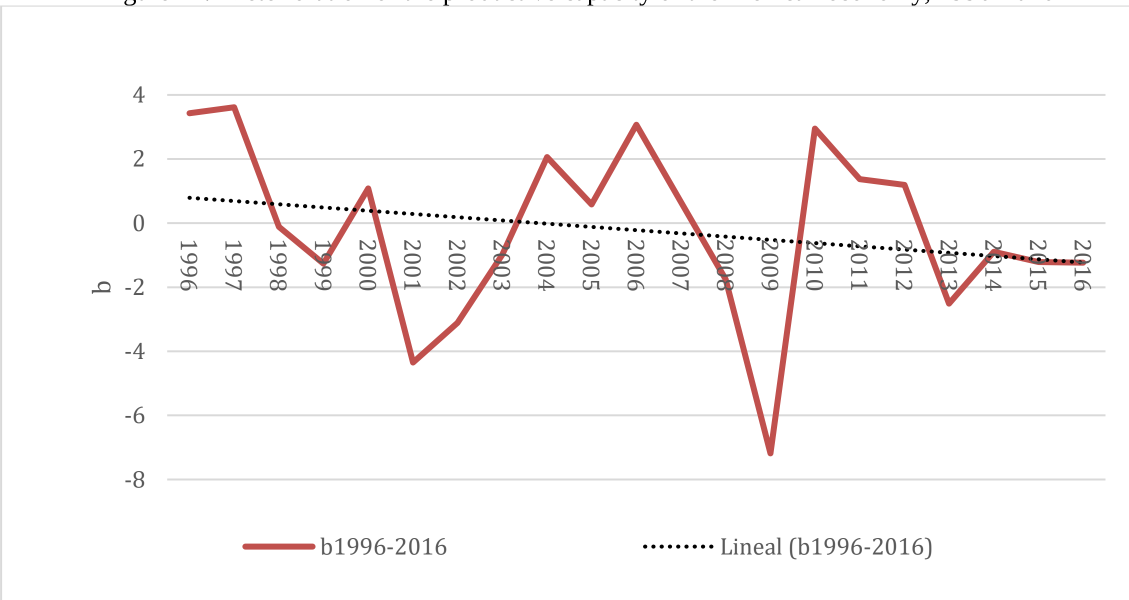
Source: INEGI (National Institute of Statistics)

Figure 10.- Balance of Payments Current Account and rate of growth of GDP, 1996-2017



Source: our elaborations on BdM's data

Figure 11.- Deterioration of the productive capacity of the Mexican economy, 1996-2016



Source: our elaborations on BdM's data

Figure 12.- Deterioration of the productive capacity of the Mexican economy, 1985-1994

Source: our elaborations on BdM's data