BANCO DE MÉXICO®

Executive Summary

Quarterly Report July - September 2021

Summary

The period covered by this Report witnessed a more complex environment for inflation. At the global level, inflationary pressures intensified, driven by the direct and indirect effects of the pandemic and the measures adopted to support spending, especially in advanced economies. The interruption of productive activities led to major bottlenecks in supply chains, which have been amplified by a reallocation of household spending from services to durable consumer goods. Moreover, there have also been higher transportation and distribution costs, and an increase in the prices of commodities, especially energy ones. This environment of price pressures at a global level has been reflected in greater inflation in the country, which have led to an increase in inflation expectations, especially those for the short term, and recently to marginal adjustments in those for the medium term. The shocks that have affected prices are considered to have a temporary effect on annual inflation. However, their effects have been more lasting than anticipated and represent a risk to the price formation process. Given this environment, Banco de México has sought to conduct monetary policy in a prudent and timely manner, in order to prevent an impact on longer-term inflation expectations and to ensure an orderly adjustment in relative prices and financial markets. In this regard, it has sought to foster conditions that will allow for a better adjustment of the economy to the atypical shocks that have taken place. This, in turn, will help to better confront additional challenges that may arise, including tighter global monetary and financial conditions. Banco de México will continue to ensure an orderly and sustained convergence of inflation to its target over the time frame in which monetary policy operates.

The box *Household Financial Savings in Various Economies during the COVID-19 Pandemic* documents the significant expansion in household savings during the health crisis in advanced and emerging economies. Three possible determinants explaining the savings surplus are highlighted: an increased demand for liquidity for precautionary reasons, the suppression of consumption opportunities during confinement, and the boost to disposable income caused by the monetary and fiscal measures implemented during the period. Finally, some hypotheses are presented on the possible impact on consumption of a gradual decumulation of these resources, as restrictions associated with the pandemic are loosened.

In terms of the external environment, global economic activity continued to recover during the third quarter of the year, although at a slower pace than in the previous quarter and with heterogeneity across countries following both the evolution of the pandemic and stimulus spending. In the euro zone, the United States and the United Kingdom, economic activity continued to expand, although the latter countries showed less dynamism because of the increase in the number of new COVID-19 cases, the reduction of some stimulus programs, and the continuing disruptions to supply chains. In Japan, on the other hand, growth contracted driven by some of the previously mentioned factors, as well as the re-imposition of mobility restrictions. Emerging economies have performed differently, due to the evolution of the pandemic and the impact on global supply chains. Global industrial production has been affected by worsening bottlenecks, while the services sector moderated its pace of recovery owing to the aforementioned rebound in the number of infections in several countries.

The growth outlook for the world economy as a whole was revised slightly downwards for 2021. The latter, as a reflection of lower growth expectations for some advanced economies, while the outlook for emerging economies improved marginally. For 2022, global growth estimates remained stable although with a change in composition because of a slight increase in the forecast for advanced economies and a moderate reduction in those for emerging economies. These forecasts continue to be subject to a high degree of uncertainty while downside risks to growth have increased, particularly those associated with the pandemic and the emergence of new

variants of the virus, inflationary pressures, and adjustments to monetary and financial conditions.

World inflation continued to increase, pressured by bottlenecks in production, stimulus spending and its reallocation towards merchandise, higher commodity prices, as well as the reopening of some service activities. Thus, inflation in most of the main advanced and emerging economies remained above the targets of their respective central banks. In some cases, the highest levels in decades have even been reached. The balance of risks to world inflation is biased to the upside and is subject to high uncertainty because, although the factors that have affected prices worldwide will have a temporary effect on annual inflation, a scenario in which they are more persistent cannot be ruled out. In this context, in the United States, the Federal Reserve announced a reduction in its asset purchase program, and in other advanced economies, central banks are expected to begin withdrawing their monetary stimuli, while a large number of emerging economies continues to reduce it.

The box entitled *Estimating Inflation Determinants in Latin American Countries* estimates the importance of different factors, such as output gaps, exchange rates, commodity prices and inflation expectations, for the path of inflation in some countries in the region. The results show that inflation expectations are the most important factor in explaining inflation fluctuations in Latin America, followed by exchange rate and commodity price changes and, to a lesser extent, output gaps. In the current context, despite the downward pressures on inflation that might be exerting negative output gaps, the effects of other factors tend to have a greater relative weight in the region.

International financial markets performed favorably during the reporting period, although there was an increase in volatility and lower risk appetite, particularly during September and the second half of November. This was observed in an environment of uncertainty as a result of the evolution of the pandemic and the emergence of new variants of the virus, as well as the increase in inflationary pressures. The latter could accelerate the gradual withdrawal of monetary stimuli in some advanced economies. In this context, uncertainty persists about the future evolution of international financial markets.

In Mexico, economic activity contracted during the third quarter of 2021. This result reflected a slowdown in the pace of recovery in various sectors that can be associated with the upsurge of the pandemic during the period and the continued disruptions in global supply chains. Another contributing factor was the sharp reduction in spending on business support services due to the transition to the new outsourcing regime. Economic activity is expected to resume its recovery path. However, disruptions in global supply chains are expected to prevail, in an environment of uncertainty regarding the evolution of the pandemic and its effects on economic activity.

In line with global trends, domestic financial markets performed favorably during the reported quarter. Starting in mid-September, the Mexican peso experienced episodes of volatility and depreciated, while interest rates increased. In particular, short-term interest rates were adjusted upwards as a result of increases in the policy rate, while longer-term interest rates were affected by external conditions, such as the dynamics of US interest rates. The behavior of domestic markets compares favorably with those of most of the region's emerging economies.

The box *Relationship between the US 10-Year Interest Rate and the Evolution of Financial Markets in Mexico* shows, through a Vector Autoregressive (VAR) model, that, in the face of increases in the US 10-year interest rate, the Mexican peso depreciates and its volatility increases, while the sovereign risk premium and the 10-year interest rate tend to increase. Afterwards, through an event study exercise, it is shown that the last two monetary policy statements by the Federal Reserve affected the evolution of financial variables in Mexico.

Between the second and third quarters of 2021, average annual headline inflation remained at high levels going from 5.95 to 5.80%, and reaching 7.05% in the first two weeks of November, its highest level since April 2001. This behavior is explained by the increase that core inflation continues to exhibit, influenced by pressures on merchandise prices and

the effects of the reopening of different economic activities, combined with the rebound in non-core inflation. During the reported period, core inflation continued to be pressured by the disruptions on supply chains and production processes of several goods and services, as well as by the reallocation of spending towards merchandise. This was observed in an environment in which slack conditions in the economy reduced with respect to those registered at the beginning of the pandemic, although they still remain ample in general and exhibit a noteworthy heterogeneity among sectors. As such, between the second and third quarters, average annual core inflation increased from 4.36 to 4.79%, driven by the higher levels of both merchandise and services inflation. As of October, core inflation had accumulated eleven consecutive months of increases, and during the first two weeks of November it rose again and reached 5.53%. Between the second and third quarters of 2021, annual non-core inflation decreased from 11.02 to 8.97%, as a result of a decline in energy inflation, although this was partially offset by the notable increase in agricultural and livestock product inflation. In particular, the performance of energy products in the reference quarter reflected, on the one hand, the fading of the arithmetic effect associated with the low gasoline prices that took place a year earlier and, on the other hand, the reduction in the level of L.P. gas prices in August due to the introduction of the price-cap policy. However, since then, energy inflation has increased, while agricultural and livestock product inflation has continued to rise, which contributed to the rebound in non-core inflation to a level of 11.68% in the first fortnight of November.

Regarding monetary policy decisions, in August, September and November, Banco de México's Governing Board decided to increase the target for the Overnight Interbank Interest Rate by 25 basis points in each meeting, setting it at 5%. In the August decision, it mentioned that the updates to the expected paths for headline and core inflation were higher than those published in the Quarterly Report January - March 2021. In its September and November meetings, the Governing Board raised the expected trajectory for inflation once again. In this context, although the Governing Board considered the shocks that had affected inflation as mainly transitory, it highlighted that the time frame over which these shocks could affect this variable was uncertain, that they had impacted a wide range of products, and that they had been of considerable magnitude, which has posed greater risks to price formation and inflation expectations. Therefore, the Board deemed it necessary to continue strengthening the monetary policy stance, adjusting it to the trajectory required for inflation to converge to its 3% target within the forecast horizon.

For the next monetary policy decisions, the Governing Board will assess thoroughly the behavior of inflationary pressures, as well as of all factors that have an incidence on the foreseen trajectory for inflation and its expectations. The latter, in order to adopt a policy rate that is consistent at all times with the trajectory needed to facilitate the orderly and sustained convergence of headline inflation to the 3% target within the time frame in which monetary policy operates, as well as an adequate adjustment of the economy and financial markets.

The box *Price Revisions during the COVID-19 Pandemic: Their Effect on Inflation and Synchronization Analysis*, shows that the inflationary pressures resulting from the health crisis that have been observed in 2021 reflect an increase in the proportion of goods and services that have been subject to price revisions, rather than greater-than-usual price revisions. The analysis also shows that, at the beginning of the pandemic, price adjustments of different goods and services were synchronized to some extent. More recently, said synchronization has reversed.

As for the macroeconomic outlook of Banco de México:

Growth of the national economy: The outlook for GDP growth for the Mexican economy for 2021 and 2022 is revised from 6.2 and 3.0% in the previous report to 5.4 and 3.2% in the current report.[1] GDP is expected to grow 2.7% in 2023. Given the uncertainty that persists around the expected dynamics of economic activity, wide symmetrical intervals around the central scenario are considered, with the current year's scenario being narrower given the greater available information, so that growth could be between 5.0 and 5.7% in 2021, between 2.2 and 4.2% in 2022, and between 1.7 and 3.7% in 2023 (Chart 1).[2]

The revision for 2021 primarily responds to a lower-than-anticipated GDP performance during the third quarter of the year. This resulted, in part, from a larger-than-expected slowdown in services that may be associated with the upsurge of the COVID-19 pandemic during the period. Lower spending on business support services due to the transition to the new labor outsourcing regime also contributed to this result.

The box *Dynamics of IMSS-insured Jobs in light of the Outsourcing Reform* shows that the transition to the new labor outsourcing regime that took place during the third quarter of the year induced a recomposition of IMSS-insured jobs among employers. This restructuring of employment took place both within and between economic sectors. In addition, there was a shift from temporary to permanent jobs.

Looking ahead, economic activity is expected to resume an expansionary pace starting in the fourth quarter of this year, supported by both external and domestic demand, although with differences among sectors. External demand is expected to be supported by the expansion of US industrial activity. On the domestic demand side, progress in the vaccination campaign and a gradual decrease in the number of new COVID-19 infections are expected to contribute to the normalization of supply conditions and to a recovery in demand, particularly spending on services. However, the Mexican economy is expected to continue facing a complex environment throughout the forecast horizon, given that several bottlenecks in production are expected to prevail, as is global uncertainty regarding the evolution of the pandemic and the emergence of new variants of the virus.

Should GDP growth be near the upper part of the interval in 2021, economic activity would recover during the second quarter of 2022 the level observed at the end of 2019. With GDP growth near the midpoint of the intervals, such recovery would occur around the third quarter of 2022. With GDP growth near the lower part of both intervals, the level observed at the end of 2019 would be attained during the fourth quarter of 2022.

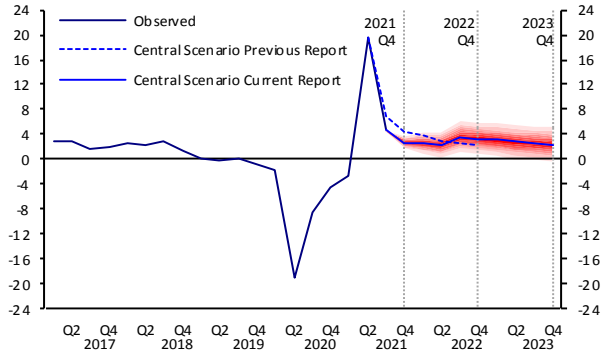
The box *Determinants of Commercial Bank Credit to Firms* studies the long-term relationship between this variable and economic activity, the cost of financing, portfolio quality, the availability of resources to commercial banks, external demand, and guarantees granted by development banks. The results suggest that the latter contributed to credit growth of small-sized firms up to 2017. Findings also reveal that although economic activity is the main determinant of credit to firms, in the face of shocks that affect this variable, credit tends to respond in a persistent and sluggish manner.

As to the economy's cyclical position, after the slight increase registered during the third quarter of the year, slack conditions in the economy as a whole are expected to continue narrowing gradually over the forecast horizon (Chart 2). This is consistent with the expected behavior of economic activity as a whole, although with a marked heterogeneity across sectors.

[1] It should be noted that that the year 2021 will have one day less than leap year 2020, which will cause the annual GDP growth rate calculated with original figures to be lower than that calculated with seasonally adjusted data. As a reference, in 2017 the difference between these two growth rates was around two tenths.

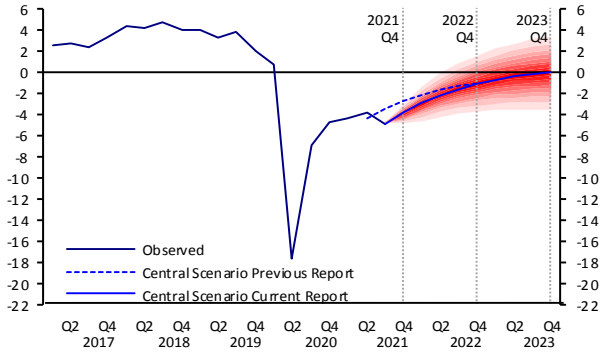
[2] The interval for 2021 compares with that of the previous report of 5.7-6.7%, while the corresponding interval for 2022 compares with that of 2.0-4.0%.

Chart 1
Fan Chart: GDP Growth, s.a.
Annual percent



s.a./ Seasonally adjusted figures.
Source: INEGI and Banco de México.

Chart 2
Fan Chart: Output Gap Estimate, s.a.
Percent of potential output



s.a./ Seasonally adjusted figures.
Source: Banco de México.

Employment: Based on the outlook for economic activity and the latest information on the number of IMSS-insured jobs, a growth of between 730 and 880 thousand jobs is expected for this indicator in 2021, a range that compares with that of the previous Report of between 640 and 840 thousand jobs. For 2022, a variation of between 560 and 760 thousand jobs is expected, which compares with that of the previous Report of between 500 and 700 thousand jobs. For 2023, a variation of between 510 and 710 thousand jobs is expected.

The COVID-19 pandemic generated unprecedented dynamics in the Mexican labor market. The indicators that had traditionally been used to estimate labor market slack do not fully reflect the situation of the Mexican labor market during the pandemic. New indicators of labor market slack in Mexico are proposed in the box *Measuring Labor Market Slack in Times of Pandemic*. One indicator considers unemployed and discouraged workers. The second indicator considers unemployed workers and temporary layoffs. The complementary indicators of labor market slack suggest that, as a result of the pandemic, labor market slack increased to previously unobserved levels.

Current Account: For 2021, the trade balance is expected to be between -14.9 and -10.9 billion dollars (-1.1 and -0.8% of GDP) and the current account balance, between -7.5 and -0.5 billion dollars (-0.6 and 0.0% of GDP). These figures compare with those of the previous Report of a trade balance of between -8.7 and -3.7 billion dollars (-0.7 and -0.3% of GDP) and a current account balance of between -6.4 and 1.6 billion dollars (-0.5 and 0.1% of GDP). For 2022, a trade balance of between -16.1 and -10.1 billion dollars (-1.1 and -0.7% of GDP) and a current account balance of between -8.5 and 1.5 billion dollars (-0.6 and 0.1% of GDP) are projected. These figures compare with the previous Report's forecasts of a trade balance of between -11.8 and -5.8 billion dollars (-0.8 and -0.4% of GDP) and a current account balance of between -10.2 and -0.2 billion dollars (-0.7 and 0.0% of GDP). By 2023, a trade balance of between -18.6 and -10.6 billion dollars (-1.2 and -0.7% of GDP) and a current account balance of between -9.1 and 2.9 billion dollars (-0.6 and 0.2% of GDP) are expected.

Risks to growth: In a context in which disruptions in global supply chains and uncertainty regarding the evolution of the pandemic and its effects on economic activity are expected to prevail, the balance of risks to growth is considered to be biased to the downside.

Among the risks to the downside in the forecast horizon, the following stand out:

i. A further intensification of the pandemic, possibly due to the emergence of new variants or insufficient vaccination coverage that imply the adoption of new measures to contain the pandemic or a less vigorous economic recovery.

ii. The persistence or intensification of bottleneck problems in global supply chains that have led to shortages of inputs for some sectors in

Mexico, particularly in the automotive sector. Similarly, the pandemic could lead to higher input and production costs in various sectors of the economy.

iii. Additional episodes of volatility in international financial markets that could affect financing flows to emerging economies.

iv. That the recovery of investment is lower-than-expected or insufficient to support the reactivation process of the economy and long-term growth. In this regard, a possible reorganization of the electricity sector could lead to a less favorable business climate for investment.

Among the risks to the upside in the forecast horizon, the following stand out:

i. That the number of infections remains low as a result of higher vaccination coverage, which would support confidence in the economy and expectations of a vigorous recovery.

ii. That the stimuli that have been granted at the international and national levels support consumer and investor confidence.

iii. That, within the framework of the USMCA, Mexico is an attractive destination for investment in the face of a global restructuring of production processes, with benefits for its economic activity and productivity.

iv. That global financial conditions conducive to a faster economic recovery are maintained.

Inflation: Pandemic-related shocks continue to pressure inflation in Mexico on multiple fronts. The imbalance between supply and demand at a global level, amplified by the slow reestablishment of distribution channels and the presence of substantial stimulus spending in the main advanced economies, resulted in cost increases for various goods and services. Likewise, international energy prices continue to be subject to pressures due to low inventory levels, in an environment of low investment in this sector and the recovery of world demand for fuels derived from increased global economic activity. This, in a context in which, at a global and national level, there has been a reallocation of household spending from services towards merchandise, while production has been affected by bottlenecks or shortages of inputs. In addition, the gradual reopening of economic activities triggered an increase in inflation in the services sector. Inflation thus continues to face a very complicated environment, where the shocks have turned out to be of greater magnitude and duration than expected.

In a context of increases in the prices of various globally traded goods, the box *Evolution of Unit Values and Terms of Trade Indices of Mexico's Foreign Trade in Goods during the COVID-19 Pandemic* presents an approximation of the evolution of prices and volumes of the main aggregates of Mexico's foreign trade in goods, and of the terms of trade.

Given this complex scenario, adjustments to the inflation forecast have been necessary. Following the previous Quarterly Report, the expected trajectory for headline inflation was revised upwards in both the September 30th and November 11th 2021 monetary policy decisions, with the latter trajectory being the one prevailing in the current Report. Thus, the pandemic has implied a sequence of upward shocks that have influenced inflation forecasts. After the August 5th 2021 press release on additional communication measures, updated inflation forecasts have been published in each monetary policy decision, as well as the vote of each of the members of the Governing Board. This is part of a continuous process of improvement that the central bank has implemented to reinforce transparency and communication with society.

The revisions reflect the pressures that both core and non-core inflation have been facing under the aforementioned shocks. With respect to the latter, the adjustment incorporates the behavior that has been observed, and is expected, for energy prices, as well as higher increases in agricultural and livestock product prices. Considering that the shocks that have affected prices will have a temporary effect on annual headline inflation, the largest forecast revisions corresponded to the short term. In particular, the trajectory of headline inflation presents the largest adjustments from the fourth quarter of 2021 to the second quarter of 2022. Thus, it is expected that after

standing at 6.8% in the last quarter of 2021, headline inflation would decline throughout 2022 and converge to the 3% target towards the end of the forecast horizon (Table 1 and Chart 3a). The decrease in expected inflation incorporates the expectation of a fading out of the shocks that have affected it and the absence of additional pressures. However, in the complex environment of the pandemic, the possibility of new shocks that may exert upward pressures on inflation cannot be ruled out.

The revised core inflation forecast considers that core inflation will continue to face pressures associated with higher production costs, the reallocation of spending towards merchandise and the gradual reopening of services, which are expected to ease over the course of next year. Core inflation is thus expected to remain on an upward trajectory until the first quarter of 2022, before declining over the remainder of the forecast horizon, reaching levels close to 3% in the first quarter of 2023 (Table 1 and Chart 3b).

Annual and annualized seasonally adjusted quarterly rates of change for the forecast horizon are presented in Chart 4. It shows that the seasonally adjusted and annualized quarterly change of the headline index would decrease such that, as of the second quarter of 2022, it would already be around 3%. In the case of core inflation, its annualized seasonally adjusted quarterly rates of change would reach levels below 3% from the third quarter of 2022. Since annual rates are affected for 12 months by short-term shocks to inflation, their reduction is slower than that of seasonally adjusted rates. As a result, annual changes are above seasonally adjusted ones at the stage during which shocks to inflation are assimilated, during most of the forecast horizon, for both headline and core inflation.

This central baseline scenario incorporates the effects of the shocks that have been materializing and the expected conditions that could affect inflation. However, given the complexity of the economic environment in the context of the pandemic, there is a possibility that pressures could be greater and stay for a longer time period, or that new shocks could occur. This would imply an even more adverse scenario for inflation than forecast. Thus, the balance of risks with respect to the expected trajectory of inflation over the forecast horizon has deteriorated and is biased to the upside.

Among the main risks to which inflation is subject to, the following stand out:

On the upside:

i. External inflationary pressures, which could affect inflation in Mexico. This could be due to higher cost-related pressures associated with commodity prices, including energy products, inputs in general or transportation costs, as well as logistical problems in global production chains or a geographic restructuring with cost adjustments.

ii. Cost-related pressures from disruptions in supply chains, or due to higher costs associated with labor hiring conditions or wages that could be passed on to consumer prices.

iii. Persistence of core inflation at high levels.

iv. Episodes of exchange rate depreciation, possibly due to episodes of volatility in international financial markets.

v. Increases in both agricultural and livestock product and energy prices.

On the downside:

i. A larger-than-expected effect due to the negative output gap.

ii. Greater social distancing measures that reduce the demand for goods and services.

iii. Exchange rate appreciation.

iv. That, given the slack conditions in the economy, cost-related pressures and labor hiring conditions do not exert pressures on prices.

v. Lower-than-expected energy prices.

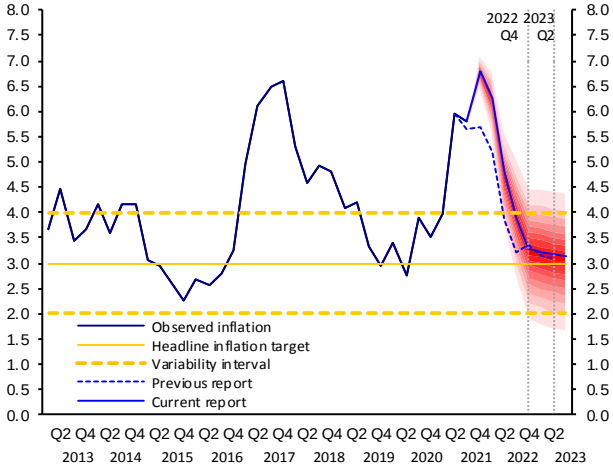
Table 1
Headline and Core Inflation Forecasts
Annual change in percent

	2021			2022				2023		
	II	III	IV	I	II	III	IV	I	II	III
CPI										
Current Report[1/]	6.0	5.8	6.8	6.3	4.8	3.9	3.3	3.2	3.2	3.1
Previous Report[2/]	6.0	5.6	5.7	5.2	3.9	3.2	3.4	3.1	3.1	
Core										
Current Report[1/]	4.4	4.8	5.5	5.8	5.3	4.3	3.5	3.0	2.7	2.6
Previous Report[2/]	4.4	4.7	5.0	5.1	4.4	3.6	3.3	3.1	3.0	

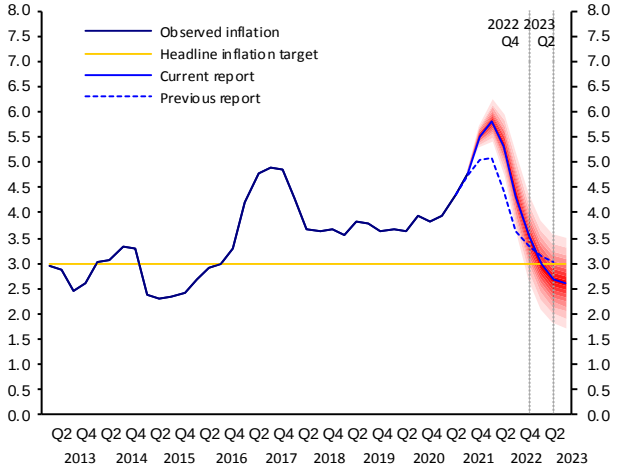
1/ Forecast from November 2021. It corresponds to the forecast published in the Monetary Policy Statement of November 11th 2021.
2/ Forecast from August 2021.
Source: Banco de México with data from INEGI.

Chart 3

a) Fan Chart: Annual Headline Inflation[1/]
Percent



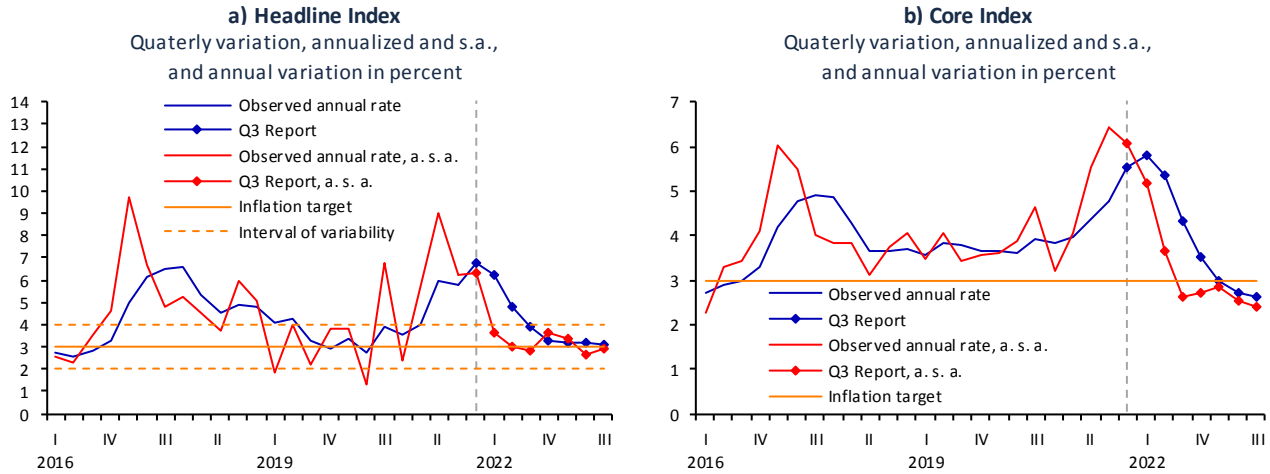
b) Fan Chart: Annual Core Inflation[1/]
Percent



1/ Quarterly average of annual inflation. The next four and six quarters are indicated with vertical lines, using as a reference the fourth quarter of 2021, that is, until the fourth quarter of 2022 and the second quarter of 2023, respectively, time frames in which the transmission channels of monetary policy fully operate.

Source: Banco de México and INEGI.

Chart 4



s.a. seasonally adjusted figures.
a.s.a. annualized seasonally adjusted figures.
Vertical line corresponds to fourth quater of 2021
Source: Banco de México and INEGI.

Despite the renewed surge of the pandemic observed in the country during the third quarter of the year, progress in vaccination allowed the impact on health and economic activity to be lower than in previous waves of the pandemic. Nevertheless, the pandemic continues worldwide and the risk of an emergence of more contagious variants of the virus persists. Therefore, maintaining efforts, both nationally and globally, to vaccinate as many people as fast as possible will continue to be a key policy to promote the recovery of economic activity and employment, and the reactivation of investment. This would also help to mitigate the uncertainty surrounding the persistence of bottlenecks in supply chains, which have lasted longer than expected and have exerted pressure on global inflation and induced episodes of adjustment and volatility in international financial markets.

In this complex environment, economic policy, both fiscal and monetary, should continue to strengthen macroeconomic fundamentals. In this regard, Banco de México's Governing Board determines its monetary policy stance in order to foster an orderly adjustment of relative prices, financial markets, and the economy as a whole, leading to the convergence of inflation to its 3% target and maintain the anchoring of inflation expectations.

Finally, as mentioned in previous Reports, it is necessary to continue addressing the institutional and structural problems that for years have contributed to low levels of productivity and capital accumulation. It is also essential to foster conditions of certainty for investment and productive activity, to strengthen the rule of law, and to fight insecurity. This would support a more sustainable, faster and widespread recovery of the Mexican economy, and contribute to mitigate any possible more persistent adverse effects associated with the pandemic. It would also lay the foundations for greater long-term growth, so that more and better jobs are created and a greater wellbeing for the entire population is attained.

BANCO DE MÉXICO®

December 1, 2021

www.banxico.org.mx