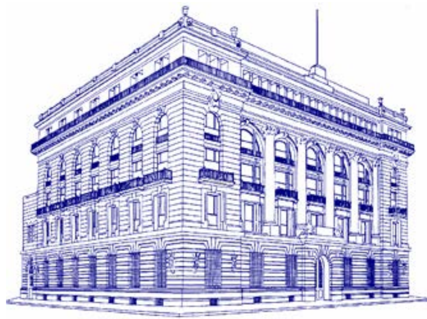
# Monetary Program

2012



BANCO DE MÉXICO

JANUARY, 2012

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# 1. Monetary Program for 2012

Article 51 of Banco de México's Law stipulates that in January of each year the Central Bank must send to the President and the Congress a description of the monetary policy to be followed by the Central Institute during the respective year. In compliance with this article, the monetary policy guidelines for 2012 are presented below.

In order to fulfill its constitutional mandate of pursuing stability of the purchasing power of the national currency, Banco de México adopted an inflation-targeting scheme as framework for the monetary policy conduct. The Monetary Policy Program for 2001 presents the most important considerations about the selection of this scheme, among which stand out the official announcement of an inflation target and a continuous effort to improve transparency and communication with the public. In particular, Banco de México has defined as a permanent target reaching an annual inflation of the Consumer Price Index (CPI) of 3 percent.

However, even when the monetary policy is conducted in line with the attainment of the abovementioned target, there is a certain margin of uncertainty as to its exact and precise accomplishment due to diverse factors affecting the evolution of inflation in the short run, which are beyond control of the central bank. In this context, Banco de México has defined a plus/minus one percentage point variability interval around the 3 percent inflation target. The definition of this interval is simply a practical way of considering the inherent uncertainty as to the exact realization of the 3 percent permanent target due to the existence of diverse disturbances, such as relative price variations that may affect inflation in the short run and place it above or below its target.

Banco de México's constitutional mandate of pursuing stability of the national currency's purchasing power is based on the multiple economic and social costs of high and volatile inflation. Among them stand out the following:

1. Inflation is a regressive tax, mainly affecting society's most vulnerable sectors.
2. High inflation propitiates frequent and irregular price changes, which distort relative prices. In this scenario, an inefficient resource allocation in the economy is generated, negatively affecting its competitiveness.
3. An environment of high and uncertain inflation increases the frequency, dispersion and intensity of price adjustments, which, in turn, reduce economic agents' planning horizons, affecting their saving and investment decisions.

Given the costs of inflation, it should be pointed out that the attainment of stability of currency's purchasing power is not a target opposed to economic growth. On the contrary, empiric evidence shows that episodes of high inflation tend to coincide with periods of low growth, as it has happened in a very pronounced way in Mexico in the past. This is due to the fact that distortions caused by inflation are larger when inflation is high and they may have a considerable effect on growth. In the same way, these costs tend to be moderate when inflation is low and stable, propitiating an adequate environment for the realization of productive activities. Nevertheless, even if price stability is favorable

for the economic activity, it is not sufficient for generating high and sustainable growth, i.e., maintaining inflation under control is a necessary, but not a sufficient, condition for economic growth.

Bearing in mind the reasons set out here, and especially taking into consideration the importance of price stability for economic growth and, in general, for the well-being of the population, Banco de México's Board of Governors reiterates in this Monetary Policy Program for 2012 its commitment to maintaining a monetary policy with the invariable priority of preserving the purchasing power of the national currency.

As to the monetary policy conduct, the central bank should consider that monetary policy actions affect the economy with certain lags and, particularly, the behavior of prices. These lags are long and variable. This is why the monetary authority should take its decisions based on a detailed analysis of the economic situation, taking into consideration, among other factors, both monetary and financial conditions, as well as the outlook for inflation in the future.

In order to reach and maintain a low inflation environment, the monetary policy should respond to different shocks, which affect the economy. In this context, Banco de México adjusts its monetary policy according to the prevailing economic conditions and the features of the inflationary pressures it faces, particularly, when Banco de México perceives that the expected inflation steadily deviates from the permanent target of 3 percent annually.

Thus, when inflationary pressures stem from the demand side and are generalized, it is advisable for the central bank to tighten the monetary policy stance. In particular, the monetary authority would increase its policy rate target, thereby contributing to a moderation of inflation pressures through diverse channels, which operate with higher or lower intensity depending on the features of the economy and the credibility of the monetary policy. These channels are described below:

> If the monetary authority increases the short-term interest rate target, it affects the conditions under which liquidity is supplied to the money market, which in general impacts interest rates for all horizons. However, short-term rates would tend to be the most affected, while longer-term rates would be less affected. The impact on the rates for different terms principally depends on three factors: 1) the short-term interest rate trajectory expected by economic agents in the future; 2) long-term inflation expectations; 3) risk premia determined in financial markets. These elements are also influenced by the credibility of the central bank as to its commitment to maintaining stability of the national currency's purchasing power. To the extent to which this credibility increases, longer-term interest rates will face less upward pressures in the face of policy rate increases. This happens as a consequence of anchoring of medium- and long-term inflation expectations. In fact, high credibility could propitiate longer-term rates to face very low impact, and even decrease, which leads to a "flattening" of the yield curve given increases in the short-term interest rate target.
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> In this sense, the first transmission channel of the monetary policy corresponds to the direct impact of higher interest rates, especially real interest rates, on aggregate spending. In particular, an increase in the real interest rate affects households' and firms' decisions on savings

and investment. With respect to the former, they would have higher incentives to postpone their consumption in time, moderating current aggregate demand. In turn, financing cost for firms increases.[1] These effects tend to reduce the expansion rate of aggregate demand, which helps to moderate generalized pressures on prices.

Regarding the channels operating through their effect on credit supply, there are two possibilities: the bank credit channel and the broad credit channel. As to the former, given that those willing to take credits at higher interest rates are also the ones undertaking riskier projects, banks can limit the granting of financing to the extent they perceive that situation.[2] In addition to the aforementioned, credit supply conditions can also be affected by a broader channel. A higher interest rate can cause changes in firms' expected net income and in their balance sheets, in such a way that their risk increases and, thus, they would have to pay an additional risk premium for taking on loans.[3] In both cases, reduced financing contributes to moderating aggregate demand pressures on prices.

Another channel through which an interest rate increase contributes to moderating aggregate demand is the one corresponding to asset prices, such as public and private debt securities, stocks and real estate prices. Higher interest rates are associated with reductions in these assets' prices, consequently reducing households' and firms' spending, mainly through an effect on their wealth, which leads to lower inflation pressures. It should be noted that in more advanced economies this channel tends to be more important than in emerging economies due to the fact that in more developed economies the amount and the variety of financial and real estate assets, which are traded in their financial systems and which might be used to guarantee the financing of consumption and investment expenditure, are higher.

On the other hand, an increase in the short-term interest rate target also operates through its effect on inflation expectations. As will be mentioned later, the effectiveness of this channel crucially depends on central bank's credibility.

Finally, monetary policy actions also affect inflation through the exchange rate channel. In a small economy with free capital mobility, to the extent that domestic interest rates increase with respect to the rates prevailing in international financial markets, the exchange rate would be expected to appreciate at the margin. This can be explained due to the relative increase in demand for financial instruments denominated in national currency with respect to those denominated in foreign currency. In this sense, there are two transmission channels: a demand and a supply channel. On the demand side, an exchange rate appreciation might cause a price increase of domestic goods with respect to the foreign produced ones. This change in relative prices could generate a reduction in net exports, which results in lower aggregate demand,

[1] However, as investment is more dependent on longer-term rates, if the short-term rate increase flattens the yield curve, investment would be less affected than in a situation where inflation expectations are not anchored.

[2] These financial frictions are due to asymmetric information problems inherent in credit markets.

[3] The increase in interest rates can affect firms' balance sheets by reducing the cash flow, increasing the value of the debt, as well as decreasing the price of firms' assets.

hence moderating inflation pressures. Although the effect of the supply channel will be explained in more detail later on, an exchange rate appreciation by decreasing firms' cost for imported inputs, contributes to lower pressure on domestic prices and, thus, on inflation.

On the other hand, when inflation pressures are the result of a supply shock, in general, it is not recommendable for the central bank to intent to counteract these pressures. Supply disturbances correspond to relative price changes, which, in principal, propitiate single CPI increases. Thus, for instance, if in a particular month adverse climatic conditions negatively affect the production of some agricultural products, it would be expected that these products' shortage would lead to an increase in their prices relative to the prices of the remaining goods and services. To the extent to which the goods, whose relative price increased, are part of the CPI calculation, a CPI adjustment would be observed, resulting in a temporary inflation increase. Further, if climatic conditions improve in the following periods and consequently, the production of these agricultural goods recovers, their prices could even return to levels similar to the ones registered before the increase, possibly reversing part of the increase exhibited by inflation. Under these conditions, and considering that the effects of the monetary policy actions on the economy, and in particular on inflation, need certain time to materialize, in general it is not very effective for the central bank to try to offset a temporary increase in inflation, like the one mentioned before. Furthermore, trying to counteract these effects can have undesirable consequences on the economy and on national financial markets. For instance, if the central bank tightens its monetary policy stance, it is possible that, when the effects of this action on prices finally begin to materialize, the increase in inflation has already vanished and inflation has returned to the level desired by the authorities. In this scenario, the central bank's actions would generate an undesirable effect on economic activity.

The effects described before are known as first round effects of a supply shock and it is important to distinguish them from those called second round effects. The distinction is relevant since the previous considerations and the recommendation not to respond to a supply shock, correspond to the situation where central bank's commitment to price stability is credible and, thus, inflation expectations are well-anchored. On the contrary, if economic agents, in the case of an inflation increase caused by a supply shock, start to revise upwards their inflation expectations, the price formation process would be negatively affected. These would be second round effects. In this context, inflation control would be jeopardized, and in this case the central bank would have to tighten the monetary policy stance in order to avoid larger deterioration in the inflation outlook.

In relation to the aforementioned and considering the international economic situation, another type of supply shock, which is particularly relevant for emerging economies, like Mexico, refers to the effects of exchange rate fluctuations on inflation. In the second half of 2011, a new period of turbulence in international financial markets affected the currency markets in emerging economies, including Mexico, whose currencies exhibited considerable depreciations, as well as greater volatility. In what follows, it will be analyzed how exchange rate shocks, which are a particular case of the supply shocks described before, can affect inflation and which is the typical recommendation for monetary policy given such a situation:

i. Exchange rate fluctuations can affect domestic prices through diverse mechanisms. As to first round effects, it is noteworthy that imported

goods are also part of the CPI. Thus, in the case of a nominal exchange rate depreciation, the price of imported goods expressed in national currency rises, which tends to be reflected in a CPI increase. Additionally, diverse intermediate goods and imported capital goods are used for the production of goods and services. Given the aforementioned, higher prices of these goods caused by a depreciation tend to affect firms' cost structure, which, in turn, could be passed through to consumers by means of higher prices. However, as in the general case of a supply shock, if the commitment of the monetary authority to price stability is credible and inflation expectations are well-anchored, the central bank can avoid second round effects, i.e., effects on inflation expectations and the contamination of the price formation process.

ii. Regarding the pass-through of exchange rate fluctuations to domestic prices in Mexico, empirical evidence exists which states that this effect has been declining since the adoption of an inflation-targeting regime in 2001 (see Technical Chapter, Inflation Report, January-March 2011).[4] The reduced exchange rate pass-through to inflation seems to be associated with the adoption of the framework for the monetary policy conduct aimed at preserving price stability. Thus, the increasing credibility of the Central Bank's commitment to reaching and maintaining an environment of price stability has contributed, together with a prudent fiscal policy, to reducing the level, volatility and persistence of inflation. This has allowed the anchoring of inflation expectations. In this context, the second round effects of exchange rate variations on inflation have declined, which has been reflected in a lower pass-through.

iii. In addition to the abovementioned, the economic situation characterized by a still negative output gap and slack labor market conditions, suggests that domestic firms have less degrees of freedom for passing-through the increase in costs of imported inputs to prices of produced goods. Under these conditions, it is to be expected that in the current phase of the economic cycle, the pass-through of a depreciation to internal prices would be moderate. Moreover, it is likely that part of the depreciation, experienced by the exchange rate, will revert in the future since it does not correspond to the solid fundamentals of the Mexican economy. In this scenario, economic agents have fewer incentives to adjust their prices, thus, also contributing to a reduced effect on inflation.

Summing up, the Mexican economy has recently been moving towards an external environment, which is less favorable for growth, due to the slowdown of the pace of global economic activity. Regarding this, it is noteworthy that the cost of adjustment to this new environment will be lower to the extent that a real exchange rate depreciation is maintained. Nevertheless, the increase in the relative price of merchandise as compared to services is expected to be reflected only in a temporary increase in merchandise inflation. Hence, the monetary authority will carefully monitor the economic situation in order to maintain inflation expectations well-anchored and to avoid the contamination of the price formation process.

[4] Technical Chapter "Exchange Rate Pass-through to Prices", Inflation Report, January-March 2011, pp. 50-64.

Although a contamination of the price formation process in the economy, due to diverse supply shocks recently observed (agricultural prices and exchange rate adjustment), is not expected, the credibility of monetary policy, which Banco de México has been strengthening, cannot be taken for granted. Therefore, it is indispensable for the monetary authority to maintain its commitment to reaching the 3 percent permanent inflation target.

In this sense, Banco de México's Board of Governors considers appropriate to continue using the communication mechanisms maintained with the public, which have been enriched in recent years, in order to strengthen this credibility. In this way, the Central Institute ratifies its commitment to maintaining an adequate communication with the public and to improving continuously the quality of analysis provided to be in line with the best international practices in the matter.

Besides the aforementioned, another important factor in assuring a low and stable inflation environment in the medium and long term is the orderly functioning of the financial system. The presence of economic and financial imbalances may unfavorably affect productive activities through a wealth effect, which disturbs aggregate demand and, thus, inflation dynamics. Therefore, to reach and maintain price stability, the monetary policy conduct needs a time horizon sufficiently extensive to allow the identification of implicit risks associated with the evolution of financial variables, such as the credit aggregates and financial solvency indicators.

Likewise, it is fundamental to consider the complementarity that exists between price stability and financial stability. The 2008 crisis in developed countries has demonstrated that the monetary policy instrument loses effectiveness in periods of widespread disruptions to the financial system. Thus, it is noteworthy that the monetary policy should be congruent with the macro-prudential policy in order to prevent situations that might put at risk the orderly functioning of the national financial system, as well as the evolution of the economic activity and inflation. The aforementioned is also important in order to facilitate an appropriate response of the financial authorities in the case of possible contingencies.

With regard to this, it should be recalled that Mexico is one of the pioneering countries at the international level in forming institutional arrangements between monitoring authorities and financial system regulators in order to coordinate policies leading to the preservation of financial stability. Banco de México plays a central role within the referred arrangements, participating in the Financial System's Stability Committee (*Consejo de Estabilidad del Sistema Financiero (CESF)*).

Hence, and considering the elements mentioned in this monetary program, throughout the year Banco de México will carefully monitor the evolution of inflation and its expectations. In the case of identifying a deterioration in the behavior of inflation determinants, such as the output gap, public prices, grain and other commodity prices, or if a sustained difference of inflation expectations incongruent with the convergence process to the 3 percent permanent target is detected, the Central Institute will adjust its monetary policy by means of its Overnight Interbank Interest Rate Target. Thus, Banco de México will fulfill the constitutional mandate of ensuring stability of the currency's purchasing power.