2020 Macro Prospects
Alejandro Díaz de León-Carrillo, Governor, Banco de México*
HSBC 8th Annual Mexico Opportunities Forum
February 13th, 2020

*/ The opinions and views expressed herein are the sole responsibility of the author and do not necessarily represent the institutional stance of Banco de México or of its Governing Board.
<table>
<thead>
<tr>
<th>1</th>
<th>External conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Mexican economy</td>
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<td>3</td>
<td>Inflation and monetary policy</td>
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<td>Economic outlook</td>
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</tbody>
</table>
Global slowdown

During 2019, the world economy continued to decelerate. This reflected the effects of: 1) prolonged trade tensions; 2) high geopolitical risks; and, 3) certain idiosyncratic factors in several economies.
In this context, the growth outlook for the main advanced economies has been revised downwards.

### Advanced Economies: GDP Growth Forecasts, %

<table>
<thead>
<tr>
<th></th>
<th>United States</th>
<th>Euro area</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Observed Growth in 2018</strong></td>
<td>2.9%</td>
<td>1.9%</td>
<td>0.8%</td>
</tr>
<tr>
<td><strong>2019 Forecast (Jan 19)</strong></td>
<td>-0.5%</td>
<td>0.8%</td>
<td></td>
</tr>
<tr>
<td><strong>2019 Forecast (Dec 19)</strong></td>
<td>1.0%</td>
<td>0.8%</td>
<td></td>
</tr>
<tr>
<td><strong>2020 Forecast (Jan 20)</strong></td>
<td>0.8%</td>
<td>0.8%</td>
<td></td>
</tr>
</tbody>
</table>

**United States**
- Median
  - January survey: 2.5%
  - December survey: 2.3%
  - January forecast: 1.8%

**Euro area**
- Median
  - January survey: 1.4%
  - December survey: 1.2%
  - January forecast: 1.0%

**Japan**
- Median
  - January survey: 1.0%
  - December survey: 0.9%
  - January forecast: 0.3%

Source: Consensus Forecast.
Global slowdown

Labor markets in advanced economies remain tight and wages have increased at a moderate pace.

Advanced Economies

Unemployment Gap
Percentage points

Real Wages
Annual % change, s. a.

Source: Prepared by Banco de México with data from CBO, OECD, Economic Outlook, November 2019 and National Statistical Agencies.

s. a. / Seasonally adjusted figures
Source: BLS, BCE, Bloomberg, ONS and Haver Analytics.
**Low inflation**

In the main advanced economies, inflation remains below their central banks’ targets.

**Advanced Economies**

**Headline Inflation**

Annual % change

**Core Inflation**

December

January

United States

Japan

Euro area

**Inflation Forecasts for 2020**

<table>
<thead>
<tr>
<th>Region</th>
<th>Median 2020</th>
<th>Median 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>2.1</td>
<td>2.25</td>
</tr>
<tr>
<td>Canada</td>
<td>2.0</td>
<td>2.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Euro area</td>
<td>1.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Japan</td>
<td>0.6</td>
<td>1.3</td>
</tr>
</tbody>
</table>

1/ Refers to the Personal Consumption Expenditure Price Index (PCE). Source: BEA, Eurostat and Japan’s Statistics Bureau.

2/ Refers to the Personal Consumption Expenditure Price Index that excludes food and energy (PCE). Source: BEA, Eurostat and Japan’s Statistics Bureau.

3/ Excludes energy and fresh food and the direct effect of the consumption tax increase. Source: BEA, Eurostat and Japan’s Statistics Bureau.

4/ Refers to expectations for the consumer price index (CPI). Source: Consensus Forecast. The latest survey was conducted in Jan 2020.
Weakness of economic activity together with inflation at levels below the central banks’ targets has been reflected in more accommodative monetary policy stances in advanced economies and lower medium- and long-term interest rates.

1/ OIS: Fixed-for-floating swap where the fixed interest rate is the one-day effective reference rate.

2/ Data for the observed federal funds rate corresponds to the average between the lower and upper bounds of the target range (1.50% - 1.75%).

Source: Bloomberg.
Easing of global financial conditions

The moderation of several risks to the global economy together with monetary policy easing has been reflected in an improvement of financial markets.

Government Bond Rate Curve and One-year Forward Curve

- Forward rates
- Reference curve

United States
Japan
Euro area

Government and Corporate Debt with Investment Grade by Interest Rate

% of total outstanding debt

Other developed countries
United States
Europe
Japan

3m 1Y 2Y 3Y 5Y 10Y 30Y

Note: Other developed countries include: the United Kingdom, Switzerland and Sweden. Data updated up to January 2020.
Source: Amundi.

Relaxation

United States: Financial Conditions Index

Units

February

Relaxation

Note: The financial conditions index is constructed based on the effect of the five variables on economic activity: the reference interest rate, the 10-year government note, the spread of the bond with investment grade on the government debt bond with equivalent maturity, the ratio of a stock index with average earnings per share of 10 years and the trade weighted exchange rate.
The countries that make up the global sample include the G10 countries and Brazil, Chile, China, the Czech Republic, Hungary, India, Indonesia, Israel, Malaysia, Mexico, the Philippines, Russia, South Africa, South Korea, Thailand and Turkey.
Source: Banco de México with Bloomberg and Goldman Sachs data.
# Emerging Markets

Global financial conditions have increased risk appetite.

## Asset Performance in 2019 and 2020

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Currencies</th>
<th>Equity markets</th>
<th>Interest rates 10Y</th>
<th>CDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2019</td>
<td>2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latin America</td>
<td>Mexico</td>
<td>3.82%</td>
<td>4.56%</td>
<td>-204</td>
<td>-76</td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>-3.87%</td>
<td>31.58%</td>
<td>-255</td>
<td>-108</td>
</tr>
<tr>
<td></td>
<td>Chile</td>
<td>-7.74%</td>
<td>-8.53%</td>
<td>-114</td>
<td>-20</td>
</tr>
<tr>
<td></td>
<td>Colombia</td>
<td>-1.00%</td>
<td>25.38%</td>
<td>-58</td>
<td>-85</td>
</tr>
<tr>
<td>Emerging Europe</td>
<td>Russia</td>
<td>12.46%</td>
<td>29.14%</td>
<td>-224</td>
<td>-98</td>
</tr>
<tr>
<td></td>
<td>Turkey</td>
<td>-11.12%</td>
<td>25.37%</td>
<td>-394</td>
<td>-79</td>
</tr>
<tr>
<td></td>
<td>Hungary</td>
<td>-5.17%</td>
<td>17.74%</td>
<td>-68</td>
<td>-17</td>
</tr>
<tr>
<td>Asia</td>
<td>China</td>
<td>-1.22%</td>
<td>22.30%</td>
<td>-17</td>
<td>-36</td>
</tr>
<tr>
<td></td>
<td>Malaysia</td>
<td>1.04%</td>
<td>-6.02%</td>
<td>-75</td>
<td>-75</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>-2.25%</td>
<td>14.38%</td>
<td>-67</td>
<td>-47</td>
</tr>
<tr>
<td></td>
<td>Thailand</td>
<td>8.61%</td>
<td>1.02%</td>
<td>-84</td>
<td>-6</td>
</tr>
<tr>
<td></td>
<td>Indonesia</td>
<td>3.78%</td>
<td>1.70%</td>
<td>-90</td>
<td>-10</td>
</tr>
<tr>
<td>Africa</td>
<td>South Africa</td>
<td>2.48%</td>
<td>8.24%</td>
<td>-51</td>
<td>-60</td>
</tr>
<tr>
<td>North America</td>
<td>United States</td>
<td>0.22%</td>
<td>28.88%</td>
<td>4</td>
<td>-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2020</td>
<td>2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.64%</td>
<td>4.13%</td>
<td>-21</td>
<td>-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-7.41%</td>
<td>0.12%</td>
<td>-11</td>
<td>-2</td>
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<tr>
<td></td>
<td></td>
<td>-4.85%</td>
<td>-0.19%</td>
<td>14</td>
<td>5</td>
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<tr>
<td></td>
<td></td>
<td>-3.01%</td>
<td>-0.10%</td>
<td>-48</td>
<td>1</td>
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<tr>
<td></td>
<td></td>
<td>-1.94%</td>
<td>2.35%</td>
<td>-46</td>
<td>4</td>
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<td></td>
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<td>-1.55%</td>
<td>4.91%</td>
<td>-98</td>
<td>-11</td>
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<tr>
<td></td>
<td></td>
<td>-5.55%</td>
<td>-3.27%</td>
<td>9</td>
<td>-24</td>
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<tr>
<td></td>
<td></td>
<td>-0.12%</td>
<td>-4.04%</td>
<td>-30</td>
<td>2</td>
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<tr>
<td></td>
<td></td>
<td>-1.11%</td>
<td>-2.88%</td>
<td>-35</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.04%</td>
<td>0.76%</td>
<td>-18</td>
<td>-5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-3.19%</td>
<td>-3.44%</td>
<td>-37</td>
<td>4</td>
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<tr>
<td></td>
<td></td>
<td>1.40%</td>
<td>-5.92%</td>
<td>-52</td>
<td>-7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-5.74%</td>
<td>1.16%</td>
<td>-22</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.69%</td>
<td>4.60%</td>
<td>-24</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: Interest rates correspond to interest rate swaps for 10-year maturity. In the case of Argentina, sovereign rates in US dollar for 9-year maturity are used since those are the most liquid and the ones that reflect more adequately the performance of the fixed income market in that country.

Source: Bloomberg.
Medium-term challenges

The Mexican economy has faced a sequence of adverse shocks since mid-2014, which contributed to a reduction in external sources of finance and increased uncertainty:

1. Fall in crude oil prices – second half of 2014.
2. Significant contraction of the oil production platform.
   • The oil trade balance went from being in surplus to being in deficit.
3. Uncertainty about the future of NAFTA.
4. Monetary policy normalization in the U.S.

Necessary elements for an orderly adjustment.

1. Real exchange rate depreciation.
2. Monetary policy aimed at keeping a low and stable inflation.
3. Incentives to internal savings.
4. Fiscal discipline.
The sources of financial resources of the economy continued to grow at a slow rate relative to previous years, reflecting a lower growth rate of external sources and a slight upturn of the domestic ones.

### Sources and Uses of Financial Resources of the Economy

**Annual flows as % of GDP**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>External</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>10.0</td>
<td>4.2</td>
<td>5.7</td>
</tr>
<tr>
<td>2014</td>
<td>9.7</td>
<td>4.1</td>
<td>5.6</td>
</tr>
<tr>
<td>2015</td>
<td>5.7</td>
<td>4.6</td>
<td>1.1</td>
</tr>
<tr>
<td>2016</td>
<td>7.4</td>
<td>5.5</td>
<td>1.9</td>
</tr>
<tr>
<td>2017</td>
<td>8.0</td>
<td>6.6</td>
<td>1.4</td>
</tr>
<tr>
<td>2018</td>
<td>5.0</td>
<td>6.0</td>
<td>0.1</td>
</tr>
<tr>
<td>Q3 19</td>
<td>5.4</td>
<td>5.1</td>
<td>0.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<td>7.4</td>
<td>3.0</td>
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<tr>
<td>2017</td>
<td>8.0</td>
<td>2.9</td>
</tr>
<tr>
<td>2018</td>
<td>5.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Q3 19</td>
<td>5.4</td>
<td>4.2</td>
</tr>
</tbody>
</table>

**Financing to the Non-financial Private Sector**

**Real annual % change**

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic</th>
<th>External</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>10.0</td>
<td>4.2</td>
<td>14.2</td>
</tr>
<tr>
<td>2014</td>
<td>9.7</td>
<td>4.1</td>
<td>13.8</td>
</tr>
<tr>
<td>2015</td>
<td>5.7</td>
<td>4.3</td>
<td>10.0</td>
</tr>
<tr>
<td>2016</td>
<td>7.4</td>
<td>4.0</td>
<td>11.4</td>
</tr>
<tr>
<td>2017</td>
<td>8.0</td>
<td>2.6</td>
<td>10.6</td>
</tr>
<tr>
<td>2018</td>
<td>5.0</td>
<td>2.2</td>
<td>7.2</td>
</tr>
<tr>
<td>Q3 19</td>
<td>5.4</td>
<td>1.6</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Note: Annual flows as a percentage of GDP in each reported quarter refer to the total sources and uses of financial resources in the last four quarters, expressed as a % of average nominal GDP of the same four quarters. All figures are annual except for the Q3 2019.

1/ Corresponds to domestic financial assets (aggregate F1), composed of monetary and non-monetary domestic sources. 2/ Includes monetary instruments held by non-residents (i.e. the aggregate MNR, which is the difference between M4 and M3) and other non-monetary external sources (external debt of the Federal Government and public agencies and companies, commercial banks’ external liabilities, external financing to the nonfinancial private sector, and funds raised by agencies, among others). 3/ Refers to the loan portfolio of financial intermediaries, the National Housing Agencies (Infonavit and Fovissste), the issuance of domestic debt and external financing of firms. 4/ As stated in Banco de México’s Law. 5/ Includes capital accounts, and earnings and other assets and liabilities of commercial and development banks, of non-bank financial intermediaries, of the National Housing Agency (Infonavit) and Banco de México –including securities issued by Banco de México for monetary regulation purposes, especially those related to sterilizing the monetary impact of the operational surplus. Includes non-monetary liabilities from the Institute for the Protection of Bank Savings (IPAB) as well as the effect of the valuation changes of public debt instruments, among other concepts. 6/ Refers to Public Sector Borrowing Requirements (RFSP, for its acronym in Spanish) of each fiscal year, which include Banco de México’s operational surplus turned in to the federal government. Source: Banco de México.

### Medium-term challenges

Credit from commercial and development banks as well as other non-bank financial intermediaries, is included. Source: Banco de México.
Medium-term challenges

In the last years the external accounts have reverted their medium-term trend, currently showing a surplus in the non-oil trade balance and a deficit in the oil trade balance.

Trade Balance
USD million

Current Account
% of GDP

Bilateral Real Exchange Rate Between Mexico and United States
Index Jan-2014=100

Source: SAT, SE, Banco de México, INEGI. Mexico’s Merchandise Trade Balance. SNIEG. Information of national interest.

1/ The annual figure for 2019 corresponds to the January-September period. Source: Banco de México and INEGI.
Medium-term challenges

Despite the significant real exchange rate depreciation of the peso over the last years, the pass-through effect from the exchange rate to prices remains at low levels, thus reflecting a better functioning of the economy’s nominal system. Monetary policy has focused on avoiding effects on the price formation process.

Bilateral Real Exchange Rate
Between Mexico and United States
Index 1992=100

Headline Inflation and Nominal Depreciation Rate
Annual % change

Note: Blue shadows show periods of high nominal depreciations.
Source: Bureau of Labor Statistics, Banco de México and INEGI.
Medium-term challenges

Nominal Exchange Rate against USD
Index Jan-01-2014=100

Depreciation

Colombia
Brazil
Mexico
Chile
South Africa

February

Source: Bloomberg.

Accumulated Headline Inflation Since 2014

%  

South Africa
Brazil
Mexico
Colombia
Chile

January

Source: Haver Analytics.
The Mexican economy has shown a greater weakness during the last quarters.

Gross Domestic Product
Quarterly % change, s. a.

Economic Activity Indicators
Index 2013=100, s. a.

Note: Figures in parentheses represent their share in 2013. 1/ Global Indicator of Economic Activity (IGAE, for its acronym in Spanish). Source: Mexico’s National Accounts System (SCNM, for its acronym in Spanish), INEGI.

s. a. / Seasonally adjusted figures.
1/ Refers to preliminary data published by INEGI.
Source: Mexico’s National Accounts System (SCNM, for its acronym in Spanish), INEGI.
Such performance was due to the continuing weakness of industrial production and the loss of dynamism of tertiary activities.

**Industrial Activity**
Index 2013=100, s. a.

- **Utilities (4.7%)**
- **Manufactures (49.7%)**
- **Construction (23.3%)**
- **Mining (22.3%)**
- **Total**

**IGAE Services**
Index 2013=100, s. a.

- **Transportation and information (14.0%)**
- **Finance and real estate (23.8%)**
- **Accommodation and food services (3.6%)**
- **Professional, management of companies and enterprises (8.9%)**
- **Retail trade (15.3%)**
- **Wholesale trade (13.5%)**
- **Public administration (7.1%)**
- **Arts, entertainment, and recreation (3.8%)**
- **Educational and health care (9.9%)**
- **Retail trade (15.3%)**
- **Public administration (7.1%)**
- **Arts, entertainment, and recreation (3.8%)**

s. a. / Seasonally adjusted figures.
Note: Figures in parentheses represent their participation in 2013.
Source: Monthly Indicator of Industrial Activity, Mexico's National Accounts System (SCNM, for its acronym in Spanish), INEGI.
Private consumption remained weak due to the slowdown in consumption of services and goods (especially imported ones). Regarding consumption determinants, remittances and the real wage bill have trended upwards.

**Total Private Consumption and Components**
Index 2013=100, s. a.

- **Imported goods (10%)**
- **Domestic services (45%)**
- **Domestic goods (45%)**

**Remittances**
Billion USD and constant pesos, s. a.

- **US dollars**
- **Mexican pesos**

**Consumer Confidence and Total Real Wage Bill**
Response balance and annual % change, s. a.

s. a. / Seasonally adjusted figures.
Note: Figures in parentheses represent their share in 2013.
Source: Mexico’s National Accounts System (SCNM, for its acronym in Spanish), INEGI.

1/ Prices as of the second fortnight of July 2018.
Source: Banco de México and INEGI.

s. a. / Seasonally adjusted figures.
Source: Prepared by Banco de México with data from the National Survey of Occupations and Employment (ENOE, for its acronym in Spanish) and the National Survey of Consumer Confidence (ENCO, for its acronym in Spanish), INEGI and Banco de México.
As for gross fixed investment, the unfavorable performance shown by this indicator since H2 2015 and especially since the beginning of 2018 continued, as a reflection of lower spending on machinery and equipment and weak construction.
As to the labor market, it has exhibited a lesser degree of tightness and job creation has slowed down.
Slack conditions appear to have negatively expanded at a faster rate than expected.

Output Gap Estimate 1/
% of potential output, s. a.

Quarterly indicator
Economic activity indicator

Monthly indicator

Slack Indicators: Main Component by Indicators 4/

Quarterly

% of potential output, s. a.

GDP
IGAE

95% confidence interval 2/

Q4-2019 3/
November

Q3 2019

Demand conditions in the lending market
Labor market
Consumption

Monthly

November

2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

4/ Indicators constructed using CCM methodology; see Banco de México (2018), “Quarterly Report, October-December 2017”, p.47. Monthly and quarterly slack indicators are constructed with the main component of sets of series which includes 11 and 12 indicators, respectively. Slack indicators of consumption, economic activity, aggregate demand, labor market and demand conditions in the lending market are based on the first main component of sets of series which includes 6, 4, 3 and 6 indicators, respectively.
Source: Prepared by Banco de México with data from INEGI and Banco de México.

s. a. / Seasonally adjusted data.
3/ Refers to preliminary data published by INEGI.
Source: Prepared by Banco de México with data from INEGI and Banco de México.
Among the factors that business representatives and analysts believe could limit growth those related to governance stand out. Progress in addressing certain problems that have affected the economy for years, such as the rule of law (corruption, insecurity and impunity), would foster an environment that would allow for incentivizing growth.

Percentage Distribution of Responses from Analysts and Business Representatives when Consulted on the Three Main Factors that Could Hinder Economic Activity Growth in the Next Six Months 1,2/

1/ Responses from the Survey of Private Sector Forecasters associated with the question: Which three main factors will limit economic growth in the next six months? 2/ Responses from the Monthly Survey of Regional Economic Activity (EMAEER, for its acronym in Spanish) and Survey of Private Sector Forecasters. 3/ It refers to factors such as: public insecurity problems, domestic political uncertainty, corruption, impurity and lack of rule of law. 4/ It refers to factors such as: uncertainty over the domestic economic situation, domestic market weakness, households’ level of indebtedness, firms’ level of indebtedness, absence of structural change in Mexico, availability of domestic financing in Mexico, oil production platform and lack of market competition.
Outline

1. External conditions
2. Mexican economy
3. Inflation and monetary policy
4. Economic outlook
5. Final remarks
Headline inflation has shown a downward trend from 6.77% in Dec 2017 to 4.83% in Dec 2018 and 3.24% in January 2020. This behavior can be attributed mainly to the significant decline of non-core annual inflation from 12.62% to 8.40% and 1.81% during the same periods.

1/ Since 2003, a permanent inflation target of 3%, with a variability interval of +/-1%, was established for headline inflation.

Source: Banco de México and INEGI.
The reduction of non-core inflation is due to the lower annual variations that have been registered in energy prices, although livestock prices have also decreased.

**Non-core Price Subindex**

**Non-core Price Subindex Components**
Annual incidences in percentage points 1/

**Agricultural and Livestock Products**
Annual % change

**Energy Products and Government-authorized Prices**
Annual % change

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1/ In some cases, the sum of inflation’s components may not add up due to rounding.
Source: Calculated by Banco de México with INEGI data.
Annual core inflation continues to show persistence.

Core Inflation Trend Measures

<table>
<thead>
<tr>
<th>Year</th>
<th>Core Inflation</th>
<th>Trimmed Mean Indicator 1/</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Core Price Subindex

Annual % change

1/ The trimmed mean indicator excludes the contribution of extreme variations in the prices of certain generic items to the inflation of a price index. To eliminate the effect of these changes, the following is done: i) monthly seasonally adjusted changes of the generic items of the price index are arranged from smallest to the largest value; ii) generic items with the largest and the smallest variation are excluded, considering in each distribution tail up to 10 percent of the price index basket, respectively; and, iii) using the remaining generic items, which by construction lie closer to the center of the distribution, the Trimmed Mean Indicator is calculated.
Monetary Policy Conduction

August, September, November, December and February meetings

25bp reductions in each one to a level of 7.0%

Press releases highlighted:

- Lower levels of headline inflation.
- A greater slack in the economy.
- The recent behavior of external and domestic yield curves.

Overnight Interbank Interest Rate and Government Bond Yields

Source: Proveedor Integral de Precios (PiP).
Financial markets in Mexico have performed better as a consequence of more favorable conditions in international markets as well as the reduction of some domestic risks such as the USMCA approval.


- Last observation of each year

**Exchange Rate**
Pesos per US dollar

**10-year Interest Rate**
%

**US-Mexico Interest Rate Spread**
Percentage points

**5-year Mexico CDS**
Basis points

Note: the median of the data set is the horizontal line cutting the box. The first quartile is in the lower bound of the box and the third quartile is in the upper bound of the box. The interquartile range, which corresponds to the difference between the third and the first quartile is calculated determining the height of the box. To establish the bottom whisker of the diagram, the point is determined by the first quartile minus 1.5 times the interquartile range. Observations below this point are considered outliers. The bottom whisker is drawn from the lower bound of the box to the lowest possible observation that does not go beyond the point determined by the first quartile minus 1.5 times the interquartile range. To determine the upper whisker of the box, the point is determined by the third quartile plus 1.5 times the interquartile range. Data larger than this value are considered outliers. The upper whisker is drawn from the upper bound of the box to the highest observation that does not go beyond the third quartile plus 1.5 times the interquartile range. Outliers are displayed as black dots.

Source: Bloomberg, Banco de México, Proveedor Integral de Precios (PiP), and the U.S. Treasury Department.
Interest rates in Mexico have decreased reflecting the reduction in external interest rates and Banco de México’s monetary policy actions.

Interest Rates on Government Securities

Referenced to Nominal Rate (Bonds)

Referenced to Real Rate (Udibonos)

Note: Historical average calculated with data since November 2009. Source: Banco de México with PIP data.
Implicit Distributions in Market Prices of Annual Returns of Fixed Income Instruments (1 - 10 year maturities) of Selected Countries as of February 07, 2020

Note: The Breeden-Litzenberger methodology is used in the implicit distributions to obtain the distribution of the foreign exchange market and the Ho-Lee model to obtain the distribution in the fixed income market. Epanechnikov kernels are also used to obtain the density function. 1/ A basket of government bonds with a 1-10 year maturity is used. *Volatility corresponds to the standard deviation of future yields over a 1-year horizon. **Efficiency is measured as the expected value of the wealth utility associated with each support element. The utility function used is the natural logarithm of wealth and the result is multiplied by 100 to facilitate comparison between the different assets.

Source: Banco de México with Bloomberg data.
Outline

1. External conditions
2. Mexican economy
3. Inflation and monetary policy
4. Economic outlook
5. Final remarks
### Growth and Inflation Forecasts

#### GDP Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>-0.2 to 0.2%</td>
</tr>
<tr>
<td>2020</td>
<td>0.8 – 1.8%</td>
</tr>
<tr>
<td>2021</td>
<td>1.3 – 2.3%</td>
</tr>
</tbody>
</table>

- Based on most recent data, GDP in 2020 is foreseen to grow less than estimated in the Quarterly Report July-September 2019, with a balance of risks biased to the downside.

#### Headline Inflation

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2</td>
<td>4.2</td>
<td>3.2</td>
<td>2.8</td>
</tr>
<tr>
<td>Q3</td>
<td>3.3</td>
<td>3.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Q4*</td>
<td>3.0</td>
<td>3.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Q1</td>
<td>3.5</td>
<td>3.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Q2</td>
<td>3.1</td>
<td>3.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3</td>
<td>3.0</td>
<td>2.9</td>
<td>2.9</td>
</tr>
</tbody>
</table>

- In light of the recent behavior of the factors affecting the foreseen path of inflation, headline and core inflation are expected to be moderately above the forecasts published in the last Quarterly Report.

#### Core Inflation

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2</td>
<td>3.8</td>
<td>3.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Q3</td>
<td>3.8</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Q4*</td>
<td>3.6</td>
<td>3.1</td>
<td>2.9</td>
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</tr>
<tr>
<td>Q2</td>
<td>3.2</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Q3</td>
<td>3.1</td>
<td>2.9</td>
<td>2.9</td>
</tr>
</tbody>
</table>

### Risks to the foreseen trajectory for inflation:

1. Core inflation’s resistance to decline;
2. Wage increases affecting the labor market and prices;
3. A possible exchange rate adjustment due to external or domestic factors;
4. Increases in agricultural and livestock prices greater than expected;
5. A deterioration of public finances.

1. A further appreciation of the peso exchange rate;
2. Lower international prices of energy goods due to the coronavirus outbreak;
3. A greater economic slack.

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*Note: Inflation figures refer to the quarterly average of annual inflation.
* Forecast since November 2019.
Source: Banco de México and INEGI.
Outline

1. External conditions
2. Mexican economy
3. Inflation and monetary policy
4. Economic outlook
5. Final remarks
Final Remarks

1. The global economy has slowed.

2. World financial conditions have loosened.

3. Several risks for the outlook of the global economy persist. While trade tensions have diminished, other ones have increased recently, such as the geopolitical ones and the potential effects of the recent coronavirus outbreak.

4. Economic activity in Mexico is expected to start recovering in the first quarter of 2020.

5. Recent progress in the USMCA approval reduces an important factor of uncertainty that has affected investment and growth.

6. Efforts must continue to advance in those factors that contribute to increase confidence needed to foster investment and growth.